

**British Pride:
Scenography, Classicism, Religion, Politics,
Naval Power, Commercialism, Christopher Wren and the Architectural Origins
of the Greenwich Royal Hospital for Seamen**

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Thank You

Introduction

For I suppose if Lacedaemon were to become desolate, and the temples and the foundations of the public buildings were left, that as time went on there would be a strong disposition with posterity to refuse to accept her fame as a true exponent of her power. And yet they occupy two-fifths of Peloponnese and lead the whole, not to speak of their numerous allies without. Still, as the city is neither built in a compact form nor adorned with magnificent temples and public edifices, but composed of villages after the old fashion of Hellas, there would be an impression of inadequacy. Whereas, if Athens were to suffer the same misfortune, I suppose that any inference from the appearance presented to the eye would make her power to have been twice as great as it is.¹

-Thucydides (5th century BC)

The architectural and aesthetic "scene" created by Christopher Wren for the Royal Hospital for Seamen in Greenwich, England [1] is best understood if it is seen as reflecting his belief that:

Architecture has its political Use, publick Buildings being the Ornament of a Country; it established a Nation, draws People and Commerce, makes the People love their native Country, which Passion is the Original of all great Actions in a Commonwealth.²

Wren's position here, while not unique, upholds a tradition of architectural patronage that uses architecture as an opportunity to represent and project the power, authority

¹ Thucydides, *The History of the Peloponnesian war*. Trans. Richard Crawley (New York, New York: Barnes & Noble Classics, 2006) 11.

² Lydia M. Soo, *Wren's "Tracts" on Architecture and Other Writings*. (Cambridge, UK: Cambridge University Press, 1998) 153.

and grandeur of the state or its leader. Since Biblical times, according to Pavel Kalina, displaying "magnificence" through architecture "has been an indispensable part of the state's (or ruler's) representation and an important element of diplomacy."³ The architecture of power, or rather, the architecture of those who held power, "was commissioned, created and controlled to make an impact both on foreign envoys and on the ruler's own people."⁴ Kalina's, Wren's, and Thucydides' statements, when viewed in that order, are significant because they describe in succession precisely the political-evolutionary life of the Royal Hospital. Wren is in the middle of this progression, providing architectural forms at Greenwich consistent with both its political cause and its intended political effect.

The main point of this paper is to examine this relationship between architecture and political power and how this relationship manifests itself at Greenwich. Focusing on the *all'antica* style developed during the Italian Renaissance, it will examine how this classical vocabulary evolved and became associated with specific forms of power. Another focal point will be the tradition of scenography—another offspring of the Italian Renaissance—and how this tradition was utilized in various palatial residences and urban environments to create "scenes" and atmospheres of power. An important part of this paper is understanding these two aspects as a whole, that is, not just the vocabulary and elements in the classical style itself, nor just scenography by itself, but the synthesis of the two. "Aesthetic qualities," Frank Sibley argues, "are dependent upon nonaesthetic ones for their existence. They could no more occur in isolation than there

³ Pavel Kalina, "European Diplomacy, Family Strategies, and the Origins of Renaissance Architecture in Central and Eastern Europe," *Artibus et Historiae* 30.60 (2009), 173.

⁴ Ibid.

could be facial resemblances without features, or grins without faces; the converse is not true."⁵ Seen like this, the classical style is an aesthetic, a *dressing* on a particular form, and scenography is the "nonaesthetic"—i.e. the form—which is *dressed*. As such, we may say that scenography, as a nonaesthetic, is a somewhat impartial and universal form in that it provides the conditions and circumstances for the application of an aesthetic style. Because of this neutrality scenography is not constrained by particular and/or shifting conventions of artistic judgment, decorum, and propriety in the same way an aesthetic style is. Evidence of this relationship between scenography and aesthetics can be found throughout history.

In our own time this can be seen, for example, in Brasilia [2a], the federal capital of Brazil founded in 1960. In this city, the scenography (the nonaesthetic form) appears fundamentally unchanged from its precursors; however the modern style used to dress it is an aesthetic ramification of the general change in cognition which occurred during the 20th century. Brasilia marked the beginning of modern Brazil and as a result needed an aesthetic that could express, symbolize and mark this significant rite of passage from relative obscurity to modernity.

This brief digression in the paragraph above is meant to highlight the enduring and immutable nature of scenography despite centuries of economic, technological, socio-political, cultural, and artistic change; but it also highlights how these very same changes had an effect on aesthetic style. Importantly, however, it shows us how an aesthetic style imparts a specific *meaning* to scenography.

⁵ Frank Sibley, "Aesthetic and Nonaesthetic." *The Philosophical Review* 74.2 (1965): 137-138.

In Wren's time England's power was on the rise and, as we shall see, the aesthetic of classicism was the language used to corroborate this fact. Classicism symbolized the taste, culture, wealth, upward mobility, and authority of those in power, while the nonaesthetic (scenography) acted as a device for orienting the spectator towards these symbols. Wren makes use of both these aspects at the Royal Hospital for Seamen, and as a result the political elements responsible for England's rise to power are thrown into high relief.

Queen Mary founded the Royal Hospital in 1694 with philanthropy in mind, its stated purpose being:

...for the relief and support of Seamen serving on board the Shippes or Vessells belonging to the Navy Royall who ... by reason of Age, Wounds or other disabilities shall be incapable of further Service at Sea and be unable to maintain themselves. And for the Sustentation of the Widows and the Maintenance and Education of the Children of Seamen happening to be slain or disabled in such service and ... Also for the further reliefe and Encouragement of Seamen and Improvement of Navigation.⁶

The final appearance of Greenwich, however, seems to be indicative of an entirely different mood altogether and representative of something more than merely a habitat for convalescence. It is the product of the 17th century and represents England's newly acquired position of dominance in foreign affairs. Standing at the entrance of the main thoroughfare into London, the River Thames, the Royal Hospital for Seamen is for all to

⁶ Philip Newell, *Greenwich Hospital: A Royal Foundation 1692-1983* (Trustees of Greenwich Hospital, 1984) 8.

see [2]; and like all architecture that is a result of state sponsorship, it transmits a specific message of power. To the foreign visitor it is a statement and reminder of England's political hegemony in Europe; on the domestic front, it embodies the advantages of constitutional monarchy and the new social and political organization of England, a configuration of which had only been recently and formally established by the terms of the Glorious Revolution in 1688-89. Seen in this light, Greenwich is a veritable agent of domestic and international diplomacy, at once reifying the constitutional and martial components of English power both at home and abroad.

Founded as an almshouse, The Royal Hospital follows a tradition of charitable patronage long established throughout Europe. However, like the hospital it was intended to rival, Les Invalides (1670-1678) in Paris [3], the extravagance of its final appearance suggests that charity was merely a departure point for a project intended for national aggrandizement. "The desire to demonstrate in a very public manner, on the main route into London from Continental Europe, the political and naval power of the state, and the duty felt by the monarch to shelter those who had spent their lives in its service" are what John Bold claims to be "the deeper impulses" driving form at Greenwich.⁷ And Nicholas Hawksmoor, who collaborated with Wren at Greenwich, tells us that "people tried to persuade Queen Mary to choose other sites, but these locations, being out of the way, and not frequently seen, and not in the View of all the World, would have undermined her Majesty's fixed Intention for Magnificence."⁸

⁷ John Bold. *Greenwich: An Architectural History of the Royal Hospital for Seamen and the Queen's House* (New Haven: Yale University Press, 2000) 104.

⁸ Nicholas Hawksmoor. *Remarks on the Founding and Carrying on the Buildings of the Royal Hospital at Greenwich* (London: printed by N. Blandford, 1728) 13.

The architectural extravagance utilized by Wren—what Lewis Mumford describes as "clichés of power"⁹—can be justified in other ways as well. Bold points out that "magnificent lodgings and the idea of charity are not at odds when 'magnificent' is defined as 'characterised by expenditure or munificence on a great scale'; and that 'it may be charitable to be magnificent when that magnificence is an indicator of a noble liberality.'"¹⁰ This interpretation of magnificence originated in antiquity and can be found in the works of Aristotle. In his *Nicomachean Ethics*, magnificence is described as a "virtue that has to do with money," or, more precisely, it is a virtue that compels liberal largesse "on a grand scale."¹¹ Expenditures of this kind, he says, are proper to those who have the "appropriate resources, acquired either by themselves or from ancestors" and to those "persons of noble birth or great reputation ... because all these involve grandeur and distinction."¹² Wren carries out this concept in his designs for the Greenwich Hospital, and with this in mind he could justifiably use the extravagant expressions of the kind he encountered during his visit to France in 1665, a visit which was vital to his understanding of the effects that scenographic display and classicism had on the beholder.

France was an invaluable source of inspiration for Wren, who determined to bring back with him to England "almost all France in Paper, which [he] found by some or

⁹ Lewis Mumford. *The City in History: Its Origins, Its Transformations, and Its Prospects* (New York: Harcourt, Brace & World, 1961) 388.

¹⁰ John Bold. "Comparable Institutions: The Royal Hospital for Seamen and the Hotel Des Invalides." *Architectural History* 44 (2001): 1.

¹¹ Aristotle. *Ethics*. Trans. J. A. K. Thomson (New York: Penguin Books, 1976) Bk. IV, Ch. ii, 149.

¹² Ibid, Bk. IV, Ch. ii, 151.

others ready design'd to [his] Hand.”¹³ It was there where he met Bernini, who had been called from Italy to work out a design for the Louvre, and it was there that he was exposed to sites like the Place des Vosges, Place Dauphine, Les College des Quatre Nations, and the royal complexes of Versailles, Vaux-le-Vicomte and the Louvre. Although Wren never returned to France, he kept in touch through various source books, such as Jacques Androuet du Cerceau's *Les plus excellents Bastiments de France* (1576), Roland Fréart de Chambray's *Parallele de l'Architecture Antique avec la Moderne* (1650), Claude Perrault's *Ordonnance* (1683), and Francois Blondel's *Cours d'Architecture* (1698).

His specific encounter with the architecture of Italy, however, was *only* through the texts of men like Leon Battista Alberti, Vitruvius, Sebastiano Serlio, and Andrea Palladio. This is by no means an exhaustive list of what was available to Wren, but it no doubt provided the foundation for the architectural ideas he employed at Greenwich.

No less important to the evolution of the Royal Hospital design are Wren's own experiences designing the palatial complexes for the Stuart Kings of England during the Restoration Period as well as the rebuilding of London after the fire in 1666. As we shall see, his designs for Winchester Palace (1680's), Chelsea Hospital (1682-1692), Whitehall Palace (1680's-1690's) and St. Paul's (1666-1709) were important prototypes that ultimately found a place in the planning and articulation of Greenwich.

Understanding the geopolitical environment of 17th century Europe is crucial to any analysis of Wren's work at Greenwich and as such will receive the attention it deserves in the following pages. However, geopolitics only explains part of the reason

¹³ Margaret Dickens Whinney. *Wren* (New York: Thames and Hudson, 1998) 27.

why the Royal Hospital for Seamen was given such monumental and magnificent treatment. To be sure, Queen Mary *had* wished "*to build the Fabrick with great Magnificence and Order.*"¹⁴ But what were the elements, or rather, the architectural and aesthetic elements that constituted monumental magnificence and order? What were their sources, and how do they manifest themselves at the Royal Hospital for Seamen? These questions, along with their answers, occupy a large part of the following discussion as well.

As we shall see, Wren's design derives from a corpus of architecture which had been defined by the political and religious convictions of the French monarchy and the Pontificate in Rome. Their absolutist ideology was embedded in their architecture, and, consequently, the use of their architectural script in England posed the risk of broadcasting the very ideology that English men and women had spent much of the 17th century rejecting: the supremacy of both the English monarch and the Roman Catholic Church on English soil. This was the challenge before Wren. He could not ignore the new developments which had taken place in architecture on the Continent, but, in doing so, he had to be careful not to antagonize the spirit which had brought about the Glorious Revolution. Wren's achievement lies in his ability to transform the architectural forms and iconographical programs developed in Italy and France into something expressive of the new political and social organization of England.

Even though Wren modified the classical elements of France and Italy to suite the political and religious sensibilities of England, he nevertheless fully subscribed to their use of perspective. The importance of perspective cannot be understated, for it is a

¹⁴ Hawksmoor, *Remarks*, 8.

fundamental feature of "scenic" architecture, or scenography, and is an indispensable part of Greenwich's presentation. Thus, understanding Wren's work entails a likewise understanding of scenography's origins, which, in turn, will bring into focus the intimate relationship between scenography and the elements of classicism.

During the 15th century in Italy, the great masters of the Early Renaissance began using perspective to organize space within the picture frame. Following their lead, Alberti commenced writing two treatises: *De pictura* (*On Painting*, c1435), a treatise on painting which included a guide to constructing convincing three-dimensional space using linear perspective; and *De re aedificatoria* (*On the Art of Building*, c1452), a treatise—modeled upon Vitruvius' text—devoted to building and to the revival of the classical architecture of antiquity. These two treatises were arguably his most important writings and stand at the threshold of a vigorous tradition of artistic theorizing. By 1500, the promulgation of these ideas throughout Europe was made easier with the introduction of the printing press, the most significant architectural publications of the Cinquecento being penned by Italians, most notably Jacopo Barozzi da Vignola, Serlio and Palladio. In France and the Low Countries, from about 1550 onwards, significant texts were published that codified and formalized their own interpretations of the Renaissance legacy. Most of these texts, as noted earlier, were made available to Wren, who in turn created an acceptable brand of classicism for England at Greenwich.

But to say that the final design of the Royal Hospital for Seamen was solely a result of Wren's appraisal of both the political climate in England and the classical tradition would only leave us with an incomplete account. Underpinning Wren's

approach to architecture was a firm belief in the value of scientific and empirical inquiry over established dogma. Given widespread currency through the works of Francis Bacon, the scientific method became an intellectual instrument for discovering the "truth" of our natural world and the terms of our existence within it. Discovering such "truths", according to Bacon, enabled humankind to gain tighter control over its destiny here on earth. This kind of thinking accounts for much of what might be considered to be, in Wren's work, at odds with the classical tradition he inherited. Not content with the established rules of architecture handed down to him, Wren gave science a fair hearing in formulating his designs: if science could reveal to humankind the "truth" of the natural world then, by the same token, it could lead to the "truth" in architecture. The influence of science will be treated throughout this essay as the opportunity either provides or demands, however suffice it to say that science and empirical investigation were ministerial to Wren's design philosophy.

