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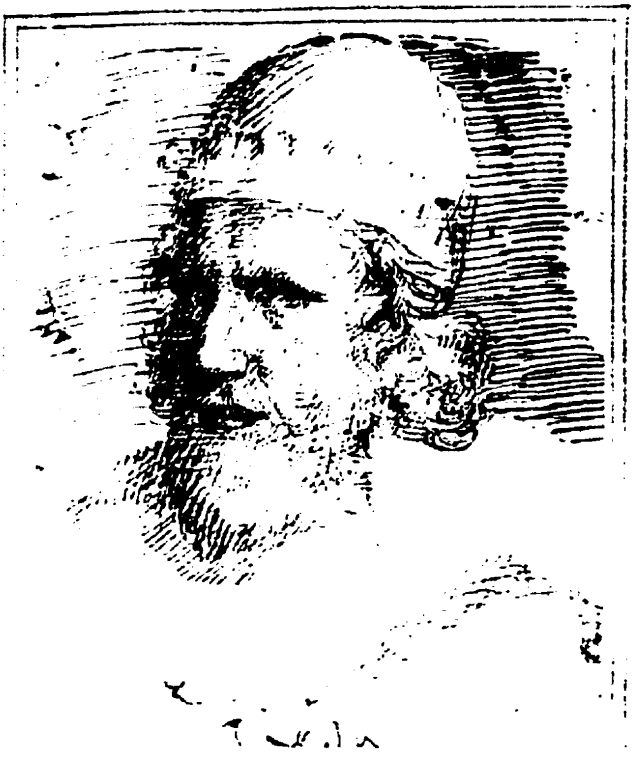

©David Michael Theodore
School of Architecture
McGill University
August 2000

A Thesis submitted to the Faculty of Graduate Studies and Research in partial fulfilment of the requirements of the degree of Masters in Architecture

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Abstract

In this essay I look at the significance of Inigo Jones's annotated copy of Andrea Palladio's *I quattro libri dell'architettura* in a time of momentous change in the habits of readers and writers, printers and publishers, architects and kings. Jones lived in Stuart England, a hinge period swinging between print culture and manuscript culture, science (mechanical philosophy) and magic (Neoplatonism, hermeticism, alchemy), humoural physiology and modern medicine. I examine his book as part of a change of *social* setting, looking outward from his study of Palladian architectural theory to developments in publishing and authorship, perspective and theatre design, graphic representation and anatomy, medicine and the history of the human body.

Dans cette thèse j'étudie l'importance de l'exemplaire du traité d'architecture d'Andrea Palladio, *I quattro libri dell'architettura*, possédé et annoté par Inigo Jones, dans une époque de changements profonds dans les habitudes des lecteurs et des écrivains, des éditeurs et des imprimeurs, des architectes et des rois. Jones vit en Angleterre au temps des Stuart, une ère ouverte à la fois aux cultures des imprimés et des manuscrits, la science (la philosophie mécanique) et la magie (le néo-platonisme, l'herméticisme, et l'alchimie), la physiologie humourale et la médecine moderne. J'examine son livre dans le contexte de changements sociaux, en partant de l'histoire du graphisme et de l'anatomie, de l'auteur et de l'industrie de l'édition, de la médecine et du corps humain.

0 Introduction: Inbetween the sheets

0.1 Title Page, Jones, *Inigo Jones on Palladio.*

Sometime after 1601 a young British joiner and "picture-maker" got his hands on a special book. The folio volume, preserved today in the library of Worcester College, Oxford, is about 21 cm wide, 32 cm long and 5 cm thick. Inside, carefully laid out pages of sharp woodcut images and concise texts are printed in oily black ink on sheets of thin vellum. The folio has been rebound in frangible, hardened vellum, making some of the handwritten marginal notes disappear into the binding.[1]

0.2 Inigo Jones's signature on the title page of Palladio's *Quattro libri* from *Inigo Jones on Palladio.*

The volume in question is a 1601 edition of perhaps the most significant of all Renaissance architectural treatises, *I quattro libri dell'architettura,* written by Venetian stonemason turned architect Andrea Palladio. First published in 1570, Palladio's theoretical treatise has been used by architects and historians as a practical and theoretical guide to architecture, the quintessential pattern and source book for classical and classicizing architecture throughout Europe and around the world.

The book belonged to Inigo Jones (1573-1652), a pivotal figure in the history of British architecture. Baptized in Smithfield, London, on 19 July 1573, he first came to prominence designing scenes and costumes for masque and theatre performances for the Stuart court. *The Masque of Blackness,* staged for Queen Anne on Twelfth Night in 1605, marked the beginning of a twenty-five-year long theatrical collaboration with dramatist and poet Ben Jonson (1572-1637).[2]

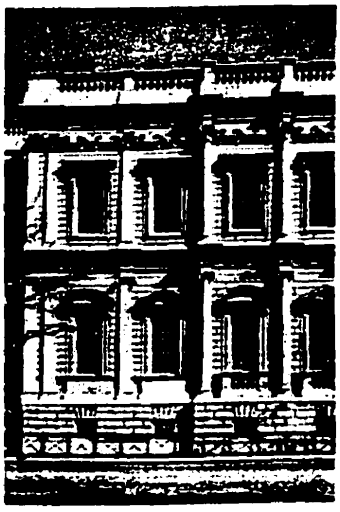
Jones's Palladio offers an unparalleled opportunity to study the reception of architectural treatises, the uses actually made of them by their readers, supplementing studies of authorial intentions. Such study helps us to overcome a straightforward linear history of the transmission of architectural ideas from author to reader, and to glimpse instead some of the rich and complex interplay between the two. That interplay is graphically represented in the opposition of Jones's handwritten marginalia and Palladio's text. It is also literally there in the material object. Thus the book works as a symbol of the enterprise of architectural historiography, with its search for the links between material form, graphic representation and theoretical ideas.

In this essay I look at the place of Jones's Palladio in Stuart England, a time of momentous change in the habits of readers and writers,

[1] See Bruce Allsopp's Preface to the facsimile of Jones's Palladio, Jones, *Inigo Jones on Palladio* 1: xiii. Despite some well-known problems with the accuracy of the transcription, the facsimile has the advantages of ease of use and access; see Wittkower, Rev. of *Inigo Jones on Palladio.* Further parenthetical references to "Jones's Palladio" are to this facsimile.

[2] The basic biographical information on Jones is in Gotch, *Inigo Jones*, and Harris, Orgel, and Strong, *King's Arcadia.*

printers and publishers, architects and kings. Jones lived in a hinge period, an era swinging between print culture and manuscript culture, science (mechanical philosophy) and magic (Neoplatonism, hermeticism, alchemy), humoural physiology and modern medicine, even between English Elizabethan court culture and the masculinist, bureacratic Scottish court culture of King James.[3] Thus his book must be studied as part of a change of *social* setting, looking outward from both his notes and Palladio's pages to developments in publishing and authorship, perspective and theatre design, medicine, graphic representation, anatomy and the history of the human body.



0.3 Inigo Jones, Whitehall, Banqueting House,1622 (Summerson, *Inigo Jones* 54).

Jones would have an important place in British cultural history for his theatre work alone. But in 1622, Jones built King James a new Banqueting House at Whitehall in London. With this building, an astoundingly strict composition based on Renaissance classical principles, Jones has become known as the genius responsible for bringing "a *proper* understanding of Renaissance Classicism" to Britain.[4]

Jones was appointed Surveyor to Henry Prince of Wales in 1610, and after Henry's sudden death in 1613 maintained contacts with the Courts of James I, Charles I and the household of Thomas Howard, 2nd Earl of Arundel.[5] In 1613-14 he undertook one of the most famous of all artist's voyages in the company of Arundel. They went to Heidelberg and on to Italy, where Jones saw the antiquities of Rome, Palladio's built work in northern Italy, and even met with the most successful Venetian architect to follow Palladio, the well-travelled theorist Vincenzo Scamozzi (1548-1616).[6] Jones later bought Scamozzi's 1615 treatise *L'idea dell'architettura universale* and annotated it heavily.

Despite Jones's designs, classicism did not take root in Britain until the next century.[7] But he had concerns other than the posterity of classicism. Jones was a powerful and respected public official in his own day. He sat with Arundel on the London building committee, was Surveyor of the King's Works (1615-42), laid out the speculative development of Covent Garden for the Earl of Bedford, and renovated St. Paul's Cathedral (now destroyed).[8]

Jones liked books, and reading was part of his work in all his careers. He left a working "library" of volumes, some fifty of which still

[3] On Stuart court culture, see Cuddy, "The Revival of the Entourage."

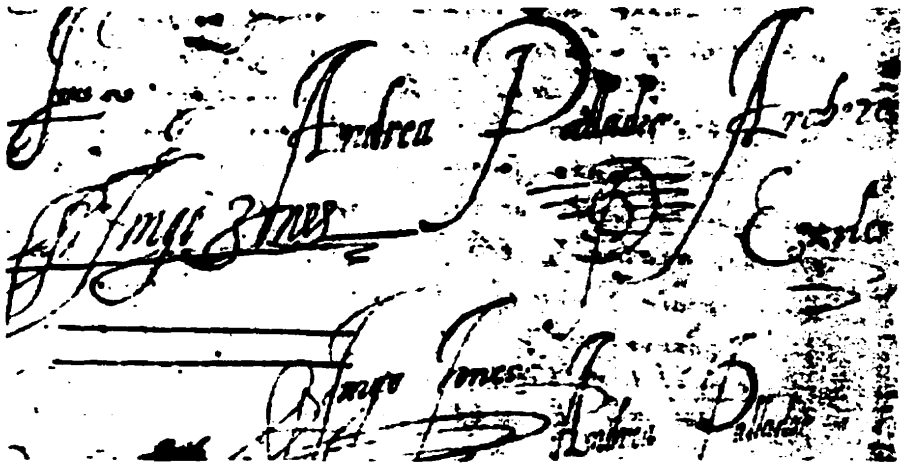
[4] Newman, "Italian Treatises in Use" 435, emphasis added. On Jones's genius, see Allen, *Tides in English Taste* 19; for a short review of the making of Jones's reputation, see Bold, "The Critical Reception of Inigo Jones."

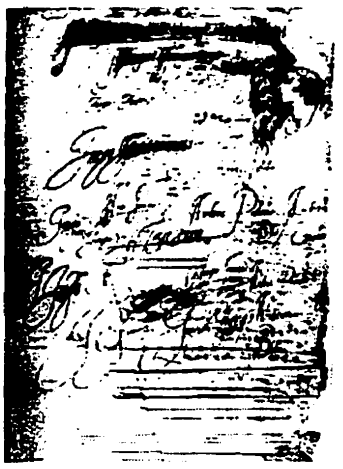
[5] On Arundel see Howarth, *Lord Arundel and His Circle.*

[6] For details of this voyage see Gotch *Inigo Jones* 71-83. Jones's travels may be usefully compared with those of John Donne in 1611-12; see Bald, *John Donne* 241-290; and with those of physician William Harvey, who travelled to the continent in the company of Arundel in 1636; see Keynes, *William Harvey* 229-263.

[7] For a blustery re-evaluation of Jones's contribution to seventeenth-century classicism, see Mowl and Earnshaw, *Architecture Without Kings.*

[8] On Jones's career, see Summerson, *Inigo Jones* 39-106.





0.4 (above left [detail] and right) Interlocking signatures of Palladio and Jones on the Fifth Flyleaf of Jones's Palladio.

survive, on fortifications (Lorini and Busca), art theory (Vasari), history (Herodotus and Plutarch), Greek philosophy (Plato's *Republic*, Aristotle's *Ethics*) and, of course, architecture. Twenty-eight of these, including his Palladio, are annotated in his own hand.[9]

Conventional wisdom has it that as travelling masons were responsible for the spread of Gothic architecture across Europe, books allowed the movement of classical imagery and classical ideas from Italy across the continent to Britain. The spread and longevity of the *Quattro libri* gives credence to this oft-propounded technetronic thesis that the invention of printing was responsible for broadcasting Renaissance architecture.[10] Underneath this thesis lie two assumptions: the belief that the content of Palladio's theory was information—abstract, portable, immaterial data—and the belief in the reproducibility of the printed text—that it doesn't matter which copy of Palladio Jones read, because the information in all of them is the same. That printing mattered in the dissemination of Palladian and other Italian Renaissance architectural ideals is indisputable; but what also mattered was the distribution and longevity of this *particular* copy of this *particular* treatise: not just Palladio, but *Jones's* Palladio.

For indeed this is Jones's Palladio, Jones's constant companion in his magical transformation from picture-maker into, in the words of his apprentice John Webb (1611-1672), the "Vitruvius of his age."[11] Doodles, translations, recipes, travel notes and copious annotations fill the margins of the ripped, torn and soiled sheets, documenting Jones's intimate lifelong relationship with the book. And with its author: on

[9] The books in the library are listed in Harris, Orgel and Strong, *King's Arcadia* 217-218, and discussed on 63-64. More recent additions are listed in Newman, "Inigo Jones's Architectural Education before 1614" 19. An annotated bibliography of most of the books associated with Jones is included in Anderson, "Inigo Jones's Library" 306-355.

[10] For example, Mario Carpo in "The Making of the Typographical Architect" claims that "mechanical reproduction of images was the principle catalyst in the new [Renaissance] practice of visual imitation" (165). On the technetronic effects of the press, see Eisenstein, *The Printing Press as an Agent of Change*.

[11] Webb, *The Most Notable Antiquity of Great Britain, Vulgarly called Stone-Heng* n.p.

the front Fifth flyleaf Jones has signed both "Inigo Jones *(repeated many times)*" and "Andrea Palladio *(repeated twice)*." Thus the close historiographic link between Jones and Palladio is traceable not only by a post-facto disembodied, abstract, art-historical primogeniture in which Palladio is the source of Jones's architectural imagery, but because this one particular material artifact documents hands-on contact.

That artifact passed from Jones's hands into history. He first gave it to John Webb. In 1723, along with most of the other books now known as Jones's library, it passed to Worcester College Library, Oxford. The collection came from the hands of civil servant and amateur architect Dr. George Clarke, who seems to have acquired it from Webb's son's widow. Later Jones's copy of the *Quatro libri* became a key element in the worldwide diffusion of Palladianism. It was known to the British Neo-Palladians at the beginning of the eighteenth century. Giacomo Leoni (1686-1746) promised to publish transcriptions of some of the Jones notes, which he finally did in the 1742 edition of his translation of Palladio.[12] In turn, it was Leoni's text with Jones's notes that spread Palladianism beyond Europe: Thomas Jefferson owned a copy, with the ironic result that the architecture of the Venetian aristocracy came to symbolize American populist democratic republicanism.[13]

Scholars have established the significance of the book in Jones's architecture and thought. At the same time, however, they have unintentionally made it, without doubt, the most significant moment in his biography, the life and works of Inigo Jones canonized by historians and critics since his death. The story of the book is the story of his life, from the beginnings of his interest in architecture, through his education and practice, his travels to Italy, his relationship with his apprentice and kinsman-in-law John Webb, his illnesses, his death, his testament.

Illness and death. "The body that suffers from the stone, sees the decline of its powers and the approach of death, worries about eating and defecation," wrote Jones's contemporary French essayist Michel de Montaigne. These are the very subjects of a remarkable set of annotations Jones made starting when he was about sixty years old. On the back flyleaves of his Palladio, following a page of considerations headed "of Inglish measures" (TF 1), Jones kept a collection of recipes for "approued medicin" (TF 2).[14] Generally these have been received as

[12] On Leoni and the Inigo Jones revival, see Kruft, *A History of Architectural Theory* 237-242.

[13] See Tavernor's Introduction to Palladio, *The Four Books on Architecture* xvii, and his *Palladio and Palladianism* 181-209.

[14] The flyleaves are numbered in the transcription as Terminal Flyleaf One and Terminal Flyleaf One verso etc. I use the abbreviations TF 1 and TF v° respectively.

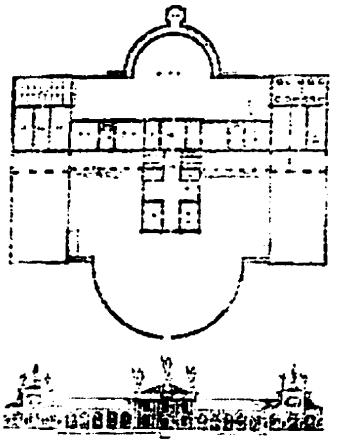
indications merely of Jones's infirmity as an old man. John Harris writes that they are "redolent of his [Jones's] advancing old age" echoing Jones's twentieth-century biographer J. Alfred Gotch who calls them "a pathetic indication of advancing age."[15]

Granted, Jones refers to problems with digestion, sleep, headaches, gout, "sharpnes of Vrin"(TF 4v) and "dimnesse of sight"(TF 5), and we should be thankful for these rare glimpses of his character and habits in at least one stage of his life. But the medical notes are more useful than that. To date the recipes have been under-utilized as a guide to Jones's conceptual, cultural and physical world. For the recipes and prescriptions on the terminal flyleaves are aptly and surely consciously placed there. Medicine was a Vitruvian subject, and medical training part of the education of an architect.[16] In Vitruvius's theory, and therefore in Jones's mind, architecture and medicine were connected in a fundamental way.[17]

Moreover, Palladian theory, following Vitruvian theory, is decidely anthropomorphic and anthropocentric, based on the idea of the divine nature of the human body. So using the medical notes to learn something about Jones's conception of his own body will also teach us something about his understanding of his body-based architecture.

What does it mean to say that Palladio's architecture was based on the human body? Well, when you look at a Renaissance building, be it secular like Villa Barbaro or religious, like his Il Redentore church in Venice, his treatise tells us that you are looking at an image of the human body. Still, how can a building resemble, reflect, mirror or represent a body? How can architecture be a body image?

Let me rewind a minute. The architectural treatise blossomed in the Renaissance. There was really only one treatise left from antiquity. Vitruvius's famous *De architectura libri decem* (Ten Books on Architecture) was composed during the reign of the Roman Emperor Augustus. Vitruvius looked backward, codifying Hellenistic practice, summarizing the rules and principles of ancient Greek architecture. In the tide of so-called modern Vitruvian treatises, starting with Leon Battista Alberti's *De re aedificatoria* (On the Art of Building), which appeared first in manuscript around 1450, one constant was the significance of the human figure. Theorists approached architecture by speculating about



0.5 Palladio's Villa Barbaro, from *Four Books on Architecture*, Bk II.

0.6 Palladio's Il Redentore Church, Venice 1576-80.

[15] Harris, Orgel and Strong, *King's Arcadia* 65; Gotch, *Inigo Jones* 78.

[16] Vitruvius, *On Architecture* I.1.13.

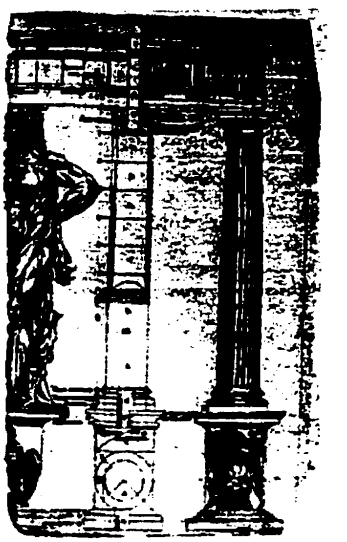
[17] This connection has been noted but not elucidated by John Peacock in "Inigo Jones and Renaissance Art" 254.

the body. For example, they used studies of ideal human proportions as the basis for discussing ideal architectural proportions. I want to draw attention to three things in these treatises.

First, Renaissance theorists presumed that buildings should naively mimic our intuitive notions of bodies, in a way that has to do with the experience of having a particular (God-given) body. Andrea Palladio in Bk. II Chap. ii of his *Four books on Architecture* writes: "But, just as our blessed God has arranged our own members so that the most beautiful are in positions most exposed to view and the more unpleasant are hidden, we too when building should place the most important and prestigious parts in full view and the less beautiful in locations concealed as far from our eyes as possible."[18] (Jones summarized this passage in the margins of his Palladio: "Comparason to a mans boddi the most butiful partes of mans boddy most exposed to sight so in building.") Plan images, like that of Palladio's Villa Barbaro, are composed according to this notion of imitation; that is, Palladio prints an image in his treatise to show the theoretical principle that might pass unremarked by actual users of the building.

0.7 Diego Sagredo, *Medidas del Romano*, published in Toledo, 1526, study of human proportions (Hart and Hicks, eds., *Paper Palaces* 137).

Next, the human body was the protagonist in the narrative of architecture's origins. Important here is Vitruvius's tale, taken up by Palladio, that the proportions, ornament and form of the orders correspond to body types. This correspondence is perhaps most explicit in the first native British Vitruvian treatise, John Shute's *The First and Chief Groundes of Architecture* (London 1563). His Doric order, presented as Hercules, and his Ionic order presented as Hera, are peculiar, particular, yet still ideal bodies; they belong to singular, if mythical, individuals; they have genders and nationalities. In short, their "bodiliness" allows them to embody cultural, moral, literary and historical values. Architects and architecture are supposed to emulate those cultural values, not the physiques.



0.8 Doric order from John Shute's *Chief Groundes of Architecture*.

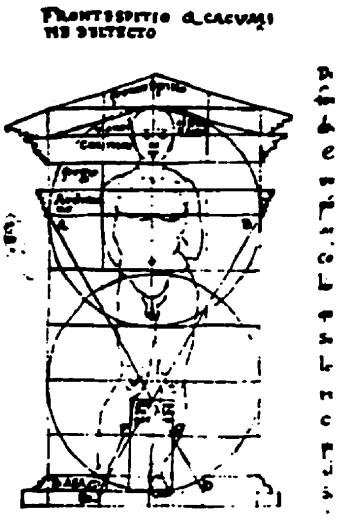
A third idea drawn from Vitruvius was the notion of a perfectly, because divinely, proportioned male human body. This figure—the famous Vitruvian man—was taken up within the doctrine of correspondences between the microcosm and the macrocosm.[19] The body reflected God's perfect design, it was argued, so that architecture that imitated our own bodies would simultaneously demonstrate celestial

[18] Palladio, *The Four Books on Architecture* 77.

[19] On the history of the correspondence between macrocosm and microcosm, see Lovejoy, *The Great Chain of Being*.

harmony. The doctrine of correspondences was vigourously elaborated as late as 1617 in a book by Jones's acquaintance physician Robert Fludd entitled *History of the Two Worlds, the Great World of the Macrocosm and the Little World of Man, the Microcosm.*

Renaissance theorists seemed to believe we can contemplate any of these ideal bodies through our own bodies; therefore, reciprocally, there is no imperative to make our own bodies visually resemble ideal bodies. Shute's heroic figures or Francesco di Giorgio's (around 1490) church plans show that in this way of thinking, architecture can imitate or "fit" the body in a very loose visual and formal manner. The correspondences worked through analogical thinking, often using rhetorical devices such as similes and metaphors, and not through precise physical figures and configurations.[20]



0.9 Francesco di Giorgio martini, anthropometric façade of S. Maria delle Grazie al Calcinaio, Cortona (Kruft, *Architectural Theory* fig. 20).

Jones's Palladio brings together this theoretical interest in bodies with Jones's own body. John Peacock argues that figures and figure drawing figure prominently in all of Jones's work.[21] But what kind of body was being figured? What moral, social, political, or aesthetic issues expressed? The concern shown in Jones's notes with the order and functioning of the body—sleep, diet, purging, sight—folds his living body into his body of knowledge. As his most important if oblique collection of statements about architecture, his Palladio *is* his corpus; the materiality of his chirographic presence in his notes on the workings and form of his body is crucial evidence of a link to the materiality, and not simply the abstraction, of Palladian architectural ideas.

This interest in materiality is characteristic of Jones, of his working methods, and of the culture in which he worked. For instance, despite his interest in books, Jones was characteristically unable to accept textual knowledge as truth. He had to see for himself. Much has been made of Jones's personal experience of Roman and Palladian architecture.[22] According to this reasoning, Jones was able to use his acquaintance with real buildings as a basis for his expertise and authority: patrons could trust that experience even if he had little building experience. Other critics, however, have no trouble postulating that Jones learnt his innovative stagecraft without ever having seen the Florentine *intermezzi* that were his source.[23] Stephen Orgel writes that

[20] Hart stresses that this "geometrical anthropomorphism" is "at the centre of Pythagorean and Hermetic philosophy" (*Art and Magic* 126), thus linking Jones with Renaissance magical traditions.

[21] Peacock, "Inigo Jones as a Figurative Artist" 164.

[22] See, for example, Anderson, "Inigo Jones's Library" 123.

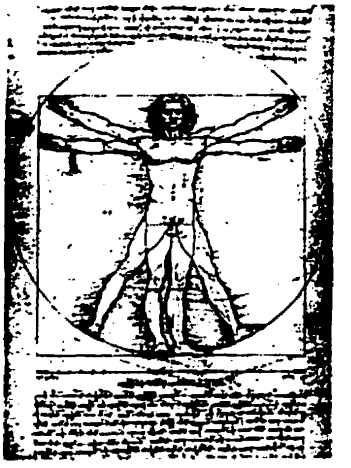
[23] Strong writes that "it is doubtful whether Jones ever saw a Florentine production on stage" (Harris, Orgel, and Strong, *King's Arcadia* 72).

there "is no evidence that he witnessed a single one of the many continental productions that he adapted or reworked. his sense of his material derived entirely from engravings and drawings, texts and descriptions."[24] So why is it any different for architecture?

The collection of medical recipes provides a clue to settling this dispute. For it seems Jones could understand medicine only through his own experience, and through subsequently comparing that knowledge with the experience of others. Against a recipe "for to auoyde grauell &c from Mo^r Sanci, and said to bee good by Doc: Haruy" (TF 4) he wrote in the margin "aproued on my self." This use of the self as the touchstone for efficacy—for the truth of the medicines—is also a keystone in the foundation arch of his approach to architecture. His desire to heal himself provides a key to adumbrating his attitude towards architecture, a process of personal experience based on self-education, self-testing. In other words, the recipes reveal Jones's intellectual attitude towards theory.

As we will see, the medical recipes also help us grasp Jones's self-understanding, not just the psychology of his interior mental life, but the physiology of his physical life. We are accustomed to understanding the body of Renaissance classicism through Leonardo's image of the geometrical Vitruvian man. In turn, the measured modules of Jones's architecture are seen as a rational equivalent of a rationalized, proto-mechanical, idealized human body. The notes on the terminal flyleaves show, however, that Jones's body is explicitly humoural, composed of a qualitative balance of four basic elements (blood, phlegm, black and yellow bile), and not an interlocking machine of quantifiable mechanical systems. It's not a body that gets repaired by medicine, rather levels of fluids are re-balanced by the extraction or introduction of sympathetic substances.

The notes reveal that Jones was in the habit of daily "casting," evacuating the stomach by vomiting in order to relieve the "medical" condition of melancholy caused by an excess of black bile. Also, he has several recipes for "glisters," clysters or enemas in our terminology. For example he had great pain from gout "for which I [Jones] am inforsed to take so many glisters" (F 4r°). But in humoural medicine clysters were used not only for purging, for unblocking pipes to get rid of



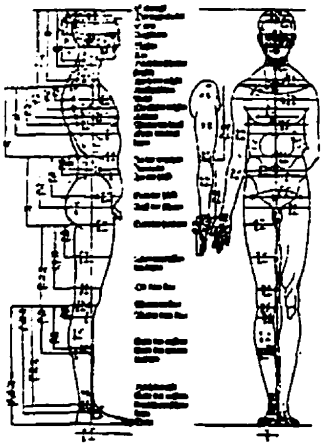
0.10 Leonardo da Vinci, Vitruvian man (Kruft, *Architectural Theory* fig. 21).

0.11 Francesco di Giorgio Martini, Vitruvian man (Kruft, *Architectural Theory* fig. 17).

[24] Orgel, in Harris, Orgel, and Strong, *King's Arcadia* 92.

material waste and excess humours. Clysters were used (somewhat controversially) to give nourishment, to feed the body, especially to anyone who could not keep down swallowed food.[25]

In other words, Jones regularly ate food through his ass and shat waste out his mouth. Thus his own idea of the "normal" human body is substantially different from our own. In contrast to the regularity, rationality, geometrics and ideality of Leonardo's Vitruvian body, Jones's body was fluid, a humoural, seasonal, Rabelaisean grotesque. This model body should qualify some of the truisms associated with Jones: his supposed rationality, purity, rigour, science, masculinity, replacing them with other more fundamental qualities. I propose Jones's body not in *opposition* to Leonardo's or Dürer's, but rather as a revelation in depth (time, experience *and* interiority) of the body that the circled and quartered geometric ideal describes.[26]



0.12 Albrecht Dürer, ideal proportions of the human figure, from *Vier Bücher von menschlicher Proportion*, 1528 (Westman, "Nature, Art, and Psyche, 189).

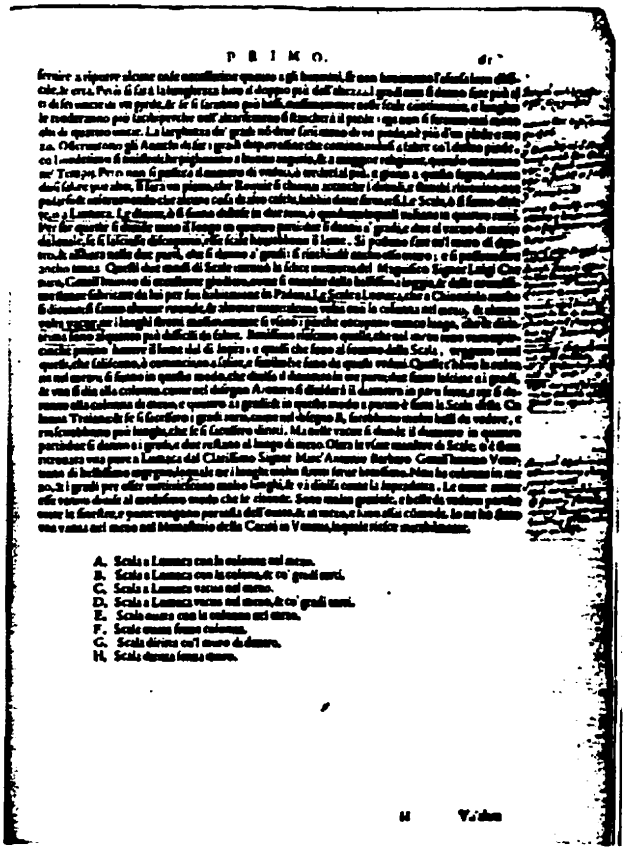
For three reasons, whenever possible the focus of the interpretational lens here will be on these terminal flyleaves. First, in most studies of the book, the terminal flyleaves are practically ignored. Even in Christy Anderson's recent extensive study of Jones's library, the books mentioned in the terminal flyleaves are not covered. Anderson points out that there "has been no questioning of Jones's interest in the mathematical studies of Giudobaldo del Monte [1545-1607], of his interest in military treatises, or of his careful reading of Plutarch," but she neglects to mention that there is also little discussion of his relationship to medicine and "physicke."[27] Second, in the flyleaves Jones mentions names like "Doc: Haruy," Dr. William Harvey, author of *De Motus Cordi* [On the Circulation of Blood] (1628) in which he speculated about the circulation of blood, and "Doc: Flud," Robert Fludd, Neoplatonic visionary cosmographer, giving clues to the English mental landscape (as opposed to Italianate visual culture) in which Jones worked. Third, for those less interested in Jones's multidisciplinary and peculiarly English world, the flyleaves give us clues to Jones's work habits and habits of thought in a discipline distinct from but closely related to architecture.

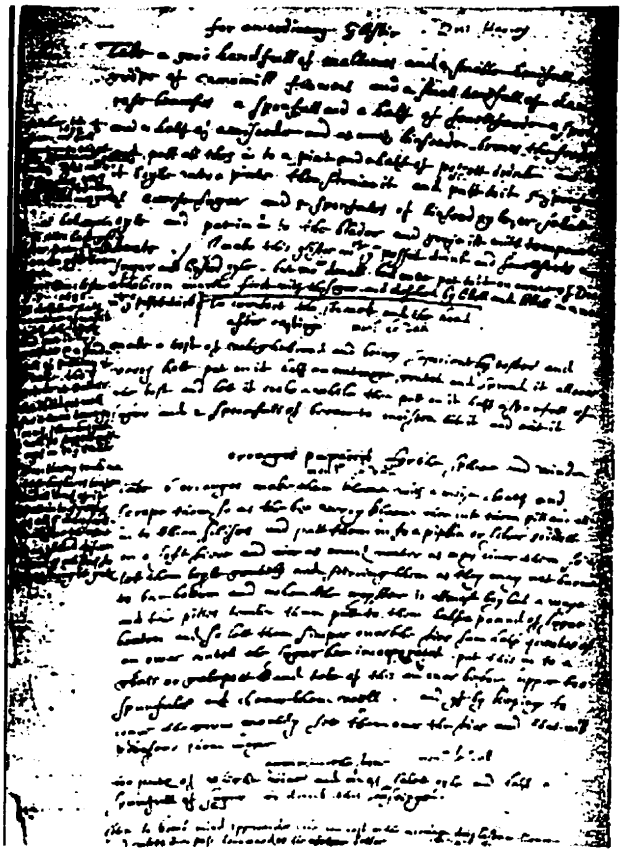
These medical notes, that is, have much in common with the architectural notes in the rest of the book. The flyleaves even look the same: on TF 3v° and TF 4v°, for instance, Jones went back and anno-

[25] Ambroise Paré (1510-1590), for instance, writes "Nous usons de tels clysteres pour nourrir enfans et gens debiles, comme en un grand deuoyement d'estomach, quand il ne retient la viande qu'il prend" (*Ouevres Completes d'Ambroise Paré* 3: 555).

[26] Michelangelo appears to be at the origin of the (anachronistic) idea of instrumentality in Dürer's mathematical interest in human proportions; see Perez-Gomez and Pelletier, *Perspective Hinge* 34-40.

[27] Anderson, "Inigo Jones's Library" 13. Hart has a footnote discussing Jones's interest in the geometry of fortifications; see *Art and Magic* 229, n. 85.





tated his own handwritten entries. More importantly, they contain a mixture of practical and theoretical musings on medicine, similar to his notes on architecture, mixed with his own comments. Architectural and medical preoccupations were not separate in Jones's thought or work. For instance, the Barber Surgeons' Company opened an anatomy theatre designed by Jones in 1636, about he same time Jones was making his notes on medicine.[28]

0.13 (left) A typical page of Jones's architectural notes (1.32).

0.14 (above) A typical page of Jones's medical notes (TF 3v°).

The supplemental evidence afforded by the terminal flyleaves is crucial because we do not have explicit statements from Jones about his architectural theories or intentions. It is perhaps logical to assume, for example, that when Jones underlines or makes a note beside a passage, such a passage is more important to him than those which have no annotations. But to some degree the opposite is also possible: he may have marked passages that he found in some way wrong or troubling, passages that he didn't understand or agree with. Therefore we need some kind of guidelines for our interpretations, some "workable hermeneutics" in Annabel Patterson's phrase, in order to decide even

[28] Hart writes that "Jones studied human proportion through his figure drawings and this found clear expression in his design for the Barber Surgeons' anatomy theatre, centred as it was on the human body" (*Art and Magic* 126), but does not specify any formal links between those proportion studies and the architecture of the theatre.

such simple questions such as when Jones is *speaking* in his notes rather than simply translating or "jotting."[29] The existence of an alternative set of notes on a separate but related topic provides a crucial interpretational tool. By shining a light on a subsidiary part of the annotations, we obtain a relucent criticism of the whole.

Moreover, Jones's world was a tissue of interrelated subjects that are not easily separated into current academic categories. Rather than evaluate him quickly as a genius, the avant-garde *visual* artist, a precursor to the systematizing of classicism popularized by Neo-Palladians, one wants to see Jones in all his possible contexts. He demands a multidisciplinary approach. Thus I am less concerned with the content of the notes than I am with using that content as a thematic guide that connects Jones's interests in theatre, perspective, medicine, antiquity and questions of literacy. I want not (yet another) reading of Jones's architecture, but a better understanding of how Jones read architecture.

To start, Chapter One looks at the theory of theory. I try to peek inside Jones's mind in order to understand why Jones read Palladio, what he was looking for, by examining the character of architectural theory in Jones's age. It is especially important to evaluate the use Jones made of the text in relation to Palladio's intentions. What was Palladio's attitude towards theory? Through what media and by what modes was Jones exposed to Italian theory? I also make a first effort to clarify a sub-theme of this essay, namely the question of Jones's relationships to Hermetic philosophy and emerging scientific theory.

In Chapter Two I place Jones's annotations in the histories of reading and literature. Stuart England is a unique time in the history of authors and readers, the period of change from manuscript to print. It is, for example, a time of ambivalence about the social status of the emerging profession of writing. In particular I look at the activity of annotation, in which Jones must be assessed as both reader and writer.

In Chapter Three I examine Jones's notes in relation to the practical and symbolic notions of machinery in printing, theatre and medicine. If Stuart England is an important moment in the history of reading, it is no less momentous in the history of science. Jones appears in a key time, not yet the impendent mechanized universe possible after the theories of Descartes and Galileo, but already in the proto-scientific

[29] Patterson, "'Roman-cast Similitude'" 383.

schemes of Dr Harvey and Sir Francis Bacon. Charles Webster reminds us that signposts of the change were nonetheless clear in Jones's lifetime. "The speed with which attitudes changed," he writes, "can be assessed from the mechanistic philosophy which Thomas Hobbes had evolved by 1650."[30]

Finally, in Chapter Four I consider the medical content of the flyleaves more closely. These notes may reflect "late" practice; the earliest date in this section is 1623, which occurs on TF 4v° but it may be a mistake for 1632, the date of the first recipe on the TF. And according to John Newman, the 1630s was the period when "Jones was ranging widely through his books, reading and above all comparing and supplementing one author with another," in other words, a period when Jones was most interested in the theory of architecture.[31] It was also, according to the research of Jeremy Wood, a period in which Jones, perhaps spurred by the visit of Rubens to London (1629-30), used drawing manuals to learn to draw.[32] The medical notes also help qualify debates about "magic" in the Stuart court. Was Jones a magus?[33]

My interpretive strategy is meant to initiate (or at least bring to the foreground) two possibilities for thinking about Jones. First, I want to help place Jones's work in the broad outlines of his culture, as opposed to the conventional view that places Jones in a purely visual culture, where he inevitably appears in the guise of the rational, Palladian, innovator. Second, I wish to use this historicized Jones as a model for contemporary practice. Although this essay is not directly concerned with present-day architectural culture, it seems to me self-evident that Jones's practices offers a sanguine counterpoint to the slight possibilities available to contemporary architects, particularly since Jones is often taken as standing at the beginning of a rationalist and technological architecture. My Jones uses technology, in the guise of machinery and perspective, as a symbol and practice of social integration rather than as lifeless contraptions that necessarily alienate architects from human life.

That this essay only initiates speculation is partly the consequence of the history of the history of architecture. Although Jones has been much studied in the twentieth century, especially since the 1973 quadricentennial of his birth, many of the kinds of complementary studies

[30] Webster, *The Great Instauration* 308.

[31] Newman, "Italian Treatises in Use" 437.

[32] Wood, "Italian Art, and the Practice of Drawing" 266.

[33] For the influence of Renaissance magic on Stuart art, see Hart, *Art and Magic*. Hart presents Jones as an artist working in Neoplatonic traditions, who, in his role as engineer of the stage machinery for court masques, "came to *resemble* the magus" (17; emphasis added).

needed to understand Jones's world are either missing or skewed. In a scathing review of the facsimile of Jones's Palladio, Rudolf Wittkower argued that a reader of Jones's notes needs "a solid linguistic [i.e. Italian], paleographic, and art historical foundation."[34] One could easily add to this list the need for a knowledge of medical practice, political and court history, literary history, military history, mathematics, and a knowledge of public and court theatrical practices. Even a knowledge of Stuart religious controversy might give some insight into both Jones's position at court and his church architecture.[35]

Take, for example, just one theme tangential to Jones's artistic practices: his sexual life. John Harris has speculated that during his first voyages to the Continent (circa 1597-1603), Jones travelled in homosexual circles, and had intimate relationships with homosexual or at least "dandified" patrons.[36] If true, this hypothesis would recast arguments such as Christy Anderson's that Jones's "masculine and unaffected" architecture is somehow equivalent to or an expression of ascendant Stuart ideals of masculinity.[37] If homosexual, it should not be much of a surprise that Jones's sex life is shrouded in silence—it is, after all the love that dare not speak its name; on the other hand in the Italian humanism Jones so readily adopted there is plenty of evidence of tensions between education, rhetoric and homoerotic practice.[38]

Speculation on Jones's sexuality and sexual self-identity could also change our perception of his love of ancient Rome. With his close connections to literary and dramatic milieus, he may well have been aware of his contemporaries's attempts to use ancient precedent to authorize homoerotic relationships and art in the same way he relied on "the precedence of antiquity to justify his architectural creations."[39]

The Harris homosexuality hypothesis could also modify our notion of the working relationship of Jones and his personal assistant John Webb. Jones engaged Webb as an apprentice in 1628 when Jones was 55 and Webb 17. Was this a Ganymedian relationship that replicated Jones's earlier relationship with his mysterious mentors? At top right of front Flyleaf 5r° is a quick sketch of two heads, one young looking up and one bearded looking down (described in the transcription as "a sketch of a man and a woman's head"). Anyone with a feel for the romance of architectural history will see this as a symbolic portrait

[34] Wittkower, Rev. of *Inigo Jones on Palladio* 61.

[35] Although he says little about Jones, see, for example, Sharpe, "The Earl of Arundel, His Circle, and the Opposition to the Duke of Buckingham, 1618-1628."

[36] Even if Jones's genius were apparent this early," writes Harris, "he would have required powerful friendships to permit him to spend so long in Italy; it might be suggested then that Jones participated in an intimate relationship with his patrons"; see Harris, "Introduction," Harris and Higgott, Inigo Jones: *Complete Architectural Drawings* 13-14.

[37] Anderson, "Masculine and Unaffected."

[38] See Barkan, *Transuming Passion*. Such "tension" is very clear in the case of Michelangelo, who sent love poems and erotic pictures to young Tommaso Cavalieri, but whose eroticism seems to have been "transumed" in art, pedagogic friendships and poetry rather than expended in sexual relations; see Carroll, *Paper Threshold*.

[39] The last phrase is from Anderson, "Inigo Jones's Library" 125. On his Ganymedian contemporaries see Smith, *Homosexual Desire in Shakespeare's England*, and Borris and Klawitter, eds., *Essays in Celebration of Richard Barnfield*.

of young Jones and experienced Palladio, since their handwritten names are intertwined many times on the same page. But it could also be a portrait of young Webb and experienced Jones. Since we know Jones and Webb shared the Palladio, perhaps it is Webb not Jones who intertwined the signatures on the same page.[40] In any case, the drawing of youth and experience together in a pedagogical setting points to the erotics of humanist learning if not to a specific sexual relationship between Webb and Jones.

This is not idle prurient speculation. Jones was fascinated by the homoerotic themes of the *Symposium*. He probably read the text of the banquet in a fin-de-siècle Italian translation (similar to his copy of Plato's *Republic*).[41] But although we do not have a *Symposium* annotated in Jones's hand, there is graphic evidence of his sympathy with the infamous scene in which Alcibiades tries to seduce Socrates, handing Socrates his cloak and offering up his youthful naked body to the older philosopher.[42] In more than one drawing Jones actually names the couple. The heads on the flyleaf are very possibly not a man and a woman but Socrates and Alcibiades (and thus also possibly symbolic portraits of Jones and Webb). If so Jones is caught here in a rare moment of "intimate and personal" invention: as Wood points out, depictions of the symposium are rare if not "unthinkable in Renaissance art."[43] It must be significant that Jones, a notoriously eclectic scavenger

0.15 (above left) *Studies of Socrates and Alcibiades with eight other heads and two sketches of a Hand* (Wood, "Italian Art, and the Practice of Drawing" 263).

0.16 (above centre) Two heads, possibly Socrates and Alcibiades; the names of Palladio and Jones are intwined with the bearded figure (Jones's Palladio F 5).

0.17 (above right) *Heads of Socrates and Alcibiades* (Wood, "Italian Art, and the Practice of Drawing" 263).

[40] Funnily enough, the homoeroticism of the relationships Palladio : Jones, Jones : Webb would be duplicated a century later in the relationship of two leading Neo-Palladians, Lord Burlington and William Kent (see Harris, *Palladians* 18). It would be interesting to know whether the theme of homoerotic mentorship continues throughout the reception of Jones, and if therefore there is a theme of humanist homoeroticism in the worldwide dissemination of Palladianism.

[41] Wood, "Italian Art, and the Practice of Drawing" 261.

[42] Wood, "Italian Art, and the Practice of Drawing" 260-64.

[43] Wood, "Italian Art, and the Practice of Drawing," 264. It is interesting, given Jones's usual Roman cast, that he would be fascinated by this Greek source.

of Renaissance art, choose an explicitly homoerotic moment from antique lore to express his creativity.

There seems to be little other evidence to conclude much about Jones's personal sexual relationships with Webb or anyone else. But there is another moment of explicit sexuality that connects his sexual thinking with his activity of annotating architectural theory. The last entry in the terminal flyleaves is a note from an edition of Hippocrates. On TF 9, after seven blank sides, Jones jotted "Out of Hipocrates his fisitious ffeare / from the 25 of September vnto ye 13 of May, but his comenter saith to the 24 of Junne, to youse Venus." This is Hippocrates's famous advice about when to have sex, to "youse [use] Venus" meaning to copulate. Hippocratic doctrine dictated that daily life—sleeping, eating, drinking, working—should follow the cycles of the seasons.[44]

The point here is that Jones's additions to Palladio's book might begin and end with *Greek* theorists, not the expected Romans, and that he begins and ends with speculation about sex. Once that set of bookends is acknowledged, Jones's Palladio becomes a source not only for tracing the influence of Italian theory on Jones's architectural practice, but a record (however difficult to interpret) and expression of Jones's sexual life. Jones wrote in his Palladio about problems of fleshly desire.

Indeed, one of the things that makes Jones seem modern to us, one of *our* contemporaries, is not his Palladian classical imagery, but his willingness to write down details about what goes in and out of his body.[45] His annotations can easily be mistaken for a compelling contemporary matrix of relays between text, anatomy, machine, body and architecture.[46] But Jones is not quite a modern figure. He is body-centred but not yet body-obsessed. His personal array of architecture, sex, theatre, medicine, and writing lies at a moment in the architectural tradition that is simultaneously *after* Neoplatonism and *before* rational classicism, an epoch exemplified by Scamozzi's treatise. As Marco Frascari puts it, "*L'Idea* lies at the crossroads between the old body-centred Renaissance Neoplatonism and the new age of mathematical order which would be exemplified by Perrault."[47]

By invoking such large conceptual divides I hope to link this essay to the history of ideas as much as to the history of architecture. The

[44] I have not yet found this exact source, but this famous sexual regimen is common enough in other Hippocratic texts widely available in Stuart England such as Thomas Cogan's *The Haven of Health*, released in six editions between 1584 and 1636.

[45] I have in mind here the general relationships proposed by Foucault in his *History of Sexuality* between textual proscription and modern subjectivity. On this modern scripted body, see Barker, *The Tremulous Private Body*; along with the important textual criticisms of Barker's argument in Nielson, "Reading Between the Lines" 47-49.

[46] This matrix is elucidated in Seltzer, *Serial Killers*.

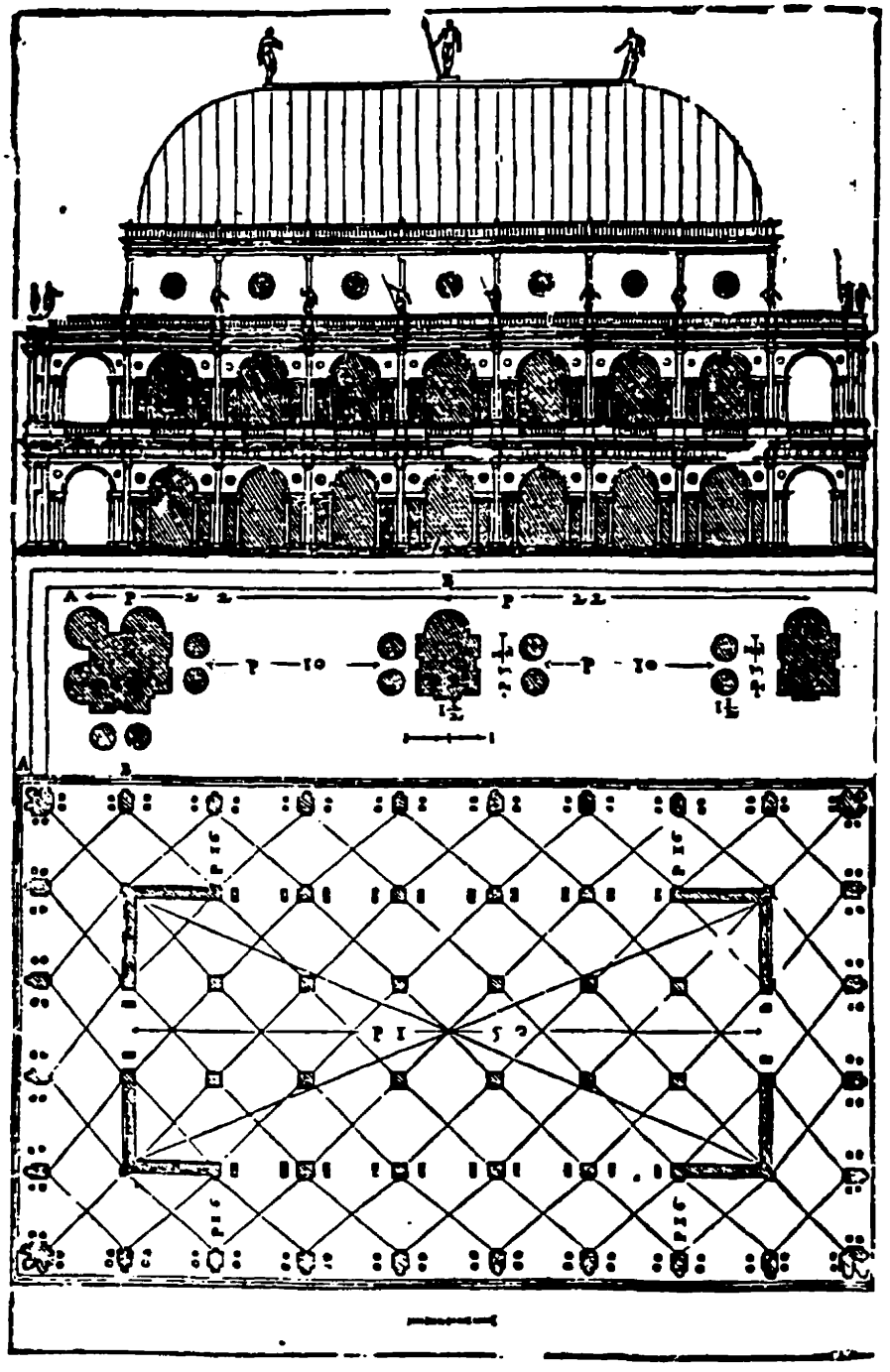
[47] Frascari, "The Mirror Theatre of Vincenzo Scamozzi" 260.

history of ideas demands the kind of multidisciplinary approach I am using, one that crosses over between the psychological, the textual and the physical. As Arthur O. Lovejoy explains, "it is part of the eventual task of the history of ideas to apply its own distinctive analytic method in the attempt to understand how *new* beliefs and intellectual fashions are introduced and diffused, to help elucidate the psychological character of the processes by which changes in vogue and influences of ideas have come about."[48]

Jones's Palladio is a stunning source for such a history, because it gives us a glimpse at the implications of operating radically *inbetween* ideas. Jones's notes show us a world poised inbetween the dialetical categories of human embodiment—spirit and flesh, body and soul, visible and invisible. Even more extraordinary, however, is that Jones's world contains simultaneously opposed ideational epochs that cannot be resolved dialectically, but nevertheless changed through a series of historical displacements and replacements. Inbetween the sheets of Jones's Palladio are traces of the much messier, complicated and contradictory story of how human embodiment itself came to be configured differently. His work and his body take shape betwixt manuscript and print culture, vitalist and mechanistic philosophies, betwixt the oral culture of the Stuart building trade and the written word of Renaissance architectural theory, betwixt personal desire and political change, inbetween mind and hand, pen and paper, machine and symbol, mouth and anus.

[48] Lovejoy, *The Great Chain of Being* 20.

1 Between Eye and Hand
The mind of the architect



1.1 Palladio, The Basilica, Vicenza, 1546-1617, elevation and plan (*Four Books on Architecture* 4.42).

Jones read Palladio. And sometimes as he read, he wrote in the margins. He annotated the text. Why did architects in the Renaissance write treatises on architectural theory? What did Jones try to accomplish by reading and annotating architectural treatises?

Annotation is more than note taking; it is as a way of extending the amount of time the reader is in contact with the text. Time spent reading is time Jones spent meditating on architectural theory, educating himself, memorizing details and coming to terms with Italian architectural terms for which there were no English equivalents.[1] Annotation was a sign of Jones's seriousness as a Renaissance reader.[2] Following the prescriptions of Renaissance educators, Jones filled the margins with notes and compiled them into commonplace books.[3]

In the Renaissance, both reading and writing were public activities oriented to public service rather than, as now, personal growth. Writing was not seen as self expression, and reciprocally reading was a goal-oriented activity. Readers were looking for actions and precepts they could imitate.[4] John Kerrigan explains that readers were supposed to extract from texts (moral) truths "accessible (and for the most part already familiar) to all."[5]

When it comes to studying Jones, however, scholars have taken this method of reading books as a source of models for ethical imitation and misconstrued it as a sign of thoroughly pragmatic, self-interested activity—as if Jones read not in search of moral truth but only to advance his career in a court where humanist learning was valued, or to amass and memorize a body of technical practical details of construction and ornamentation.[6]

"Practical" considerations certainly confronted Jones. And for a deep understanding of his work it is necessary to investigate his relationships with builders, the organization of his building sites, and the financial arrangements of his patrons and projects.[7] But none of those practical issues made much of a dent in the tradition of treatise reading and writing—in architectural theory—until after the French Revolution; despite changes in theory, building practice was relatively unchanged from the middle ages until the nineteenth century.[8] As Joseph Rykwert emphasizes, Jones's influence in these areas is under-valued

[1] On education, see Newman, "Inigo Jones's Architectural Education before 1614"; on memorization, see Anderson, "Inigo Jones's Library" 42 and 146; on the transliteration of architecture, see Cast, "Speaking of Architecture."

[2] Anderson, "Learning to Read Architecture in the English Renaissance" 243-248.

[3] This is the intellectual practice of "*loci communes*, gathering in notebooks or books citations, examples, references, and observations arranged by topic or theme" (Chartier, *Forms and Meanings* 38).

[4] Jardine and Grafton, "How Gabriel Harvey Read his Livy" 30-33.

[5] Kerrigan, "The Editor as Reader" 115.

[6] On Jones's reading as social climbing, see Anderson, "Inigo Jones's Library" 68.

[7] On Jones and city artisans, see Colvin, "Inigo Jones and the Church of St. Michael le Querne"; on building sites, see Hart, "Inigo Jones's Site Organization at St. Paul's Cathedral"; on Jones's royal patrons, see Newman, "Inigo Jones and the Politics of Architecture."

[8] This delayed change in practice is one of the subjects of Perez-Gómez, *Architecture and the Crisis of Modern Science*.

because rather than being primarily practical—finding ways to get things built—his (Jones's) great achievement was to translate the old "craft mysteries" into "the new Scamozzan and Neoplatonic terms."[9] In other words, Jones read Palladio and then told the masons not *how* to build but *why*. Jones was not looking into his Palladio for "practical advice"—that he would receive orally from the workmen—but rather he was looking for architectural theory.

Oddly, it's often art historical, stylistic analyses that claim most vehemently that pragmatic concerns were foremost for treatise readers and writers. Giles Worsley insists that practical matters governed the architecture of Jones and his contemporaries: they used "Serlian motifs" rather than those of Palladio or Scamozzi, because Serlio's did not require "high standards of carving and proportion."[10] Worsley claims Jones devised a cheap, simple, abstract "practical" style devoid of "intricate Classical ornament" because craftsmen were not well-trained in Britain. As proof he cites the need for full scale models of the West Portico of St. Paul's, ignoring a Renaissance tradition in theory and practice of model making.[11] Jones's Palladianism surely involved working with craftsmen, not simply manipulating them.

The problem is, this belief in an ethos of pragmatism can dictate a very inadequate understanding of the architecture of Jones and his contemporaries. David Howarth, for example, defines good architecture pragmatically "as building which meets the needs of the client efficiently or can be adapted to do so without undue delay or expense." Because of this definition, Howarth is surprised that "elements in English royal palace building could be conditioned by show rather than function."[12] Vaughan Hart has shown that in fact Jones's palace building was supported not only by show but by Solomonic iconography.[13]

Theory must also be distinguished from the heuristic principles of architectural education. After scouring Jones's notes and drawings Rudolf Wittkower concluded that "[e]very written indication, every one of his designs proves that he did not regard Palladio's and Scamozzi's works as pattern books from which he might pick single elements at random."[14] But in this model, one studies theory only in order to guide practice. Wittkower seems to believe that theory controls practice because theory *must precede* practice temporally. Although

[9] Rykwert, *The First Moderns* 137. Hart expands on Rykwert's observation in *Art and Magic* 123-125.

[10] Worsley, *Classical Architecture in Britain* 8.

[11] Worsley, *Classical Architecture in Britain* 15. Palladio himself built a famous wooden full-sized trial bay for the Basilica in Vicena; see Tavernor, *Palladio* 32.