The following breaks down into 5 chapters. The first chapter outlines the geopolitical climate of 17th century Europe, the civil strife afflicting England during this time, and the commercial, naval and scientific basis responsible for England's rise to power. This section is not meant to be a comprehensive account of 17th century Europe; rather, it is intended to identify the cultural, political, religious, and intellectual ideologies that activated European society. With this background in place, The Royal Hospital for Seamen can be appreciated for its historical timing in relation to the overall ideological constitution of England and to those of its counterparts on the Continent: Greenwich stands both as a kind of coda (or caesura) to an overture which had begun

nearly 150 years before *and* as an overture for the 150 years to follow. Chapter 2 examines how scenography and classicism developed almost simultaneously in the pictorial realm, the theater, and in the built environment during the Renaissance and also how they developed in the hands of those who held, or believed they held, power. Chapter 3 examines how scenography and the *all'antica* style was utilized by French monarchs and the Roman Catholic Church as elements of coercion in order to reinforce and legitimize their claims to power. The 4th chapter examines the classical tradition in England, how it had been conditioned by the time it was Wren's turn to build, and how classicism was employed by Wren. In chapter 5 a detailed account and analysis of the Greenwich Royal Hospital is given in relation to what has been discussed in the previous 4 chapters.

Chapter 1:

Geopolitics, Ideologies, and England's Rise to Power

England's rise to power came at the end of more than a century's worth of struggle between competing intellectual, political and religious ideologies. In terms of architecture, Greenwich Hospital is the cumulative product of this struggle, which, in the end, saw the English monarch bowing to Parliamentary authority. Its extravagance publicizes England's newfound commercial wealth and political hegemony over Europe that both caused and were a result of this struggle, while at the same time it pays homage to the military branch which made this possible: the Royal Navy.

Political power is a function of wealth, and, consequently, it was in the hands of those who had the ability to regulate and control England's economic and capital resources. The growing merchant class of London, with its large maritime fleets, was by and large the main source of England's wealth by the second half of the 17th century. The voice of this burgeoning commercial society was heard through its Parliamentary representatives. As a result, domestic and international policy could now be, and was, by virtue of Parliamentary representation, more forcefully aligned with the interests of the growing commercial class, as opposed to the dynastic and personal interests of the King. This meant securing the mercantile fleets at sea, the responsibility of which fell to the Royal Navy.

There is little doubt that England's success was a result of the congenial

relationship that arose between the political (Parliament), civil (commercial society), and martial (Naval power) constituents of England's body politic. The first question before us, however, is *why* all of a sudden did this relationship become congenial? That is, what had prevented this bond between Parliament, commercial society, and the Royal Navy in the preceding centuries; or, to state it differently, what allowed this bond to take place?

GEOGRAPHY AND THE NAVY

There are a variety of ways to explain England's rise to power, but the best place to begin is with England's relatively unique geographical position as an island nation off the shores of Continental Europe. Why an effective Navy should be of paramount importance to the nation's security is obvious to see, but it wasn't until the 17th century that the Navy was employed as an offensive weapon. "From England's loss at Castillon [1453], which drove it almost out of all France, to 1558, when England lost its last continental foothold at Calais, British military might underwent a marked decline."¹⁵ With no territorial interests on the mainland to defend, England's involvement in the political and military affairs of Continental Europe became meager at best. This noncommittal attitude toward the Continent left the island with no plausible justification for maintaining the large standing Army which would have been required to protect its political and territorial interests across the English Channel—had it had any. Instead, England felt perfectly content leaving its defense to its Navy, a strategy which was reinforced by its

¹⁵ John Brewer. *Sinews of Power: War, Money, and the English State, 1688-1783* (Cambridge: Harvard University Press, 1990) 7.

great Naval victory over the Spanish Armada in 1588.

Naval defense had important political ramifications, for by obviating the need for an Army, the martial arm traditionally used by—and loyal to—the monarchs of Europe to secure both their power abroad and their rule at home was, in England, not at the Crown's disposal. Thus, the Navy's importance as the guardian of the country had the effect of disarming the English monarch, and as a result "the path to absolutism ... could be avoided."¹⁶ Indeed, Parliament's relentless opposition to a standing Army was a result of the generally held perception that the Army "was likely to enhance the power of the executive."¹⁷

Consequently, two sides took shape: on one side there was the King and the Army, which were perceived as the political and martial arms of absolutism, and on the other was Parliament and the Navy, which safeguarded the interests of the people. However, these two sides were accompanied by divergent religious components as well, and as we shall see the King became equated with Catholicism and the Pope in Rome, and Parliament with Protestantism.

CHELSEA ROYAL HOSPITAL

The battle between Parliament and the English monarch for political "recognition" played itself out in architecture as well, and as economic and political control shifted more and more into the hands of Parliament, so did economic and political control over government building projects. Architectural undertakings that needed state subsidies

¹⁶ Ibid, 9.

¹⁷ Ibid.

received close scrutiny from their Parliamentary sponsors, who throughout the second half of the 17th century had hesitated to underwrite any project that either belied England's political reality or threatened to undermine Parliament's own burgeoning political authority. Accordingly, projects like Wren's Royal Hospital at Chelsea (1682-1692), which was intended to care for wounded soldiers of the Standing Army [4], received little political and public support.

The Parliamentary Army created by Parliament during the Civil War had, upon the Restoration in 1660, become merely a Standing Army, putting the fear of absolutism once again in the hearts of Englishmen and women. In point of fact, the political reality at the time of Chelsea Hospital's commission, while in Parliament's favor, was still formally undecided; but financing the accommodations for what could possibly be perceived as the Army of King Charles II was, for Parliament, tantamount to financing its own political opposition. Parliament understood the relationship between architecture and power and likely believed that Charles II's interest in Chelsea was only partly motivated by charitable concerns. The danger was that it re-established and emphasized all too much the presence of an Army, and by virtue of Chelsea's location on the River Thames into London, the power of the Crown could be, if not *politically* intelligible to the general public, then *visibly* intelligible. The resurgence of an all-powerful authoritarian leader, as shown in Grinling Gibbons' "imperator" statue of Charles II [5], which plainly suggested a mutual partnership between the King and the Army, was precisely what Parliament wanted to avoid.

In spite of Parliamentary and public opposition, however, Charles II was able to

realize his project at Chelsea. This does not so much speak for the *real* power and authority of the English monarch in general as it does for the political and diplomatic finesse of Charles II. The important relationship between architecture and power, that is, the ability of architecture to impress upon people's minds a particular version of power, becomes all the more clear when we look at the construction process at Chelsea.

As we know, financial support from the public was found wanting, moreover, Charles II's personal reserves were not enough to split the difference. This thankless task was left to the Army itself, with money originally intended to outfit and equip the Army being diverted to the Chelsea project. Every officer in the Army also made direct contributions by sacrificing a "day's pay in the year."¹⁸ If the Royal Hospital at Chelsea was to become a reality, it would do so at the Army's expense. This brings us to the heart of the matter: that Charles II was willing to make great financial sacrifices of his own and the Army's for the *impression* of power. It seems that what power the Army may have lost by rerouting the resources meant for its readiness in combat, Charles II thought could be offset by Chelsea's symbolic value. Chelsea performed just as ably as the Army as an element of coercion, and it is significant that, at a time of political uncertainty, Charles II felt that the best use of his own, as well as the Army's, financial assets were on such architectural projects.

Wren was sensitive to these issues when formulating his designs, and if we remember that one of the tenets of his design philosophy was that architecture has its "political use", we can begin to understand what motivated and limited his design

¹⁸ Royal Hospital. *Papers Illustrative of the Origin and Early History of the Royal Hospital at Chelsea* (London: Printed by G.E. Eyre and W. Spottiswoode, 1872) 16.

decisions at both Chelsea and his later project at Greenwich. Both Hospitals are, generally speaking, similar in plan, arranged around a scenographic perspective, located on the Thames en route to London [6,7], and charitable foundations for the military. However, the language used for their expression is decidedly different. Wren strikes altogether different aesthetic tones for Chelsea and Greenwich. While the former resides in and is subdued by a sea of bare brick [8], the latter explodes with the grandiose expression of classicism. Wren's belief in the political value of architecture was decisive, he pays homage to the tradition of charitable foundations, and at Chelsea he dignifies not only this tradition but also both the King and the Army. However, he never crosses the bounds of political decorum, casting Chelsea in an image worthy enough for its benefactors and beneficiaries, but no more. The Royal Hospital at Chelsea was part of a nation-wide political struggle that, in the end, the English Crown lost, both politically and financially. The Royal Hospital for Seamen was also part of this struggle, but on the winning side, and as such it required, if not demanded, different treatment and attire. Greenwich was part of an effort to institutionalize the outcome of the Glorious Revolution, and it became an opportunity to celebrate and announce the political, social, and military alliance that was responsible for England's rise to power. This kind of expression was the province of classicism, and Wren's free use of it at Greenwich shows us that classicism, at least in England by his time, was a language linked to, and reserved for, a specific political reality. It is also telling of something else, that classicism was linked to, and reserved for, those who could *afford* it. We will return to this at later point, but for now we must turn are attention toward the religious conflict

afflicting England during the 17th century.

RELIGION

England's physical separation from Europe was augmented by cultural and religious separation as well. Henry VIII's Act of Supremacy in 1534, which broke England's tie to the Catholic Church and the Pope in Rome, set up the Anglican Church of England with the King at its head. The purpose of this Act was not necessarily to rid England of the Catholic faith, rather it was a precautionary measure designed to prevent the Roman Catholic Church from interfering in the political affairs of England. This not only gave the English monarch more political maneuverability at home, but it also allowed the ideas of the Protestant Reformation to obtain a more secure footing in England. Despite this, however, Protestantism was still on precarious grounds on English soil. Following the conclusion of the Tridentine reforms in 1563, the Roman Catholic Church launched an aggressive campaign—spearheaded by the Jesuits—to regain its following in Protestant Europe.¹⁹ When, in 1588, the Catholic King of Spain, Philip II, sent the Spanish Armada to its ignominious defeat off the shores of England, a feeling arose in England that it was the target of intrigues mastermind by the Pope in Rome.²⁰ Protestant England's fear of Catholicism was on the rise, causing "any dealings with Catholic powers" to be viewed with suspicion.²¹ King James I of England, in 1604, made efforts to placate Protestantism's more voracious elements—namely the Puritans and Calvinists—but his concessions fell short, thereby providing the grounds for the

¹⁹ Anthony F. Upton. *Europe, 1600-1789* (London: Arnold, 2001) 37.

²⁰ Ibid, 92.

²¹ Ibid.

ensuing mutual suspicion between the two camps (i.e. the Crown and Protestants). That James I could not reach a consensus was seen by ardent Protestants as Catholic leniency, but, in truth, he was more concerned with establishing religious peace, and, in all fairness, England did still have a large Catholic following. Nevertheless, the monarch came to be seen as a defender of, and possible route for, Catholicism in England: a fear that was partially justified when Charles I ascended the throne in 1625. His questionable commitment to the Protestant cause appeared from the start. His unrealized marriage to the Catholic Infanta Maria of Spain and subsequent marriage to the Catholic Henrietta Maria of France wed the English Crown to Catholicism, thereby presenting the possibility that a bona-fide Catholic could assume the English throne. This, coupled with Charles I's subscription to Arminianism, an unapologetically anti-Calvinist doctrine; his support of Archbishop William Laud, a man who not only attempted to undo the religious reforms made by the Protestants and reinstitute a hierarchical structure into the Church of England, but also propagated the idea of absolutism and the Divine Right of the King; and his dismissal of Parliament in 1626, were the beginnings of the end for Charles I and outright absolutism and Catholicism in England.

CIVIL WAR AND NAVAL POWER

The ensuing events which led to the English Civil Wars (1642-1651) and the establishment of the Commonwealth of England (1649) revealed that power was in the hands of those who could finance it: Parliament. Its control over England's financial and economic center, London, was virtually undisputed. Under the exigencies of the Civil Wars, Parliament redoubled its war effort by creating the New Model Army, a new

professional fighting force which, under the leadership of Oliver Cromwell, took the field in 1645 and scored a crucial victory against Charles I's main battle wing. Creation of the New Model Army proved to be a pivotal moment, for it taught Parliament the skills needed to fund and organize the manpower necessary for an effective fighting force, skills it later applied to the Navy.²² With Parliament now in control at home and the Commonwealth established, international and domestic diplomacy was now determined by the voices coming from London's merchant oligarchy and their mercantilist creed.²³ A new spirit now animated the Navy, whose mission brief shifted from passive defense to aggressive offense. From 1650 onwards, England's ambitious maritime program brought it head to head with Europe's major powers. Through a series of wars against the Dutch between 1652-1654, 1665-1667, and 1672-1674, England effectively dismantled the Naval power of its main rival in the English Channel. In the New World, it wrested Jamaica from the Spanish in 1655 and New Amsterdam (New York) from the Dutch in 1664.²⁴ These two victories, while marginal in comparison to its defeats, underscored the reality that England was quickly becoming a major power to be reckoned with. Concurrently, legislative initiatives—namely the Navigation Acts (1651 onwards)—were instituted requiring all trade between England and her overseas possessions be carried on English vessels.

SCIENCE AND RELIGION

With this abbreviated picture of England's religious and political struggles in

²² Ibid, 103.

²³ Lawrence James. *The Rise and Fall of the British Empire* (London: Abacus, 1995) 28.

²⁴ Ibid, 29.

place, we can now look at the benefits of Protestantism. Protestant theology was committed to the idea of religious equality; in the eyes of God, all believers were equal. This smashed the traditional distinction between the cleric and the lay, undermining the hierarchical principle of the Roman Catholic Church. Submitting to and accepting Papal authority was no longer a condition of Salvation; the burden of Salvation was now upon the individual.

Liberating man from the shackles of the Roman Catholic Church was part of the overall Protestant effort to reform religious society by starting afresh. With the hierarchy smashed, the middlemen—i.e. the Pope and the Roman Catholic Church—were effectively removed, and the playing field was leveled; a religious community could now be built. Sentiments like these carried over into the practical affairs of daily life. Spiritual liberty and equality translated into political liberty and equality, and from here "the concept of democracy was born and nourished."²⁵ By the middle of the 17th century, England's commercial success was tied to this new egalitarian community and its large mercantile fleet of exporters and importers based in London. But what has yet to be explained is *how*, or *why*, this egalitarian community evolved into a *commercial* society interested in material gain.