[12] Howarth, *Images of Rule* 12, 14. What must Howarth think of Jones's more esoteric interests such as astrology?

[13] Hart, *Art and Magic* 112.

[14] Wittkower, "Inigo Jones, Architect and Man of Letters" 59.

Wittkower characterizes Jones's design method as "metaphysical," "humanist and essentially Platonic," his conception of Jones's "theory" amounts to little more than an account of Jones's education and training, describing how Jones designed but not why.[15]

In a nutshell, this chapter attempts to anwer the questionWhy read and write theory? I outline Renaissance architectural theory as a privileged political, social and cultural moment that specified architecture's position in human life in addition to its visual impact and formal coherence. Manela Morresi comments on Daniele Barbaro's translation of Vitruvius (1556), for example, that Barbaro's aim was pedagogical and polemical, specifically, that there was a "revolutionary potential" in holding up the "*all'antica* architectural system" as a reform of current practice as a mirror for a similar reform of Venetian politics.[16]

Architectural theory is thus an endeavour to bring pattern and order to everyday life. Renaissance treatises attempt to demonstrate and explain something significant that could not be clearly explained solely by architectural form, but was crucial to the experience of the building, and, moreover, to the significance of form and the ultimate purpose of making architecture. I want to show that Jones, the delineator of costumes and sets for such Neoplatonic fantasies as *The Masque of Queens* would not have read Palladio solely in search of craft work diagrams; he would have been sensible to these important invisible theoretical and cultural relationships.

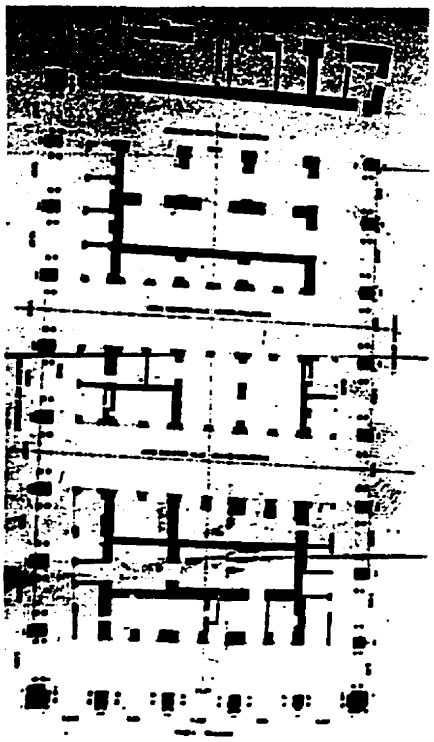
"Ultimate purpose" here is not the art of authorship. Deborah Howard's hypothesis that the differences between Palladio's built work and treatise drawings are due to his search for "internal stylistic consistency" for the "treatise as a work of art in its own right," while a useful insight into Palladio's writing method, tends to aestheticize Palladio's formal preoccupations as self-sufficient, a kind of art-for-art's-sake doctrine difficult to square with sixteenth-century Italian thought.[17]

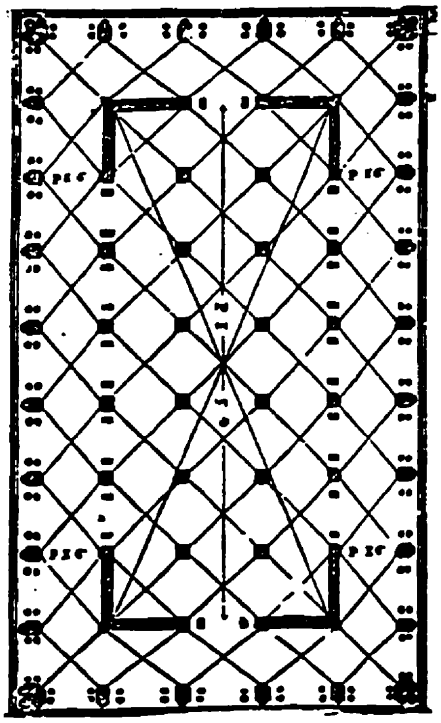
It is this problem of a *difference* between the built work and the treatise drawings that brings out the theoretical, not practical, goals of Renaissance treatises. The treatise is not primarily or solely concerned with how to build architecture. For Palladio, and for Jones, architectural theory was deliberately ambiguous in a way that their concern for

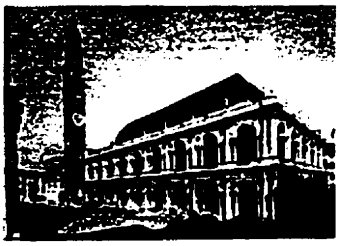
[15] Wittkower, "Inigo Jones, Architect and Man of Letters" 64. As I mentioned earlier, Newman argues that Jones looked most closely at his books in the 1630s, long after he was established as a trained architect ("Italian Treatises in Use" 437).

[16] Morresi, "Treatises and the Architecture of Venice in the Fifteenth and Sixteenth Centuries" 276.

[17] Howard, "*Four Centuries* of Literature on Palladio" 228.







1.2 (above) Palladio, The Basilica, Vicenza, 1546-1617, view across the Piazza dei Signori (Tavernor, *Palladio* 35).

1.3 (far left) Palladio, The Basilica, Vicenza, 1546-1617, plan, measured drawing as built (Zorzi, *Le opere publbliche* plate 45).

1.4 (left) Palladio, The Basilica, Vicenza, 1546-1617, plan (*Four Books on Architecture* 4.42).

precise drawings seems to belie, and that interpretations of Jones as the creator of a pragmatic rationalist *theory* fail to account for.

Indeed, the images are slightly mysterious.[18] Due to the complex rationale of Renaissance image-making, and not because of a difficulty understanding the conventions of technical drawing, the images are difficult to understand. In Palladio's illustrations, unlike the reductive working drawings found in pattern books or modern blueprints, the content of the architectural image is rarely merely a precise representation of a material object from the "real world."

Consider one brief example, the Basilica in Vicenza. If one compares Palladio's project for the Basilica in Vicenza as he illustrated it in his treatise long before the building was completed (it wasn't finished until 1617, 37 years after Palladio's death), and a measured drawing of what was actually built, one quickly sees that the measured drawing shows a building with its own "image" quite distinct from Palladio's drawing.[19] What is the (causal) relationship between the drawing and

[18] "Mystery" is not confusion. Paul Ricoeur, in a discussion of the Delphic oracle, writes "[e]nigma does not block understanding but provokes it" (*Freud and Philosophy* 18).

[19] This comparison is borrowed from the classroom teaching of Alberto Pérez-Gómez, who uses it to make the point that there is no imperative at this time (the sixteenth century) to realize ideal forms.

the building? Palladio's illustration is not a blueprint for the building—the Basilica was obviously not built according to Palladio's drawing. But neither is his drawing a mere mathematical idealization or abstraction of a real building—for the final form of the Basilica was as yet unknown when he drew it. Thus it appears Palladio's ideal drawing and the real building exist in autonomous ontological realms, related by correspondences, but the drawing does not entail the building. The treatise illustration is a *theoretical* drawing, manifesting theoretical concerns distinct from and in addition to pragmatic structural and constructional concerns.

The whole hypothesis that Palladio drew his illustrations to make his built work appear to conform to mathematical ideals, so attractive at first hearing, is very difficult to prove. The argument goes that Palladio adjusted the drawings in the book to fulfill the kinds of mathematical modular principles Wittkower made famous in our time in his *Architectural Principles in the Age of Humanism*. Palladio did use some form of proportioning system based on interlocking whole number harmonic ratios that bind together room dimenisons and room heights, the sizes of adjoining rooms. The entire system could even be based on the module used for proportioning the orders.[20] And Palladio did idealize some of his drawings of projects already built for publication; but he did *not* do so systematically. Deborah Howard explains that "there are a number of conspicuous examples among his projects in the treatise where, with small, unimportant adjustments to the dimensions, he could easily have achieved simple harmonic proportions had he wished to do so."[21]

It is because Palladio's drawings are clearly not idealized, mathematical abstractions of his built work that scholars continue to argue that the illustrations are primarily intended to help practical men with the pragmatic task of building. That is the usual interpretation of Palladio's desire to "make use of those terms widely used nowadays by craftsmen."[22] But it's a prejudice that undermines the philosophical tradition of architectural theory. That is, no one would read a treatise on the art of love and then go out and expect to know how to make love; similarly, reading Palladio on the art of architecture could never be an experience sufficient to allow you to make architecture. Thus

[20] See also Tavernor, *Palladio and Palladianism* 37-42.

[21] Howard, "Four Centuries of Literature on Palladio" 235. See also Howard and Longair, "Harmonic Proportions."

[22] Palladio *Four Books on Architecture* 1.6; see also translator's note 26.

Howard Burns's conclusion that "the way in which he [Palladio] introduced proportion into his buildings was pragmatic, and did not involve a total proportional regulation of every part of the building" errs on the side of seeing proportional systems as mechanistic algorithms rather than as ideal symbols.[23] If theory and practice are granted an ontological separation, then *building* may not have involved "total proportional regulation," while it remained necessary to demonstrate in theory and *drawing* the possibility of determinate underlying mathematical systems. For Palladio and other Renaissance architects, precise, geometric images were often theoretical propositions, not "blueprints" for the worksite.

Did Jones try to develop his own architectural theory? Scholars disagree on whether Jones intended to write out such a theory formally in his own treatise. The existing so-called theoretical drawings (in Webb's hand) were studied by Colin Rowe in a thesis directed by Wittkower. Rowe believes Jones planned the "treatise at the end of his life with Webb's support."[24] John Bold has countered that "[T]here is no . . . evidence . . . to indicate that the project was the brainchild of anyone but Webb himself. He, unlike Jones, had the appropriate cast of mind."[25]

More recently, in searching through the annotations, Gordon Higgott has tried to delineate Jones's theory, based on the "fundamental design principle . . . 'varying with reason.'"[26] Higgott argues that Jones developed a method for marrying mathematical theories of decorum and proportion with pragmatic practice through the use of a range of allowable proportions rather than rigid rules. He explains that "at the more detailed level of design, Jones was less constrained by precedent and proportional formulae. Pragmatism and a quest for visual coherence led him to modify his larger ratios and mold the proportions and ornaments of his orders to suit the purpose of the design or the distance that parts of the building would be from the eye."[27] But Morresi notes that in the Venetian treatises, the concept that in practice elements can and should vary within certain norms is the perquisite and requisite of the architect's imagination: "varying with reason" is a theme which points out the normality, the conventionality of Jones's thought, rather than indicating a coherent original theory.

[23] Qtd in Howard, "Four Centuries" 240 (see Burns, Boucher, and Fairbairn, *Andrea Palladio 1508-1580* 225).

[24] Wittkower, "Inigo Jones, Architect and Man of Letters" 61. See also Rowe, "The Theoretical Drawings of Inigo Jones.

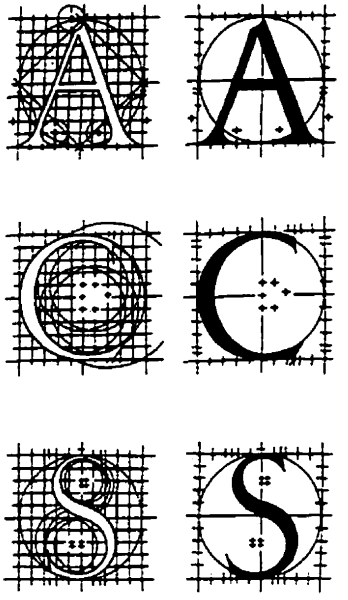
[25] Bold, *John Webb* 23.

[26] Higgott, "'Varying with Reason'" 53. Morresi, "Treatises and the Architecture of Venice," especially 273-276.

[27] Higgott, "'Varying with Reason'" 65.

Jones here took on an important idea received from Palladio and Barbaro that denotes the continuum of practice, not the continuum between practice and theory.

Higgott seems unwilling to place his argument in the broader cultural practices Morresi suggests motivated architectural theorists. He even slants his argument against philosophy by slander: "Jones evolved a coherent design theory," Higgott writes, "based not on esoteric concepts of number and geometry but on the fundamental principles of decorum, economy and *eurhythmia* ('beauty') expounded by Vitruvius" (in Bk. 1 Chap. ii).[28] This claim is a disguised repetition of the familiar twentieth-century opposition of British pragmatism and continental abstraction: what sense does it make to say geometry is "esoteric" and decorum "fundamental"? For Higgott, it seems, theory provides algorithms for practice, a design *method*, or it has no value at all.



1.5 Geometrical proportions designed by Dürer (Smeijers *Counterpunch* 89).

1.6 "A concept diagram for the first true design for printing type" (Smeijers *Counterpunch* 89). This strict geometry could not be followed in the fabrication of real type.

Indeed, "a quest for visual coherence" was not Jones's private obsession, but a project at the heart of the Vitruvian Renaissance. For instance, the fabricators of letter forms for the printing press walked this familiar tightrope between geometric ideals and pragmatic visual coherence. If Jones was interested in the making of books and ventured into a print shop, he would have seen a process with the same gap between theoretical discussions and practice as in architecture. The Roman type designs invented in the Renaissance "contain much asymmetry to compensate for the optical illusions to which the eye is prone."[29] Pacioli, Dürer, Leonardo and others may well have used geometry to propose letter forms that conformed to mathematical ideals of symmetry and proportion, but in practice *real* type was made by hand and eye without preliminary outlines.[30] The first attempt to design real working typefaces according to ideal grids and geometry was undertaken by the French Académie des Sciences at the end of the 1600s, and was quickly ridiculed as impractical. It wasn't until the late nineteenth century that type was first outlined on paper by a designer and later made in a separate process by a simple worker.[31]

I have been arguing that Jones read Palladio not solely as a practical guide but as an indispensable philosophical meditation. We can see evidence for this kind of reading in his notes. Newman writes that

[28] Higgott, "'Varying with Reason'" 52.

[29] Hengesbargh, *Typography for Desktop Publishers* 31.

[30] Pérez-Gómez notes that "Pacioli's newly designed alphabet is generated geometrically to reveal the letters' ultimate origin," *not*, I would add, because strict geometry was used or even useful in the print shop. "Thus geometry is understood as the origin of writing, as the trace of God's light upon the Tables of the Law or the minds of mortals, at the very origins of human culture and memory" ("The Glass Architecture of Fra Luca Pacioli" 14).

[31] Smeijers, *Counterpunch* 63-72.

Jones's marginal annotations to Palladio's discussion of foundations (which starts Bk I Chap. vii) "amount to a thumbnail practical manual on the subject."[32] Jones then turned to Vitruvius "in order to read about ancient methods at the fountain-head,"[33] and later, in another phase of annotations (according to Newman), Jones stopped translating Chapter ix, on ancient wall types: "Presumably he did not consider them of any practical use."[34] Newman evidently assumes that the only reason Jones read Palladio in the first place was in a search for practical, useful information. But why did "pragmatic" Palladio include useless material on ancient wall types? And why, if Jones wanted to know how to build a real wall, did he not simply ask the wall builders in his native London, rather than seek answers in a series of books describing ancient construction? The answer seems to be that the study of wall types is there for theoretical completeness, not practical usefulness.

Pragmatism and practicality are often said to characterize Renaissance architectural treatise as a genre. Vaughan Hart and Peter Hicks write: "With very few exceptions the authors of the treatises were experienced architects, and their books were not intended as abstract discussions on theory but as practical aids for the purpose of building."[35] Hart and Hicks base this argument on the supposed utilitarian nature of representation: "The illustrations in the sixteenth-century treatises should be seen as 'technical' rather than 'artistic' in nature, their principal purpose being to convey practical information concerning proportion, dimension and, with regard to the column and specific building types, character or decoration."[36]

Again, it is misleading to suggest that treatise illustrations are first and foremost technical. More than technical or artistic the illustrations in Palladio, if not in all treatises, are first and foremost theoretical. Among all those Renaissance men interested in Vitruvian disciplines such as machines, anatomy, and architecture, and art, who evolved new systems of 2d representations of 3d structures, it is difficult to find any expressing interest in increasing technical efficiency.[37]

In architecture the privileged views of plan, elevation and section were derived neither from artistic necessity nor from an a priori mathematical model in which they completely and exhaustively describe the building. Rather, they derive from Vitruvius—Bk I Chap 3. Here he

[32] Newman, "Inigo Jones's Architectural Education before 1614" 22-23.

[33] Newman, "Inigo Jones's Architectural Education before 1614" 22.

[34] Newman, "Inigo Jones's Architectural Education before 1614" 38.

[35] Hart and Hicks, *Paper Palaces*, "Introduction," 1; Tavernor takes a similar approach in "Palladio's 'Corpus.'"

[36] Hart and Hicks, *Paper Palaces*, "Introduction," 11.

[37] On representational schemes for anatomy and their relationship to other Renaissance drawing practices, see Sawday, *The Body Emblazoned* 133. I discuss this topic from other angles in chapter 3.

describes three ideas of architecture, *ichnographia*, *orthographia* and *scenographia*. The latter was interpreted by Barbaro as *sciographia*, based on shadows. Palladio's sectional view was thus view of the building's shadows, a theoretical proposition that neither describes how a building is made nor how users see it.[38] Palladio's orthogonal drawings are primarily theoretical *ideas*, showing how architecture appears in the realm of ideas, a view of buildings never accessible to human beings in the world.

The notion that Jones read Palladio philosophically pushes somewhat on the idea of Jones the magus rather than Jones the architect or Jones the visual artist. It is an idea advanced by Frances Yates in her book *Theatre of the World*.[39] Yates describes a tradition of British Hermetic, occult, alchemical philosophers having two strands that reach to Jones: a textual line that follows John Dee to Robert Fludd by way of the Rosicrucians, and, in parallel, and thanks to Dee's preface to a 1570 translation of Euclid's *Elements*, an occupational line through the artisans and craftsmen of London. Jones, alive in a hinge period before the creation of the Royal Society, figures as a test case for the Yates hypothesis. "It was precisely at the time [London 1605]," writes Charles Nicholl, "when modern science began to formulate its priorities—secular, empirical, mechanistic—that alchemical philosophy, which is none of these things, was at its most influential."[40]

Yates proposed that an attitude of experimentalism and a desire to make changes in the real world was an essential part of Renaissance alchemical and magical theory and practice. According to Yates this "scientific" outlook was directly responsible for the rise of the modern scientific method as we know it. In *The Rosicrucian Enlightenment* she argues that "the *main* influence on the new turning towards the world in scientific enquiry lay in the religious attitudes fostered in the Hermetic-Cabalistic tradition."[41] In Yates's, mind modern science—rooted in "seventeenth-century advances"—was a beneficial achievement. Beyond trying to raise awareness of the history of the Hermetic tradition, Yates argued for the existence of a direct link between magic and science in order to raise the stature of magic.

Yates's story has had a strong pull on the imagination of historians such as Roy Strong, who defines the court of Prince Henry, where Jones

[38] Pérez-Gómez and Pelletier, *Perspective Hinge* 45-49. See also chap 3.

[39] Yates, *Theatre of the World* 80-91.

[40] Nicholl, *The Chemical Theatre* 7.

[41] Yates, *Rosicrucian Enlightenment* 226, emphasis added.

was employed, as the flowering of "Dee's magico-hermetic universe, with its quest to harness powers and secrets, stemming from a pervasive view of the cosmos as governed by occult influences to which the key lay in number. That alliance of art, science and the monarchy snapped in 1612, not to be re-established until after the Restoration, with the foundation of the Royal Society."[42] Ironically this chronology implies that Jones created all of his architecture in a London *not* governed by Dee's Neoplatonic, Hermetic philosophy. Indeed, other scholars see little Hermetic thinking in Jones's work. David Howarth, unsympathetic to magic, declares that rather than inaugurating modern science, the "tradition of learning which descended from Dr. Dee and Robert Fludd through John Evelyn and other Restoration figures was essentially sterile."[43] Christy Anderson sees no evidence that this tradition of "hermetic intellectual culture," if it even existed at all, had any effect whatsoever on Jones and his circle. According to her any so-called Neoplatonic elements in Jones's work are simply part of a broader "humanist culture" which architects and patrons valued "for its moral value and cultural expediency."[44]

Those disavowing the determinism of the Yates thesis, however, should bear in mind Joseph Rykwert's comment that "[w]hatever the direct connection (or lack of it) between Jones and Dee, there is little doubt that he [Jones] breathed the mental climate formed by Dee and his disciples."[45] In particular, Yates makes us aware of the importance of the "Vitruvian subjects" in Stuart London, helping to explain, for instance, the presence of medical notes on the flyleaves of Jones's Palladio.

The general problem with declaring Jones a Neoplatonic magus lies in the difficulty, for the seventeenth century as for ours, in distinguishing usefully between magic and science. As Dalibor Vesely points out, one reason for so many "confusing and misleading discussions about the role of magic in the formation of modern technology" lies in our inability to draw useful distinctions between magic and technique.[46] Yates's belief that Dee's magic must have led to science, for example, is not widely accepted by historians of science, who see rather a fundamental opposition of the two ideas. Brian Nicholas H. Clulee, a scholar of Dee, writes: "This [Dee's] magic is not a narrow practical or

[42] Strong, *Henry, Prince of Wales* 219.

[43] Howarth, *Lord Arundel and His Circle* 126.

[44] Anderson, "Inigo Jones's Library" 261. William H. Sherman in his work on Dee explains this cross in the Renaissance between activities surrounding texts—writing, reading, libraries, consultations—and professional and intellectual roles. Sherman is vehement about the public, scholarly import of Dee's library, as opposed to the shock value of Dee's magical, spiritual work. He has " serious doubts" about "the packaging of Dee as—exclusively or even primarily—a hermetic, Neoplatonic magus, choosing to emphasize his role as a political advisor and scholar (*John Dee* xii).

[45] Rykwert, *First Moderns* 130.

[46] Vesely, "Architecture and the Question of Technology" 37.

instrumental natural magic that rejects occult virtues or the special esoteric and mystical insight of the sage. . . . [I]t points in the direction of a spiritual knowledge so opposed to natural science as later understood that it is impossible to cite Dee's concept of Archemastrie as evidence that Renaissance magic and occultism unambiguously contributed to the evolution of a new science."[47]

The point is, there is an "element of magic . . . in modern technique" which is not an anachronistic holdover from medievalism, but which persists because the beginnings of both science and magic lie in the Greek art of making.[48] The emancipation of the mechanical arts in the Renaissance, Vesely argues, allows for both magic and technique. There was no linear progression from Neoplatonism to mechanical philosophy in which magic figures as a primitive science. Rather magic and science remain together long after the clarifications of Mersenne, the inventions of Galileo, and the philosophy of Descartes. Isaac Newton, for example, wrote over 1,200,000 words on the occult subject of alchemy. Richard Westfall comments: "A fascinating correspondence between Newton and John Locke following the death of Robert Boyle reveals that the three men, possibly the last three men from Restoration England whom one would have expected, only a generation ago, to find so engaged, exchanged alchemical secrets and pledged each other to silence."[49] Thus even if Jones is not the quintessential Neoplatonic magus, scholars must be prepared to understand the element of magic in his work.

Another way historians counter the idea of Jones the magus or Neoplatonic philosopher is to propose Jones the visual artist, whose crucial contribution was to adopt the concepts and forms of Italian art. For Rudolf Wittkower and Fritz Saxl, Jones is a highlight in a long history of British imitation of Mediterranean visual culture.[50] Now Jones's visual sophistication, his knowledge and use of Italianate traditions, is not in dispute. It is just that the question of taste and the idea of progress need to be distinguished. For example, Lucy Gent notes that Jones's friend Sir Henry Wotton associates the language of Italian classicism with "progress towards a civilized consciousness" in the preface to his 1624 treatise *The Elements of Architecture*.[51] Civilisation, however, was epitomized by ancient civilization, not future ones, and

[47] Clulee, "At the Crossroads of Magic and Science" 65. For more on the difficulty of separating magic from science, see Copenhaver, "Natural magic, Hermeticism, and Occultism in Early Modern Science."

[48] Vesely, "Architecture and the Question of Technology" 37.

[49] Westfall, "Newton and Alchemy" 315.

[50] Wittkower and Saxl, *British Art and the Mediterranean*.

[51] Gent, *Albion's Classicism*, "Introduction" 12.

certainly not contemporary Catholic Italy.

From whence Jones's interest in things Italian? A cultural fascination with Italy was "in the air" in Stuart England, but we can only speculate whether Italian books, an early visit to Italy or perhaps Italian friends or mentors in England spurred his special interest. Certainly an appreciation for recent Italian art was pronounced in Prince Henry's court. Jones may have learned to draw from Isaac Oliver (1566-1617), an artist also contracted to the prince, who had travelled to Italy and who like Jones venerated Parmigianino.[52]

In charge of building projects for Henry were two other men who must have been of some influence: French Calvinist Salomon de Caus (1576-1626), who arrived in 1608 and left in 1613 for Heidelberg, and Constantino de' Servi (1554-1622), who spent "five years [1611-1615] in England embodying, however inadequately, the Renaissance concept of the architect as *uomo universale.*"[53] Strong suggests that exposure to these talented and well paid (respectively four times and two times what Jones received) designers made Jones feel jealous and inadequate, spurring him on to oust foreign pretenders from his future career as the British Vitruvius.[54] But it is equally possible that one or both, or someone in their entourages, *encouraged* Jones's architectural ambitions. Perhaps this is even how he received his copy of Palladio.

Even if Italianism was in the air, there remains the intriguing question "Why Now?" Vitruvian, classical principles had been known among British patrons and builders for a long time—the Italian Renaissance was already two hundred years old. So why only with Inigo Jones do classical forms, classical imagery and classical architecture erupt in Britain?[55]

Too often this question of "why now?" is dismissed as a shift in tastes and the fashion of styles.[56] John Summerson, for example, identifies Jones's "artistically Palladian" built works as "the foundation stones of two centuries of London taste."[57] Although Jones's connaisseurship helps explain his role in the history of British classicism, it is not sufficient to explain itself; that is, it leaves open the same question of why did Jones become a connaisseur.[58] Other suggestions for why classical architecture erupted at Whitehall in 1622 are legion, some of which I have already discussed: Jones's simplification of classi-

[52] Harris, Orgel, and Strong, *King's Arcadia* 60.

[53] Strong, *Henry, Prince of Wales* 105.

[54] Strong writes: "Without the inadequacy he was made to feel under de' Servi it is probable that he would never have gone again to Italy. And even if he had he would not worked with the passion that he did, for he had to return this trip not a picture maker but the 'Vitruvius Britannicus' who would eliminate any question of future foreign competition" (*Henry, Prince of Wales* 113).

[55] Christy Anderson asks: "Why do styles change, and who supports them and why?" ("Inigo Jones's Library" 11), however phrased this way the question conflates two separate inquiries: what is a coherent architectural style and what is a coherent architectural theory. Different styles can have the same theoretical foundations. It is theory that interests me here.

[56] "After all," claims Gordon Toplis, "Horace Walpole, writing within ten years of Burlington's death, said that the Banqueting House stood as 'a model of the most pure and beautiful taste.' A more misleading summary of Jones' methods and capabilities can hardly be conceived" (Toplis, "The Sources of Jones's Mind and Imagination" 63).

[57] Summerson, *Georgian London*, 37.

[58] The inadequacy of the gustatorial explanation is exemplified in the work of B. Sprague Allen. He accuses Inigo Jones of introducing "into architecture a disciplinary spirit that anticipated by nearly fifty years the advent of a similar phenomenon in literature" (*Tides in English Taste* 1: 19-31). In order to make this claim, Allen has to conflate Jones's buildings with later classicisms, e.g., anachronistically, he discusses Palladio and Jones in terms of axial symmetry, a notion not introduced into architectural theory until Claude Perrault (1613-1688) published his 1673 translation of and commentary on Vitruvius.

cal ornament;[59] the availability of printed architectural treatises;[60] John Dee's Vitruvianism bearing fruit in Prince Henry's court;[61] the changing role of England in continental politics, promoting links with the visual culture of Palladianism in the Low Countries;[62] and Jones's firsthand study of antique buildings in Italy, especially Rome, and France.[63]

Obviously none of these factors is exclusive. For instance, Jones's firsthand experience and his library are part of the general trends towards continental travel and book collecting. What's difficult is deciding how to combine them into the story of the erumpent Whitehall Banqueting House, which, despite the existence of classical traditions in England, must have appeared to have been conjured up in an astounding act of parthenogenesis. But there is a further important irony that the conversion of the British to classicism, one of the most dramatic changes in all of architectural history, was spearheaded by a reactionary. Jones went to Italy and came back fascinated with the architecture of Palladio and ancient Rome, not to the latest ideas and formal trends.

In his reactionaryism Jones was perversely in the forefront of Renaissance thought. "The great forward movements of the Renaissance," explains Frances Yates, "all derive their vigour, their emotional impulse, from looking backwards. . . . The classical humanist recovered the literature and the monuments of classical antiquity with a sense of return to the pure gold of a civilization better and higher than his own."[64] More precisely, Mario Carpo notes, the humanists believed that the antique past was better than the *near* past: "The idea of 'moving forwards looking backwards' may seem strange, but the Renaissance version of imitation after antiquity was in many ways innovative with respect to the medieval tradition."[65]

Thus Jones had a taste not so much for the Italian as for the Roman. Rome, the centre of things Roman, just happened to be in Italy. This "taste" corresponded not to avant-garde visual tastes but to beliefs about history and political dogma. This point is not controversial. King James, explaining his ascension to the throne of Great Britain, uniting Scotland and England, drew explicit parallels between his own rule and the Augustan age. He made this story into public policy, "the

[59] See Worsely, *Classical Architecture in Britain*.

[60] See Carpo, "The Making of the Typographical Architect."

[61] Hart, *Art and Magic* 129-131.

[62] Worsley, *Classical Architecture in Britain* 37-39.

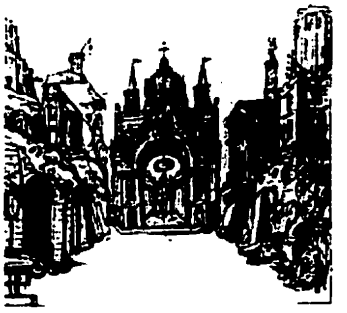
[63] On Jones in France, see Higgott, "Inigo Jones in Provence."

[64] Yates, *Giordano Bruno* 1.

[65] Carpo, "The Making of the Typographical Architect" 165. The very idea of history in Stuart London needs be qualified. The Stuarts believed that the truth of history is moral, and it consists of models to be imitated, not facts to be memorized (Woolf, *Idea of History in Early Stuart England* 12).

notion that Great Britain was a single entity, descended from the Roman Empire, and destined to receive the glories of Augustan Rome."[66]

Jones's collaborator Ben Jonson and Jonson's teacher William Camden(1551-1623), author of *Brittania*, believed strongly in the moral primacy of Roman society. The goal of the artist was not to make new, but to imitate the past. John Peacock notes that in a masque created with Jones for Prince Henry, Jonson has King Arthur say that "'it is nobler to restore than make.'"[67] This interest in things Roman was a broad concern in the seventeenth century. As Annabel Patterson shows in an essay on Ben Jonson, Stuart Britain regularly exploited Roman history "as a context for interpreting contemporary events."[68]



1.7 *St. George's Portico* for *Prince Henry's Barriers* (1610), a stage design which combines medieval and classical styles (Harris, Orgel, and Strong, *King's Arcadia* 60).

Jones's interest in antiquity came from these two fairly distinct sources. One was scholarly, showing a fascination with Roman historical thought; the second was architectural, for Jones was as fascinated as anyone in the Renaissance with Roman buildings, whether the existing ruins visible in Rome or the reconstructions in Palladio or Bk 3 of Serlio. Scholars have argued that in his theatrical work for Prince Henry Jones tried to combine gothic and medieval styles with the Roman to come up with something British.[69] But in his architecture, Jones was decidedly focused on the munificence of the monuments of ancient Roman. Christy Anderson points out that the two influences dovetail nicely, that Jones used "the methods and resources of English antiquarians in his study of ancient architectural precedent."[70]

In brief, Jones looked *through* Palladio back to the Romans. If Jones's work betrays scientific progress or avant-garde visual innovations, it is an irony; he himself undoubtedly used Palladio to look backwards at History and Antiquity, and not sideways at leading continental artistic and scientific circles. There is little practical, pragmatic utility for Jones in this reading of Palladio.

These issues of Italy, ancient Rome, theory, practice and Jones's Palladio come together in Jones's renown as a great traveller. Jones's fame and success as an architect is somehow tied to the idea that he studied Italian architecture in Italy. Gotch writes that Elizabethan architects "Thorpe and Smithson, had both ability and opportunity, but they were far too busy to go to Italy for the purpose of prolonged study, and they had to obtain what help they could from the few books

[66] Riggs, *Ben Jonson* 17.

[67] Peacock, "Jones and Jonson Collaborate on Prince Henry's Barriers" 190.

[68] Patterson, "'Roman-cast Similitude'" 382.

[69] Peacock, "Jones and Jonson Collaborate on Prince Henry's Barriers."

[70] Anderson, "Inigo Jones's Library" 2.

which were then published on architecture."[71] The main import for scholars of Jones's travels is the idea that he had *firsthand* experience of ancient and Palladian architecture. That is, his travels gave him knowledge of classical forms as a crucial supplement to his study of books.[72]

Since it is so central to Jones's reputation as a Palladian, the lack of knowledge about the timing, extent and itinerary of his earliest travels is striking. John Harris has speculated that Jones may have spent as many as five years in Italy following the death of his father in 1597.[73] Did he become truly fluent in Italian (and if so, why so did he translate so much of Palladio's text in his marginal notes?).

Even the purchase of books may have involved long, difficult voyages. The ubiquity of printed texts today makes it difficult to imagine the rarity of books in Stuart England. Books were expensive at the beginning of the seventeenth century, especially lavish folio volumes published in foreign countries. Perhaps Jones bought his Palladio in Venice in the year of its publication.[75] Someone, maybe the bookseller, has written "1601 doi docati Ven[ezia]" on one of the front flyleaves (not legible in the facsimile). It is one thing to travel by boat across the English channel and weeks or months across the continent to purchase a book in Venice, quite another to double-click on amazon.com.

Books were part of the culture of traveling. On this 1613 trip with Thomas Howard, Earl of Arundel to Italy, Jones seems to have travelled with a library of about twenty books.[76] He made preparatory notes in the Palladio before setting out, recorded facts and impressions while in Italy, and added commentary once back in London, for example his note on Genoese Loggias in BK1 p. 52 dated "18 Jan 1614 [1615]" (1.52).[77]

The opposition of book *theory* and building *practice* I started with can even be restated as an opposition of in *books* and in *Italy*. In this argument, personal experience of Italian architecture is seen as fundamental to Jones's achievement because it gave him practical experience rather than theoretical knowledge. Books give abstract information about alien, far way, distant, foreign practices that can only be made useful by personal experience with the real.

Jones himself contributes to this belief in the priority of the architect's hand over the engraver's reproduction. For all the impor-

[71] Gotch, *Inigo Jones* 7. The rationale ("far too busy"?) seems entirely speculative, one that we don't have enough facts to support.

[72] Anderson claims: "Travel is the crucial link between text and practice in understanding Jones's method of approaching antiquities" ("Inigo Jones's Library" 143).

[73] Harris and Higgott, *Complete Architectural Drawings* 13. Harris adds that "Jones did not return from Italy fully versed in the latest Florentine or Parisian stage techniques. He was learning [in the years after 1603], and this only amplifies the enigma of what he did produce in Italy before 1603" (14).

[75] Newman, "Inigo Jones's Architectural Education before 1614" 18.

[76] Harris, Orgel, and Strong, *King's Arcadia* 56. Harris, who writes this note, says Jones "was the first Englishman to travel in this intellectual manner," but Donne had journeyed in a similar fashion the year before; see Bald, *John Donne* 85-103.

[77] Bear in mind that Jones never embarked on the Grand Tour. That phenomenon belonged to a later era (and a different social class) than Jones's, when the "passing of the courtier, the widened scope of the university, the rise of journalism, and the ascendancy of England, changed the attitude of the English Traveller from eager acquisitiveness to complacent amusement" (Howard, *English Travellers of the Renaissance* 201).

tance of Palladio's book as a printed text, Jones had access to a significant pile of Palladio's drawings. Henry Wotton had purchased some, possibly from Scamozzi, and Arundel picked some up as well.[78] Jones often makes a note when he has compared the printed image to the original, for example in BK IV where he notes "This drawing Sr Ha Wo that was done by the Anticke" (4.29). Such notes undercut the value of print in Jones's cultural setting. In the history of the establishment of Palladianism in England, Palladio's drawings have to be given a starring role alongside the new ubiquity and "availability" of the printed page. Jones consulted unique *hand*made documents, not just mechanical reproductions.

To sum up: Jones did not passively read his Palladio, he actively annotated it, at home and in Italy. He read it, that is, in settings that often had little to do with the practical problems of the building site. And when he read he looked for theoretical, scholarly and historical principles, even travel information, not just for an architectural design methodology.

Next I want to move in from the intellectual background of Jones's annotations to a closer examination of his physical and psychological relationships with the pages of his book.

[78] Harris, Orgel, and Strong, *King's Acadia* 56.

2 Between pen and paper
The hand of the architect

2.1 Inigo Jones after Oliviero Gatti (after Guercino), *Studies of Hands and Fingers* (Wood, "Italian Art, and the Practice of Drawing" 259).

In the last chapter the focus was on why Jones read Palladio. I looked at personal, social and cultural influences (texts *and* people) to see what motivated his reading, and what kinds of things he expected to get from the treatise: theoretical grounding, textual authority (that would advance his career at court), technical knowledge, an understanding of Roman (and therefore British) history, a travel guide to contemporary Italy and ancient Rome.

This chapter uses some of the same procedures, looking at textual and social links (his books and his friends and his friends's books) this time in order to consider the activity of reading and writing, of annotating Palladio, in the context of the history of reading and writing in Stuart England. Jones annotated in a period when authorship and printing were forming an indissoluble link, that is, when for the first time *being an author* and *being in print* were becoming two ways of being the same thing.

Jones's Palladio is a document as suited to understanding the history of reading as the history of architecture. Even within architecture it is most often used as a guide to what and how Jones read. The notes are equally valuable as evidence of Jones as a writer. Once again, it is the *difference* between Jones the reader and Jones the writer that opens up onto the historiographical and theoretical debates surrounding what Walter Ong has called the technologizing of the word: the transformation from oral culture to writing, a change driven in the Stuart era by the change from manuscript to print and the new links forged between humanist education and printed texts.[1]

Despite the *heuristic* utility of the notion of a technologizing of the word (or the image), as well as its relevance as a deep insight into the general history of western technology, the concept is of limited *hermeneutic* utility in studying Stuart England.[2] The effects of the technology of the printing press are subtle and contradictory.[3] Typesetting text simultaneously puts a value on handwriting. The appearance of mechanically printed texts automatically confers an aura of immediacy on manuscripts, and institutes a difference between original and copy quite different from the difference between oral and written. And as I discussed, Jones was well aware of this difference between original and reproduction: he compared Palladio's original

[1] Ong, *Orality and Literacy*.

[2] Ong's argument has been much debated. See for example Street, "Walter Ong on Literacy." On the question of the phenomenology of print, see Kernan, *Printing Technology, Letters, & Samuel Johnson*. On the technologizing of the image, see Mario Carpo, "The Making of the Typographical Architect."

[3] On the impact of print, see Febvre and Martin, *Coming of the Book*.

drawings both with existing buildings and the illustrations reproduced in the *Quattro libri*.[4]

This chapter, however, is not an exhortation to "consult the original" rather than use the notoriously unreliable transcription and often unreadable facsimile.[5] Rather, I try to develop the idea that for Jones, in Jones's era, the physicality of the text, of the book page that contained print, image and handwriting, grounded in the immediacy of speech, was an important concept in the workings of literacy.

What we know of Jones, the facts of his biography, career, family and friends, is sketchy and bare. This lack of documents of Jones's intimate life—no letters, few references in other sources—makes his Palladio the most affective of source materials for study. The annotated book helps us not only to verify travel dates to Italy or trace sources for his designs, but in reading it we are able to construct a personality for the person. The book is well-thumbed, "warmed" by his hands, imprinted by his body not just his intellect, by the *real* Jones, whose hand appears in the handwriting.

Jones's notes gives us a glimpse of his character. Christy Anderson argues that "to approach the [Jones's] library hoping for a more emotive statement by Jones of his buildings is to ignore the very nature of the archive."[6] But the notes about travel, health, sickness, disease, friendships, social relationships and personal experiences do reveal something of Jones's "emotive" states. On page 52 of Book I, for instance, Jones writes "I have observed that some loges ar maad without the house and others within." The observation was made in Genoa, but the note is dated London 18 Jan 1614 [1615]. We therefore know what kind of a traveller he was and what he remembered of his travels—the vagueness and imprecision of his comment counts, too. And we know something of his interest in the development of a new building form in Britain.[7] The notes tell us of his eye and his I, not only his travelling persona, but what he saw. In studying the notes we can form some estimation of his person in addition to his historical personage.

It is precisely the tenor of the note-taking activity that has struck most readers, even those, like Wittkower, looking only for evidence of Jones's "mentality as an architect."[8] "Everyone who goes through these notes," he writes, "must be struck by the profundity and thoroughness

[4] Christy Anderson notes 13 places in BK IV where Jones makes comparisons between the buildings and the pages: 10, 12, 53, 54, 73, 74, 77, 79, 80, 96, 98, 112, and 115 ("Inigo Jones's Library" 144).

[5] On the inadequacies of the facsimile, see Wittkower, Rev. of *Inigo Jones on Palladio*. As far as I can tell, although each scholar who has examined the original closely seems to find some small emendations to make to previous transcriptions, the controversies in Jones studies arise from interpretive strategies and not factual inaccuracies in the transcriptions.

[6] Anderson, "Inigo Jones's Library" 14.

[7] See Henderson, "The Loggia in Tudor and Early Stuart England."

[8] Wittkower, "Inigo Jones, Architect and Man of Letters" 51.

of his observations, by his attention to detail and his intimate knowledge of a whole library of architectural source books."[9] Wittkower thus discovers something of Jones's character but interprets it as intellect. Many scholars show this tendency to downplay Jones's personality. For example, the infamous argument between Jones and Jonson is usually relayed as a confrontation between two artistic theories, partly due to the excellent study of the theoretical crux by D.J. Gordon.[10] But there are good reasons for thinking of the quarrel as social and personal rather than theoretical and political. Jones would not have been the last autodidact to turn into a bombastic didact. Jonson's stepfather was a bricklayer; at two separate periods of his life Jonson himself joined the bricklayer's guild. But according to biographer David Riggs, Jonson resented his stepfather and hated the low-paying, messy work.[11] So Jonson had an obvious psychological animosity to the arts of building.[12]

Therefore, Jonson's bitter lines deriding Jones made at the breakup of a 25-year friendship, describe what may have been a quarrel or clash of egos, not a struggle for intellectual supremacy.[13] This question of discerning personality from intellectual position is a problem noted by Kevin Sharpe in his discussion of parliamentary history under the Stuarts. Noting that emotional outbursts were common in the House, he cautions against writing the "history of parliament" as "a catalogue of heated moments."[14] He adds that Parliament was "a world of flux and doubt, not one of resolution and certainty, a clash of personality not principle."[15]

Still, such are the thin materials we have to work with: we must evaluate Jones's thought and character on the basis of scanty evidence of the reactions of others to specific circumstances. The marginal notes remain the source that gives us the best "feeling" for what Jones "really" thought.

The notes create personality effects. By this I mean the way in which handwritten texts, such as Jones's marginalia, produce an especial feeling of personal connection with the writer in a way that published texts cannot. When we read handwriting, we can imagine the physical attitude and labour that produced it, because we do a similar thing ourselves when we take hold of pens. The illusion or sensation or

[9] Wittkower, "Inigo Jones, Architect and Man of Letters" 61.

[10] Gordon, "Poet and Architect."

[11] Riggs, *Ben Jonson* 16.

[12] One other source of rancor might have been Jonson's animosity to Italian culture, which John Peacock discusses in "Ben Jonson's Masques and Italian Culture."

[13] For further discussion of the quarrel, see Summerson, *Inigo Jones* 108-111.

[14] Sharpe, "Introduction: Parliamentary History 1603-1629" 10.

[15] Sharpe, "Introduction: Parliamentary History 1603-1629" 13.

effect of communing with a distinct personality is created when looking at manuscript in a way that it is not when looking at published text.

In an essay on Jones's near contemporary Gabriel Harvey (1550-1630), James Nielson emphasizes that sensing these personality effects is one of the (often unacknowledged) goals of manuscript research. "My interest in [Harvey's] manuscript," writes Nielson, "has to do specifically with the ways in which it is able, *as a manuscript*, to allow or even force us, as practical readers of it (however sophisticated a *theory* of textuality we may have), to feel that we *can* get at the 'real Harvey' through his *handwritten* text."[16] When reading the annotated Palladio we feel the "real Jones," partly because of obvious quirky "personal" characteristics, such as Jones's atrocious spelling, that would have been neutralized or homogenized in the transformation to print, for example by copyeditors.[17] In Jones's marginalia, we get first of all, as Nielson writes of Harvey, "the meandering, philandering life in the lines of his hand," the illusion of the lived life of the handwriter.[18]

In the case of published authors such as Gabriel Harvey, Donne, Dee or Montaigne, these autobiographical *affect*ive illusions are reinforced by the existence of both printed and manuscript versions; the authentic, "real" Harvey can appear to be approached through manuscript only because the other, authorial Harvey is distanced, controlled and authenticated by publication. But this authenticity is, at best, a differential *effect*. It is ironic how quickly the effect can be hypostatised as a technological fact. Richard B. Wollman, for instance, sees Donne as prescient, consciously choosing to undermine the authority of print:

> The finality of print locks in the author's words with a rigid physical fixity that separates language from its origin as utterance. Manuscript, as Donne demonstrates, preserves to a greater extent the oral expression of the writer by inviting a closeness with the reader that becomes more and more difficult, if not impossible, to achieve in print.[19]

Wollman's Donne worries constantly about misinterpretation, about how the press places his poems "in the visual realm of the printed word at a distance from spoken utterance" (95). But the change from manuscript to print was anything but clear. Stuart England is a pivotal time, when the "fixity" of print was hardly assured, much less the spatialisation and visualization of the word. Is Wollman right that

[16] Nielson, "Reading Between the Lines" 44.

[17] Print did not at first make for a more "accurate" text. Proofreading is a different skill from copying, and the errors it creates are different from dictation errors. Writers had to contend with the mechanics of printing and publication, not simply the abstract "meaning" of their work; see Hoffman, *Montaigne's Career* 86-87.

[18] Nielson, "Reading Between the Lines" 76.

[19] Wollman, "'The 'Press and the Fire'" 88-89. Further references are made parenthetically in the text.

these were Donne's anxieties about orality, manuscript and print, or are they his own?

Among Jones's associates, in fact, John Donne can be singled out for some remarkable remarks on the relationship of words to the writer. Donne and Jones were born in the same year. In his biography of Jones, Gotch contrasts their lives to show Donne as someone with education and high-placed friends, as opposed to Jones's humble beginnings, and to characterize Jones as a self-educated man who rose on his own talent.[20] A more insightful portrait of the courtly milieus in which their careers operated is in R.C. Bald's biography of Donne. Bald has an astute discussion of Donne's friends, one of whom is Jones, in that crucial period after Queen Elizabeth's death, showing both the kinds of sources available and what analysis of them can reveal.[21]

The most well-known connection between Donne and Jones is that they both attended Thomas Coryate's Philosophical Banquet in the Mitre Tavern in 1611. (Jones included some verses in Coryate's *Crudities*, which includes poems from 56 friends as a preface.) The group of ten friends who met were barristers, not particularly a literary group, most of whom were members of the Inns of Court with links to Prince Henry's household. This was probably the same "worshipfull Fraternitie of Sirenical Gentlemen, that meets the first Fridaie of euery Moneth, at the signe of the Mere-Maide."[22] And one 1611 source implicates "Henego Jhones" along with others of Donne's associates including Sir Henry Goodyer and mathematician Thomas Hariot in the Gunpowder plot.

Donne had many other opportunities to meet with Jones. Professionally they would have worked together on two well-known projects. One of Donne's first appointments after his ordination was as "diuinitye Reader" for the Benchers of Lincoln's Inn. Donne's friend Christopher Brooke was a member of the building committee for the new chapel. In January 1617/18 Brook was sent to persuade Inigo Jones to undertake the plans. In February the Council of the Benchers considered a model, although it was not until at least November that the final site was chosen.[23] Although Donne soon left for Germany on Doncaster's embassy to see the princes of Germany, he did lay the foundation stone.[24]

[20] Gotch, *Inigo Jones* 50-51.

[21] Bald, *John Donne* 155-199.

[22] Bald, *John Donne* 192; see also I.A. Shapiro, "The 'Mermaid' Club."

[23] Bald, *John Donne* 329-330.

[24] Bald, *John Donne* 382.

The other project was St. Paul's Cathedral. James I visited the Cathedral on Sunday 26 March 1620, before Donne was Dean, and instigated a Royal Commission to gather materials and funds for renovations. Although the project was not undertaken seriously until Laud succeeded Donne to the Deanery, Donne and Jones probably had professional dealings about the project.

For Donne the problem of the word was one of spirit, not technology. As Elaine Scarry has shown, the issue for Donne is volitional materiality, God's "breathtaking" willingness to have a body, and the intractable question of the passage between body and spirit.[25] Donne investigated the passage between spirit and matter evinced in the incarnation by searching out the materiality of words. Donne's solution, writes Scarry, is first of all to imagine words together with the paper that holds them as one material object, bypassing "the problematic immateriality of language by thinking in terms of something that already has material standing in the world."[26] That is, he addressed the notion of the spoken word's weight in the world by thematicizing the physical life of paper (which could contain handwritten *or* typeset text).

For instance, on his occupation of the Deanery of St. Paul's, Donne wrote to the Duke of Buckingham "I most humbly beseech your Lordship to afford this ragg of paper a room amongst your evidences."[27] He continues "I deliver this paper as my Image; and I assist the power of any Conjuror, with this imprecation upon myself, that as he shall tear this paper, this picture of mine, so I may be torn in my fortune, and in my fame, if ever I have any corner in my heart, dispossessed of a zeal to your Lordships service." Leaving aside the question of Donne's belief in the conjuring (whether it is a mere metaphor or a description of real magic), Donne is clearly conceiving the materiality of paper, the integrity of the page, as essentially alive, a conjunction of word and image and person.

In a Sermon preached at St. Paul's, Easter 1625, Donne meditated on the Shroud of Turin and the significance of the absent body of Christ.[28] Janine Debanné has described the Shroud as "a perennially dual sign: vestige of bodily presence and reminder of absence, tangible and yet invisible."[29] Her discussion concerns Guarini's SS Sindone

[25] Scarry, "Donne" 71.

[26] Scarry, "Donne" 75.

[27] Qtd in Bald, *John Donne* 375.

[28] Scarry, "Donne" 70-72.

[29] Debanne, "Surface and Appearance in Guarino Guarini's SS. Sindone Chapel" 49.

Chapel that receives the shroud in Turin. Donne thus may be a surprising link between Guarini's extravagant "Baroque" forms and Jones's conservative classicism (e.g. for his renovation of St. Paul's), showing how deceptive the stylistic history of architecture can be.

Michel de Montaigne presents another limit case of the question of the personality effects of printed texts.[30] For each successive edition of his *Essais*, Montaigne revised the text by making handwritten marginal notes in his own publications, a process of composition Robert D. Cottrell calls a "genuine oddity."[31] Montaigne's revisions say little about whether he had a theoretical preference for written words over spoken words, but they do suggest that he had no concept of the fixity of print, and that he saw the typeset texts not as finished works but as canvas and palimpsest.

This rather postmodernish image of Montaigne's text as a layering of traces comes not out of contemporary textual theory but rather from the material conditions of production and circulation of writing in the Renaissance. George Hoffman, a scholar who has researched Montaigne's "engagement with the immediate mechanics of publishing and printing his book," cites evidence that Montaigne even ordered the paper for his book himself.[32] "The Essays' watermarks all bear the image of a heart; an 'open heart'," Hoffman writes, "in particular, appears to have come from a local mill."[33] Hoffman comments quite cautiously:

> One might entertain for a moment the perhaps fanciful idea that Montaigne smiled to himself upon later remarking, in quite different contexts, that he preferred keeping his 'heart open', and that if it was too small, at least 'it is open for its part, and it orders me to boldly publish its weakness'. That the paper of his book actually bore the faintly outlined diagram of a heart folded along the spine can of course suggest rich associations to a literary critic's imagination, and this is nowhere more enticing than when Montaigne claims to be incarnate in a book which is a 'cadaver on which the veins, the muscles, and tendons appear at a glance, each part in its place. One part of what I am is produced by a cough, another by a pallor or palpitation of the heart'.[34]

Like Donne, Montaigne understood writing, reading and publishing as a bodily activity, both done by the body and creating something like the body, the page, which folds the invisible into the visible like the soul in the flesh. For these Renaissance writers, then, the opposition of

[30] An English translation of Montaigne's essays by John Florio appeared in 1604, but I have no proof of direct contact between Jones and Montaigne or Montaigne's books.

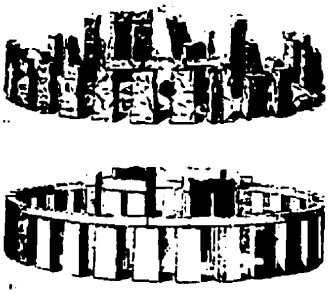
[31] Cottrell, *Sexuality/Textuality* 104.

[32] Hoffman, *Montaigne's Career* 105.

[33] Hoffman, *Montaigne's Career* 72.

[34] Hoffman, *Montaigne's Career* 71-72.

print and manuscript was not clearly the opposition between a fluid orality and a fixed, spatialized visuality. Like the change that eventually separated typeface design and typeface production, the distancing of the writer from the word was not a product of the printing press, but required many other cultural changes that did not occur for centuries.



2.2 The Jones/Webb reconstruction of Stonehenge (Harris, Orgel, and Strong, *King's Arcadia* 83).

The status of an architect's handwriting is slightly different from that of a writer's, especially for architects like Jones who never published, that is, for whom there is no undeniable and first difference between a manuscript stage and some later transformed print version.[35] In Jones studies this distinction between manuscript and book is more familiar in *reverse*, in the debate about Jones's book on Stonehenge, *The Most Notable Antiquity of Great Britain, Vulgarly called Stone-Heng on Salisbury Plain, Restored by Inigo Jones, Esq.* This book was not published until 1655, three years after Jones's death, and was seen through the press by his assistant John Webb. No manuscript versions of the text exist, though Webb did claim to work from "some few indigested notes."[36] Jones/Webb came to the conclusion that Stonehenge was a Roman hypaethral temple dedicated to the sky god Coelus. The plinths were imagined in a Tuscan order. Much of the debate around this fantastic but Jonesian conclusion has centred on whether the published text can be traced to Jones's hand, and therefore whether the arguments and opinions are indeed Jones's. For it is distressing for normalizing classicists (such as James Lee-Milnes) to believe that the founder of British Palladianism could "mistake" this prehistoric site for the founding monument of British architectural history.[37] If scholars could see those "indigested notes" from Jones's hand, the debate would presumably be over, because handwriting has the power to authenticate thought in a way as powerful as the supposedly more authoritative printed texts.

Jones's handwriting has been thoroughly considered by John Newman.[38] And Gordon Higgott has categorized the inks and styles of Jones's hand, as he did for Jones's drawings, in order to date the entries in the Palladio book.[39] In their work, writing is seen as a providential source of scientific evidence that allows to document Jones's architectural development. In other words, the style of handwriting and the types of ink used are analyzed to determine dates for the annotations in

[35] Because architects draw, architectural history is somehow always involved with digital (handmade) "personality effects." When architects become writers, the results call upon particular interpretive skills from scholars. Architectural historians have always used, when available, the original drawings that come from the hand of the architect.

[36] Webb, after Inigo Jones, *The Most Notable Antiquity of Great Britain* n.p.

[37] Lees-Milne, *The Age of Inigo Jones* 161. For fuller discussion of the Stonehenge question see Hart *Art and Magic* 52-58 and 201-205; and Stephen Orgel, "Jones and Stonehenge" in Harris, Orgel, and Strong, *King's Arcadia* 82.

[38] Newman's conclusions are summarized briefly in "Italian Treatises in Use." The methods and criteria for dating the handwriting are elaborated in an unpublished essay in a typescript volume available at the University of London Library.

[39] For the drawings, see Higgott, "The Architectural Drawings of Inigo Jones," summarized briefly in Gordon Higgott, "Style and Technique" in Harris and Higgott, *Complete Architectural Drawings* 25-29.

the books in order to establish a sequence of intellectual progression (Jones's "education" in Newman) and coherence (Jones's "theory" in Higgott).