A fundamental tenet of Protestantism, most vocalized by the Puritans in particular, was that the purpose of man was to glorify God. Glorifying God was not just an individual pursuit, but also a communal effort. As such, public service and corporate

²⁵ A. S. P. Woodhouse. "Puritanism and Democracy," *Canadian Journal of Economics and Political Science* 4.1 (1938), 1.

compassion came to be viewed as one of the greatest possible ways to serve God,²⁶ and by encouraging men to help one another, Protestantism cultivated an environment of social utilitarianism.²⁷

The idea that utility should underlie and be a reference point for determining the worth and course of men's actions was naturally allied with another movement of the time: empiricism and science. In England, Francis Bacon was the first to popularize the advantages of scientific thought. Through works like *Advancement of Learning* (1605) and *Novum Organum* (1620), he promoted the idea that mathematics and scientific inquiry could be used to understand the forces governing our natural environment. Once understood, Bacon maintained, the laws of nature could then be co-opted for the "relief of man's estate."²⁸ For him, the only acceptable forms of knowledge were those that could be utilized to increase man's dominion over his natural environment. This offered an altogether new ontological and existential explanation for man's position in the universe. The cosmology of the Roman Catholic Church, which held that the universe is the way it is because God made it that way, was no longer acceptable. Instead, "men began to desire the kind [of knowledge] which would enable them to measure, to weigh and to control the things around them"²⁹—a clear reflection of Bacon's call "to extend

²⁶ Robert K. Merton, "Science, Technology and Society in Seventeenth Century England," *Osiris* 4 (1938), 489.

²⁷ *Ibid*, 420.

²⁸ Francis Bacon, *Advancement of Learning*. Ed. W. A. Wright (Oxford: Clarendon Press, 1880) Bk. I, Sect. V, No. 11, 42-43.

²⁹ Basil Willey. *The Seventeenth Century Background; Studies in the Thought of the Age in Relation to Poetry and Religion* (London: Chatto & Windus, 1934) 4.

more widely the limits of the power and greatness of man."³⁰

Bacon's notion that the object of learning should be to acquire only the kind of knowledge which improves man's condition had the effect of aligning learning with utility. Furthermore, that he believed that such knowledge could only be had through the mutual and ongoing cooperation of a scientific community of experts reinforced the Protestant spirit of communal cooperation; thus, the utilitarian mission of science and the social utilitarianism of Protestantism perpetuated each other.

This, however, overlooks an important aspect of Bacon's theory of knowledge: the separation of religion and science. Accounting for natural phenomena in scientific terms was not a novel concept as there had been a detectable spirit of science in Europe since the Middle Ages. But by providing an intellectual foundation for explanations, as opposed to a religious foundation, science challenged the authority of the Roman Catholic Church and its belief that God is the only valid explanation of our universe. Challenging the authority of God was heretical, and science was part of this heresy. It is why the advancements made by men like Copernicus, whose book *De revolutionibus orbium coelestium* (1543), which outlined his heliocentric theory, thereby discrediting the geocentric cosmology of the Catholic Church, and later those made by Galileo, who seconded Copernicus' point of view, met with such fierce resistance from the Pope. Science offered an alternative explanation of our universe, which, according to Galileo, is "written in the language of mathematics ... its characters are triangles, circles and other geometric figures, [without] which it is impossible to understand a

³⁰ Francis Bacon, *Novum Organum*. Trans. R. Ellis and James Spedding (London: George Routledge & Sons, 1905) Bk. I, Aphorisms CXVI, 135.

single word of it.”³¹ In countries where Catholicism was supreme, science was prevented from making the strong headway that it was later to do in Protestant England.

But how did science avoid religious confrontation in Protestant England? Bacon is able to navigate these tricky waters by proclaiming separate domains for knowledge as it pertains to the immaterial and mystical world of religion and as it pertains to the material and secular world of our senses. And though "God was still important, being God, he was outside of time and space and was not really *in* the" scientific vision of man.³² Science was not pertinent to religious revelations: the subject of science, for Bacon, is the material world we find around us, the subject of religion that of the immaterial world. He does not claim for science any jurisdiction outside the realm of matter; knowledge of this sort, he says, is to "be drawn from the same divine inspiration from which that substance first proceeded."³³ This leaves questions regarding things like morality and the nature of the Divine within the province of religion. By dividing the secular and religious spheres, Bacon sets up a scenario whereby knowledge of one sort—that is, that concerning the material world or that concerning the immaterial world—does not have to be obtained at the expense of the other: the discoveries made in science do not have to conflict with those of religion because they reveal truths about different things. These ideas provided the intellectual underpinnings for the "secular culture of materialism and progress" that was so crucial to England's rise to power in the

³¹ Alfred W. Crosby, "A Renaissance Change in European Cognition," *Environmental History Review* 14.1/2 (1990), 20-21.

³² *Ibid*, 27-28.

³³ Robert McRae, "The Unity of the Sciences: Bacon, Descartes, and Leibniz," *Journal of the History of Ideas* 18.1 (1957), 28.

17th century.³⁴

Bacon's ideas were ultimately institutionalized when, in 1662, Charles II chartered the Royal Society. Here, a scientific community of experts, just the kind envisioned by Bacon, could meet to discuss their results. And it was here that significant advances were made in map-making, maritime navigation, medicine, arithmetic, and geometry which helped give England its "scientific advantage" over its adversaries. Christopher Wren was one of the founding members of the Royal Society and his interest in science, as noted earlier, had a decided impact on his approach to architecture. Later, we will explore this aspect of Wren's architecture. But before moving on we must recognize that the Greenwich Hospital came precisely at the moment in England when the power of both the King the Roman Catholic Church were in decline, while that of Parliament, Protestantism, commercialism, science, and the Navy were on the rise. This becomes all the more important when we discover that the architectural metaphors used by Wren at Greenwich were taken from the ecclesiastical and royal imagery of the Papacy and the Catholic Kings of France. To understand how Wren avoided these connotations, we must appreciate the antiquarian inspiration behind this imagery and how it evolved before his time.

³⁴ Upton, *Europe*, 33.

Chapter 2:

Scenography and Classicism

The architecture of the Royal Hospital for Seamen comes from a tradition significantly influenced by the discoveries and practices of Early Renaissance painters. Their use of perspective allowed them to construct convincing three-dimensional spatial backdrops for their figures. Buildings, streets, piazzas and other architectural elements became organized in relation to each other and as a result the architectural environment began to tighten. Since the painter and the architect during this time were often one and the same person, it was not long before these sorts of architectural environments began to be actually built in the real world, and as time progressed the ceremonial courtly culture of Europe began to believe that these environments were the only appropriate backdrops for the formalities and activities of its daily life.

From its beginning in the small states in Italy, perspective atmospheres and their accompanying classical architecture began to gain in magnitude in the service of the Roman Catholic Church in Rome and absolutist France, ultimately developing alongside a political framework aimed at the centralization of power.³⁵ At Greenwich, this tradition is put into effect to achieve similar results, that is, to draw attention to the sources of authority and power. The following discussion is an attempt to understand the historical development of and the relationship between scenography, the vocabulary of

³⁵ Mumford, *City in History*, 347.

classicism, and power.

PAINTING, ARCHITECTURE, AND URBAN DESIGN

A crucial link between painting and architecture was established in the opening decades of the Quattrocento through the efforts of Filippo Brunelleschi (1377-1446). His system of linear perspective provided painters with a valuable artistic tool for creating realistic architectural environments in which the subject, or narrative, or *historia*, could unfold. Alberti helped the spread of these ideas when, around 1435, he completed *On Painting*, a work expounding on the artistic developments that Brunelleschi and others had initiated in Florence during the previous decades. Composing a convincing narrative, or *historia*, was an important part of Alberti's theory on painting. It could be achieved, he thought, by carefully arranging figures so that their gestures communicated emotional content.³⁶ However, *historia* also entails describing *wherein* all these emotive gestures of the soul take place, which is why Alberti opens his treatise with a detailed account on how to construct convincing three-dimensional environments using linear perspective. In a sense, then, the first subject of the painting became the architectural environment, which was then populated by figures and objects of the *historia*. Using linear perspective, however, also made it possible to experiment with and develop new architectural schemes on the canvas [9]. However, by working out architectural ideas on canvas, architecture inevitably became infused with the pictorial qualities from whence it proceeded, adapting "to its own mirrorings in painting and print

³⁶ John Spencer, Introduction. *On Painting*. By Leon Battista Alberti. (New Haven: Yale, 1956) 25.

... putting into practice strategies of citation, embedding, reframing and staging that had been developed in the pictorial realm."³⁷ Conversely, by working out architectural ideas on the canvas, pictorial space became infused with the tectonic qualities of architecture.³⁸

Linear perspective forces the spectator into a pre-arranged relationship with what is being viewed on the canvas; the coherence and power of the architectural setting is contingent upon the spectator assuming a predetermined position "in perspective." This is important to the development of scenography because this idea carried over into architectural practice and architecture began to be "conceived [of] as a subject visible from a fixed viewpoint."³⁹ Moreover, it was instrumental to the ideas of order and proportion later articulated by Alberti concerning town-planning.

By the end of the 15th century, painters began to treat the architectural setting itself as the *historia*, and as the Urbino, Baltimore and Berlin Panels demonstrate, human figures were virtually dropped altogether from the scheme [10]. The architectural settings of these three Panels also give shape to the some of the ideas put forth by Alberti in his second work, *On Building*, completed about 1452. Dedicated to the achievements and architectural magnificence of antiquity, this treatise offers a range of advice, including the appropriate construction of the classical Orders as well as the rules governing their use. Drawing from, and improving upon, examples from antiquity, Alberti

³⁷ Alexander Nagel and Christopher S. Wood, *Anachronic Renaissance* (New York: Zone Books, 2010) 318.

³⁸ Christoph Frommel, "Reflections on the Early Architectural Drawings," in *The Renaissance from Brunelleschi to Michelangelo: The Representation of Architecture*, ed. Henry A. Millon and Vittorio Magnago Lampugnani (Milan: Bompiani, 1994) 102.

³⁹ Ibid.

believed that towns should be organized with symmetries on both “sides of the street” so that “a standard design may be repeated for a whole street.”⁴⁰ For major town squares and precincts, proportional relationships, as well as symmetries, were to be sought between the open spaces and the surrounding buildings.”⁴¹ As the Panels demonstrate, the architectural theories of Quattrocento Italy not only found their way into the pictorial realm, but they also appear to have crystalized in the pictorial realm as well. This “feed back loop between architecture and painting with the representations of buildings” was crucial to the “transmission of architectural ideas.”⁴² Paintings like these, which describe coherent architectural settings, were decisive in determining the future path of architecture and town-planning.⁴³ And as Richard Krautheimer has pointed out, they acted as “hortatory” messages to young dukes or princesses as a reminder of a new society that a new architecture could provide.⁴⁴ By the time *real* building and construction commenced “architecture had [already] been figured [and represented] and before long it was itself engaged in the work of figuration.”⁴⁵

A humanist to the core, Alberti believed in the dignity and self-worth of individuals, his efforts to retrofit cities according to Renaissance aesthetic theories were meant to ennoble the townscape and were part of the humanist strategy which was

⁴⁰ Anthony Blunt. *Artistic Theory in Italy, 1400-1600* (Oxford: Clarendon Press, 1956) 8.

⁴¹ Leon Battista Alberti, Cosimo Bartoli, and Giacomo Leoni. *The Ten Books of Architecture: The 1755 Leoni Edition* (New York: Dover Publications, 1986) Bk. 8, Ch. 6.

⁴² Nagel and Wood, *Anachronic Renaissance*, 317.

⁴³ Fiske Kimball, “Luciano Laurana and the High Renaissance,” *The Art Bulletin* 10.2 (1927), 145.

⁴⁴ Richard Krautheimer, “The Panels in Urbino, Baltimore and Berlin reconsidered,” in *The Renaissance from Brunelleschi to Michelangelo: The Representation of Architecture*, ed. Henry A. Millon and Vittorio Magnago Lampugnani (Milan: Bompiani, 1994) 256.

⁴⁵ Nagel and Wood, *Anachronic Renaissance*, 319.

aimed at dignifying man. However, Alberti, like Wren, also believed in the political value of architecture. "How much Authority accrued to the *Roman* Name and Empire from their buildings," Alberti declares, is indisputable.⁴⁶ The idea that architecture played an important part in establishing, or reestablishing, authority was not lost to the Papacy either. Following the return of the Pontificate to Rome from Avignon in 1417, the authority of the Pope in religious matters was still a matter of debate. Architecture played an important role in reestablishing the legitimacy of the Papal Seat in Rome, a fact recognized by Pope Nicolas V (1447-1455), who stated: "not for ambition, nor pomp, nor vainglory, nor fame, nor the eternal perpetuation of my name, but for the greater authority of the Roman church and the greater dignity of the Apostolic See ... we conceived such buildings in mind and spirit."⁴⁷ Alberti's influence can be felt here, as he was part of the Papal Court at the time. In general, this attitude toward architecture persisted, as we will see, in varying degrees in successive Popes up through the 17th century.

In the opening decades of the 16th century, architectural environments began to be organized around perspectival axes in a more forceful way, and as a result these environments began to evince an "image of hierarchically organized power."⁴⁸ Donato Bramante's (1444-1514) Belvedere (1504+) at the Vatican was the first major project to demonstrate this [11,12,13]. Here, the axial perspective becomes *the* organizing element upon which the entire composition depends. The ramps, stairways, terraces,

⁴⁶ Alberti, *Ten Books of Architecture*, Preface.

⁴⁷ Christoph Frommel, "Papal Policy: The Planning of Rome during the Renaissance," *Journal of Interdisciplinary History* 17.1 (1986), 41-42.

⁴⁸ Ibid, 62.

the terminating exedra, as well as the symmetry of the lateral facades, all exist in relation to the perspective, the full effect of which can be appreciated only from a "fixed" position within the Papal apartments of the Vatican Palace."⁴⁹ The axial planning of the Belvedere marks a decisive moment because it shows:

... a desire to create a particular kind of architecture ... the design of the building comes to depend upon the presence of the spectator ... what the spectator will actually see and experience becomes a positive factor in the development of architectural theory, providing the basis for a new style of architecture.⁵⁰

The organizational principles utilized at the Belvedere ultimately provided the framework utilized later by Michelangelo at the Campidoglio on the Capitoline Hill in Rome [14]. However, before discussing the impact of Michelangelo's work, important differences between the Belvedere and the Campidoglio must be pointed out. While axuality drives the designs at both [15], it functions in an entirely different way: the visual experience at the Belvedere is revealed at a single glance, that is, from a predetermined point in the Papal Palace; the visual experience at the Campidoglio, however, can only be fully grasped by engaging in movement along the axis, "an effect similar to that provided by the planned progression through a city of a royal entry."⁵¹ Thus, at the Capitoline, the axis draws and forces the spectator up a monumental stairway towards a dramatic climax, the central accent in this case being the Palazzo Senatori [16].

The Royal Hospital for Seamen at Greenwich takes from both, like the Belvedere

⁴⁹ James Ackerman. *The Architecture of Michelangelo* (Chicago: University of Chicago Press, 1986) 140.