Although the changing hand and inks in the Palladio is a useful guide to date entries, it is only a guide. Handwriting can vary within an entry or within a small period of time. Timothy Mowl and Brian Earnshaw have their doubts about the objectivity of the entire dating game, complaining that "he [Jones] did not move chronologically from one technique to another in order to leave a handy pseudo-science by which future historians could date his works."[40]

In Stuart England it was normal to use a multiplicity of hands and letter forms simultaneously even within writing manuals.[41] Recently Herbert Mitchell came across this phenomenon in trying to determine whether the annotations in a copy of Philbert Delorme's architectural treatise were all made by Sir Henry Wotton. He had trouble attributing the volume because of "the apparent difference in handwriting from note to note. It turns out that according to expert opinion, in spite of these differences, they are all written by the same person."[42]

The materiality of production of a writer's hand is conceptually important, not just evidence to establish "facts." For example, one crucial marker is that Jones switched from the ordinary English secretary hand to the upwardly mobile fashionable italic hand. Christy Anderson cites this adoption as one more instance of Jones's classicizing and his love of Italy. In this view, Jones's change of handwriting was a kind of Greenblattian self-fashioning, a self-conscious attempt to inculcate new bodily habits that would *italianize* his everyday habits to increase his cultural authority.[43]

But this question of Italic handwriting can be overworked as a sign of Italianate classicism. By the time Jones adopted the Italic, it had already come "to signify socially as the mark of high literariness and a full literacy."[44] By writing Italic, Jones produced a social and civilized body quite self-consciously fashioned apart from the "natural" body. But *any* writing, including the secretary hand, produces an unnatural, an artificially produced, a cultured body. There is something inherently anti-human (i.e. artifactual) about writing in the Renaissance, namely, the way writing can seem divorced from the body, a concept oppo-

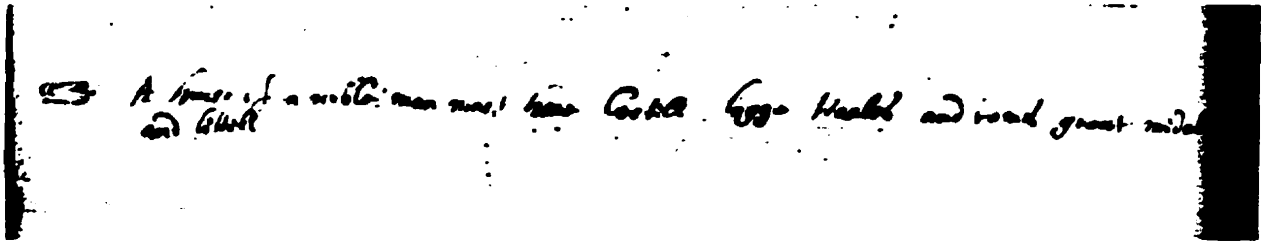
[40] Mowl and Earnshaw, *Architecture Without Kings* 28.

[41] Goldberg, *Writing Matter* 245; Goldberg also summarizes W.W. Greg, who points out that Jones's contemporary the poet Dekker "wrote two, or really three, distinct hands" (241).

[42] Mitchell, "An Unrecorded Issue of Philibert Delorme's *Le premier tome de l'architecture*" 24-26.

[43] Anderson, "Learning to Read Architecture" 243. On self-fashioning in literature, see Greenblatt, *Renaissance Self-Fashioning*. On self-fashioning in English architecture, see Howard, "Self-Fashioning and the Classical Moment." Jones interest in things Italian was not a personal quirk; the words italic, Italianate and Italianism first appear in England around the beginning of Stuart rule.

[44] Goldberg, *Writing Matter* 1-2.



site to the Donne strategy outlined above. "The illustrations [from sixteenth-century English writing manuals]," Jonathan Goldberg notes, "depicting penhold dispense with these scenes of the body [at the writing desk] by dispensing with the body."[45] The image of writing in these manuals is of a hand without a body, of a body separated (and separable) into body parts.

Jones's himself drew some of these disembodied hands on the pages of his Palladio. It is not clear that they were derived from writing manuals; they were common in all sorts of handwritten and printed Renaissance texts. In print, writes William W.E. Slights they could serve to "relocate an author's emphasis": "Even the simple[?] printer's device of the hand with extended index finger [☛ ☞] represented a standardizing of points of emphasis and a co-opting from the reader of what had long been a hand-drawn, individualized directional signal scribbled[?] in the margin to remind him or her of what had seemed an important point at a particular point during a particular reading session."[46]

Their indexical function is clear—they point to something. Yet Anderson's remark that the drawn hands "mark passages that did not need a textual annotation" goes too far.[47] There are many cases where the hand and a textual note are both used. For instance, on page 1.41, the hand points to the image while a note explains: "This Bace of ye Pedistall is taken from ye Temple of Pola fo. 108. The caruinge is added and the membretto is better Proporsioned." Another note at 1.11 points to a date, "1614 Baia :17 January," where a further note compares the reticulated wall at the Thermae of Baia to Palladio's image. While the handsign may simply be a "scribble" or unconscious doodle (there is no obvious pattern to its use), it is not just shorthand for a longer (but unnecessary) text.

Indeed, in the work of someone as self-consciously visually so-

2.3 A hand drawn hand from the middle of page 2.20. The text reads: "A house of a noble man must haue Cortill logge Haales and romes great midalins and littell," a parpaphrase of the Italian text above, which Jones has also lightly underlined. The necessity and/or function of the hand is not readily apparent. It points redundantly to his own note rather than to Palladio's text.

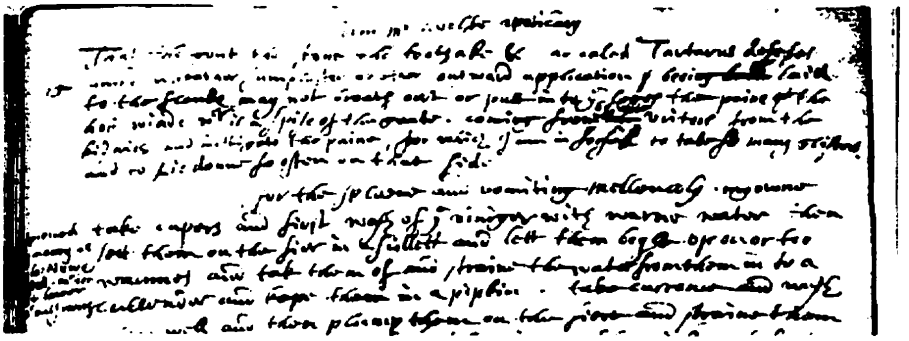
2.4 Penhold from John Davies, *The Writing Schoolemaster*, 1636 (Goldberg, *Writing Matter* 107).

2.5 Disembodied penhold from Richard Gethinge, *Calligraphotechnia*, 1619 (Goldberg, *Writing Matter* 106).

[45] Goldberg, *Writing Matter* 98.

[46] Slights, "The Edifying Margins of Renaissance English Books" 698. Slights deals only with printed margins.

[47] Anderson, "Inigo Jones's Library" 53.



2.6 (above left) Jones's handsign in the medical notes of the terminal flyleaves (TF 4).

2.7 (above right) Inigo Jones after Oliviero Gatti (after Guercino), *Studies of Hands and Fingers* (Wood, "Italian Art, and the Practice of Drawing" 259).

phisticated as Jones, it is possible to look to a less functional, more symbolic significance for these disembodied hands. Sheets of illustrations exist with Jones practicing drawing by copying hands not from life but from other drawings and engravings. Jeremy Wood writes that "Jones apparently used Oliviero Gatti's set of twenty-two engravings, published in 1619, after drawings by Guercino."[49] Thus Jones was learning to draw body parts long after his early education (Jones's imitations probably date to the early 1630s, i.e. he would have been about fifty years old). Wood adds that "he [Jones] never moved on to the next stage of drawing the other parts of the body, such as feet and arms, which could in turn be combined into the complete human figure, and provide the basis for narrative subjects."[50]

In a sense, then, the hand was sufficient for Jones to represent the human body. Synechdocically, the hand drawn hands present Jones's body. These hands point not only towards the text, but back out to Jones's body, standing in for his presence among the monuments of architectural theory, and signaling his acknowledgment of his own presence in his notes.

The circular history of the hand signs (drawn by hand, machine imitates hand, hand again imitates machine imitation) is another manifestation of the artificiality of the opposition of the machine-made and the hand-made in Jones's writing and reading. In the history of technology, it would be some time before the prosthetic capabilities of machines, that is, the ways in which machines replace or extend parts of the body, made writing machines something to be anxious about, something alien and inhuman.[51] In Jones's era reading and writing were not yet overwhelmed by the machinery of the printing press, much less the mechanical worldview commonly associated with the seventeenth century.[52]

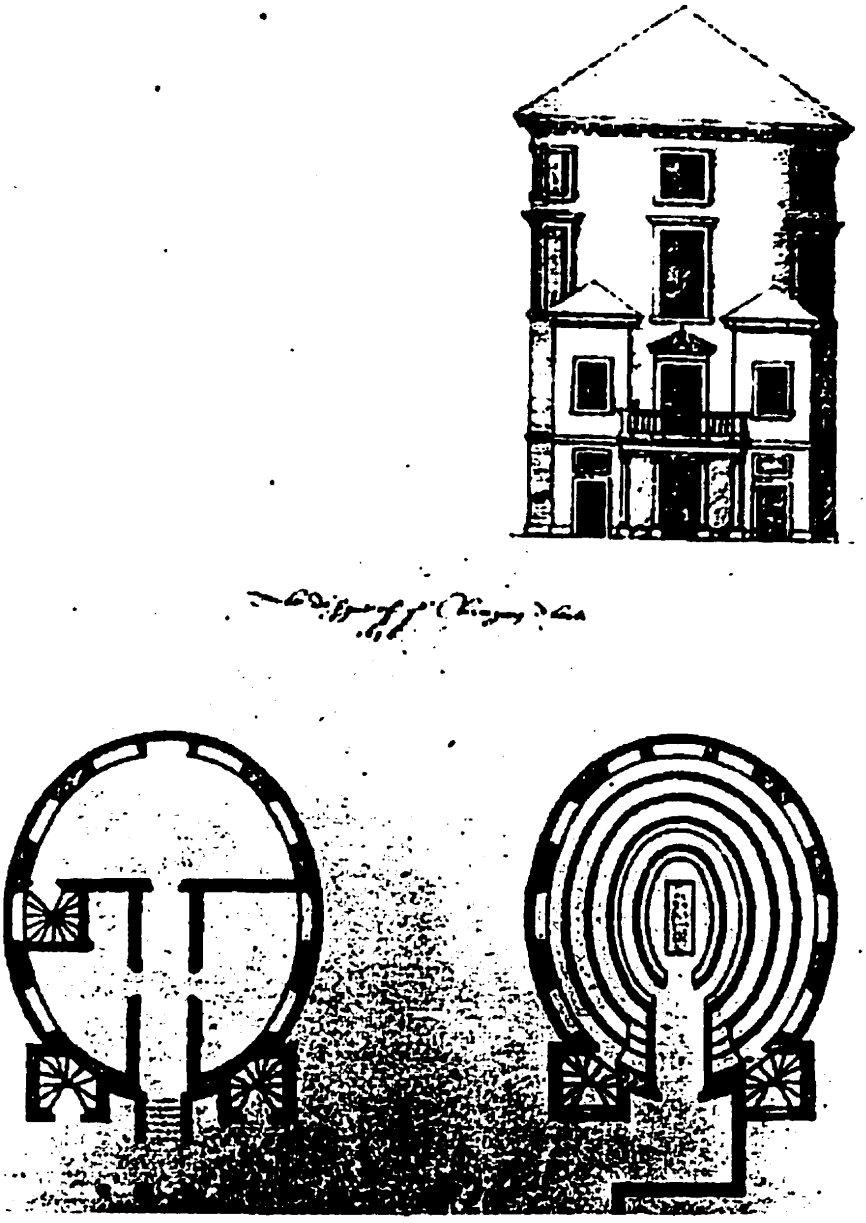
[49] Wood, "Italian Art, and the Practice of Drawing" 253-254.

[50] Wood, "Italian Art, and the Practice of Drawing" 260.

[51] On the relationship between writing machines and modern anxiety, see Seltzer, *Serial Killers* and Kittler, *Grammaphone*.

[52] Keith Thomas ("The Meaning of Literacy in Early Modern England") is adamant that scholars should not exagerate the impact of print.

3 Between machine and symbol
The heart of the architect



3.1 Barber Surgeons Anatomy Theatre, plans and elevations, 1636, (drawing attributed to Webb; Fusco, *Inigo Jones* 342)

In the last chapters I looked at the status of the architectural word and image in Stuart England. I outlined how in a period of change from magic to science, from Albion to Britain, and from scribal publication to print, the activities of reading, writing and drawing had neither shaken off old medieval hierarchies and oral practices nor yet fully entered into the period characterized by the emergent "modern" mechanistic philosophies.

In this chapter I take up more specifically the theme of the machine, linking together the printing press, theatrical machinery and the mechanization of anatomy. Although this is not the place for a close study of the development of technology in the West, I should point out that I believe in the "slow" history of the triumph of technology due to the scientific revolution. Technology has been an important part of Western thought since the Greeks, but it was only after the work of key seventeenth-century thinkers, including, prominently, Galileo Galilei (1564-1642) and René Descartes (1596-1650), that the issue became one of mastering of technology in order to effect real change in human destiny.[1] And even this change in world view did not happen overnight as the word "revolution" implies. Indeed, although traces of the mechanization of the world view can be glimpsed in architectural theory as early as the work of Claude Perrault (1613-1688), it was not until the nineteenth century that this emphasis on technical mastery and control began to affect architectural practice.[2]

For Jones and his contemporaries, machines were always connected to older vitalist and Aristotelian notions. The function and movement of a machine were always determined by non-mechanical forces. Salomon de Caus, for example, in his *Les raisons des forces mouvantes* (Frankfurt 1615) wrote that "D'avant que les compositions, & effects que produissent toutes sortes de machines, sont causées par le moyen des quatre Elements, lesquelsdonnent [sic] corps & mouuement à icelles."[3] Situating Jones's Palladio among this symbolic interest in machinery in Stuart England is the main goal of this chapter.

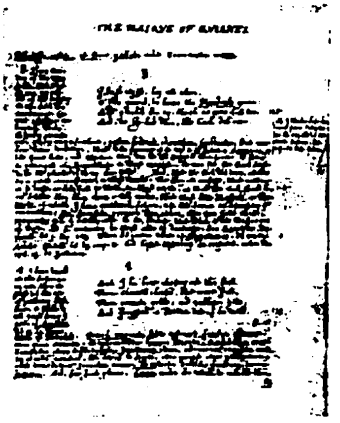
I have argued that the technetronic reasoning that the printing press, a mechanical device mechanically reproducing Vitruvian treatises, was *instrumental* in disseminating classical architecture, is qulaified by a closer examination of how people read or used those

[1] Rykwert adds to this stew the influence of Jansenism: "The sacred precedent for all the antique detail on which Poussin drew for his *Last Supper*—as Inigo Jones did for his reconstruction of Stonehenge—the detail which Villalpanda [sic] had revalidated in his great sleight-of-hand by which the orders turned out to be a divine institution, even a divine dictate, all that was anatomized and reduced in the double solvent of Cartesian analysis and the Jansensist conviction that the will, in whose realm taste operated was irredeemably corrupt" (*The First Moderns* 19).

[2] On this history of the relationship of architecture and the scientific revolution, see Vesely, "Architecture and the Question of Technology," and Pérez-Gómez, *Architecture and the Crisis of Modern Science*.

[3] De Caus, *Les Raisons des Forces Mouentes* i. For a discussion of De Caus's understanding of machinery, see Grillner, "Human and Divine Perspectives."

printed texts. Consider the specific question of how Jones and his contemporaries might have thought of the printing press *qua* machine. Because of the press, an activity formerly done by a person was now done by a thing. From our post-Fordist point of view, the idea of machinery replacing hand labour evokes an inevitable nostalgia. Cecile M. Jagodzinski, for instance, writes that the "technological advances of the printshop eliminate, not only the solitary joys and labors of copying a manuscript by hand, but its drudgery as well."[4] But the process of making and composing type was no less a craft, involving "solitary" labour, than scribal duplication. In fact, the press did not quickly or entirely replace hand copying, but created a whole new set of print practices.[5] In Jones's time the pathos of alienated labour was not (yet) part of life in the printshop nor part of the significance of the printed word.



3.2 Jonson, the holograph of the *Masque of Queenes* (Herford, Simpson and Simpson, eds., *Ben Jonson*, facing 7: 290). There are only two stanzas ("3" and "4") for a total of eight lines of verse. The rest are footnotes. Jonson's graphic layout was followed in the printed quarto.

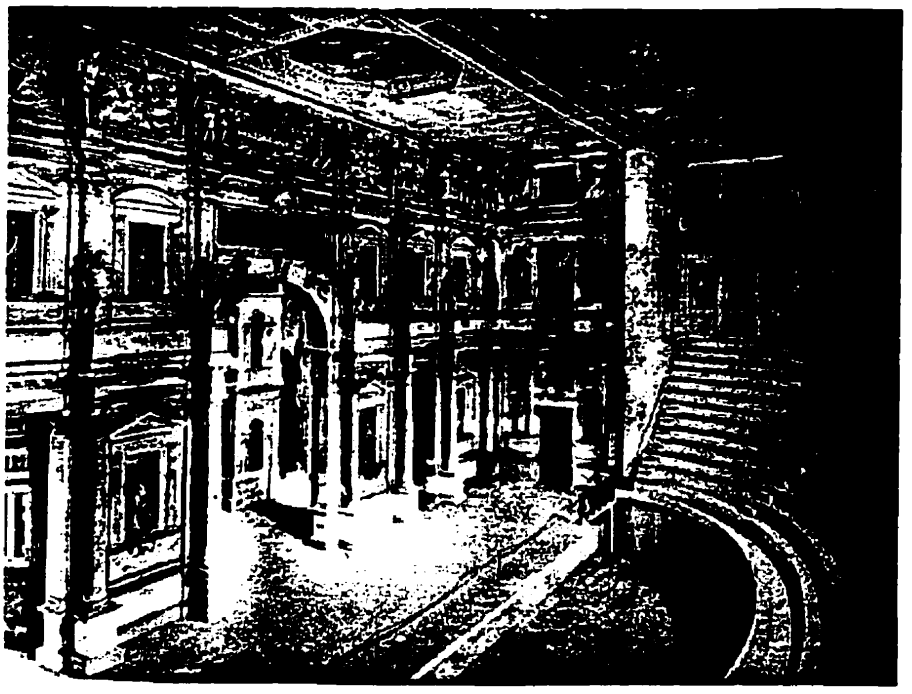
It is equally difficult to maintain the notion that the handwritten was personal (addressed to specific persons), intimate and private, while the typeset was impersonal (addressed to an unkown, mass, anonymous audience), and public. In his discussion of printed marginalia, William W.E. Slights argues that handwritten notes were for the benefit of the reader, but that "printed marginalia address a wider audience."[6] Such a viewpoint overlooks the practice of writers such as Montaigne, who wrote notes in his own books which were incorporated into later editions, and others like John Dee whose copies of books written by others were valued by a wide audience precisely because they contained his own handwritten notes. Since his death, Jones's annotations have had an extremely public life.

Marginal annotation was not only the addition of the personal handwritten to the generic printed, but an imitation by hand of a standard Renaissance printed layout, which in turn was an imitation of medieval manuscript practice. Like the circular history of the handsign discussed last chapter, this complicated genealogy makes it difficult for us (as for King James's courtiers) to see print as a direct mechanical replacement of the hand. For example Jones might have seen Jonson's holograph of the *Masque of Queenes* (Quarto London 1609); Jonson's hand written annotations—mostly scholarly footnotes on his sources—were carefully reproduced in the printed version.

[4] Jagodzinski, *Privacy and Print* 9.

[5] The idea that the replacement of human workers by machines causes psychological anxiety is of course part of Karl Marx's theory of "alienated labour"; see "Economic and Philosophical Manuscripts" in *Karl Marx* 75-87.

[6] Slights, "The Edifying Margins of Renaissance English Books" 682.



3.3 (above) Palladio, "alternative 'scene fronts' and seating for the Teatro Olimpico, Vicenza, 1580" (Tavernor, *Palladio* 75).

3.4 (left) Palladio and Scamozzi, Teatro Olimpico, Vicenza, 1580-1585.

We don't know whether Jones gave much thought to the machinery of the printing press, but he was responsible for mechanical innovations in another area, the theatrical stage. Palladio does not discuss theatres in *I quattro libri*, but Jones's first notes address this important Vitruvian subject. On Flyleaf 5v, there are two notes about Palladio's last work, the Teatro Olympico in Vicenza, started by Palladio in 1580 and modified after his death by Vincenzo Scamozzi, who added the famous permanent perspective stage sets. The first note, dated "Vicensa. Mundaie ye 23 of September 1613," and the second, "Visenza 13 of Agust 1614," indicate that he visited Vicenza twice on his trip with Arundel to Italy (F 5v^o).

In the Renaissance, theatre had a privileged place in literature and architecture, part and symbol of civilized urban life. The revival of ancient theatre forms paralleled the discovery, translation and performance of antique plays and styles.[7] Not surprising, then, that Jones would want to find a place for his notes on Palladio's theatre in Palladio's book.

Although Jones did prepare temporary and permanent stages for

[7] See Pérez-Gómez and Pelletier, *Perspective Hinge* 50-51; Anderson, "The Changing Scene."

drama, his principal involvement with theatrical productions was through the Stuart court masques.[8] Masques were allegorical courtly entertainments, evolved from a peculiar English tradition of tilts and pageants, and related to similar contintenal theatrical forms including the famous *intermezzi* of the Florentine Medicis. Masques involved courtiers, professional actors, dancing, poetry and music. Jones introduced into Stuart court theatre both costume design and technical innovations, such as sliding wings (scena ductilis), descending and ascending cloud machines, and perspective set design, that were self-conscious imports of continental visual art.[9] Scholars have shown that Jones used an impressive and eclectic array of source material for costumes and scenic imagery, demonstrating a wide-ranging knowledge of Renaissance art.[10]

It is Jones's innovative use of perspective set designs that is the touchstone here. It is still quite common to find scholars who write that "[p]erspective turned the medieval concept of a symbolic relation of objects [microcosm-macrocosm] into an understanding of visual relation, which in turn was determined by quantitative entities."[11] In fact, this transformation took a long time; and it can be argued that the world first changed to a realm of quantitative entities that in turn made perspective into a visual relation.

In other words, in the theatre, perspective is too often seen as a mathematical innovation that changed the relationship of performance and spectator into a merely quantitative relation between a fixed illusionistic picture scene, framed by a proscenium, and a body reduced to a fixed stationary eye. But this does not describe Jones's theatre. He never used perspective primarily to create "visual relation" or pictorial illusion. In a typical performance, the masquers used to enter at the back of the stage, or descend from above, and move forwards towards the audience through the perspective stage sets "without apparent regard for the consequent incongruities of scale."[12] It seems Jones was not concerned with presenting a homogenous perspective picture, for the illusion was always destroyed by the actions of the performers. "Evidently the risk that such uses of the perspective construction might lead to ridiculous disparities of scale made little impression on Jones," writes Orrell.[13]

[8] On Jones's theatre career, including masque making, see Orrell, *The Theatres of Inigo Jones*, and Nicoll, *Stuart Masques and the Renaissance Stage*. On the masques, see Orgel and Strong, *The Theatre of the Stuart Court* and Nicoll, *Stuart Masques*.

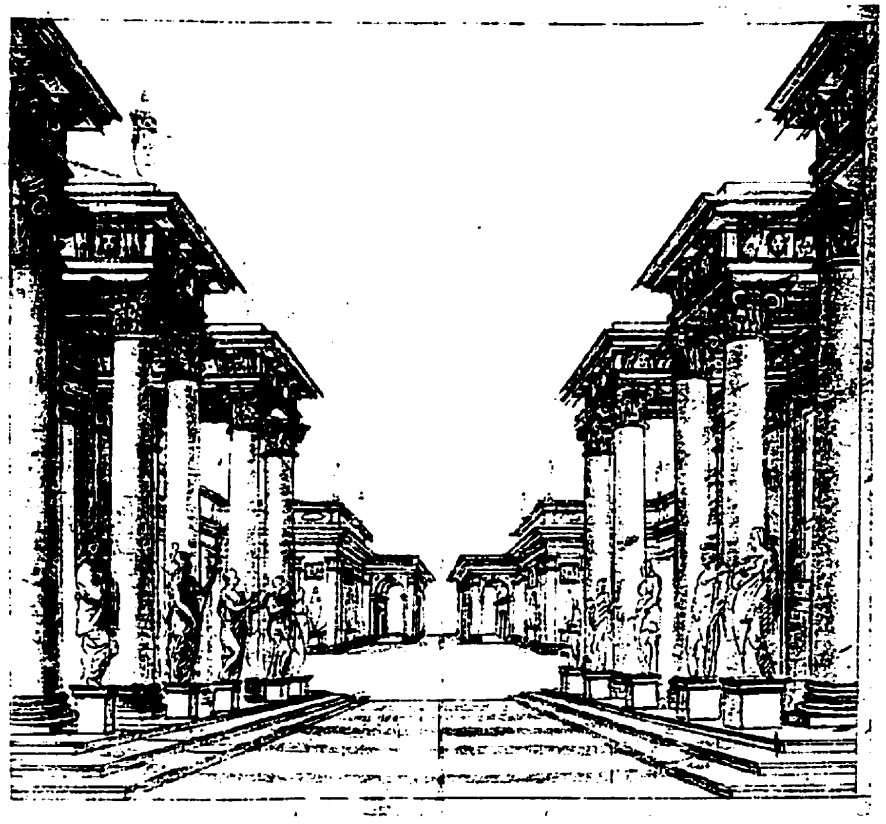
[9] On stage mechanics see Orrell, *The Theatres of Inigo Jones*, and, briefly Harris, Orgel, and Strong, *King's Arcadia* 83-93. Costumes for each masque are discussed in Orgel and Strong, *The Theatre of the Stuart Court*. In fact it is not known exactly how Jones learned his stagecraft. Yates's emphasis on the importance of Dee's preface to Euclid to stagecraft in Britain cannot be ignored (*Theatre of the World*; see also Hart, *Art and Magic* 89-90).

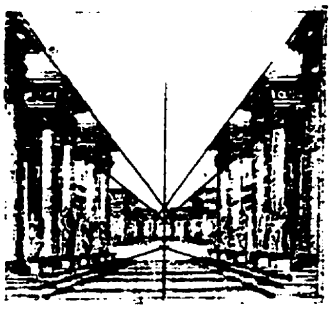
[10] See the articles by John Peacock "Jonson and Jones Collaborate on *Prince Henry's Barriers*," "Inigo Jones's Stage Architecture and Its Sources," and "Inigo Jones and Renaissance Art."

[11] Angelil, "Technique and the Metaphysics of Science" 68.

[12] Orrell, *The Theatres of Inigo Jones* 78. At the Teatro Olympico, the actors apparently never walked upstage onto the perspective streets. In general, the machinery was placed at the back of the stage, separate from the acting space at front. Hart argues that this organization was symbolic, "representing a backstage application of the supposed mathematico-mechanical principles of nature" (*Art and Magic* 89).

[13] Orrell, *The Theatres of Inigo Jones* 79.





3.5 (above) Inigo Jones, Scenery design for the masque *Albion's Triumph*, 1632 (Harris and Higgott, *Complete Drawings* 277). The added lines verify the locations of three distinct vanishing points in Jones's perspective construction.

3.6 (left) Inigo Jones, Scenery design for the masque *Albion's Triumph*, 1632 (Harris and Higgott, *Complete Drawings* 277).

Orrell has also shown that there is no practical or theoretical privileged vantage point in Jones's perspective designs. In an extension of a procedure he seems to have gleaned from Serlio (and that Webb never used, perhaps because he did not understand its importance), Jones constructed his stage sets with multiple vanishing points. The method was a practical device for representing his ideas and giving instructions to the carpenters who built them, and came out of a theoretical understanding of perspective as an optical, not geometric, device. That is, he used perspective to adjust the scenes for visual congruity, rather than in conformity with a rigid, quantitative, geometric order.[14]

Stephen Orgel argues that the incongruity between the masquers and the perspective sets worked symbolically to separate the quasi-Olympian, heroic masquers (non-speaking roles played by members of the court) from the rude antimasquers (speaking roles played by professional actors): the proscenium framed a perspectival illusion that was the home of the antimasque only, and not of the masquers in their

[14] Orrell, *The Human Stage* 218-248.

mythological disguises.[15] "Inigo Jones regularly used the proscenium arch for masques, though not for plays, and through the use of perspective stressed visual realism in his settings," Orgel writes, because "the Jacobean poet [i.e. Jonson] was to see the climax of his work as a point at which the actor [sic; actually the non-professional courtier] broke through the limits of his stage."[16]

Remember, though, that there was no vantage point for any member of the audience at which the perspective illusion was entirely coherent. Orgel may be right that the heroic aristocratic masquers *deliberately* broke the perspective illusion of the rude antimasquers's world, but such a breaking or transcendence was still only enacted symbolically (if at all), and not literally as a picture of moving giants indifferent to the scale of the stage. When the masquers descended the stairs at the front of the stage to dance with the audience, any transgression of illusory limits was no longer supported or determined by the perspective design. Whatever reasons Jones had for incorporating perspective in his designs, then, it was not to produce a merely visual relation between a spectator in a fixed position and a picture.

The notion of a "breakable" proscenium frame demands fixed conventions and the staging of rather static "tableaux." Vaughan Hart makes a claim similar to Orgel's about the "breakable" framed perspective, relating it to contemporary innovations in garden design:

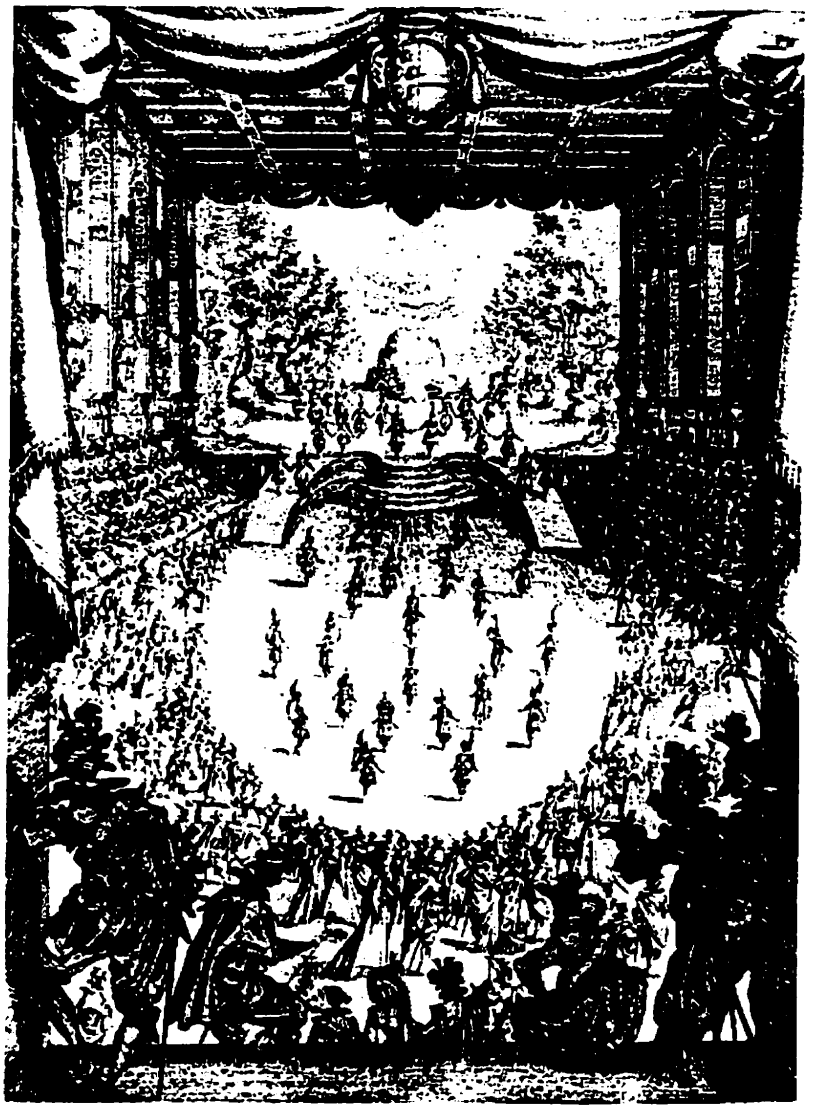
> The grotto provided a natural [pun intended?] counterpart to the masque in uniting music, mechanical illusion, and framed settings to form an emblematic tableau representing cosmic harmony. The proscenium arch served to emphasize the self-contained nature of the masque, a mode of mechanical theatre developed in England at exactly the same time that hydraulic and mechanical wonders were introduced into the Court garden within the equally self-contained theatrical world of the grotto."[17]

The masque, however, was ephemeral and artificial, *never* self-contained, never "natural," only a mirror of nature. The masque wasn't a *picture* of cosmic harmony, but rather an artificial device that allowed the masquers to participate in cosmic harmony. In short the masque was not a simple tableau but an *action*. Like John Shute's anthropomorphic architectural orders, the masques were condensations of cultural, not only visual, ideas. As historian Roy Strong puts it, "When Jones . . . presented . . . Prince Henry as Oberon, Prince of Faery, a deep truth

[15] Orgel, *The Jonsonian Masque* 119.

[16] Orgel, *The Jonsonian Masque* 201.

[17] Hart, *Art and Magic* 94.



3.7 (above) Oberon, costume design for the masque of *Oberon, The Fairy Prince*, 1611 (Harris, Orgel, and Strong, *King's Arcadia* 50).

3.8 (left) Callot, *Intermezzo: La Liberazione di Tirreno*, 1617 (Harris, Orgel, and Strong, *King's Arcadia* 92). In this performance the masquers are descending from the stage to dance on the parterre.

about the monarchy was realized and embodied in action, and the monarchs were revealed in roles that expressed the strongest Rennaissance beliefs about the nature of kingship, the obligations and perquisites of royalty."[18] At the end of the masque, the performers would join with the audience in dancing: no-one, performer or audience, was merely a fixed observer, reducible to a disembodied eye at a fixed point.

It is crucial that Jones's innovations, his new machinery and techniques, allowed or in fact highlighted change and motion, especially the ability to make sudden scene changes with curtains, machina versatilis (sets that could change by revolving around a central pivot),

[18] Harris, Orgel, and Strong, *King's Arcadia* 35.

scena ductilis, and cloud machines. Even the art of costuming can be considered as a form of transient embodied representation that permitted a momentary impression of the permanent superlunary order that guaranteed the harmony of the universe but could only be glimpsed in the ephemeral world of everyday life. This desire for action may account for the neutrality of Jones's description of the Teatro Olympico, and his surprise at the lack of stage machinery there: "In this Sceane thear is no apparitions of nugolo and such licke but only the artificie of the seeane in Prospective Carrieth ytt" (F 5v°). The techniques used to command wonder—the stage machinery and perspective designs that made Jones's first reputation—were not connected to mere visual picture making, however "emblematic," but rather to participation, ritual, Strong's embodied action.

3.9 Title page of the *Fabrica* of Vesalius, 1543 (O'Malley, *Andreas Vesalius*, plate 25).

Ritual public actions also took place in another kind of theatre that Jones designed and built, the anatomy theatre. It's a complicated story, but in many jurisdictions in Europe there were fixed times of year when anatomical dissections could be made; these dissections were public demonstrations, involving not just physicians and anatomists, but all levels of society, from government and court officials to the criminals whose corpses were dissected.[19] This inclusion of all human society is symbolised in the famous frontispiece to the *Fabrica*, the anatomy treatise of Andreas Vesalius (1514-1564).[20] These public dissections were not empirical investigations into human physiology. They were rituals intended to demonstrate the knowledge of anatomy contained in canonical texts. The anatomist revealed the secrets of the microcosm—the human body—which would tell us about the macrocosm—the great machine of the world.

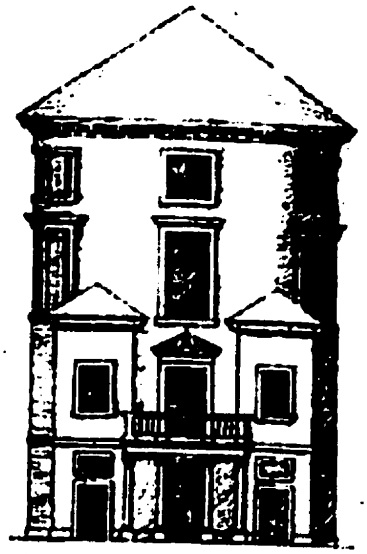
Jones designed and built an anatomy theatre for the Barber Surgeons of London in Monkwell Street in 1636.[21] According to a description from the Clerk of Court Records of the Barber-Surgeons Company dated 24 July 1637, this desire to connect the anatomy of the body with the sidereal order was explicit in the building's decoration: "Beatifieing ye Theater: Alsoe it is ordered that the Concave seeling of the Theatre shalbe painted With the Constellacons of the Heavens, and the 7. planets [...] the 12 signes in every yeere and skeletons to be wrought and sett up on every one of the 12 signes or Corbells."[22] There were

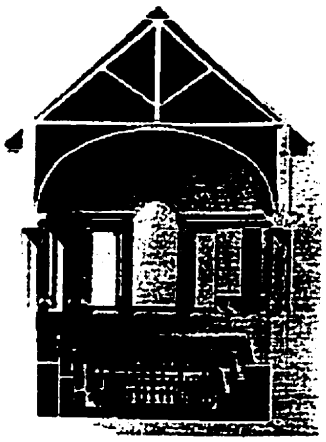
[19] On anatomy as a theatrical performance, see Sawday, *Body Emblazoned* 74-76. See also Wilson, "The Performance of the Body." A standard history of anatomy in this period is Singer, *A Short History of Anatomy from the Greeks to Harvey*.

[20] *De Humani corporis fabrica* [*On the fabric of the Human Body*]. The purpose of this image is in fact difficult to clarify; for an interesting discussion on the problems of spectatorship in anatomy the image provokes, see Harcourt, "William Harvey's *Prelectiones*" 69-74.

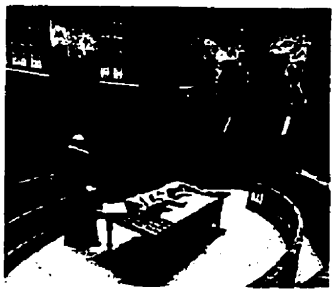
[21] I have not yet seen Susannah Bach's recent PhD thesis (Cambridge) on the Barber Surgeons theatre, but it promises to be an essential discussion of the subject.

[22] Qtd. in Rowan, "A Neglected Jones/Webb Theatre Project" 10.

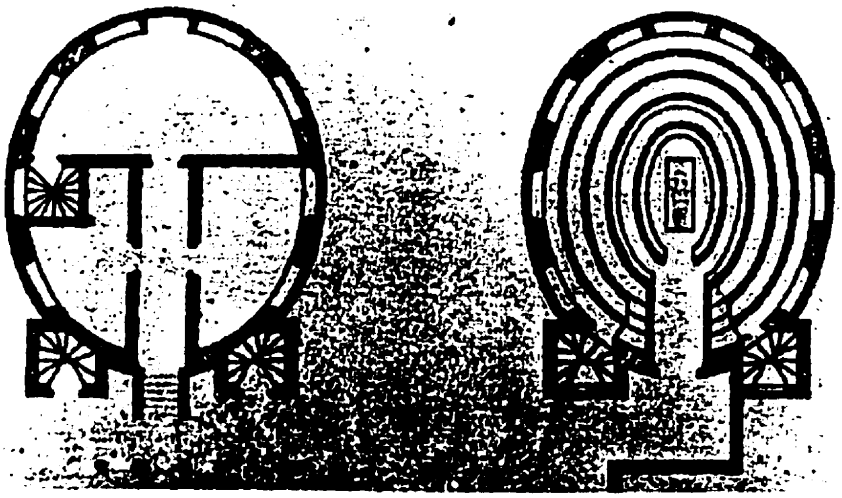




3.10 (above) Section of Barber Surgeons Anatomy Theatre now in Guildhall Library, London (www.remiggio.freeserve.co.uk/surgplan.htm).



3.11 (above) Barber Surgeons anatomy theatre (1936), computer reconstruction by Christian Billings (www.remiggio.freeserve.co.uk/surgmod.htm).



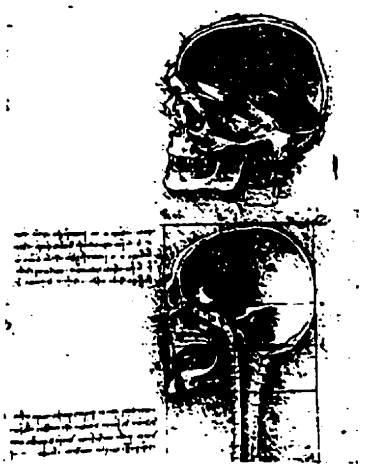
3.12 (left) Plans and elevation of Barber Surgeons anatomy theatre (drawn by Webb?; Fusco, *Inigo Jones* 342)

two public and two private lectures given annually. The "Theaters first Publique Anatomye" was booked for 6 April 1638: "The Lords of the Privy Council and other Lords are to be invited, and are to be given supper in the new Parlour."[23] This arrangement was similar to the protocol at a demonstration (in the theatre) and dinner afterwards (in the hall) recorded by Samuel Pepys in his diary in 1662.[24]

By the time the Barber-Surgeons Anatomy Theatre was built in

[23] Rowan, "A Neglected Jones/Webb Theatre Project" 10.

[24] See the discussion in Sawday, *Body Emblazoned* 77-78. For the diary entry, see Wheatley, ed., *The Diary of Samuel Pepys* 3: 51.



3.13 (near left) Fludd, depiction of the Brain (Westman, "Nature, Art and Psyche" 202).

3.14 (far left) Leonardo da Vinci, Drawing of the Brain (Clark, *Drawings of Leonardo da Vinci* 19057 *recto*).

1636, there had already been a century of links in Renaissance thinking between anatomy and architecture, mostly about questions of representation. "Daniele Barbaro compared the architect drawing a cross-section to a physician," writes John Peacock, "because he can show the anatomy of a building."[25] Such statements, however, require a great deal of explication, first to explain what Barbaro had in mind by "anatomy," and second to try to understand the role of drawing in Renaissance anatomy.

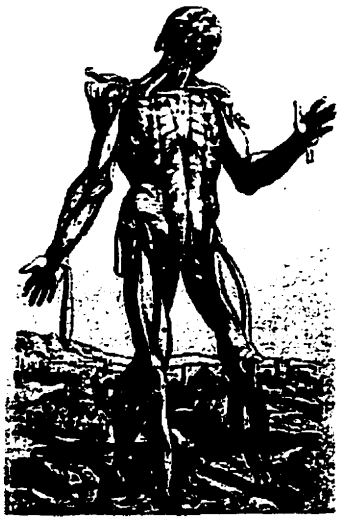
For it is not always easy to know the referent of Renaissance images. That is, we often read them or interpret them, or date them stylistically, without understanding what they are pictures of. Are they even "pictures"? For example, it seems obvious that Fludd's representation of the human brain is "imaginative or poetical," referring to something other than objective biology. Yet Leonardo's explicitly empirical brain (that is, drawn from anatomical observation), too, belongs to a speculative tradition rather than biological science. In Stuart England, the brain was fundamentally mysterious; study of the brain was a study of the occult. And central to a study of the occult was the making of images. As Robert S. Westman puts it, "the main presupposition of Fludd's epistemology [is that t]he Occult, the mysterious, the textually obscure can be depicted in images and thereby grasped."[26] At the end of the seventeenth century, Thomas Sydenham's (1624-1689) still claimed that microscopes could never show how blood moves from the arteries to the veins (capillaries) or the function of the separate parts of the brain.[27]

[25] Peacock, "Inigo Jones as a Figurative Artist" 164.

[26] Westman, "Nature, Art and Psyche" 196.

[27] Sloan, *English Medicine in the Seventeenth Century* 26-27.

Consider Vesalius's images. They are only partly representations of human biology. They are not meant to show exactly what you would see if you dissected a human body. The plates illustrate ancient texts—Galenic physiognomy—and parts of the anatomy of animals. The fifth so-called "muscleman" shows muscles of apes, not humans, in order to make comparisons. So Vesalius's images, like Fludd's, or Shute's, are meant to recall texts and articulate resemblances, rather than just copy the nakedly visible.



3.15 The fifth "muscleman," from Vesalius's *Fabrica*, 1555 edition (O'Malley, *Andreas Vesalius* plate 31). The image includes nonhuman muscles (at X).

Architectural images can be understood in the same fashion. Most commentators compare Palladio's images (such as his reconstruction of the Pantheon in Rome) and Vesalius's only graphically.[28] And there is a visual link between a layered, sectional building cut, and the exposed layers of the dissected body. In Vesalius, Glenn Harcourt argues, the means of representation occlude the violation of the human body that allows dissections to be made: Vesalius's images are supposed to give a privileged demonstration of a living body, not a corpse—that's why they have those live-action poses—and the imagery borrows both from high art and antique authority.[29] But in the case of architecture, "dissection" had been performed by time; *nature* had anatomized antique buildings, exposing and revealing their inner truth in a manner very different from that of archeology.

Vesalius's representations, his use of art, established anatomy as a visual discipline, "absolutely dependent on a system of visual representation."[30] Palladio, arguably, in concert with other treatise writers, did the same for architecture, instituting the triumvirate of plan, section, elevation as the systematic visual representation of the architectural idea.[31] The three "orthogonal" drawings, however, were not yet conceived as a mathematical description of three-dimensional object. They were drawn from Barbaro's reading of Vitruvius Bk I, ch 2 and each type of drawing had a rationale fairly autonomous from the others.[32] For example, Barbaro argued that Vitruvius's *scenographia* was an error for *sciographia*. The former, perspective, was meant for use only in theatre design. One of Jones's associates, Salmon de Caus, wrote a book on perspective (*La Perspective avec la raison des ombres et miroirs*) which he published in London in 1612 and dedicated to Prince Henry. In his address to the reader de Caus states explicitly that one of

[28] See, for example, Tavernor, "Palladio's 'Corpus.'"

[29] Harcourt, "Andreas Vesalius."

[30] Harcourt, "Andreas Vesalius" 53.

[31] According to Barbara Maria Stafford, Piranesi used a Vesalian vision of anatomy to "def[y] the general cultural trend toward separating the informative from the imaginative" (*Body Criticism* 58). In Stafford's analogy, Piranesi used "the etcher's needle like a scalpel," (59) and "responsibly sutured the certain to the conjectural, thereby allowing the seamed nature of his vision of the whole to show" (64). He learned from looking at Vesalius's "still-living" dissectected bodies how to dissect architecture, yet give the impression that it is still alive, linking the explorations of the past with contemporary concerns. That an architect in the Enlightenment would look to Vesalius for instruction in how to imagine the experience of time in architecture (decay, change, persistence) re-emphasizes the point that the Vesalian images were intended primarily as a means of imparting experiential knowledge. See also Stafford's essay "The Visualization of Knowledge from the Enlightenment to Postmodernism," in *Good Looking*.

[32] See Pérez-Gómez and Pelletier, *Perspective Hinge* 45-51.

the uses of perspective is to allow painters, engineers and architects to predict what buildings will look like when built, to show the thing (fortress, building) "telle à la ueue."[33] But his advice was little followed by architects. Palladio stuck to Barbaro's scheme of representation quite rigorously: there are very few perspective drawings of architecture from his hand.

3.16 The Pont du Gard, Nîmes, woodcut from Jean Poldo d'Albenas, *Discours historial de l'antique et illustre cité de Nismes*, 1560 (Harris and Higgott, *Complete Architectural Drawings*, 40).

Jones, too, seems rarely to have used perspective for designing or representing designs in architecture. He did of course use perspective in theatre work, as Barbaro recommended. But even when sketching, Jones did not use perspective to represent architecture. Indeed, a drawing of the Pont du Gard near Nîmes, France, was long thought to be a sketch *in situ* made on Jones's voyage back from Italy in 1614. But it turns out to be a modified imitation of a view from a published source. Surprisingly, Jones modified the original perspective view, and drew it as an elevation.[34] The part of the drawing that is sketched in perspectival illusion, the steep bank in the foreground, was used in masques in 1610 and 1611, while the interest in stonework and masonry in the elevation does not reappear until his mature architecture of the 1630s.[35] Jones did not make many anatomical sketches of his own; he almost certainly never drew from life or corpses like Leonardo. Still he noted Vasari's story of Leonardo's anatomical studies, drew some muscles of the head from Vesalius, and gave "his copy of *Fabrica* (almost certainly the 1543 edition, with plates by Calcar) to Charles I."[36]

3.17 Jones, study of the Pont du Gard, Nîmes, *c.* 1609 (Harris and Higgott, *Complete Architectural Drawings*, 40). Jones has redrawn the perspective image as an elevation.

Perspective is often seen as a "scientific" invention, an advance of technological technique at the very least. Jones's use of it in masque designs is part of his ininterest in symbolic machinery. In turn, theatres are a link betweenthe discipline of anatomy and Jones's interest in perspective. I want to complete the circle now by looking more closely at the link between anatomy and machines, specifically at the notion of the human body as a machine.

Since Descartes, the subject of anatomy, the human body, is usually understood as a machine obeying mechanical laws and controlled by a rational soul. That machine has been elaborated in many ways, but nowhere more so than in anatomy itself. Fundamental to modern scientific medicine is an anatomy of the body that breaks it down to a

[33] De Caus interpreted Vitruvius's third term as "scenografie": "[adumbration] avec la racourcissement du front & des costez d'une edifice, faite par la raison de la perspective" (*La Perspective*, n.p.).

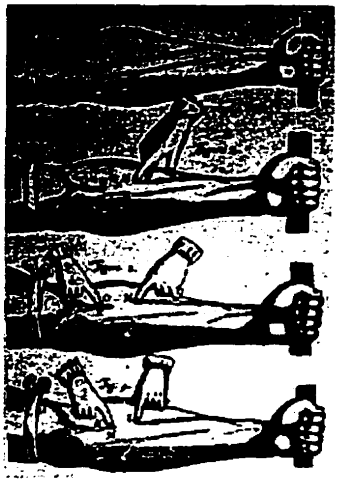
[34] Harris and Higgott, *Complete Architectural Drawings* 40-41.

[35] Harris and Higgott, *Complete Architectural Drawings* 41.

[36] Wood, "Italian Art, and the Practice of Drawing" 258-59.

conglomeration of mechanical systems. In the history of medicine, one of the key developments in the development of this anatomy was William Harvey's discovery of the circulation of blood.

Harvey was a British physician, and a friend of both Fludd's and Jones's. He had been trained in Vesalian anatomy in Padua, and had dissected a remarkable number of animal and human corpses. As early as 1616 (that is, when Jones was expanding from masque designer to building designer), Harvey seemed to have the idea of the circulation of blood in his head. He published his theory in Latin as *De Motu Cordis et Sanguinis, [an Anatomical disquisition on the Motion of the Heart and Blood in Animals]* in Frankfurt in 1628.



3.18 Harvey, demonstration of the valves in the veins from *The Circulation of Blood.*

Harvey gave the heart a clear function—moving blood. Historian Charles Singer writes, "With Harvey, at last, a clear idea emerges that each organ has a discoverable function and is related in its mode of working to all the other organs and to the body as a whole. The point of view of Harvey, [however], is very different from that of [classical anatomist] Galen and in the coming centuries we hear less of Design and more of the Machine."[37]

But what kind of machine is Harvey's heart? First of all, Harvey did not imagine the heart as a mechanical pump. Charles Webster is emphatic: "he [Harvey] in no way considered the circulatory system as a self-motivating machine," and he explains that Harvey's theory "was in accordance with Aristotelian vitalist physiology, and that the heart which propelled the blood was operated by a force which could not be expressed in physical terms and gave rise to non-mechanical effects."[38]

Harvey lines his work up with the texts of Aristotle. At the end of *De Motu*: Harvey states: "They who affirm [these] propositions against Aristotle, overlook, or do not rightly understand the principal argument, to the effect that the heart is the first part which exists, and that it contains within itself blood, life, sensation, motion."[39] And the dedication to Charles I that opens Harvey's book is full of standard Neoplatonic resemblances: "The heart of animals is the foundation of their life," he writes, "the sovereign of everything within them, the sun of their microcosm, that upon which all growth depends, from which all power proceeds. The king, in like manner, is the foundation of his kingdom, the sun of the world around him, the heart of the republic,

[37] Singer, *A Short History of Anatomy* 75.

[38] Webster, "Harvey's Conception of the Heart as a Pump" 517.

[39] Harvey, *The Circulation of Blood* 6.

the fountain whence all power, all grace doth flow."[40]

For Harvey, then, the heart is hardly a utilitarian productive machine, the lifeless functional pump of a mechanical system. Nevertheless, for historians this idea that blood circulates mechanically is inaugurated rhetorically in Harvey's own work. The evidence is a short note in the *Prelectiones*, Harvey's handwritten notes written for lectures given at the College of Physicians starting in 1616 .

> On account of the structure of the heart, William Harvey is of the opinion that the blood is constantly passed/through the lungs into the aorta, as by two clacks of a water bellows to raise water. Moreover, on account of the action of a bandage on the vessels of the arm he is of the opinion that there is a transit of blood from the arteries to the veins. It is thus demonstrated that a perpetual motion of the blood in a circle is brought about by the beat of the heart.[41]

3.19 Daniele Barbaro, *Vitruvius*, 1556, verso of frontispiece (Cosgrove, *Palladian Landscape* 218).

It's the simile of the water bellows that is significant here. Most scholars now believe that the bellows image is a late (1628) addition to the notes, in other words, that even this small mechanical image formed no part of the thinking that led up to the formulation of his theory.[42] Charles Singer comments: "A clack in the English of Harvey's day was a form of valve used on pumps or 'Water bellows.' Such a valve or 'clack' was opened by the upward movement of the water produced by suction, and closed again by the backward pressure of the weight of water."[43] According to Webster, this is the wrong kind of pump: Harvey had in mind more the image of blood spurting out of a cut artery, as would be seen in a London bellows pump type fire-engine.[44]

Furthermore, even this small machine, an explanatory rather than a conceptual image, does not need mean that Harvey saw the circulation of blood as a mechanical system. Renaissance architectural theorists are explicit that the main value of machines was symbolic and demonstrative, not practical or productive. In the verso to the frontispiece of the 1556 edition of Barbaro's Vitruvius, the architect is depicted using a compass to study a zodiacal sphere alongside the machinery of building, a sundial, vaulted ruins, musical instruments, and the military tortoise. These are all examples of the machinery of the world; all of them mimic the circular movements of the heavens. Barbaro writes: "The origin [of machines] derives from necessity, which moves men to accommodate themselves to their needs; nature

[40] Harvey, *The Circulation of Blood* 3-4. On the sun metaphor and macrocosm-microcosm correspondence, see Temkin, *Janus* 281-282.

[41] Translation taken from Singer, *Discovery of the Circulation of Blood* 45-6.

[42] See Webster, "Harvey's Conception of the Heart as a Pump."

[43] Singer, *The Discovery of the Circulation of Blood* 43, 46. See also Basalla, "William Harvey and the Heart as a Pump"; and Siegel, "Why Galen and Harvey did not Compare the Heart to a Pump."

[44] Webster, "William Harvey and the Heart as a Pump" 515.

teaches them and offers examples either in animal life whence, it appears, many artifices have their origin, or in the continuous rotation of the world, which Vitruvius claims to be a mechanism, and thus also is called the machine of the world (machina del mondo)."[45] Here Barbaro elaborates Aristotle's concise statement: "All motion that arouses our wonder follows the circle as its basic pattern and origin."[46] Machines were important because the circular motion in the mechanical action of machines imitates not only the order of the heavens (the familiar model of concentric spheres), but also how they move.

The point is, it is no accident that the blood makes a circular motion. A circle hardly describes visually the path Harvey thought blood took moving through the body. The blood moves in a circular system because that is how the heavens move. The blood circulates in Aristotelian, microcosmic and symbolist circles. Harvey, like Barbaro, subscribes to the "Aristotelian idea of the function of circular motion in nature."[47] Indeed, circularity (as opposed to circulation) was the idea that conditioned the first positive responses to Harvey's theory.[48] Robert Fludd was one of the first to acclaim Harvey's theory in print (in 1630) because "the discovery of circulation fitted so well his [Fludd's] cosmographic ideas."[49]

Hart and Hicks argue that there is a link between the exploration of Vesalian anatomy and the "consequent decline" of Neoplatonism, as if anatomy "[i]nevitably undermined the status of the human body as a divine humanist model."[50] This "inevitably" is entirely ironic, because the anatomists—in this case Vesalius and Harvey—used anatomy to *demonstrate* the divine status of the human body. Allen G. Debus sums up this irony thus: "In the end one is faced with the seeming paradox that one of the most impressive achievements of the Scientific Revolution was accomplished by a professed Aristotelian [Harvey] and that his work first appealed to mystical Hermeticisists [Fludd]."[51] In Jones's society, the circulation of blood thus appeared to confirm old Neoplatonic and Aristotelian theories rather than ring in the new mechanical philosophy.

There is one facet of the significance of circles that is difficult at first glance to explain. The form of the Barber Surgeons theatre was elliptical, even if the zodiacal decoration of the interior makes a direct

[45] Qtd. in Cosgrove, *Palladian Landscape* 229.

[46] Qtd. in Pagel, "William Harvey Revisited Part I" 14.

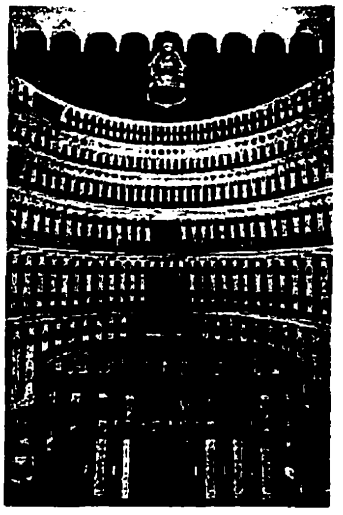
[47] Pagel, "William Harvey Revisited Part I" 6.