⁵⁰ Bates Lowry, "High Renaissance Architecture," *College Art Journal* 17.2 (1958), 128.

⁵¹ Ibid.

the strength of its effect derives from a fixed viewpoint along its perspectival axis, but from the Campidoglio it takes the U-shaped plan, albeit through several architectural degrees of separation. We will return to this theme as it relates to the development of the Baroque in France and Italy at a later point, but for now it may be useful to refocus our attention on the Belvedere.

THEATER, ARCHITECTURE, AND URBAN DESIGN

As we saw above, Bramante's Belvedere project marked a crucial stage in the development of hierarchically organized space. It was also noted that the coherence of the entire design depended on a single vantage point from the Vatican Palace. In this regard, the Belvedere betrays the influence of the pictorial realm and its method of constructing three dimensional environments using linear perspective. But "the unified spatial setting of early Renaissance painting" was also "an important ingredient in the evolution of the new humanist theater"—i.e. stage design.⁵² Linear perspective was fundamental to this evolution; a fact duly noted in a treatise by Serlio published in 1545:

... among those things made by the hand of man which may be considered with the greatest satisfaction to the eye and to the mind alike has been the discovery of stage scenery in which the art of perspective has permitted the display within a small compass of magnificent palaces, great churches, varied houses and spacious squares near and far adorned with diverse bldgs, long straight streets,

⁵² David Rosand, "Theater and Structure in the Art of Paolo Veronese," *The Art Bulletin* 55.2 (1973), 220.

lofty columns, pyramids, obelisks and a thousand other beautiful things.⁵³

Serlio cites some of the masters of the Italian High Renaissance, such as Bramante, Raphael, and Baldassare Peruzzi, "among his forebears in the art of perspective."⁵⁴ Thus, we have perspective developing in three different realms— theater, painting, and architecture—and as a result each are informed by each others' qualities. Seen in this light, the Belvedere is also a specie of stage scenery, and as such provided the setting for the staged performances of the Papal Court [17]. Indeed, this was the intention, and the result was the conversion of the residences of those of the ruling class into places of, or rather stages for, ceremonial and ritual display. Thus we find the merging of the private residence with the theater. Towards the middle of the 16th century these kinds of environments began to spill out into the urban scene, and the city itself became a stage for ceremonial and ritual displays of authority and status.

The Piazzetta and the Piazza San Marco in Venice are some of the earliest and best examples of the urban scenography that resulted from the combination of perspective in theater, painting and architecture. Here, the ideas developed by Bramante and his circle found expression in the unified spatial setting created by the Italian architect Jacopo Sansovino, who, along with Serlio, had come to Venice following the Holy Roman Emperor Charles V's Sack of Rome in 1527, taking along with them the ideas of the High Renaissance. In his analysis of the Piazzetta [18], John Onians points out the similarities between Sansovino's design and Serlio's theatrical illustrations [19,20], and maintains that there is "even evidence that the whole idea of applying such

⁵³ Cecil Gould, "Sebastiano Serlio and Venetian Painting," *Journal of the Warburg and Courtauld Institutes* 25.1/2 (1962), 57.

⁵⁴ Ibid.

a scene design to the Piazzetta derived from Serlio."⁵⁵ The Piazzetta had for centuries defined the nautical approach to Venice's urban core and "in a sense it had come to 'represent' the city."⁵⁶ Sansovino formulated his design in relation to this maritime approach—like Wren later does at Greenwich—in this case from a fixed view from the Bacino through the Molo abutting the end of the Piazzetta. It is only from this single perspective viewpoint that the three structures planned by Sansovino—[21,22,23] the Zecca (1537+), Libreria (1537+), the Loggetta (1537+)—and their relationship to the Piazzetta operate as a whole. Thus, through Serlio, Sansovino applies to the Piazzetta "principles of arrangement already current in the theatre."⁵⁷ The influence of theater design becomes clearer if we look at the articulation of the classical vocabulary. In Serlio's theatrical illustrations the classical architecture of the Tragic scene [20] was the most befitting backdrop for the daily activities of the nobility and visiting dignitaries. Sansovino seems to have been persuaded by this view when the time came to articulate his facades, and we find at the Piazzetta an urban backdrop which has been "staged" with an aesthetic suitable for the events of aristocratic life. A project which had begun as an effort to dignify the public face of Venice—i.e. the Piazzetta—ultimately turned into a project glorifying and enshrining the presence and values of Venice's ruling elite. The important point being made here is that scenography and the language of

⁵⁵ John Onians. *Bearers of Meaning: The Classical Orders in Antiquity, the Middle Ages, and the Renaissance* (Princeton, NJ: Princeton University Press, 1988) 295. Bruce Boucher has pointed out that while Sansovino's design for the Piazzetta is similar to Serlio's stage, these ideas existed earlier, as in the completion of Piazza Santissima Annunziata in Florence by Antonio da Sangallo the Elder when Sansovino was living there. For this see, Wolfgang Lotz. *Studies in Italian Renaissance Architecture* (Cambridge: MIT Press, 1977) 82-83.

⁵⁶ Ibid.

⁵⁷ Ibid.

classicism not only enabled Sansovino to inject a certain degree of formalism and regularity into the Venetian townscape, but it also enabled Venice to be described in terms of its ruling-class. Scenography, with its accompanying classical architecture, was a way to signify and stage the power of the rulers over the ruled, playing into "a process begun earlier in the century of making the Venetian patriciate a self-conscious group that separated itself clearly from the rest of the population."⁵⁸

Missing, however, from the scenography of the Piazzetta is a hierarchical focal point, or rather, an architectural climax. For this, the observer must pass through the Piazzetta and into the Piazza San Marco itself. At this point the main event ceases to be the social pretensions of lords of Venice, and becomes the Doge and the Basilica of San Marco itself. Here, Sansovino sets in motion the kind of hierarchical organization Bramante had initiated earlier at the Belvedere. Prior to Sansovino's remodeling of the Piazzetta, the southern edge of the Piazza San Marco was defined by two aligned and adjacent structures [24], the Campanile of San Marco and the Hospice. Occupying the eastern end and facing the Piazza was the facade of the Basilica, which was off center in relation to the open square before it. The Hospice was torn down to make room for its replacement, the Procurazie Nuove, however it was Sansovino's Libreria which determined the placement and alignment of this new structure.⁵⁹ By terminating the northern end of the Libreria (the south-east corner of the Piazza) approximately 24 meters south of the Campanile, the southern edge of the Piazza San Marco—the future

⁵⁸ Eugene Johnson, "Jacopo Sansovino, Giacomo Torelli, and the Theatricality of the Piazzetta in Venice," *Journal of the Society of Architectural Historians* 59.4 (2000), 441.

⁵⁹ Wolfgang Lotz. *Studies in Italian Renaissance Architecture* (Cambridge: MIT Press, 1977) 83-84.

facade of the Procurazie Nuove—in order to align with the Libreria, was set back further south than the original Hospice [25]. This "hinging" down of the southern edge clockwise from west to east had important ramifications: by setting back the southern edge the acute angle of its southwest corner was swung open close to a 90 degree angle, widening the breadth of the eastern end, with the result that the facade of the Basilica was repositioned [26], so to speak, at the hierarchical center of the Piazza.⁶⁰

The Royal Hospital for Seamen and the alterations in Venice were cast from similar molds. At both Greenwich and Venice, scenography was used to "stage" the elements of power on the main approaches, while the syntax of classicism provided these staged settings with an aesthetic that dignified this power. "Both conjure up an artificial world into which the spectator is forcefully drawn, a world beyond the reality of everyday life."⁶¹ It is important to note here the "presentational" value of scenography, that is, its ability to provide not only the framework for the face of power but also the authoritative *presence* of power.

The Belvedere and the Piazza and Piazzetta of San Marco give us instances of how scenography influenced palatial and urban designs. Returning now to Michelangelo's work on the Capitoline Hill we see that it presents us with the fusion of palatial and urban scenography. The Campidoglio's U-shaped plan, "double-ramped stairway", and low wings that converge on a "dominant central accent" and a "centralized monument", were features that became "characteristic components of urban and villa design" into the Baroque age, paving the way for, and culminating in, the

⁶⁰ Ibid.

⁶¹ Krautheimer, "Panels," 257.

grand schemes of the 17th century like Versailles, St. Peter's, and ultimately the Royal Hospital for Seamen.⁶² Moreover, by linking the Cordonata of the Campidoglio axially with a new street, the Via Capitolina, Michelangelo extended the axis of the Campidoglio into the urban fabric. What Sansovino had achieved in Venice for the patriciate, Michelangelo had achieved in Rome for the Papacy: the Campidoglio represented "the final consequence of Papal appropriation of the city, which had started under Nicholas V."⁶³

Axial approaches created lines of site within the city that reoriented the focus of public attention toward emblems of power and authority. In this way, an entire city could be used to propagate, reinforce, and symbolize the political authority and legitimacy of its rulers, as had happened on the Capitoline Hill and in Venice. In the next chapter we will examine how scenography and classicism became reinvigorated by and infused with the spirit and ideology of absolutism. Particular attention will be given to Roman Catholic Church and the monarchs of France: those two powers most responsible for conditioning scenography and classicism into "baroque clichés of power." While both the Papacy and the French monarchy claimed for themselves jurisdiction over different realms, the former over the spiritual, the latter over the secular, their claims were grounded on the same ideological principle: absolutism. This autocratic cosmology

⁶² Ackerman, *Architecture of Michelangelo*, 142.

⁶³ Frommel, "Papal Policy," 64.

insisted and relied upon unquestionably accepting a hierarchical framework that positioned the Pope and the King at the top. Scenography and classicism became an important part of the political science of absolute authority. Axial perspectives redirected the center of focus on symbols power, and cityscapes became places for "staging" authority; and as a result, "the new city itself" became "in fact an essay in formal scenic design: a backdrop for absolute power."⁶⁴ Scenography became the preferred delivery system for bespeaking the claims of those in power, and its classical garnish, according to Mumford, became nothing more than "a garment of esthetic decency" intended to disguise "the tyrannies and debaucheries of the ruling powers."⁶⁵

⁶⁴ Mumford, *City in History*, 379.

⁶⁵ Ibid, 347.

Chapter 3:

Scenography and Classicism in the Age of Absolutism

By the end of the 16th century, the most ardent and successful proponents of absolutism were the Popes in Rome and the Kings of France; and for both, architecture was a way to give visible expression to their political aspirations and pretensions, that is to say, it was a way of "staging" these aspirations and pretensions to the masses. Within this framework of centralized power, a new kind of scenography and classicism was built, however, not so much in *kind* but in *degree* and *meaning*. What, in the 15th and 16th centuries, would have been confined to local and/or unconnected city precincts and private seigniorial residences had, by the 17th century, become the organizing principle of design and the dominant aesthetic for entire cities. The following identifies some of the general features developed in Italy and France that ultimately find their way into England and into Wren's work and the Greenwich Royal Hospital.

ROME

If we look at 17th century Rome, *the* capital of the Catholic world, we find a cityscape manufactured to display the power, wealth, prestige, and authority of the Holy See. The physical outline and profile of Rome owes much to the efforts undertaken by Pope Sixtus V (r.1585-1590) at the close of the 16th century. His grand plan of Rome transformed the city into a system of avenues and terminating foci (usually obelisks)

meant to connect its seven major basilicas and other important religious monuments. Working with his architect, Domenico Fontana, Sixtus V re-imagined the three existing streets at the Piazza del Popolo as a point of radial dispersion [27,28] for diplomatic envoys and pilgrims alike—a design of which ultimately came to typify Baroque city and palatial planning throughout Europe. In addition, in the final year of Sixtus V's reign, Fontana and Giacomo della Porta were able to complete the dome of St. Peter's [29]. Thus, by 1700, two important and influential urban elements had been established in Rome: the radial axes and the grand dome. However, as Giulio Argan notes, "the *forma urbis*, as envisioned by Sixtus V and Domenico Fontana ... was a powerful form of political and religious propaganda," and ultimately became "an important "rhetorical" means of persuasion."⁶⁶ The use of the dome in ecclesiastical architecture, which in the Renaissance had been driven by the desire to "recreate" the heavens above—a matter which will be discussed elsewhere—was now driven by the desire to impart an air of officiality to the institution it housed. The dome, in effect, became a recognizable emblem of power; it symbolized not so much the heavens as it did the power, legitimacy, and reach of the Pontificate. Colonnades and detached columns also played their part in this visual montage, performing in an honorific capacity worthy enough to stand as rhetorical devices in their own right [30,31], the great and most obvious example in this case being those created by Bernini at the Piazza San Pietro (1656-1667).

⁶⁶ Giulio Carlo Argan. *The Baroque Age* (Geneva: Skira, 1989) 31.

FRANCE

In France, King Henry IV (r.1589-1610) undertook to do to Paris what Sixtus V had done to Rome. However, whereas in Rome the planning projects had been more or less a matter of tightening and embellishing pre-existing urban elements, in Paris there were no such pre-established urban focal points. This forced Henry IV to create an altogether new kind of scenographic urban element, the *place royale*.⁶⁷ Modeled on Italian piazze, Henry IV's first initiatives in the opening decade of the 17th century—the Place Dauphine [32,33] and the Place des Vosges [34,35]—created almost completely enclosed spatial cells in the heart of Paris. Unlike the piazze of Rome, however, which often had a main architectural focus, such as Sant'Agnese in the Piazza Navona [36,37], the *places* were envelopes of space surrounded by structures which, more or less, were uniform in appearance; the main focus of the space itself revolved around a statue of the French monarch located at the center [38], a situation similar to the obelisks in Sixtus V's plan and the equestrian statue of Marcus Aurelius at the Campidoglio.

By the middle of the 17th century and onwards, particularly during the reign of Louis XIV, we begin to see in works like Francois Mansart's Val-de-Grace (1645+) and Louis Le Vau's College des Quatre Nations (1662+), the domes, classical articulation, hierarchical climax, and axuality reminiscent of Rome [39,40]. But it was with the large-scale planning of Andre Le Notre and his penchant for laying out grand infrastructures

⁶⁷ Christian Norberg-Schulz. *Baroque Architecture* (Milan: Electa, 1986) 32.

around perspectival sight lines that the ideas of Rome were pushed further.⁶⁸ In the grounds surrounding Chateau Vaux-le-Vicomte (Le Vau, 1656-1661) and Versailles (Le Vau, Jules Hardouin-Mansart, 1661-1687), Le Notre used the radial axis introduced by Sixtus V as the departure point for a new kind of planning [41,42]. At both, a palace sits in the middle of a central axis which defines and organizes the avenue of approach, at either end of this axis are *patte d'oie* (radial axis) which extend into the countryside beyond. Traversing these axes is a system of secondary axes which create a sequence of terraces, forecourts, and *parterres*. In Paris, Le Notre's garden planning at the Tuileries set in motion an entire system of axial extensions that linked important national institutions [43], while the River Seine, instead of acting as a barrier, became the "central spine" for subsequent design growth.⁶⁹

However, while perspectival scenography was the organizing principle behind the urban and palatial planning of Rome and France, it was the *articulation* of the classical vocabulary that set them apart. Understanding this aspect is important because *articulation* is precisely that which enabled Wren to set the Royal Hospital for Seamen apart from its French and Papal precedents. That the Papacy and the Kings of France recognized the preeminence of the classical syntax—that it should be the prevailing expression of all their great architectural undertakings—was a legacy of the Italian Renaissance. Ancient Rome stood at the summit of civilization—at least for Renaissance theorists—and by virtue of this its architecture was thought to embody a

⁶⁸ Thierry Mariage. *The World of Andre Le Notre* (Philadelphia: University of Pennsylvania Press, 1999) 86.

⁶⁹ Edmund Bacon. *Design of Cities* (New York: Viking Press, 1974) 93.

higher state of civilization. However, by the 17th century, the language of classicism had become involved with the agendas of both the Roman Catholic Church and the French monarchy. Using the classical grammar of antiquity, the Pontificate and the Kings of France could not only associate their rule with the glories of ancient Rome, but could also *articulate* this grammar to express a specific religious or secular context. Thus, in Rome, classicism was calibrated according the pretensions of the Papacy, and the aesthetic elements of Rome's ecclesiastical architecture became more bold, forceful and ornate: just the kind of imagery sanctioned by the Tridentine Reforms, which saw artistic form as a device for religious edification. We see, for example, in structures like Sant'Andrea della Valle and Santa Susanna [44,45] the "spiritualization" of the basic elements of classicism.⁷⁰ In France, taking from both antiquity and the Papal projects in Rome, French architects pursued a similar statement of expression, though in this case the aims were secular. The classicism of Val-de-Grace [39,46] betrays the influence of its model in Rome (Santa Susanna), however the character of the dome and the facade are more stately, "relaxed and harmonious" and breathe "a truer classical spirit" than their Italian counterparts.⁷¹ The same can be said for the colonnade on the east front of the Louvre [47] "whose existence ... had to be contrived as part of a royal residence."⁷² Like the architects in France and Rome, Wren believed that the foundations of architecture lie in antiquity, both in its form and in its meaning, and like them, he sought to build from these foundations a specific kind of classicism that was suitable to a

⁷⁰ John Varriano. *Italian Baroque and Rococo Architecture* (New York: Oxford University Press, 1986) 16.

⁷¹ John Summerson. *The Classical Language of Architecture* (London: Thames and Hudson, 1980) 30.

⁷² Ibid, 31.

context that was specifically English.

WREN'S SOURCES

What Wren learned from Italy and France was considerable, but his visit to France in 1665-1666 provided him with an actual *experience* of architecture, something that no Italian treatise or any other treatise could supply. While in Paris, Wren was able to witness at first hand the scale and magnitude of scenography and the classical tradition. The Louvre, he says, was his "daily Object,"⁷³ and of Bernini's design he says he would have "given [his] skin for."⁷⁴ He learned also that the Thames, like the Seine, could be used to architectural advantage, something we see evident at Greenwich and at Chelsea, as well as his plan for London. Paris also furnished him with his first encounter with domed architecture, and the idea of a centralized building with a prominent dome henceforth dominated his imagination.⁷⁵ Of the seigniorial residences Wren visited in the countryside Le Vau's Chateau Vaux-le-Vicomte [48] and Francois Mansart's Chateau de Maisons [49] stood out as 'incomparable', their frontispieces, broken pediments, and superimposed orders later finding a place in his designs.⁷⁶ A simple comparison of his work before and after his visit to France reveals the extent to which Wren was influenced by French architecture. His facile handling of the classical style in his earlier works like the Sheldonian Theater [69] yields to a stricter and more

⁷³ Christopher Wren Jr., Ernest Enthoven and E. H. New. *Life and Works of Sir Christopher Wren, from the Parentalia; or Memoirs* (London: E. Arnold, 1903) Appx. to Part I, Sect. III; No. IV, 106.

⁷⁴ Ibid, 105.

⁷⁵ Eduard Sekler. *Wren and His Place in European Architecture* (London: Faber and Faber, 1956) 47-48.

⁷⁶ Ibid, 48.

studied approach in his later works like the Greenwich Hospital and St. Paul's [51], a point which we will examine more fully in the following chapter.

The Great Fire that burned London to the ground in 1666 presented Wren with the opportunity to put his newly acquired ideas into practice. From *Parentalia* we learn that he intended to "rebuild [London] with Pomp and Regularity" in order to transform the City into "the Wonder of the World."⁷⁷ The similarities between Wren's plan and the radii created by Sixtus V and Domenico Fontana in Rome and by Le Notre in France during the 17th century are apparent [27,42,43,50]. Likewise, the commanding presence of St. Paul's Cathedral in plan and in the profile of its dome is analogous to the religious and secular imagery found in Paris and Rome [29,51,52,82]. Thus in plan and in iconography Wren's design for London reflects the conceptions of centralization and absolutism embraced by the Pope and the Kings of France. But, whereas the main event in Rome was the Papacy and that in Paris the French monarchy, the main event in London was Parliament and commerce. The "Straightness and Regularity of Buildings ... the well disposing of Streets and publick Places ... the Opening of Wharfs," the open piazze, and the long perspectival vistas, all of which no doubt contribute to the beauty and formal coherence of the overall design, perform a utilitarian role as well in Wren's scheme by providing, what he says, "Convenience for Commerce."⁷⁸ Thus we find located at the "Nave or Center of the Town" not a monument to the Crown nor to religion but instead a monument to commerce: the Royal Exchange [50].

The prominence of St. Paul's may seem unwarranted in light of religion's

⁷⁷ Wren, *Parentalia*, Part II, Sect. I, 120.

⁷⁸ Ibid, 117.

diminished role in national affairs. But *Parentalia* informs us that there were also sentimental, historical, as well as patriotic grounds for Wren's decision. To be sure, glorifying God was built into the design process, as it naturally would be for any church, but St. Paul's had been a part of England's history for centuries, and as a result it had become part of its national identity. Wren is sensitive to this and, accordingly, makes St. Paul's conspicuous in both plan and profile, the grand dome of the Cathedral serving both as the "principle Ornament" of the City and "for the Honour of our Government, and this our Realm."⁷⁹ Like his design for Greenwich, he appeals "both to compassion and to patriotism" in formulating St. Paul's.⁸⁰

Although Wren's program was never carried out, the hierarchy of his overall plan for London is clear: commerce and national aggrandizement come first, the Crown second. Overt classicism, like the kind evinced at St. Paul's and the Royal Hospital at Greenwich, is used by Wren to describe a more complex totality, where religion, aristocracy, Parliament, the Navy, and the citizenry are all participants. In works intended for the English monarch, Wren seems to consciously avoid the lavish use of classicism, or at the very least, when he does use it, these projects never leave the drafting board. As will be discussed in the next chapter, he takes from France the formal arrangements found in their elevations, plans and profile, like the stepped back *cour d'honneur*, the large terraces, the U-shaped plan, and not least the perspectival

⁷⁹ Ibid, Part II, Sect. IV, 135. This sentiment also seems to have motivated Inigo Jones during his remodeling of St. Paul's in the 1630's. Jones' enormous Corinthian portico fronting the western side was highly regarded by Wren, and it is safe to say that Wren was following Jones' cue when resurrecting the classicism of St. Paul's following the Conflagration of 1666. For more on this see: John Summerson. *Inigo Jones* (New Haven: Yale University Press, 2000) 97-101.

⁸⁰ Kerry Downes. *The Architecture of Wren* (New York: Universe Books, 1982) 106.

scenography in which these features depend. However, he never puts the full weight of the classical syntax behind their expression. We saw earlier some of the political and financial reasons for this in our discussion of the Chelsea Royal Hospital, and the same holds true for his half-finished project for Winchester Palace [53]. This can also be said of Wren's design at Hampton Court (1689+), where monumentality is attained through sheer size and scale [54], but is, nevertheless, prevented from reaching its maximum potential because the appropriate elements of classicism fail to accompany its expression [55]. Viktor Furst accounts for this discrepancy in political terms:

... the attempt to build on a monumental scale in the medium which is essentially that of smaller scale domestic architecture, namely brick contrasted with stone quoins and trimmings ... may be inappropriate to the scale of the edifice, and Hampton Court has been called, with justification, 'merely an English gentleman's country-house on a large scale'; but it cannot be gainsaid that Wren's application of methods more appropriate to domestic architecture to a building of which the scale recalls, though not approaches, that of Versailles, has been eminently successful ... what Hampton Court may lack in grandeur, what qualities of magnificence it does not attain, because it does not strive for them, what it must necessarily yield to Versailles to which it is frequently, though not altogether appropriately, compared, it amply compensates for by the charm of the whole composition; and while ... French prototypes were most certainly operative inspiration in the evolution of the design, the attraction of Hampton Court differs as we have indicated, from that of Versailles in the same measure as the

personality, the reign, and the concepts of Louis XIV differed from those of William III.⁸¹

Wren seems to have believed, along with his Parliamentary sponsors, that the monarch of England was not entitled to the same kind of classical expression found in the architecture of its counterparts on the Continent. Classicism carried with it a specific message of power; according to Onians, "status, morality, and character were the three principle factors which were recognized as influencing the selection of architectural forms ... the most important was the status either of the building's patron or occupant, or of the institution which it housed."⁸² In England, the status, morality, and character of the institution of Parliament and those it represented were not inferior in rank to the Crown, but a classically embellished project in the King's name might indicate otherwise. The only palace designs of Wren's that seem to overtly express the elements of classicism are those of Whitehall Palace [56,57]. This may have stemmed from the desire to match the classicism of Inigo Jones's Banqueting House, which was the departure point and centerpiece of the design [58,59]. Another cause for classicism may have come from the fact that a new building for Parliament was incorporated into the plan. Still yet, as Furst points out, since the general plan and the twin domes are the only features which betray the hand of Wren, the remaining details in the classical elevations are likely not those of Wren's at all but creations of his assistants.⁸³ A second grand scheme for Whitehall [60] followed the rejection of the first. Here, Wren seems to control more of the

⁸¹ Viktor Furst. *The Architecture of Sir Christopher Wren* (London: Lund Humphries, 1956) 77-79.

⁸² Onians, *Bearers of Meaning*, 310.

⁸³ Furst, *Architecture of Wren*, 81.

details of the aesthetic than in his previous scheme, and the aesthetic of classicism is limited to porticoes, portals, and frontispieces. But this scheme too was rejected; its luxuriousness and opulence were anathema to the sensibilities of King William III, those qualities being more suited to his enemy across the English Channel, Louis XIV; and furthermore, Parliament, as it had been with the previous four Kings of England, was not eager to provide the funds to support such grand palatial ambitions.⁸⁴ Nevertheless, England's rising political hegemony over Europe needed an architectural response. France had its Versailles, and Rome its St. Peter's; in England the time had come for Greenwich.

⁸⁴ Ibid, 88.

Chapter 4:

The Classical Tradition in England

What we saw in the preceding chapter were some of the basic elements of scenography and classicism that resulted from the patronage of the Roman Catholic Church and monarchs of France. The aim of this part is to understand more clearly how, or why, Wren was able to utilize these elements in his design for The Royal Hospital for Seamen without invoking their Papal and French pedigree.

To do this we must begin by examining the introductory phases of classicism in England and the contributions made by Inigo Jones. This will reveal two things; first, what classicism meant not only to Jones himself, but also to his patrons and the English public at large; and second, the state of the classical tradition in England as Wren had inherited it. However, Wren's own philosophy of architecture birthed a brand of classicism different from that which he had inherited, and if we are to discover how Wren successfully imparted an English "feel" to forms imported from foreign lands, then we must also examine the principle elements of his design philosophy as well. By doing so we can see how Wren disassociated Greenwich from its Continental progenitors.

ENGLISH 'CLASSICISM' AND INIGO JONES' CLASSICISM

The classical style as it had been developed in Italy during the 15th and 16th centuries and in France during the 16th century made its way into England in bits and

pieces during the 16th century, and it wasn't until Inigo Jones that this style gained a steady, albeit tenuous, foothold in England. The two main reasons for its slow arrival, generally speaking, were England's geographical isolation from the Continent and Henry VIII's break with the Catholic Church in Rome.⁸⁵ While the important treatises of Vitruvius, Alberti and Serlio had been available in Latin, French and Italian in England by the last decades of the 16th century, classical architecture in England had been more a matter of applied decorative design to an existent native building tradition. Moreover, these treatises were often bastardized versions of the originals and thus provided incomplete and inaccurate information. The Low Countries, which dominated the commercial and cultural exchange of northern Europe, also exerted a certain amount of influence over English architecture, and as John Summerson points out, "whereas the arts of Italians and Frenchmen had to be fetched, the art of Antwerp flowed in of its own accord."⁸⁶

John Shute's treatise *The First and Chief Groundes of Architecture* (1563), a record of his 1550 sojourn in Italy, was the first attempt to provide England with a firsthand encounter with Italian architecture. However, like the treatises of Vitruvius, Alberti, and all the others that had made their way into England, Shute's treatise was at best a crude imitation of what he had witnessed. Nevertheless, it remained significant, for it was "the first time an Englishman [had] acknowledged the validity of the Italian thesis that practice must be preceded by theory ... [and] once this idea had been

⁸⁵ England's break with the Pope severed a crucial artery connecting it to the artistic ideas developing in Rome.

⁸⁶ John Summerson. *Architecture in Britain, 1530-1830* (New Haven: Yale University Press, 1993) 51.

verbalized in English there was no turning back."⁸⁷

The classical style made a decisive appearance in English architecture with the work of Inigo Jones. His travels in Italy in 1601, and later in 1613-1614, brought him not only into direct contact with the great monuments of antiquity and the works of the Italian Renaissance but also into direct dialogue and contact with architects like Vincenzo Scamozzi, with whom he could work out solutions to various architectural problems. Jones' first hand encounter was supplemented by intense study of the treatises of Palladio, Alberti, Serlio, Philibert L'Orme, and others, which helped him appreciate the classical style as a system of measure, proportion and number rather than as an appliqué of superficial and ornamental veneer. Consequently, he learned "to regard a building as a whole, organized throughout—in plan and elevation—according to rational rules."⁸⁸

Inigo Jones' career as a court artist began when James VI of Scotland assumed the English throne as James I in 1603; it was during this time that Jones' artistic ideals began to be reflected in the visual culture of the Stuart court.⁸⁹ Concurrent with the visual restyling of the Stuart court was the restyling of the social etiquette and decorum within the Stuart court itself. The guiding light in this matter was Baldassare Castiglione's *Il Cortegiano* (1528). In this book, a detailed account of Italian court life is given along with all the proper rules of conduct incumbent upon the aspiring lord. This text later provided the framework for Henry Peacham's *The Compleat Gentleman*, first

⁸⁷ Rudolf Wittkower. *Palladio and Palladianism* (New York: G. Braziller, 1974) 74.