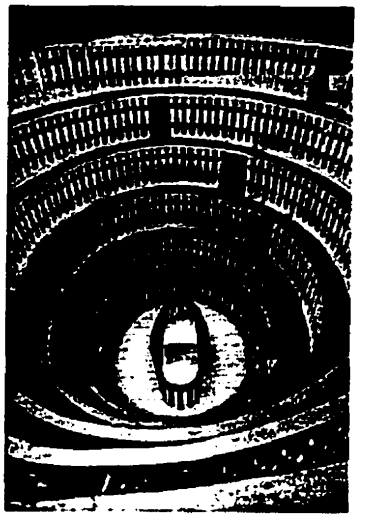
[48] There is a similar discussion of Harvey's thinking about circulation in Sawday, *Body Emblazoned* 23.

[49] Pagel, "William Harvey Revisited Part I" 26. Allen G. Debus points out that circulation had three cognates at the time: one was the experimental proposition about the flow of blood; a second was the mystical, Aristotelian concept of a microcosmic imitation of macrocosmic revolutions; and the third was a chemical meaning denoting a specific chemical process ("Robert Fludd and the Circulation of Blood" 376).

[50] Hart and Hicks, "Introduction," *Paper Palaces* 27.

[51] Debus, *Man and Nature in the Renaissance* 72.

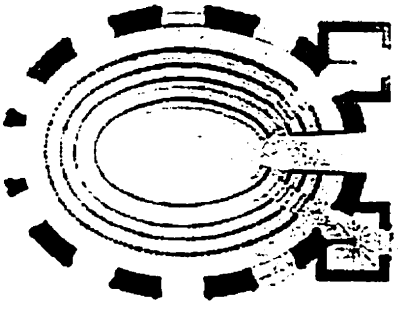




3.20 (above left) Anatomy Theatre, Padua, 1594 (http://www.unipd.it/esterni/visiteweb/english/pagine/visita.htm)

3.21 (above right) Anatomy Theatre, Padua, 1594 (http://www.unipd.it/esterni/visiteweb/english/pagine/teatro.htm)

3.22 (below left) Barber Surgeons Anatomy Theatre, London, 1636, oval plan (Fusco, *Inigo Jones* 342)



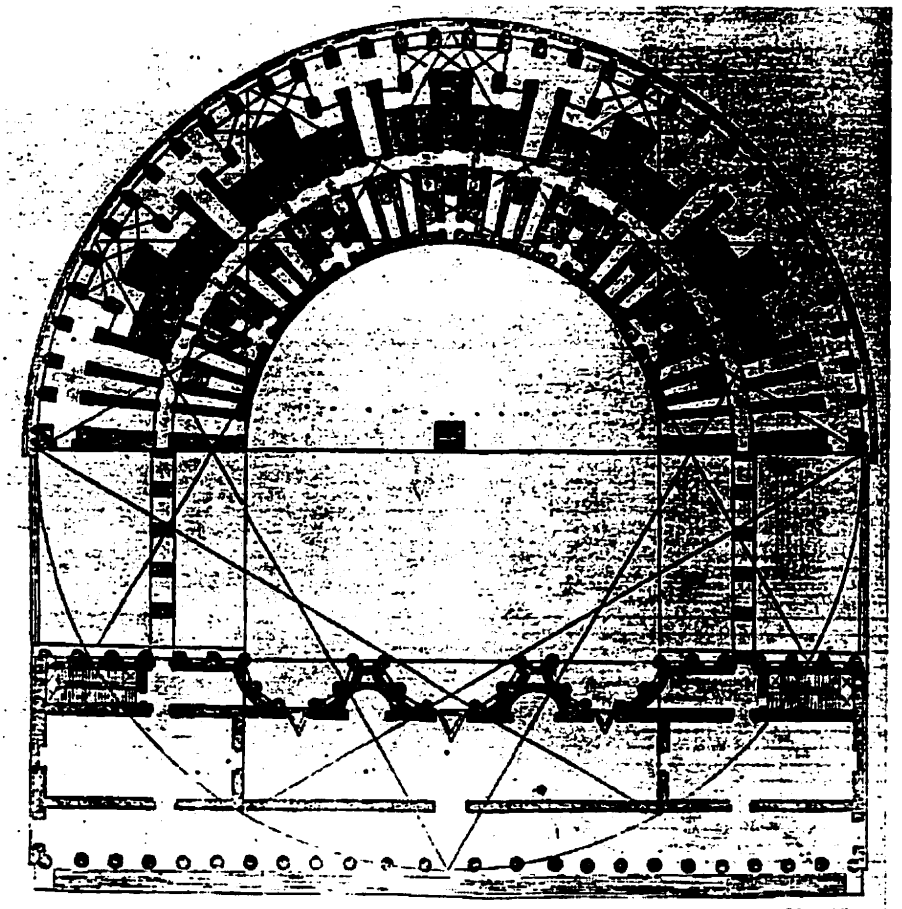
reference to celestial circulation. But though it is tempting to match up his design with the Baroque interest in elliptical and oval architectural forms, the elliptical form was most likely chosen as an imitation of the celebrated *teatro anatomico* built in 1594 at Padua University. Many of the leading medical men in England had been trained at Padua, including William Harvey and Doctor Lister, who are mentioned by Jones in his Palladio notes.[52]

There is a further architectural ramification of the symbolic importance of the circularity of machine motion and theatres. Jones believed in a link between circles and sacred architecture, first stated in Vitruvius and elaborated by Barbaro.[53] Jones also followed Barbaro in the interpretation of the circle as a key part of the ground plan of the antique theatre. This is of course the basis of Jones's belief that Stonehenge was a Roman temple.[54] Jones believed the plan of the antique theatre in Bk 5 of Barbaro's version of Vitruvius was identical in geom-

[52] See also Sawday, *Body Emblazoned* 76. Indeed it would be wonderful to be able to connect the oval theatre with the elliptical planetary orbits of Johannes Kepler (1571-1630)—Kepler had links to the court of James I, especially to Henry Wotton, James's ambassador to Venice, who tried to persuade Kepler to move to England, though there is no evidence that Jones and Kepler met. (See also Pérez-Gómez and Pelletier, *Perspective Hinge* 125-28, for an attempt to clarify at least one facet of the debate, namely that Kepler's ellipses were deformed circles.)

[53] For further links between circles, Barbaro and Palladio, see Cosgrove, *Palladian Landscape* 226-232. See also Palladio *Four Books on Architecture* 4.9, which Jones annotates as "Round and Square Temples the most Regulated forme."

[54] On Stonehenge, see Yates, *Theatre of the World* 176-185. Yates believes Jones got this notion of Stonehenge as an ancient Vitruvian theatre because the English public theatres, namely the Globe, were also Vitruvian theatres (*Theatre of the World* 184), further proof of Dee's influence in seventeenth-century London.



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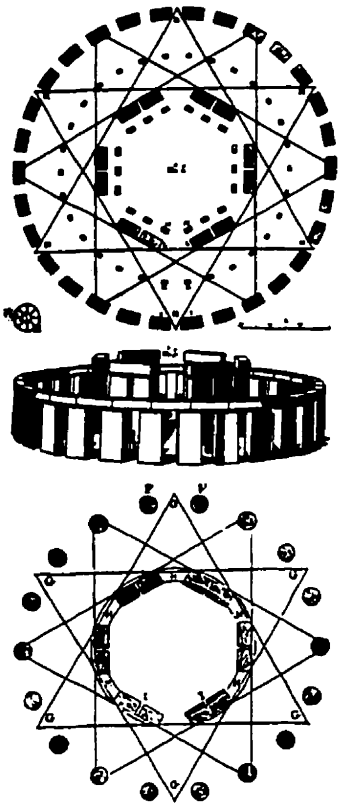


3.23 (above) Stongehenge, Webb/Jones reconstruction, plan, view of stones, and generalised layout from *STONEHENG Restored*, 1655 (Hart, *Art and Magic* 57).

3.24 (left) Illustration of the Roman theatre plan from Book V of Barbaro's *Vitruvius*, 1556 (Tavernor, *Palladio* 51).

etry to the plan of Stonehenge. For Jones, the geometry of interlocking circles and triangles has clear astrological significance: there are four equilateral triangles, whose forms represent the twelve signs of the zodiac.[55]

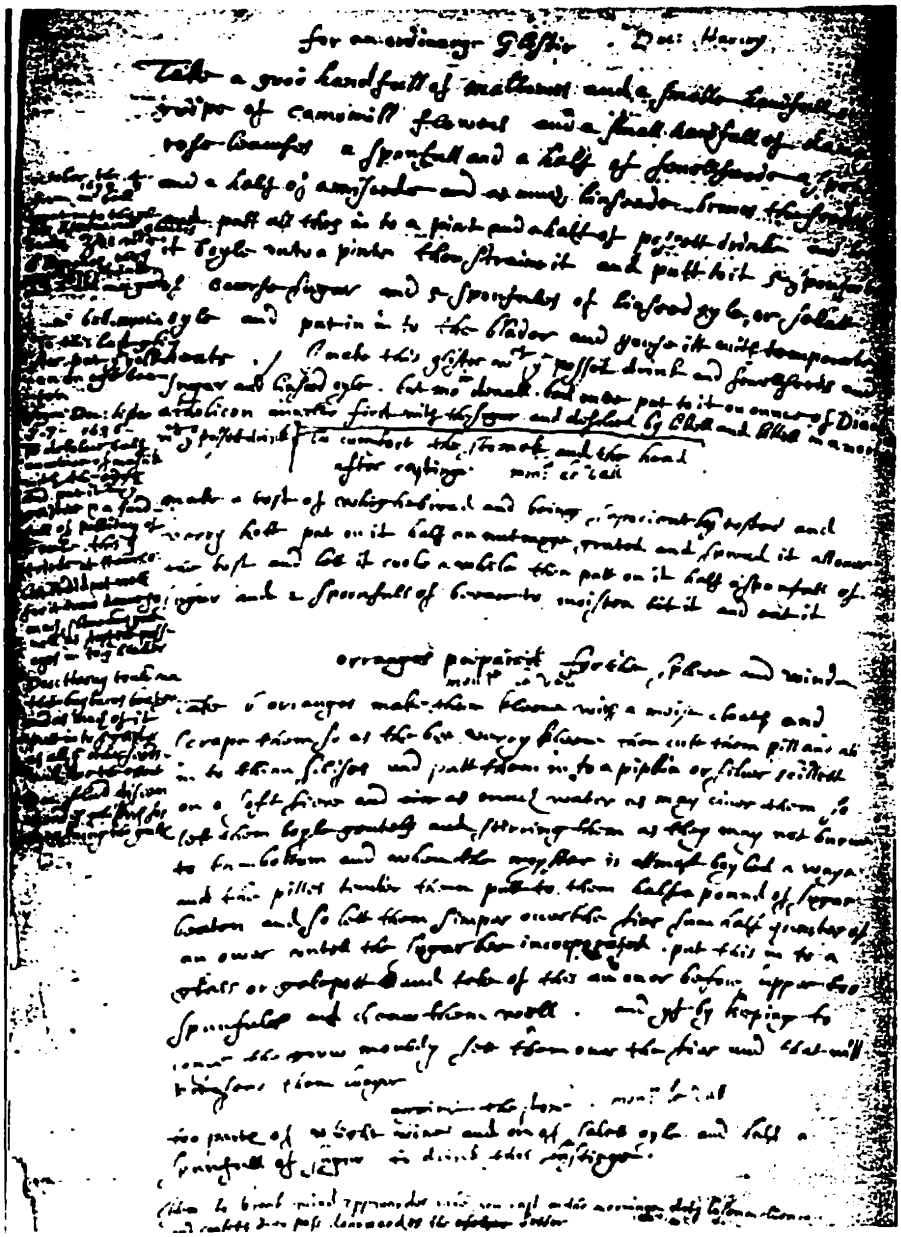
At the beginning of this chapter, I argued that the impact of the printing press on architecture in Stuart England is difficult to assess because of the ways architects (and others) understood the machinery of the press. I can now add that a second factor that lessened the impact of printing technology on architectural practice was that machinery was *already* a significant part of Vitruvian architectural theory. This vision of Stonehenge shows how thoroughly Vitruvian architectural

[55] See Hart, *Art and Magic* 131-35.

theory is enmeshed in Jones's thinking. Theatre design can lead outward to anatomy or to ancient monuments or to stage design because they are linked both temporally and conceptually in the matrix of Vitruvian theory Jones strove to steep himself in.

Vitruvian theory is thus closely linked to the cultural setting of Jones's practice. Indeed it is this Vitruvian background that sets off the unusual connections between Guarini's Baroque and Jones's Palladianism, or between Stonehenge and Vesalius's *Fabrica*. Topics such as theatres, medicine or ancient British monuments are linked together at the heart of Jones's thinking by his immersion in Vitruvius, supported by an understanding of the symbolic importance of geoemtry and machinery, and by the philosophical and professional interests of his peers. Even when such subjects are not explicitly discussed by Palladio, they are appropriately gathered together by Jones into the body of his Palladio.

4 Between mouth and anus
The belly of the architect



4.1 Jones's recipes "for an ordinary Glister" (TF 3v").

In the last chapter I discussed how Stonehenge brought together Jones's concerns with Vitruvian machinery, astrology and antiquity under the rubric of the model of the antique theatre proposed by Barbaro and Palladio. Jones and Palladio shared an interest in theatre vocationally (both had careers in theatre), methodologically (Jones used Palladio as a source for theatre and scenic design), and theoretically (through Vitruvius). Even though neither the theatre, ancient or modern, nor Stonehenge was explicitly addressed in the *Quattro libri*, they formed a natural extension of Jones's artistic and architectural interest (and investment) in Palladio.

Stonehenge also brought together characters from the Stuart Court like King James and William, 3rd Earl of Pembroke, but also, surprisingly, physicians Robert Fludd and William Harvey. According to *Stone Heng Restored*, published by Webb in 1655, King James asked Jones to investigate Stonehenge when the King was at Pembroke's Wilton House. And, according to Webb's preface to *A Vindication of Stone-Heng Restored*, published in 1665, Harvey (in concert with the "best Antiquaries") encouraged Webb to publish the results of the investigation.[1]

Jones's involvement with Harvey brings us to that other Vitruvian subject, not covered by Palladio directly, but which Jones naturally included in his Palladio: medicine. As I discussed in the introduction, most commentators mention the medical annotations that fill the back flyleaves as a sign of Jones's (failing) health. But given the social and intellectual connections between medicine and architecture, these notes should not be so easily dismissed. This chapter is a preliminary sketch of some of the ways we can read Jones's interest in medicine. Wherever possible I will emphasize Jones's interest in books, not just his habits of humanist reading, but the nascent connections between reading, writing and the body.

The common ground of medicine and architecture is part of the architectural tradition Jones worked in. Maurice Howard suggests that the question of the ideal house and the healthy life was a subject that preoccupied both architects and physicians in the sixteenth century, particularly in the development of a professional consciousness.[2] The first Vitruvian-style Renaissance treatise in English, John Shute's (?-1563)

[1] See Hart, *Art and Magic* 201-205.

[2] Howard, "The Ideal House and Healthy Life." This battle for professional turf was alive in Britain in the nineteenth centrury; see Adams, *Architecture in the Family Way*. Is there any real continuity between the situation in the 1500s and that three centuries later?

The First and Chief Groundes (1563), counts "Phisicke" as part of the necessary training and knowledge of the architect:

> he ought first to be a very good Grammarian, then to have experte knowledge in drawing and protracting the thinge, which he hath conceyued, Nexte he must have a good sight in Geometrie, Consequently in Opticke and in such lyke sciences he must have good perceuerance. Likewise in Arithmeticke he must be very parfiact, and in histories singulerly well seene. He must also have a good sighte in Musycke, and some knowlaige in Phisicke, not altogether ignoraunt in Astronomie, he must also besides all thise ben Philosophie, very experte.[3]

This list, of course, is derived from Vitruvius I.1.3. In his own words, Vitruvius advises an architect need not be "in fine a physician like Hippocrates, yet not unskilled in medicine."[4]

Jones's interest in medicine as manifested in his Palladio is not as rigorous or systematic as his study of architecture, but there are parallels between the architectural enterprise and the medical one: he is self-taught, using books and treatises; he practices by experimenting on himself; he creates his own "inventions" by imitating and copying models; and he distinguishes between general theoretical principles and specific practices.[5]

Besides these structural parallels between Jones's studies of medicine and architecture, the medical annotations shed light on two other areas of Stuart culture important to architectural history. The notes show that Jones takes for granted some of the white magic associated with Neoplatonic thought; at the same time, they show none of the scientific or even alchemical bent that one would expect from someone so closely linked by historians with Dee's concept of archemastrie.[6] Jones's notes, that is, manifest a decided *lack* of support for the argument that Jones was a conscious scholar in the Yates Hermeticist-Cabbalistic tradition or even a Paracelsian. The notes help qualify, then, descriptions of Jones as a Neoplatonic magus, and clarify what Vaughan Hart calls "the importance of Court Platonism in shaping Jones's work."[7]

Second, the notes are one of the few sources that tell us anything about the kind of human body for which his masques and buildings were designed. Indeed, Jones's Palladio invites questions about the body: what is it? how does it work? what does it look like? and what does it

[3] Shute, *Chief Groundes* fol. 5 v.

[4] Vitruvius, *On Architecture* I: 18-19.

[5] On the importance of the concepts of imitation, copying and *mimesis* to Jones, see Peacock, "Inigo Jones and Renaissance Art."

[6] See, for example Strong, *Henry, Prince of Wales* 214-219. Grillner implies that Jones should be recognized as an archemaster for his theatrical work ("Human and Divine Perspectives" 83-84).

[7] Hart, *Art and Magic* 8.

mean? Although the evidence is often implicit, and thus interpretation is necessarily speculative rather than analytical, there is enough of it to suggest a rather intriguing "body image," raising conceptual questions about the historical necessity of our modern technological prosthetic body.

The Jonesian body (the body image that Jones had, as opposed to his flesh) is conceptually intertwined with the historiography of writing I looked at in chapter two. As philosopher Gary Shapiro notes, "After the decline of neo-Aristotelian accounts of human beings as ensouled matter and before the extravagant constructions of Cartesian medicine and the artificial body politic of the Hobbesian Leviathan—two bodies that may be taken as having instituted modernity—there are other ways of writing about the body or of allowing the body to write."[8]

Jones's Palladio lets us question the mechanical Cartesian body as the basis of classical, humanist (Renaissance and afterwards) architecture, or least position it historically, that is, to argue that it appears in England only *after* Jones. Because of this chronology, the annotations reveal little about the Phenomenological body, because that, too, is chronologically, a Cartesian body.[9] Jones's Palladio is more obviously useful for a history of the body as conceived by Michel Foucault: *not* the body that is, phenomenologically, the fundamental source of human experience and meaning, but the succession of bodies with particular organs, particular shapes, particular functions that coalesce conceptually at certain epochs.[10] "Writing the body" is itself, though, a characteristically modern concept of the body.[11] So although in concept Jones's body is not a machine but rather Aristotelian ensouled matter, it is also in part an early modern textual body, a body, as the jargon has it, that reads, writes and is written.

I have argued that the influence of Vitruvian theory points Jones away from concerns of modern science. As shown in his work on the Barber Surgeons anatomy theatre, Jones's interest in medicine crossed-over into architecture in the realm of Vitruvian theory and court social networks, not in the spirit of scientific experimentation and medical innovation. The medical notes also show more generally that Jones's interest in medicine was not scientific, but looked back to traditional

[8] Shapiro, "Jean-Luc Nancy and the Corpus of Philosophy" 61.

[9] On the historicity of the Phenomenological body, see Leder, *Absent Body*

[10] See Foucault, *The History of Sexuality*, especially volume 1, and Laqueur, *Making Sex*.

[11] See Introduction, note 45.

medicine and Renaissance magic. For instance, in a heading "Against melloncoly," Jones cites "Copulation must bee vtterly escheued for that thearby, the best blud of a man is wasted and natural strength infeebled. To kimb the head often, to sing, youse music." (TF 2v°). The notion that coitus shortens life was widespread in Renaissance thought and easy to find in medical treatises.[12] The second notion, of effecting healing through singing, is also common to medical writers, but it stretches modern notions of what medicine, or at least healing, must be. The use of music shows how the boundaries of healing blur with those of lifestyle advice, opening up (again) on the intractable debate about magic and science in the Renaissance.

An example of a text that Jones may have known in which discussions of magic and science coexist as approaches to healing is Giambattista della Porta's (ca. 1535-1615) *Natural Magick*.[13] The Seventeenth Book, on the science of lenses and optics, "Wherein are propounded Burning-glasses, and the wonderful sights to be seen by them," is well known for its early description of the camera obscura, and for passages that may describe a telescope and microscope. At the same time, in the Eighth Book, "Of Physical Experiments," della Porta writes explicitly of magic: Chap. XIV, entitled "Of Fascination, and Preservatives against inchantments," (229) includes "Some Preservatives against Love" (232), magic to "abate the power of witchcraft" (232).

Della Porta includes magic potions to improve and preserve health. He has the following "Excellent Remedies for the Eyes": "If the Pearl be above or beneath the Cornea, make a Powder of Sugar-Candy of Roses, burnt Allome, and the Bone of a Cuttle-Fish, very finely beat and searched exactly; and when the Patient goeth to Bed, sprinkle a little of this Powder upon his eye, and by and by drop some of this water into it, and let him shut his Eyes and sleep: for he will quickly be cured" (221). The recipe is similar to one of Jones's from "Mon^r De Vall a medsine for bludshotten eies . . . Take the whight of an new laid egg and beatt it with whight sugar candy and being well beaten to a water, put to it 5 sponfules of redd rose water and temper it well and dropp it in to the eies and laeye a cloath dipt in it on them and change as it drieath" (TF 3).

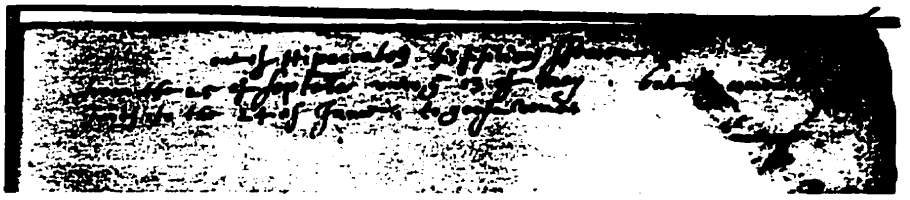
[12] See Allen, "John Donne's Knowledge of Renaissance Medicine" 335-6, note 75.

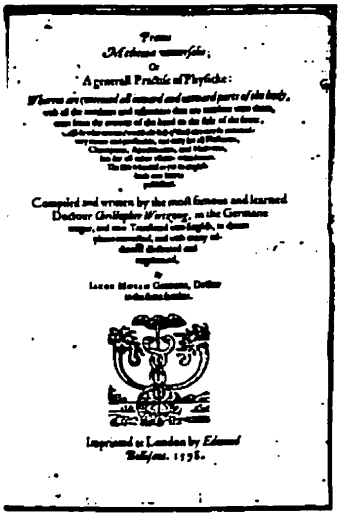
[13] Page references to della Porta's *Natural Magick* are made parenthetically. The English edition appeared a century after the first Latin edition (1558 Naples), which had been quickly translated into Italian, French and Dutch.

Della Porta shows us one place where Jones failed to go to Vitruvius for guidance, namely, that Jones doesn't mention Vitruvius's cure for kidney stones, the "grauell" from which Jones seems to have suffered a great deal. Jones includes numerous recipes for stones, including a "fomentation when a stone stickes or grauell" (TF 4), "A bath for ye grauell and stopping of vrin wth slime or blutt congealed" (TF 4) and potions to drink like one from Mon^r: le Vall "against the stone" consisting of "too partes of whight wine and on of salett oyle and half a spunfull of sugar to drink this fastinge" (TF 3v^o). Vitruvius has another kind of cure. He reports that "Some springs are acid, as at Lyncestus and in Italy in the Velian country, at Teano in Campania, and in many other places. These when used as drinks have the power of breaking up stones in the bladder, which form in the human body" (*On Architecture* 8.3.17). Della Porta claims to have sought out one of these springs—at "Francolise, about a mile from Theano" along the way towards Rome, which "made me exceedingly rejoyce" (223). Perhaps if Jones had travelled to Italy in the 1630s, he would have made a special trip to this Vitruvian site.

The point is, health, medicine, Vitruvius, magic and science were interconnected in della Porta's universe with an astonishing naturalness. Although Jones's medical notes are far less ambitious, focused narrowly on the subjects found in Bk VIII of della Porta, his recipes are likewise not exactly magical potions or scientific prescriptions. They make sense only if seen in this wider, and by this date old-fashioned, context. This ambiguity between medicine and magic, health and science points out the seriousness of the medical notes (that is, they are as serious as optics or other scientific topics), and simultaneously tempers the sense of novelty or innovation in Jones's thinking.

Jones keeps track of two main sources for medical information in his notes, people and books. The people are physicians, apothecaries and fellow sufferers, including Drs Harvey, Fludd, Williames and Lister, Mr. Haydon Surgion, and apothecaries Bell and Wolfe. There are others who seem to have expert opinions but are not given medical titles: lo: of Northumberlands corncutter, Mon^r Sanci, Mr Daye "Mr Dimokes man" and the oft-cited "Mon^r De Uall." Another set of names could be grouped as fellow patients my la: Penbrooke, lo: of huntington, Fran:





4.2 (above left) Jones's note on Hippocrates: "Out of Hipocrates his fisitious ffeare from the 25 of September vnto y^e 13 of May, but his commenter saith to the 24 of Junne, to youse Venus" (TF 9).

4.3 (above right) Title page, Wirsung, *A Generall Practise of Physicke*, 1598.

Fanell.

The latter group are named in notes that vouch for the efficacy of the recipes. This test group is necessary because Jones sometimes invents his own recipes, such as "for the spleene and vomiting Mellencoly. My owne," a caper-based breakfast potion. In a marginal note to this entry he adds "Aproued by many as My lo: Newcastell, Mr. Herbert Lawer Mr. Oulsworth" (TF 4). Jones's uncontrolled experimentation with new recipes is more imitation than empirical research, similar to Jones's devising of architectural detail in imitation of designs from Serlio or Palladio.

Jones's main textbook is cited variously as "Gen: Prac:" "Generall Prac," or "general prac." It is the *Praxis Medicine Uniuersalis; Or, A Generall Practise of Physicke*" written by "Christopher Wirtzung" (normally written "Christof Wirsung"; 1500- or 1505-1571) and first published in an English translation ("corrected and augmented") by Jacob Mosan in London in 1598.[14] The 800-page book contains a general index and a glossary of pharmaceuticals and preparations. It is arranged according to the parts of the body. Each section has a description of the body part as well as the main associated ailments, their causes and sanctioned treatments. The recommended treatments include folk and traditional Galenist compounds in the form of pills, unguents, syrups, foments and plasters, as well as advice on when to use purging (enemas, vomiting), baths and bloodletting. Wirsung also includes preventive advice on how to live a healthy life in accordance with the cycles of nature.

Jones has a striking note that derives from this last category. Neither strictly a description of an ailment nor a prescription for daily regimen, Jones notes: "Item to break wind vppwarded when you cast [vomit] in the morninge doth losen mellencoly and causeth it to pass downwardes the better" (TF 3v°). This note is in the form of a typical

[14] Wirsung's book first appeared in German in 1568. English editions were published in 1598, 1605, 1617, and 1654. The 4th ed. (1654) contains 818 pages plus another 100-odd pages of indices.

"item" in Wirsung, but it is unclear whether he is imitating Wirsung or creating his own counsel.[15] The advice falls under the category of Hippocratic daily regimen, of the kind Jones quotes from B. G. a Portu Aquitano, "The cheefest point of health consisteth in this, not to fill thyself with meate, nor to be slow in labours" (TF 2). Jones must have read an English translation of Hippocrates (there is a note on TF 9 naming "Hipocrates" and "his comenter"), such as Thomas Cogan's very popular *The Haven of Health*, intended "for all those that haue a care of their health, amplified upon fiue words of Hippocrates, written Epid. 6. Labour, Meat, Drinke, Sleepe, Venus."[16] His note-taking activity in medicine and architecture follows the advice given by Hippocrates and noted by Cogan: "And this is the best physicke of all for everyman to know thoroughly the state of his owne bodie, and to marke diligently what things are wont either to doe him good or harme."[17] "Aprouved on myself" indeed.

Jones was clearly interested in traditional Hippocratic medicine. But what about the new "chemical philosophy" of Paracelsus (1493-1541)? The question is important because an interest in Paracelsus would link Jones to Yates's Rosicrucians, especially to Robert Fludd. And in fact Jones does refer to specific Paracelsians in his flyleaves. Yet he does not seem interested in the specific theories of Paracelsus, such as the iatrochemical theories, with their connection to alchemy. Paracelsians rejected humoural medicine, arguing for localized seats of disease in specific organs, and proposing metal- and mineral-based chemical cures. Allen G. Debus claims that in England, this theoretical Paracelsianism was never popular. The first translations were done by a certain John Hester (died ca. 1593) who translated works "which were short on theory and long on lists of chemical recipes."[18] English doctors, writes Debus, were "indifferent rather than hostile to chemical medicine."[19] Jones's main textual source manifests this indifference perfectly. There are apparently some chemical remedies in Wirsung, and in the address to the reader translator Jacob Mosan names Hippocrates, Galen, Avicenna and Paracelsus as "the most famous Authors of auncient and moderne age" worthy of imitation. But only Paracelsus's *fame* seems to be used, not his theories or his chemical preparations.