⁸⁸ Nikolaus Pevsner. *An Outline of European Architecture* (London: Thames & Hudson, 2009) 164.

⁸⁹ Peter Womack, "The Comical Scene: Perspective and Civility on the Renaissance Stage," *Representations* 101.1 (2008), 34.

printed in 1622, which along with *Il Cortegiano* "had been given widest currency at the English court."⁹⁰ Why there should be such a complete shift in taste from the Elizabethan era to the Jacobean era can be explained by James I's political ideology. A firm believer in the Divine Right of the King—he wrote a book on it in 1598, *The True Law of Free Monarchies*—James I sought to align the visual image of the Stuart Court with the tastes and aims of his seigniorial equivalents on the Continent. Earl Rosenthal observes that:

... the initial agents of diffusion [of the classical style] were, in the main, diplomats at Italian and then other European courts, and the early adopters were the princes they served; ... architecture in the Renaissance style had a value other than the aesthetic one for European princes and their ministers ... [and] once convinced of the propaganda value of magnificent palaces and funerary monuments for themselves and their dynasties, princes inevitably used the most rhetorical of architectural styles, that of ancient Rome [which was best expressed by the Renaissance architects].⁹¹

This proved to be exactly the case in England. Recognizing Inigo Jones as an erudite master of the classical tradition, James I utilized Jones' talents to construct the architectural atmosphere for the Stuart court. As a stage designer for court masques [61,62], Jones had made use of Serlio's recipe for theatrical stage designs and was well aware that there were appropriate types of theatrical backdrops for different types of scenes. Like Sansovino had done with the classical style for the patricians of Venice,

⁹⁰ Wittkower, *Palladianism*, 62.

⁹¹ Earl Rosenthal, "The Diffusion of the Italian Renaissance Style in Western European Art," *Sixteenth Century Journal* 9.4 (1978), 39-43.

James I intended Jones to do with architecture for the Stuarts in England. Inigo Jones' Queen's House (1616-1619), Banqueting House (1619-1622) [63], and design for Whitehall Palace (c1638) [64] are all visual responses to this social climate in England and were intended to support and confirm the politics of Divine Right as well as the social pretensions of a newly re-fashioned Stuart court.

However, Inigo Jones' style "was in no sense popular around England," and it was ultimately competing with other architectural traditions proceeding at their "own pace independently of Jones."⁹² To be sure, classicism was a Royal affair and existed in England only through aristocratic patronage: classical elements prevailed in the vicinity of the Court, but they gave way to "English traditions as soon as we get away from it."⁹³ However, with the outbreak of the Civil War in 1642, the execution of Charles I, and the subsequent interlude of the Commonwealth (1649-1660), classicism was prevented from taking root. Nevertheless, like Shute's book had done in the previous century, Jones' work had done in the 17th century: the seeds of classicism were sown. It maintained a latent existence in the hearts and minds of Englishmen who "believed that the rejuvenating force of English culture and artistic life was tied to the classical ideology" represented in the work of Inigo Jones.⁹⁴

Wren appeals to this instinct in his project to rebuild London and for Greenwich; for St. Paul's Cathedral he sought after a design "that might satisfy the World," and, after submitting "several Sketches meerly for Discourse-sake," he observed that the "Generality were for Grandeur," and thereupon he "endeavour'd to gratify the Taste of

⁹² Summerson, *Architecture in Britain*, 97.

⁹³ Pevsner, *Outline*, 162.

⁹⁴ Wittkower, *Palladianism*, 76.

the Connoisseur and Criticks, with something coloss and beautiful ... a Design antique & well studied, comfortable to the best Stile of the Greek and Roman Architecture."⁹⁵ As we saw in the previous section, St. Paul's had nostalgic value; it had a religious function *as well as* a civic function. Those who thought that the "Roman Stile ... deviated too much from the old Gothick Form of cathedral Churches, which they had been used to see and admire in this Country," were, in the end, outnumbered by those who, Wren says, "observed it was not stately enough, and contended, that for the Honour of the Nation, and City of London, it ought not to be exceeded in magnificence, by any Church in Europe."⁹⁶ Thus a Roman and Greek aesthetic seem to win out when the project was one of national aggrandizement. The same can be said for his design of the Royal Exchange, which, he says, was to be a "Building ... contriv'd after the Form of the Roman Forum, with double Porticos."⁹⁷ It also holds true for the Royal Hospital for Seamen, where the classical and scenographic images of the Royal Court, that is, those defined by the early Stuarts and Inigo Jones, as well as those defined by antiquity, are recruited for their "political use."

THEORY AND SCIENCE AND THE CLASSICAL TRADITION

However, the most unlikely candidate for carrying out the classical mission in England was Christopher Wren himself. As one of the founding members of the Royal Society, Wren was devoted to the method of scientific inquiry advocated by Francis Bacon, who held that number, mathematics, geometry, and arithmetic—i.e. science—

⁹⁵ Wren, *Parentalia*, Part II, Sect. IV, 137.

⁹⁶ Ibid.

⁹⁷ Ibid, Part II, Sect. II, 118.

were useful only inasmuch as they could be utilized as instruments for procuring technical and practical control over the natural world in which we live. Extending "more widely the limits of the power and greatness of man," says Bacon, was the vocation of science.⁹⁸

If we recall Bacon's distinction between the kinds of knowledge necessary for material revelations as opposed to spiritual or religious revelations, a conflict emerges in the classical tradition. This is because the classical style had developed during the Italian Renaissance upon the assumption that there were mathematical and geometrical equivalencies that existed between the microcosm and macrocosm. A fundamental component of Plato's cosmology, and revitalized in the works of Plotinus, this view was handed down to and revived by Marsilio Ficino in Florence in the last decades of the Quattrocento. Under the patronage of the Medici, Ficino provided a series of commentaries articulating the idea that perfect numbers and geometrical forms enabled men to give visible expression to the harmonic order which they thought permeated every aspect of creation.⁹⁹ An ultimate reality existed beyond our own, that of God's, and idealized forms and relationships were esteemed to be the "clearest evidences available to mortal senses" of this ultimate reality and thus of God.¹⁰⁰ Ficino's ideas provided much of the substance behind the artistic theory of the Italian High Renaissance. "For the men of the Renaissance this architecture with its strict geometry, the equipoise of its harmonic order, its formal serenity and, above all, with its sphere of

⁹⁸ Francis Bacon. *Novum Organum* (London: Routledge & Sons, 1905) Bk. I, Aphorisms CXVI, 135.

⁹⁹ Rudolf Wittkower. *Architectural Principles in the Age of Humanism* (New York: W. W. Norton & Company, 1971) 27-29.

¹⁰⁰ Cosby, "Cognition," 26.

the dome, echoed and at the same time revealed the perfection, omnipotence, truth and goodness of God."¹⁰¹ Thus what we have with the classical tradition is a method of design that aligns architectonics, aesthetics, and structure—i.e. the microcosm—with what were thought to be the mathematical and geometrical expressions of God—i.e. the macrocosm. Bacon's theory of knowledge does not permit the intermingling of the incorporeal and corporeal realms: both have different "natures" and therefore different "truths." Interpreting one in terms of the other only obscures the true nature of the other. To illustrate, Bacon calls attention to and criticizes the design of Phillip II's Escorial in Spain.¹⁰² Here, the plan was determined by a system of squares and rectangles in relation only to themselves [87]. However balanced, proportioned, and beautiful these forms may appear to be on paper, they nevertheless fail to account for man's position within this matrix. Interpreting the Escorial in terms of formal geometrical relationships, Bacon thinks, compromises its serviceability to its user, Phillip II. Idealized proportions and absolute harmonies are not useful to how man really exists in the universe, and thus, are not relevant to built form; "therefore," Bacon maintains, "let use be preferred before uniformity."¹⁰³ Wren's approach to architecture reflects Bacon's method of scientific inquiry and as a result he restricts his approach to the "truth" of built form to questions of "statics and optics"—i.e. science—which, in turn, affects the aesthetics.¹⁰⁴ Geometrical forms like circles, squares, and domes were, for Wren, the building blocks for an architecture of *usefulness*. They arise because they complement the structures

¹⁰¹ Wittkower, *Principles*, 29.

¹⁰² Francis Bacon, "On Building," *The Essays*, ed. John Pitcher (Harmondsworth: Penguin, 1985) 194.

¹⁰³ Ibid, "On Building," 193.

¹⁰⁴ Wren, *Parentalia*, Appx. Tract I, 236.

use, not themselves, and the beauty of these forms, he believes, derives not from their rapport with the heavens, but from the simple fact that "Geometrical Figures are naturally more beautiful than other irregular" figures.¹⁰⁵ Thus for Wren, the dome of St. Paul's was anything but the symbolic expression of the divinity above, rather it was three things: first, it was a useful structural expedient for spanning the crossing of the nave and transepts;¹⁰⁶ second, it was a beautiful and legible geometrical shape and thus an appropriate form for the beautification of London's skyline; and third, it imparted to London an air of monumentality, thereby giving it official recognition. The domes at Greenwich, we will see, were conceived of in much the same manner.

THEORY AND SCIENCE AT THE SHELDONIAN THEATER

To fully appreciate Wren's approach it is worth taking the time to examine one of his earliest works, the Sheldonian Theater (1664-1669) at Oxford. From *Parentalia* we learn that Wren designed the Sheldonian "with a view to the ancient Roman Grandeur discernible in the Theatre of Marcellus at Rome."¹⁰⁷ This D or U-shaped plan—likely obtained from Serlio—was the starting point [65], however, in his handling and articulation of the interior and exterior he departs virtually in every way from the ancient theater model. There are two main reasons for this; first, the function of the Sheldonian solely as a venue for graduation ceremonies had no precedent, forcing Wren to come up with his own solutions for accommodating the program of the building; and second,

¹⁰⁵ Ibid, Appx. Tract I, 237.

¹⁰⁶ John Summerson. *Heavenly Mansions and Other Essays on Architecture* (New York: Norton, 1998) 78.

¹⁰⁷ Wren, *Parentalia*, Part II, Sect. XII, 216.

the influence of Bacon and empirical science on Wren's thinking. If we remember that in Bacon's theory the only kind of acceptable knowledge is that which is *useful* to man as he exists in the tangible world, we can understand more clearly the reasons behind Wren's design decisions for the Sheldonian Theater.

SHELDONIAN INTERIOR

In order to carry out the principle of *usefulness* and maximize the structure's utility, Wren saw to it that obstructed views were at a minimum. This is the point of departure from the ancient theater; Wren's 'theater' has no formal stage, the stage in this case becomes the entrance for the ceremonial progression of graduates receiving their degree, with the U-shape functioning as a sort of terminating apse focusing on the Vice-Chancellor's chair [66], thereby reversing the traditional orientation of the Roman theater type. To provide clear views and ample lighting Wren determined that the central space of the interior must be cleared of any interfering structural elements, to this end he devises a roof truss system able to span the entirety of the area, thereby eliminating the column or pier elements in the center that would have been necessary to support the roof [67]. His treatment of the columnar Orders also breaks with convention; Wren understands them on structural grounds and considers them apart from their traditional aesthetic or theoretical use. The Doric Order was traditionally used to indicate the bearers of structural load, additionally it was also a symbol of toughness and virility and as such was used in structures signifying male dedications. At the other end was the Corinthian Order which, being more ornate, delicate and slender, often surmounted the Doric and Ionic Orders beneath; symbolically it was the "female" version of the Orders,

and thus performed a role in structures intended for female dedications. Wren interprets the Corinthian as last in the evolutionary line of the Orders, having a slenderer profile than the other orders but with the ability to bear a heavier load.¹⁰⁸ As a visual architectural element, the Corinthian columns hardly figure into the articulation, but as a structural and functional element they perform a major role with their slimmer profile and strength, allowing more light from the upper and lower levels to fill the open space of the interior [68]. This is an excellent example of how "the liberal aesthetic space inherent in the Baconian intellectual framework gave rise to a limited acceptance of an architecture that defined its own spatial and formal references outside the narratives of geometry, structure, function or proportion."¹⁰⁹

SHELDONIAN EXTERIOR

In regards to the articulation found on the exterior, Wren's handling follows up on discussions occurring in France at the time regarding the use of the Orders, and his position is analogous to that found in the pages of his contemporary Fréart Chambray's *Parallele de l'architecture antique avec la moderne* (1650)—a work which was known through John Evelyn's 1664 English translation—and that published later in Claude Perrault's *Ordonnance des cinq especes de colonnes* (1683), which maintained that the proportional systems used in antiquity were arbitrary and were formulated along customary and traditional lines. Essentially, Chambray and Perrault proposed that when the Orders were deployed, their structural integrity was assured first and from there they

¹⁰⁸ Shiqiao Li. *Power and Virtue: Architecture and Intellectual Change in England 1660-1730* (London: Routledge, 2007) 49; Wren, *Parentalia*, 250.

¹⁰⁹ Li, *Power and Virtue*, 75-76.

were altered to conform to proportional systems that were in line with traditional currents of taste. A similar point of view is taken by Wren in *Parentalia*:

... it is evident, that in the Rules of the Proportions, & different Members, &c. of the Orders, there was no certain perpetual and universal Law, but the same Orders, Measures, and Manners differed, according to the various Kinds of Buildings, the Judgment of the Architect, and the different Circumstances of Things¹¹⁰ ... [the Orders] are but Modes and Fashions of those Ages wherein they were used; but because they were found in the great Structures, (the Ruins of which we now admire) we think ourselves strictly obliged still to follow the Fashion...¹¹¹

Wren formulates his approach to beauty in a similar way:

There are two Causes of Beauty, natural and customary. Natural is from Geometry, consisting of Uniformity (that is Equality) and Proportion. Customary Beauty is begotten by the Use of our Senses to those Objects which are usually pleasing to us for other Causes, a Familiarity or particular Inclination breeds a Love to Things not in themselves lovely.¹¹²

The architecture of the ancients was valued by Wren because he "believed that [its] geometrical principles [were] the common ground between the monuments of antiquity and his own time" and that these principles provided an "important access to the greatness of past architecture,"¹¹³ however from this common ground the Orders could

¹¹⁰ Wren, *Parentalia*, Appx. Tract II, 240.