[15] I have searched only the 1598 and 1654 editions; Mosan might have included this advice in another edition.

[16] Cogan, *Haven of Health* title page. There were six editions between 1584 and 1636.

[17] Cogan, *Haven of Health* 253.

[18] Debus, *English Paracelsians* 67.

[19] Debus, *English Paracelsians* 77.

Jones does mention one well-known Paracelsian. The note on TF 2 is itemized "Out of B. G. a Portu Aquitano." The note is a transcription of Portu Aquitano (i.e. Penotus aka B.G. Penot) taken from *A hundred and fourteene experiments and cures of... Theophrastus Paracelsus...Whereunto is added certaine excellent and profitable works by B.G. a Portu Aquitano*, translated by Hester, and first published in London in 1596.[20] Hester's translations were, according to Debus, typical of the reception of Paracelsus in England: they were often translations of apocryphal works and concentrated on the recipes for remedies that gave miraculous cures rather than theory.[21] Ironically, when Jones quotes from Hester's translation, he quotes *theory*, describing the division of illness into four principal diseases, leprosy, gout, dropsie and falling sickness. This system of four principal diseases adapted quite well to a traditional humoural system. Paracelsus himself argued for five principal diseases, and his followers often argued for three; there were similar divergent systems that tried to make sense of Paracelsus's rejection of the four elements (air, fire, earth, water) and endorsement of three principles (salt, sulphur, mercury).[22] Thus Jones noted a piece of theory that was in fact *not* a Paracelsian idea. The rest of the *Hundred and fourteene experiments* book is full of procedures for Paracelsian chemical processes which Jones does not note. Finally, ironically, the *Hundred and fourteene experiments* is apocryphal, a piece of enduring pseudo-Paracelsus.

Because Jones gives such little indication of interest in understanding disease as a chemical process, it is possible to qualify Joseph Rykwert's claim that "Jones would have found Paracelsian medicine sympathetic."[23] Rykwert's remark is made in a footnote to a passage that links Dee, Jones and Fludd. Rykwert explains that there is no known connection between the "two Welsh notables," and then calls Fludd a "magus," and one who the flyleaves show had personal contact with Jones.[24] The notes reveal, however, that Jones had little interest in the specifics of Paracelsus's thought, the parts of chemical theory that provoked the ire of the Galenists. Above all, Jones wrote down recipes based on the ideas of the four humours, one of the traditional medical ideas that Paracelsus tried to overthrow. One would expect chemical remedies among his pages of notes. There are none. Thus although it

[20] *A hundred and foureteene experiments and cures of the famous physitian Philippus Aureolus Theophrastus Paracelsus* was reprinted in 1652 as part of *Three Exact Pieces of Leonardo Phioravant*, (Leonardo Fiovravanti) which I consulted. After the publication of the collected works of J.B. van Helmont (1577-1644) in 1648, English translations of which began to appear in 1650, Hesters books were reprinted. They sparked great interest in Paracelsian theory in England (Debus, *English Paracelsians* 181).

[21] See Debus, *English Paracelsians* 66-69; on Hester see also Nicholl, *The Chemical Theatre* 66-76.

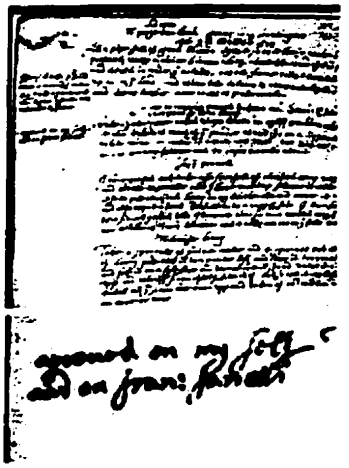
[22] Debus, *English Paracelsians* 60.

[23] Rykwert, *First Moderns* 203, n.39.

[24] Rykwert, *First Moderns* 127.

does seem probable that Jones would have had sympathy with parts of Paracelsus's system common to other systems, such as the microcosm-macrocosm analogy, it is difficult to believe Jones even knew much about what made Paracelsian medicine unique and innovative.

I have described two places where Jones might have but did not reveal an interest in chemistry and Paracelsian theory: in his dependence on the traditional Galenism of Wirsung and in his choices from Hester's Paracelsian translations. The same absence characterizes the notes concerning Harvey and Fludd. When Jones mentions known "magi" such as Robert Fludd by name, it is in context of older, traditional, Galenist humoural medicine.



4.4 Jones's note "aproued on my self" in context and in detail (TF 4v°).

Rykwert characterizes Harvey, with Robert Fludd, as "the most distinguished Paracelsans [*sic*] in Britain."[25] Rykwert adds, about Fludd: "Inevitably, he recommended chemical treatment in preference to the old Galenic remedy." Rykwert's citation (Debus *English Paracelsians* 101, 115 ff.) does not support this view of Fludd or Harvey. Instead, Debus repeatedly insists that Fludd had little interest in "the practical application of chemistry to medicine."[26] And although Harvey was well-known in his day, he was *not* well-known *as* a Paracelsian.

As far as his notes record, Jones dealt with Harvey and Fludd as traditional humoural doctors, not as Paracelsians. In the flyleaves Harvey is mentioned thrice. Once he gives his approval, probably in December 1638, for a recipe containing golden rod and white wine "for to auoyde grauell &c from Mo^r^ Sanci. and said to bee good by Doc: Haruy" (TF 4v°). The other two mentions concern a recipe "for an ordinary Glister [clyster]" (TF 3), and a marginal note, probably also in 1638, advising that to the basic recipe of marshmallow roots, chamomile flowers, rose leaves, fennel, anise and linseeds boiled in possett and mixed with salad oil, Jones should add "barbares beaten" (*berberis* or Barberry tree, a herbal, not metallic or mineral, remedy).

Fludd is mentioned twice in the flyleaves, both times in connection with Harvey and the aforementioned recipe for clysters. One mention is in the brief marginal note "Doc Flud discommendes glisters for weakening the guttes" beside the original recipe on TF 3v°, while a longer note on the facing page elaborates: "Nouember 20. 1638 Docc.

[25] Rykwert, *First Moderns* 203, n. 39.

[26] Debus, *English Paracelsians* 125.

Flud tould mee at Arr: House [Arundel House] that glisters being often taken doe weaken the guttes for the(y) being but scinnes [skin] are subject to loose thear naturall heate and so not able to doe ther offise he aduised rather to take stomicall pilles, but I must not haue them with Alloe for it is ill for the Emerades" (TF 4). Again, the advice is not Paracelsian but commonplace, the same kind of folk remedy Jones would also have looked up in his Wirsung, who includes a section entitled "Pils which will not purge, but onely strengthen."[27]

If Jones was more a folk medical man than a Paracelsian, he was not therefore far removed from the serious study of medicine. In Stuart England, there was no hard division between academic, professional medicine and traditional folk medicine.[28] Practitioners did not hesitate to prescribe folk remedies, often gathered and passed on orally, including "superstitious" treatments such as remedies containing animal excrement.[29] Physicians were humanists, university educated in "physick," who studied the principles of natural philosophy necessary not primarily to cure the sick, but to "preserve health and prolong life."[30] University education was not, however, an essential route to medical knowledge. "A man of education," writes Vivian Nutter, "like Montaigne [or Jones], could swiftly pick up the basic principles of Galenic medical practice—Paracelsianism demanded a more intense commitment—, and give advice or prepare remedies himself."[31] They would look in vernacular manuals and private compilations. Nutter might have had in mind a manual like the one written by Jones's contemporary William Vaughan (1577-1641), whose lay advice book *Directions for Health, Naturall and Artificiall: Derived from the best Physicians, as well Moderne as Antient* appeared in London in 1633. Vaughan's book is dedicated to "William Earle of Pembroke." Jones had ties to William, the 3rd Earl, who died in 1630, and to his brother Philip, the 4th Earl, who died in 1650. Recall that in 1620 Jones had been summoned to the 3rd Earl's house at Wilton by King James to study the nearby Stonehenge. The first recipe in the flyleaves, "An approued medicin for the stone in the kidnies" is "from my la. Penbrooke, 1632" (TF 2), presumably Philip.[32] Like Jones, Vaughan had travelled on the continent—to France, Italy and Vienna—in the years between 1600-1605. (Vaughan also travelled across the ocean to New-

[27] Wirsung, *Generall Practise* 328.

[28] Nagy, *Popular Medicine in Seventeenth-Century England* 53.

[29] Nagy, *Popular Medicine in Seventeenth-Century England* 43-53. Excrement was considered effective because alive with vital spirits.

[30] Cook, "The New Philosophy and Medicine in Seventeenth-Century England" 398-399.

[31] Nutter, "Medicine in the Age of Montaigne" 23. See also Slack, "Mirrors of Health and Treasures of Poor Men." Vernacular literature included (like Jones's notes) lists of remedies, and preventive advice about diet and everyday life.

[32] Jones and Webb worked for Philip, the 4th Earl, on Wilton House after a fire in 1647; see Hussey, "Wilton House, Wiltshire, I," and "Wilton House, Wiltshire, II."

foundland ca. 1622-1625.)

It may have been Vaughan's work on a medical book that encouraged Jones to keep medical notes, rather than just Jones's failing health or his interest in Vitruvian theory. In any case there are important parallels between Jones's working methods and Vaughan's. In his address to the "iudicious Reader," Vaughan says that although his knowledge does not come from practicing medicine, there are two rather Jonesian bases for his authority, self-education through reading treatises and his own experience: "ever since my childhood, [my choice] zhath been to reade more books of Physicke then of any other, in regard of my own health, which I saw might have proved more distempered and crazed, if I trusted others more then in my own in sight."

Like the arts, drama and literature, then, medicine is a vital link between Jones and a number of figures associated with humanist learning and the court. The mention of Harvey on the terminal fly-leaves in connection with the making of clysters, for instance, is a rare piece of direct documentary evidence that the two knew each other. But they must have had other contacts. Harvey was one of the men who persuaded Webb to write up Jones's notes on Stonehenge.[33] Harvey is linked to Jones's patron Thomas Howard, Earl of Arundel, as early as 1616 (i.e. shortly after Jones and Arundel returned form Italy). Arundel and Harvey, too, made a trip to the continent together. In 1636 Arundel was Ambassador to the Catholic Emperor Ferdinand of Germany at Regensburg. After the diplomatic meetings were finished Arundel split from Harvey, who went off to visit Italy, traveling south to Padua.[34]

The notes also connect Jones with Doctor Matthew Lister. He is mentioned on TF 3 in connection with the clysters (the entry is dated 7—1636). Lister studied at Padua with Harvey, and both were admitted the same day as Fellows to the College of Surgeons. Lister was physician to Jones's patrons Anne of Denmark and Queen Henrietta Maria.

As well as these connections between Jones and others interested in medicine, there are important professional, social and textual links amongst those "others." Recall that Fludd was one of the first people to proclaim Harvey's work on the circulation of blood.[35] There are also some suggestive intertextual and professional links between Donne and

[33] See Keynes, *William Harvey* 125.

[34] The voyage to Italy is discussed in Keynes, *William Harvey* 229-263.

[35] See the discussion in Debus, "Robert Fludd and the Circulation of Blood."

Harvey (links between Donne and Jones are described in chapter 3). F.N.L. Poynter believes Donne was at Harvey's Lumeleian lectures (why not Jones, too?), delivered before the College of Surgeons on 16, 17, 18 April 1616. According to Harvey's notes, Harvey presented publicly his ideas about the circulation of the blood. (*De motu cordis* was not published until 1628. Poynter offers evidence that Harvey read Donne's *Devotions upon Emergent Occasions.*)[36]

The topic that links Donne, Harvey, Fludd, Jones and medicine is clysters. The story of the invention of clysters, like the Vitruvian story of the invention of columns, was a tale of how human practice imitates nature. The story told by Pliny, and retold by no less than Galen, was that the ibis used its long beak to administer itself sea water enemas.[37]

Not only were clysters part of the armamentarium for purging, they were also used for feeding the body. William Vaughan's recipes for clysters includes directions to "make your Glister of Sugar-candy and Milke, which also will serve in this manner, as nourishment for great bellied women, and for such as cannot eate with the cough or a sore throat."[38] Jones headed his section "for an *ordinary* Glister" (emphasis added), however his recipe includes nutritional ingredients including sugar and "possett drinke," hot sweet milk curdled with ale or wine. On the suggestion of a Mr. Bell, apothecary, he also added egg yolks to his basic recipe: "Mr Bell Apotic. To this last glister put ye yole on an ege beaten" (TF 3v°).

The value of these so-called "nutritive clysters" was debated in Renaissance medicine. Don Cameron Allen claims that John Donne, in "Elegie XVIII (Love's Progress)," weighed in against the practice:[39]

Rich Nature hath in women wisely made
Two purses, and their mouths aversely laid;
They then, which to the lower tribute owe,
That way which that exchequer looks, must go.
He which doth not, his error is as great,
As who by clyster gave the stomach meat."[40]

Donne's jocular, ironic conceit is worth expounding. His contention is that women have two "purses," vulva and mouth, and that "Whoever loves, if he do not propose / The right true end of love," errs. In other words the poem argues that trying to feed the body through

[36] Poynter, "John Donne and William Harvey "233.

[37] Ambroise Paré (Pareus; 1510-1590) gives this version: "L'Ibis, oiseau semblable à la cigoigne, nous a monstré l'usage des clysteres, lequel se sentant aggravé d'humeurs, estant au riuage de la mer, remplit son bec et col d'eau marine, puis se syringue à la partie par où les excremens se vuident, et peu de temps apres se purge" (*Ouevres complètes d'Ambroise Paré* 1: 20).

[38] Vaughan, *Directions for Health* 76.

[39] Allen, "John Donne's Knowledge of Renaissance Medicine" 339.

[40] Donne, "Elegy 18," *Complete English Poems* 122-124.

the fundament is as ridiculous as making love to a woman's face.

But of course the poet is satirizing lust. It is *not* ridiculous to make love to a woman's face. The satire only makes sense if we understand the meaning of the final couplet ironically. In the logic of the poem, then, the idea of making love to the face is as true as the idea of nutritive clysters; the validity of each idea depends on the other. Thus if Donne is (satirically) endorsing making love to a woman's face, he is simultaneously *endorsing* nutritive clysters.

Irony and satire are double-edged rhetorical swords; it is difficult to be confident of the attitude of the speaker of the poem to anal feeding. But although Donne's own position may be ambiguous, it is crystal clear that the debate about nutritive clysters is essential to the meaning of the poem. The clyster simile is the poet's final, climactic argument; Donne must have expected his readers to negotiate it without excessive difficulty. Therefore, the use of the simile indicates that knowledge (and use?) of nutritive clysters was common in Donne's circle.

Modern scholars also need an understanding of nutritive clysters to interpret Renaissance artistic products. In his study of anatomy in the Renaissance *The Body Emblazoned: Dissection and the Human Body in Renaissance Culture*, Jonathan Sawday argues that the "sexually ambiguous puns" at the end of the elegy display Donne's homosexual panic.[41] He reads "aversely" as "backwardly," and thus counts the two purses as vagina and anus. It is certainly a strong secondary reading of the imagery, but Donne is explicit that he is comparing the face and a lower, "centric" part. In line 40 he writes "How much they stray, that set out at the face!" and in line 72 adds that a lover's chase is "Misspent by thy beginning at the face." Sawday's reading, is decidedly, in his words, "secondary"; the *primary* interpretation depends on understanding the contemporary medical debate about the value of nutritive clysters.[42]

Allen cites Riolanus (Johannes Riolan, 1539-1605) as one authority who disbelieved the efficacy of nutritive clysters. One author who advocated them was the so-called father of modern surgery, Ambroise Paré (1510-1590), who defended them with recourse to theory (that body parts will attract familiar nutrients they lack) and bedside experience (that such clysters were good for infants and anyone who could

[41] Sawday, *Body Emblazoned*, 206.

[42] Sawday's explanation that the lover's goal in the poem is anal intercourse is also deficient spatially. He says that the way the Exchequer looks at the woman's body is from "behind"; but if this is so, then the vagina is lower than the anus, so the poet, in advocating that the lover "go lower," would be advocating vaginal not anal intercourse. One pun that would aid Sawday's argument, however, is that the Exchequer looks obviously to funds, and might therefore "go" to the fundament. Both have the same Latin root *fundus*, which refers both to bottom and to a piece of (unworked) property. This reading fits with the second part of the poem, an extended imperialist metaphor of navigation and shipwreck.

not keep down food).[43]

The theory of attraction was inherited from Galen and Hippocrates, and was part of the debate about the action of cathartic drugs. It was accepted that specific drugs could cause specific actions. The fungus agaric, for instance, was thought to selectively purge phlegm. The opposed theory, that cathartics acted merely through mechanical irritation, was of great import for developments in seventeenth century biology. Theories of irritability led to mechanical descriptions in physiology, while the theory of selective sympathetic attraction, (attraction like a magnet attracts iron), or its opposite, an antipathetic repulsion, continued to be decried as "occult."[44]

The theory of purgatives helps explain another of Jones's entries, that for "the Cuere of Cattaris in head / To sneese with a fether in ye nose before meatt a littell purgeth the braine by the nose and mouth. I have youses it for ye paine in my neck and I fond ease" (TF 3). The action of the sneeze discharged noxious humours, purging the brain, and relieving pain in the neck. Similarly tickling the esophagus could cause vomiting, and enemas were thought to force the stomach to expel its contents into the intestines.[45]

Again the theory is humoural: the purging is meant to expel imbalanced humours, usually thought of as vapours, and not simply expel excess, undigested food. And speaking of vomit, as I discussed in the introduction, in addition to using clysters to take "meat" (food) through the rectum, Jones was in the habit of "casting" or excreting out the mouth. In this case, choler or yellow bile was the culprit: "M^r De Vall. to voyde coller adrift / Eate and drink clarratt wine exterordinary much at dinner and about 5 of the clok in the affternoone cast it and it may bring away the humor this I did on Thursday the 8th of September 1631 and it did the effecte but I doe youse to sheepe [~~after eating~~] beefore I vommit" (TF 3).

Purging a humour with emetics such as a surfeit of Bordeaux was a process meant to duplicate the natural purging action of the body. An imbalance of humours, such as an excess of melancholy, would itself cause vomiting naturally. In that case what was needed was something to *stop* vomiting, or at least to dim the associated pain and discomfort. Jones suffered "36 yeares" of "sharpe vomitinges," which he cured by

[43] Paré, *Oeuvres Complètes* 3: 551-555: "Nous usons de tels clysteres pour nourrir enfans et gens debiles, comme en un grand deuoyement d'estomach, quand il ne retient la viande qu'il prend" (555).

[44] Temkin, "Specificity of Cathartic Drugs" 61.

[45] Temkin, "Specificity of Cathartic Drugs" 63.

frequent use of an electuary of his own invention based on pickled capers and currants (TF 4). He also had a recipe, of toast topped with grated nutmeg and sugar and moistened with beer, again from Mon^r De Vall, "To comfort the stomak and the head after casting" (TF 3v°).

The transition from Galenist humoural theory to the new philosophy in medicine was accomplished in the seventeenth century.[46] With a new emphasis on describing a mechanistic physiology of the body, and a "sheer increase in factual information" that had to be explained, medical theory soon dispensed with the notion of the divinity of the human body outlined in traditional Galenism.[47] In fact the definitive change was not only the disappearance of a belief in the divine status of the human body, but the occlusion of this humoural body.

Humoural psychology describes persons in a strange manner. As Mark Breitenberg explains, the "early modern period imagined identity as derived from the often contentious fluids of the body, not as the largely mental condition that displaced this model in the Enlightenment."[48] The kind of body Jones's had—humoural, fluid, non-systematic and vital, orificial rather than official—is foreign enough from my own agglomeration of mechanical systems that it is hard to imagine the *person*, Inigo Jones, whose subjectivity and self-identity rested in this flow of humours. Humoural psychology can thus make Jones seem *un*modern and *un*familiar.

Humoural physiology presents a body equally hard to grasp. And it is perhaps only a misunderstanding of Jones's body as non-humoural—as a modern mechanical entity—that makes his architecture seem familiar and modern: rigorous, rational, mathematical. In Vitruvius's text, and in familiar drawings by Leonardo and di Giorgio, the divine body is represented on the Renaissance page inscribed in geometry. But that representation shows merely the surface of a body. In the pages of his Palladio, Jones took care to describe that body in depth as a humoural body, capable of illness and death. If it is somewhat difficult to reconcile Jones's physical discomforts, his casting and clysters, with the divine status of the body in Renaissance architectural theory, it is because these questions of flow, balance, purging, feeding and vomit are superficially a long way from the discourse of Jones the

[46] King, "The Transformation of Galenism" 7. King adds that medical practice "did not suffer as much" from the impact of the new philosophy, as practioners continued to dispense traditional remedies.

[47] King, "The Transformation of Galenism" 24-25.

[48] Breitenberg, *Anxious Masculinity* 29.

visual artistic genius or Jones the Neoplatonic magus. But nevertheless this fluid body is the ground that must be established before either of those discourses make any real sense.

Conclusion
The page, the sheet, the body

5.1 Inigo Jones, self-portrait sketch, *c.* 1630-1640 (Harris, Orgel, and Strong, *King's Arcadia* 211), approximately the time Jones was making his notes on medicine in his Palladio.

At the beginining of this essay I wrote that I wanted to speculate about themes that are not normally brought together in modern academic studies of Jones, but which coexist quite naturally in his Palladio. I used the quick example of Jones's sexual life to show how such speculation can lead to unexpected estimations of the person and the achievement of Inigo Jones. I then outlined at more length some of the surprising connections between components of Jones's world: how Stonehenge and the pages of the *Fabrica* of Vesalius are related through astrology; Guarini's chapels and Jones's churches through the pages of John Donne; scenic design and the circulation of the blood through Barbaro's pages on the symbolic role of machinery and circular motion. If these arguments are often more provocative than persuasive, it's because the breadth of material it would be necessary to discuss in order to subtantiate them is enormous: that's the drawback to any multi-disciplinary approach. There is, however, one theme, which I broached in Chapter Two, that is common to all of these disciplines, and especially fruitful for further study of Jones: the importance of the page in Renaissance thinking.

In order to grasp adequately the significance of the pages of Jones's Palladio, the vellum sheets, one would have to come to grips with the page in the Renaissance as a material object caught up in a criss-crossed network of bodily activities including handwriting, typemaking and printing, drawing and engraving, oral publication and manuscript duplication. One would need, for example, a phenomenology of reading handwriting in an age of the printing press.[1] That task would be further complicated because in architectural theory one would also need to develop a phenomenology of reading images. (The ability to read and interpret images is a skill quite different from the ability to understand technical drawings or appreciate formal achieve-

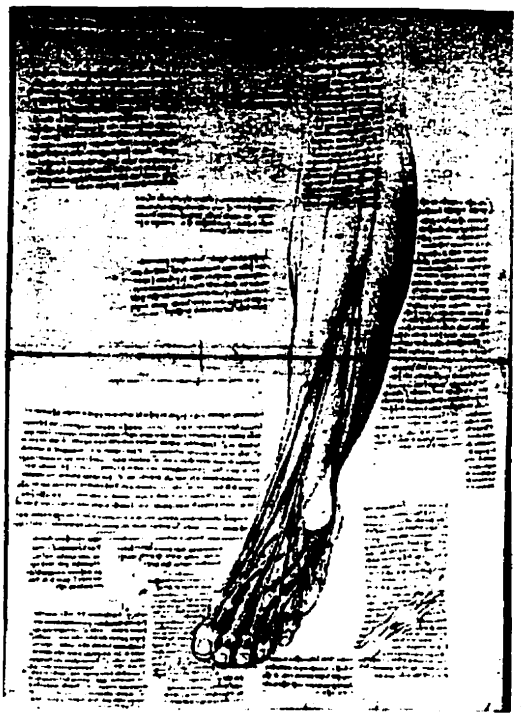
Nielson speculates that we lack such studies because currently "all literate people, though in practice they are often readers of manuscripts, are *theoretically* readers of *print* ("Reading between the Lines" 46).

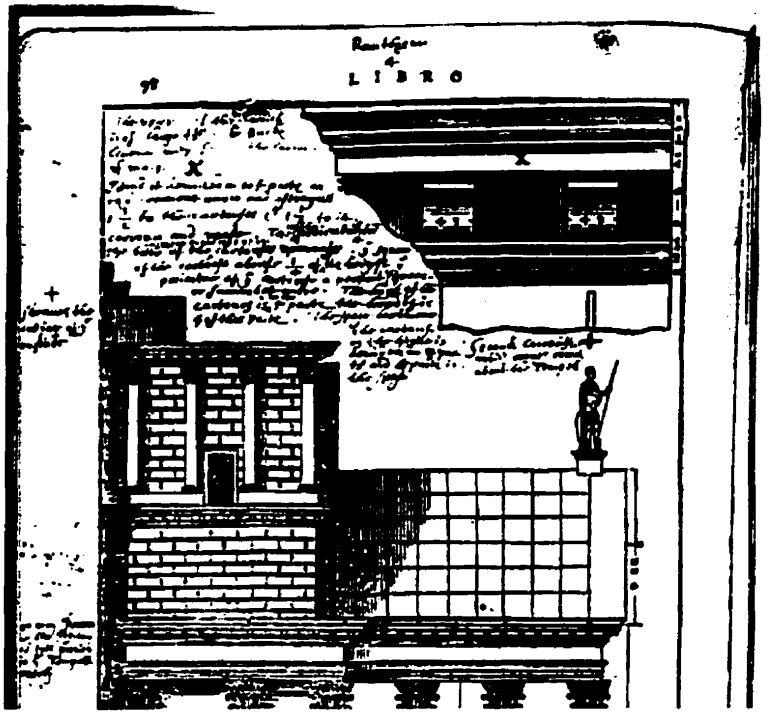
ment in representation.) And even that difficult task seems straighforward in face of the quicksilver subject of natural magic. The need to consider aspects such as the book as talisman, the page as Cabala, and the text as incantation complicates the study of an object which is not merely the neutral support for text or image, but which combines with them, has powers, has consequences, *makes sense.*

Pages are inherently polysemous. Images can be opaque, theoretical objects of contemplation, not just naturalistic description; and words, with their basis in speech, are not always fixed signifiers but rather furtive indices. The page is thus somehow less than the referents denoted by word and image; yet it is simultaneously more, capable of communicating complex meanings and of provoking complex, even contradictory interpretations. The page, then, is different from text, different from image, and something other than the combination of both. It is a surface that reveals a depth, much like the surface of the body conceals a depth. As I discussed in the cases of Donne and Montaigne, the physicality of the page can even be conceptually equivalent to the organs of the body, or to the organicity of the person.

The question of the body should not be underestimated. The evidence in Jones's Palladio shows that when Jones talked with Paracelsian visionary Robert Fludd, they talked not of Rosicrucian mysteries or new cosmographies, but of "glisters [enemas]," "guttes," "scinnes [skin]," "stomical pilles" and "Emerades [hemorrhoids]" (TF 4). It seems to me quite clear that because Renaissance architectural theory is body-centred, scholars need to examine the bodies of architects before they can claim a deep understanding of architectural theories. And Jones's body is best revealed in the pages of his Palladio.

I want to end with a last, perhaps merely provocative, comparison between architecture and the body revealed by writing and books, namely, a comparison between a page from one of Leonardo's scrapbooks of anatomical drawings, and a page of Jones's Palladio. The superficial resemblance between them might be accidental; certainly it is improbable that Jones saw Leonardo's drawings, much less tried to imitate them formally. But Leonardo's attempt to associate words with the body is certainly an activity similar to Jones's attempt to associate words with architecture. That is, the comparison uncovers a strategy





5.2 Leonardo da Vinci, notes and drawings, tendons in the leg, Anatomy Notebooks (Scarry, "Donne" 87).

5.3 Inigo Jones, notes in his Palladio concerning the Pantheon (4.78).

towards architecture parallel to a strategy towards the body that depends on the page, not just on images or words but on a method of imaginatively placing words into the image and thereby (by magical or poetic proxy) inhabiting the body or the building.

One would like to know just how deep the similarity between the two pages really is. For even simple resemblances turn out to be fraught with complications. The creators of these two images, for instance, both depended on handwriting rather than print; and as I've emphasized, scholars still know little about the circumstances, signifcance and habits of handwriting in that key time in the first centuries after the advent of the printed page.

All of these debates about the histories of reading, writing, anatomy, the body, theatre, machinery and medicine are affected by these problems of handwriting, printing and the page. To date scholars in all these disciplines have underutilized Jones's notes. Further study of his Palladio with these questions in mind would be a first step to creating a conceptual model of the page supple and nuanced enough to do justice to the importance of the page (and therefore the book) in Renaissance architectural theory.

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