¹¹¹ Ibid, Appx. Tract II, 239.

¹¹² Ibid, Appx. Tract I, 236-237.

¹¹³ Li, *Power and Virtue*, 38.

be justifiably altered according to "Customary Beauty." This explains why Wren had such little respect for the rules of precedent governing the use of the Orders; and "when he did accept and follow historical precedent," Wren "was by no means motivated by the same considerations which had inspired its use."¹¹⁴

We have already seen how utilitarian considerations affected the application of the classical syntax and the arrangement on the *interior* of the Sheldonian, but on the exterior the classical dressing seems to be undertaken *pro bono*. Wren clarifies his position in this regard:

Whatever a man's sentiments are upon mature deliberation, it will be still necessary for him in a conspicuous Work to preserve his Undertaking from general censure, and so for him to accommodate his Designs to the Gust of the Age he lives in, tho it appears to him less rational.¹¹⁵

Wren seems to have been following his own advice on the exterior with his haphazardly attached classical syntax [69]. Through various source books, like Serlio's, as well as what he had learned during his visit to France in 1665, he arrives at a temple-like facade with a superimposed frontispiece. But the main structural elements shine through the classical articulation; the salient features, like the floor divisions, window openings, and truss profile, are all elements which express the empirical "truth" of the building, and are determined by the interior functioning and structural arrangement of the building—that is, by the geometry of its *usefulness*. There is a distinction between the geometries which govern the utility of the building and the geometries that govern the articulation of

¹¹⁴ Furst, *Architecture of Wren*, 171.

¹¹⁵ Lydia Soo. *Wren's 'Tracts' on Architecture and Other Writings* (Cambridge: Cambridge University Press, 1998) 154.

the classical vocabulary, that is, the *customary* beauty.

If we compare the Sheldonian Theater to works created by architects like Andrea Palladio and Francois Mansart, in other words, to architects who believed in and adhered to the principles developed during the Renaissance, the results of Wren's approach become manifest. The difference between the Sheldonian Theater and Palladio's works in Venice [71], such as San Giorgio Maggiore or Il Redentore (1577-1592),¹¹⁶ and something like Francois Mansart's Val-de-Grace (c1640) in Paris [46], is that in these works the classical aesthetic and the structural elements work together to achieve a unified result, while at the Sheldonian Theater the classical aesthetic is an afterthought—an appliqué—to the utilitarian structure beneath.

The same kind of attitude prevails on the remaining exterior elevations. Here Wren makes an unexpected break with the temple-like facade of the south elevation as he rounds the corner and abruptly begins to apply a species of Renaissance palace facade topped with oval French dormers [72,73]. Wren does not seem to question the propriety of freely adapting a Renaissance palace façade [74] to a theater structure and, like in the southern elevation, the unorthodox use of motifs was for him only a violation of the laws of taste, not the laws of nature, or, rather, the laws of structure.

¹¹⁶ Wren would not have know of Palladio's churches, as they were not in Palladio's *Four Books of Architecture*, nor were they engraved before the 18th century.

Chapter 5:

The Architecture of the Greenwich Royal Hospital for Seamen

Wren's planning at Greenwich coincided with a period in England's history that had recently undergone radical political and social transformations. This was a significant moment in English history and called for something great; Evelyn remarks that the "late Discoveries of new Worlds, and Conflicts at Sea; the sanglant Battles that have been fought at Land; the Fortitude and Sufferings of an excellent Prince; the Restoration of his Successor; the Conflagration, and Re-edifying of the greatest City of the World in less than twenty years ... call aloud for their Medals apart."¹¹⁷ In this regard, The Royal Hospital for Seamen is not only about staging a scene for the new tripartite arrangement between Parliament/Limited Monarchy, commercialism, and Naval strength, but it is also about awarding the constituents of this syndicate with a single "Medal" of commemoration.

GREENWICH PARK

Greenwich Park had been the on-and-off again project of England's peerage since medieval times. Its formal dimensions, including much of the 190 acres of land it

¹¹⁷ John Evelyn, Benjamin Tooke, and John Savage. *Numismata: A Discourse of Medals, Antient and Modern. Together with Some Account of Heads and Effigies of Illustrious, and Famous Persons, In Sculpts and Tailedouce, of Whom We Have No Medals Extant; and of the Use to Be Derived From Them. To Which Is Added a Digression Concerning Physiognomy* (London: Printed for Benjamin Tooke, 1697) 162.

consists of today, were established early in the 15th century. At the time of Wren's commission, Greenwich was already the home to three significant works: Wren and Robert Hooke's Royal Observatory [75] (begun in 1675), Inigo Jones' Queen's House, and John Webb's unfinished King Charles block [76]. Of these, only the latter two find a place in Wren's design.

Webb's work was part of a larger scheme begun by Charles II during the 1660's to turn the entirety of Greenwich Park into his private compound. The guiding light for Charles II in this matter was France and the court of Louis XIV, where he had spent most of his years in exile before the Restoration in 1660. In previous royal projects, such as St. James's Park, Charles II had sought advice and expertise from French designers [77]. For this project, a design was provided by Andre Mollet utilizing the principles of formal garden planning devised by Le Notre.¹¹⁸ Although Mollet's direct involvement at Greenwich cannot be substantiated, some of the early plans provided to Charles II betray the influence of French garden design [78]. Seeking further counsel for his project at Greenwich, Charles II solicited, and received, help from none other than Le Notre himself [79]. Like the earlier designs for Greenwich Park, Le Notre's design implements all the devices characteristic of formal garden planning: a single central axis unifying house and garden, *parterres*, subsidiary *alles*, radial *patte d'oie*, and elevated viewing terraces.¹¹⁹ Ultimately, Charles II's dream went unfulfilled, but before he abandoned the Greenwich project in the late 1660's what little had been completed was enough to direct the course of future development: Le Notre's elevated *parterre* to the

¹¹⁸ Bold, *Greenwich*, 8.

¹¹⁹ *Ibid*, 8-12.

south and north of Queen's House remained as flat grassy expanses of lawn, King Charles block was near completion, and, most importantly, a dominant axis had been established running from the Thames through the Queen's House and into the park beyond. This blueprint provided the framework from which Wren worked out a series of grand designs.

INITIAL SCHEME

In his initial scheme, Wren retains King Charles block and adds a range to its backside [81], repeating this arrangement across the courtyard for what was later to become Queen Anne block [80]. Additional ranges extend from the southern ends of these blocks, creating a long vista from the Thames which terminates and culminates in a courtyard of curved colonnades arranged around a large centralized dome [81]. Conspicuously missing from this plan, however, is Inigo Jones' Queen's House, which is entirely omitted. The scenography here no doubt draws from that utilized in 17th century Italy and France. The long vista, the embracing curvature of the colonnade, and the climatic dome, echo similar scenarios Wren was familiar with in France like Les College des Quatre Nations, Les Invalides, Ste. Marie-de-la-Visitation, the Sorbonne (finished structurally in 1646), and the Val-de-Grace (1646-65), as well as what he had seen on paper, like St. Peter's in Rome [82]. However, the dramatic effect of this scheme was undone by Queen Mary's wish not only to retain both the Queen's House and Webb's King Charles block, but also by her desire to have an uninterrupted vista running from the Queen's House to the Thames [83]. Queen Mary's requirements that the Queen's House be retained along with an avenue to the Thames was the ostensible reason for

the demise this scheme. But there were other factors which might have contributed to this plans demise. Kerry Downes points out that it was not necessarily the "inviolability of the Queen's House and [the project's] large price tag" that prevented the realization of this scheme, rather "the implications of ... a chapel of such monumentality as the centerpiece of the Hospital would have inescapably evoked association of Rome, Popery, and unlimited power whether religious or secular, associations [of which were] distasteful to every loyal English Protestant ... for in a lay community religion should know its proper place and not exceed it."¹²⁰

SECOND GRAND SCHEME

Whatever the reason, the Queen's House and its axis extending to the Thames were there to stay; this avenue subsequently became the controlling element of Wren's second grand scheme (and, ultimately, for his third and final grand scheme). However, owing to its long distance from the Thames and its small scale, the Queen's House was not imposing enough to act as the central piece terminating the long perspective. Wren resolves this conflict in his second scheme by flanking the perspective with a Hall and Chapel surmounted by two domes (an arrangement which is kept for the final plan) [84]. These vertical elements neutralize the excessive length of the axis and at the same time

¹²⁰ Kerry Downes. *Hawksmoor* (New York: Praeger, 1970) 99-100. Downes is here referring to a scheme put forward by Hawksmoor in the 1720's, which is based off and a revival of Wren's initial scheme. At this point the domes of the Hall and the Chapel, discussed below, were already a feature of the design. But, in Hawksmoor's "revision" the grand terminating piece is the large dome of a new Chapel. However, as we shall see shortly, there was, in lay institutions, a tradition of placing the Hall and Chapel face to face.

ground the entire composition.¹²¹ They also serve to stimulate visual interest along the axis before it is allowed to die out and also confer a degree of integrity on the Queen's House by framing it within the perspectival composition. This twin arrangement of the domes recalls the setting found at the Piazza del Popolo in Rome [85] and was an idea Wren had experimented with nearly three decades before in his planning of London following the Conflagration of 1666 where the vista leading to St. Paul's is flanked on both sides by a church [50]. Tandem domes also make a conspicuous appearance in the elevations of Wren's first design for Whitehall Palace and in an earlier design for the western towers of St. Paul's. At Greenwich, this motif is revived and given life in an altogether different context.

In addition to the twin domes and the Hall and Chapel of the second scheme, Wren runs colonnades from their bases along the perspective leading up to the Queen's House. Perpendicular to these colonnades are a series of six dormitories on either side [86]. Eduard Sekler observes that "Wren was not afraid of such an accumulation" of indistinguishable structures.¹²² The monotonous repetition of the dormitories may fatigue the design, but for Wren, on the grounds of utility, that is, on their *usefulness* to the purpose of the Hospital, this is a perfectly acceptable sacrifice. Reticulated in plan, this second scheme also reflects the tradition of hospital planning first delineated by the Italian architect Filarete in his *Libro architetonico* (c1456).¹²³ Filarete's influential design for the Ospedale Maggiore in Milan made its presence felt not only in hospital designs

¹²¹ Bacon, *Design of Cities*, 172.

¹²² Sekler, *Wren*, 171.

¹²³ John D. Thompson and Grace Goldin. *The Hospital: A Social and Architectural History* (New Haven: Yale University Press, 1975) 31.

like that of Les Invalides, but also in such royal schemes as the Escorial in Spain [87], the Tuileries in Paris, Wren's second grand design for Whitehall Palace and his third and final grand plan for Greenwich [88].¹²⁴

THE THIRD AND FINAL GRAND SCHEME AND THE "ENGLISHNESS" OF GREENWICH

In the final grand scheme (c1699), Wren retained the King Charles and Queen Anne blocks, the twin domes, and the Queen's House; but between the Queen's House and the twin domes a symmetrical arrangement of colonnaded structures with large inner courtyards were included: Queen Mary block and King William block, the final resting places, respectively, for the domed Hall and Chapel [88]. This tiered relationship between the first set of buildings, the second, and the Queen's House, form a *cour d'honneur*, recalling palace designs like Versailles [89] and Wren's own plan for Winchester Palace [90].

The impact of Continental architecture on Wren's design has been duly noted. Indeed, its affinity with palatial residences had been perceived from the start, with some contemporaries remarking that Greenwich was "one of the most sumptuous Hospitals in the World," more like a "the Palace of a Prince than a Harbour for the Indigent."¹²⁵ Moreover, its dominant visual features—the crowning domes—"come directly from the vocabulary of church architecture."¹²⁶ While this is true, the ecclesiastical and monarchical message nevertheless fail to corrupt the meaning of the architecture at Greenwich. The twin domes are modeled off the one created by Jules Hardouin-

¹²⁴ Pevsner, *Outline*, 102.

¹²⁵ Bold, *Greenwich*, 98.

¹²⁶ Sekler, *Wren*, 194.

Mansart at Les Invalides, itself a French derivative of St. Peter's [91], but Wren's own experience as a steeple designer seems to have made its way into the final appearance. Ultimately, the design for the twin domes mixes elements of Wren's own designs like the twin steeples (and dome) of St. Paul's Cathedral and those of his city churches *in addition to* the dome of its French counterpart. The potency of the domes at Greenwich derives just as much from their form as it does from their attenuated *verticality*, and as a result they appear much like "domed towers" [84]. In effect, Wren has "steeplized" the twin domes, thereby establishing within the classical vocabulary something reminiscent of the spires of England's Gothic past: i.e. the *customary*.

Shiqiao Li points out that "by accommodating the customary in his designs, Wren acknowledges a different kind of architecture which is deeply bound up with the ingrained practices of communities and nations."¹²⁷ Wren acknowledges that "Persons of little skill in architecture did expect ... to see something they had been used to in Gothic architecture."¹²⁸ This penchant for medievalism was a characteristic not just of Wren, but of the English Baroque in general.¹²⁹ Geometry also plays its part in the final appearance of the domes. By sticking to the "science" of construction, paired columns break free from the columns of the drum to accommodate the thrust of the dome above, creating an altogether new visual effect at the corners.¹³⁰ The dualism inherent in Wren's approach—his commitment to science and his scholarly antiquarianism—cause him to apply a classical syntax to the structural geometry of the domes, much like he

¹²⁷ Li, *Power and Virtue*, 59.

¹²⁸ Furst, *Architecture of Wren*, 116.

¹²⁹ Pevsner, *Outline*, 182.

¹³⁰ Bold, *Greenwich*, 125.

had done on the exterior façade of the Sheldonian Theater. Moreover, the side by side relationship between the Hall and the Chapel, albeit in this case divided by an avenue, pays homage to England's architectural past. They had made a decisive appearance in the Royal Works of Edward III during the 14th century at Windsor Castle and had been taken up later at collegiate foundations like Winchester College, Winchester (1382), and New College (1379) and Wadham College (1610), Oxford. English traditions and science combine to create subtle nuances in the classicism of Wren's work; these variations reinforce Greenwich's connection to England, working to keep it apart from its ecclesiastical and monarchical precedents on the Continent.

A colonnaded walkway provided access to the Hall and Chapel to and from the wards and dormitories of King William and Queen Mary blocks [92,84], the purpose of which we learn is "to protect the Men from the Inclemency of Weather, and give them Air, at any time, without incommoding them; very useful where a Number of People are to inhabit in one College."¹³¹ Wren invokes the ancient pedigree of the arcaded ambulatory, citing the colonnades of antiquity, but, as Sekler observes, "the medieval cloisters in which England is so rich must surely have been as important as classical colonnades."¹³²

The colonnaded cloister of England's monastic past initially had two important uses, one visual the other functional. Visually, by fronting the structures of the monastery, like the chapter house, the refectory, and the church, cloisters gave the "impression of a unified architectural ensemble, [often] to buildings of varying date and

¹³¹ Hawksmoor, *Remarks*, 16.

¹³² Sekler, *Wren*, 150.

design"¹³³; and functionally, by linking the various communal buildings, cloisters improved the circulation to and from their access points. In light of this, two reasonable conclusions can be made concerning Wren's use of the colonnades at Greenwich. First, in functional terms, they perform in the capacity of their (alleged) monastic predecessors by providing sheltered and ventilated circulation to and from their respective ranges. The colonnades in this case are prompted by their *usefulness* to the program and thus perform in the name of utility. However, unlike England's medieval monasteries, which were often the result of uncoordinated architectural accretions over long periods of time, the Royal Hospital was conceived of *in toto*. This brings us to the second point regarding Wren's use of the colonnades. Because King William and Queen Mary blocks proceeded from a single design concept and were formulated in relation to each other, the need for the colonnades—in the monastic sense—to give *visually* the "impression of a unified architectural ensemble" must not have been the initial inspiration behind their use here. The colonnades do, of course, add a unifying effect to the overall aesthetic, a point we will return to shortly, however they also behave as visual rhetorical devices, bringing to the Royal Hospital the prestige and grandeur of ancient Rome. They also behave in an honorific capacity, standing in their own right in a way much like those created by Bernini for the Piazza San Pietro [92,31]. Most importantly however, Wren's colonnades are vital to the scenographic effect found at Greenwich. From within, the colonnades carry out the functional requirements for which they were intended, but from without they continue and carry the columnar progression—beginning with the Order

¹³³ David Robinson and Stuart Harrison, "Cistercian Cloisters in England and Wales Part I: Essay," *Journal of the British Archaeological Association* 159.1 (2006), 135.

found on the Pavilions facing the Thames and those affixed to the facades of King Charles and Queen Anne block and those of the Hall and Chapel—into deep perspective [1,2,84]. The point trying to be made here is that because Greenwich was from its inception already conceived of as a "unified architectural ensemble," the use of the colonnades could have been avoided, but because Greenwich was conceived of as a unified *scenographic* ensemble, the colonnades became important elements that defined the liminal, scenographic boundaries of the architecture and the spatial setting it enclosed. More will be said of Wren's scenographic conception of Greenwich, but first we must address the logic behind Wren's decisions which tolerated a considerable degree of aesthetic license.

During the 17th century brick and stone gradually displaced timber as the builder's material of choice in London. However, "one of the major effects of rebuilding London" following the Conflagration of 1666 "was that a new structural standard of brick in domestic architecture was set up *for the whole country*."¹³⁴ At Greenwich brick and bare stone intermingle with classical style, imbuing Greenwich with a domestic feeling, as had happened at Hampton Court, and bringing the Hospital 'closer to home', thereby adding to its civic, national, and public appeal. Also, Wren's use of brick (and stone) for various facades follows the same kind of approach he had used at the Sheldonian

¹³⁴ Summerson, *Architecture of Britain*, 128.

Theater. In this case, it is not necessarily the *use* of brick *per se* that is important, rather it is the way in which he allows the various connecting facades at both the Sheldonian Theater and at Greenwich [93,95,96,97] to be treated with apparent disregard for the others. Indeed, the multitude of facades present at Greenwich make it seem as if they were taken from different design competitions altogether. If we compare the handling of the facades at the Sheldonian with those at Greenwich, a few important observations can be made about Wren's development as an architect. First, the similar treatment and handling of the facades at both projects indicate that Wren still adhered to his unique brand of "disjunctive" architecture. But at Greenwich, many of these disparate facades owe much of their appearance to Wren's assistant-turned-collaborator Nicholas Hawksmoor, who, working under the overall supervision of Wren, brought them to completion.

THE APPEAL OF THOMAS HOBBS

Hawksmoor (1661-1736) had been introduced to Wren at an early age, and it was from Wren that he received a large part of his architectural education. However, as Hawksmoor's work at Greenwich shows us, his style is clearly distinguishable from that of Wren's. A possible explanation for this may be found in the philosophical writings of Thomas Hobbes (1588-1679), whose ideas, particularly those found in his magnum opus, *Leviathan* (1651), had become built-in to the views of Hawksmoor's generation.¹³⁵ Having put forward no single body of writing expressing his design theories,

¹³⁵ David Cast, "Seeing Vanbrugh and Hawksmoor," *Journal of the Society of Architectural Historians* 43.4 (1984), 316.

Hawksmoor's architectural intentions remain somewhat unclear. However, we do have on record a statement made by him which can be considered a fundamental principle of his design: "Strong Reason and Good Fancy, joyn'd with experience and tryalls" are the foundations of good and effective art.¹³⁶ Hawksmoor's reference to *good fancy* suggests a familiarity with both the materialism and the "idea of the mind that Hobbes sketched out a few years before" in the *Leviathan* and other works.¹³⁷

In Hobbes' theory, the universe is nothing more than matter and the perpetual motion this matter. This motion, he argued, is transferred from one material body to another upon contact; thus, when the motion of an external object makes contact with the human body it (the motion)—instead of coming to a halt—proceeds inward, pressing against our sensory organs. Our senses react to this physical pressure with internal motions of their own, resisting with a kind of "counter-pressure." These internal "sensory motions" are then relayed to the brain which in turn uses them to form an image at the moment of perception; this image, Hobbes says, "is that which men call *sense*", which he refers to as *fancy*.¹³⁸ Sensation, or perception, thus, is a result of our sensory apparatus' internal response to external kinetic pressure; that is, we *feel* or *sense* through kinetic *motion*. Our senses translate external motion into qualities such as light, color, heat, cold, happiness, remorse, texture, sound, scent, and taste. These qualities exist not in the external objects themselves, but in our minds. However, *fancy* is of two sorts. There is the "original *fancy*", which can be characterized as the image of the

¹³⁶ Downes, *Hawksmoor*, 21.

¹³⁷ Cast, "Seeing Vanbrugh and Hawksmoor," 316.

¹³⁸ Thomas Hobbes. *Leviathan: Or, the Matter, Forme, and Power of a Commonwealth Ecclesiasticall and Civill* (Oxford: J. Thornton, 1881) Part I, Ch. I, 4.

original perception brought about by the motion of immediate external stimuli; and there is the "passing *fancy*", which can be characterized as the image of the *fancy* which has been retained in the mind once the original object of perception has been removed from our presence. We experience this second type of *fancy* when, for example, after seeing a chair, we shut our eyes yet can still "see" an image of the chair; or when, say, we have been jolted by the sound of a very loud siren, we can still "hear" it in our minds in the ensuing silence. That we are able to have such images is a result of internal residual motion; according to Hobbes "when a thing is in motion, it will eternally be in motion ... unless something else hinder it", something he thinks equally true for "that motion which is made in the internal parts of man."¹³⁹ This residual motion, heretofore described as "passing *fancy*", is what Hobbes calls the *decaying sense*, or *imagination*, or *memory*. "Much memory, or memory of many things," Hobbes explains, "is called *experience*."¹⁴⁰

We can see Hawksmoor playing with these ideas in his architecture. One of the first things that strikes us about his work is the materiality and corporeality of his forms. Hawksmoor makes a spectacle out of the material in such a way that his architecture registers its presence within us in a visceral way first [96,97,98]. The immediacy of incoming stimuli causes their qualities to predominate at the moment of perception, much like in Hobbes' theory of the mind, but because of the palpability of Hawksmoor's forms, they reverberate more forcefully within us as internal residual motion, or as the *decaying sense*. The more powerful the external motion, or stimuli, the more powerful the internal motion. Moreover, the palpability of this immediate stimuli ensures that our

¹³⁹ Ibid, Part I, Ch. II, 6.

¹⁴⁰ Ibid, 7-8.

perception is informed through the subliminal responses of our senses, instead of through the faculty of reason. In other words, in the same way we would “react” subconsciously to the sound of a loud siren with an automated sensory response—such as a twitch or a flinch—without “thinking”, a reaction of which occurs both in the absence of rational thought and before the rational parts of our mind can make sense of it, so too do we “react” to Hawksmoor’s forms.

However, though our initial reaction to external stimuli may be entirely sensory, our perception is in actuality a "creative act in which materials from past experience coalesce with incoming stimuli to form the inner reality of the thing perceived."¹⁴¹ That is, we *create* a perception of a thing by merging our present and past experience into a final percept. Take, for example, the properties which constitute the form of a square. We may through previous experience be introduced to concepts like "*four sides, equality of sides, and right angles*" by the impressions made by other shapes such as a rectangle or triangle.¹⁴² However, it is when these various concepts are combined and compounded and "seen as one thing" in the mind that a single percept, i.e. a square, emerges.¹⁴³

This idea of *creating* a perception from *fancy* and our *imagination* (or *memory*, also called *experience*) may be a possible link between Hobbes and Hawksmoor.

¹⁴¹ Clarence De Witt Thorpe. *The Aesthetic Theory of Thomas Hobbes, with Special Reference to His Contribution to the Psychological Approach in English Literary Criticism* (Ann Arbor: University of Michigan Press, 1940) 87.

¹⁴² Thomas Hobbes, *Elements of Philosophy*, Part I, Ch. I, reprinted in Mary Whiton Calkins. *The Metaphysical System of Hobbes: In Twelve Chapters from Elements of Philosophy Concerning Body, Together with Briefer Extracts from Human Nature and Leviathan* (Chicago: Open Court, 1910) 8.

¹⁴³ Thorpe, *Aesthetic Theory of Hobbes*, 88.

Located within the reservoir of our *imagination* are the images which can be used to conceive forms, whether fictitious or real-life, entirely of our own choosing. Creative art, for Hobbes, contains an element of both fiction and the real, he says:

whereas a man can fancy Shapes he never saw; making up a Figure out of the parts of divers creatures; as the Poets make their Centaures, Chimaeras, and other Monsters never seen: So can he also give Matter to those Shapes, and make them in Wood, Clay or Metall. And these are also called Images, not for the resemblance of any corporeal thing, but for the resemblance of some Phantasticall Inhabitants of the Brain of the Maker. But in these Idols, as they are originally in the Brain, and as they are painted, carved, moulded, or moulten in matter, there is a similitude of the one to the other, for which the Material Body made by Art, may be said to be the Image of the Phantastical Idol made by Nature¹⁴⁴

Finding similitudes between phantasms arising in the *imagination* with stimuli entering into the mind through immediate sense perception is, thus, for Hobbes, an important part of the artistic process and also seems to be something Hawksmoor is interested in.

Hobbes explains that:

Those that observe [such] similitudes, [in the cases where they] are but rarely observed by others, are sayd to have *Good Wit*; by which, in this occasion, is meant a *Good Fancy*. But they that observe their differences, and dissimilitudes; which is called *Distinguishing*, and *Discerning*, and *Judging* between thing and

¹⁴⁴ Hobbes, *Leviathan*, Part 4, Ch. XLV, 522.

thing; in case, such discerning be not easy, are said to have *good Judgement*.¹⁴⁵

Hawksmoor may have been operating within the same theoretical framework and he may have had *similitudes* in mind when he used the term *good fancy* to describe his design process. This may explain the variety and pluralism found in his work.

Hawksmoor was a man of great erudition, and though he never traveled abroad he had a natural passion and curiosity for the sociological, cultural, and historical roots of civilizations in every part of the world. This passion was nurtured by a range of scholarship which, by his time, had expanded to include a vast array of travel literature. These accounts not only gave useful surveys of societies once remote, but it also gave invaluable descriptions of the architectural and ornamental forms created by these societies. A wide range of architecture outside the classical tradition had been introduced to England, and architects, including Hawksmoor, became "increasingly aware of buildings with antique attributes that seemed outside the accepted historical development of architecture centered on Roman antiquity."¹⁴⁶ Egyptian, Persian, Arabian, Turkish, and Chinese forms demonstrated the "diversity of ancient practices," encouraging architects to reconsider the "role of Vitruvius as the source for architectural principles."¹⁴⁷ Consequently, these new historical and iconographical forms became equal sources of inspiration.¹⁴⁸ This frame of mind was encapsulated in the illustrations found in Fisher von Erlach's book *Entwurff einer historischen Architectur* (1721). In this work (Hawksmoor owned a copy) von Erlach sets these "newly discovered historical

¹⁴⁵ Ibid, Part 1, Ch. 8, 48.

¹⁴⁶ Vaughan Hart. *Nicholas Hawksmoor: Rebuilding Ancient Wonders* (New Haven: Yale University Press, 2007) 33.

¹⁴⁷ Ibid.

¹⁴⁸ Ibid, 38.

types—from pagodas to mosques—" on "equal footing with those of classical antiquity."¹⁴⁹ Hawksmoor already had a shaky faith in the rules of the classical tradition as result of Wren's tutelage. This is not to say that he did not have great admiration for this tradition, but rather that Hawksmoor, like Wren, had a philosophy of his own which came before the rules of this tradition, and he molded the forms of classicism around this philosophy.

We know that one of the precepts of Hawksmoor's philosophy was *good fancy*, which, according to Hobbes, is a special talent possessed by artists which allow them to observe "readily the likenesses of things of different nature,"¹⁵⁰ and to combine things which, "though they are remote from each other or appear unlike, have a natural, logical kinship"¹⁵¹ that ordinarily escapes the mind. From these "unexpected similitudes ... proceed those grateful similes, metaphors, and other tropes," by which artists "have in their power to make things please or displease."¹⁵² *Good fancy*, thus, leads to the discovery of *similitudes*, of which provide the "material for pleasing image-bearing language" and forms.¹⁵³ Hawksmoor's use of newly discovered historical and iconographical imagery was not necessarily a way for him to challenge and escape the constrictions of classicism, rather they added to the repertoire of imagery from which he could draw to create, by using *good fancy*, an architecture based on *similitudes*. What then were these likenesses or *similitudes* that resulted from *good fancy*?

¹⁴⁹ Ibid, 33.

¹⁵⁰ Hobbes, *Elements of Philosophy*, Part IV, Ch. XXV, in Calkins, *The Metaphysical System of Hobbes*, 124.

¹⁵¹ Thorpe, *Aesthetic Theory of Hobbes*, 96.

¹⁵² Thomas Hobbes. *The Elements of Law, Natural and Politic*. Ed. Ferdinand Tonnies (London: Simpkin, Marshall, and Co., 1889) Part I, Ch. 10. No. 4, 50.

¹⁵³ Thorpe, *Aesthetic Theory of Hobbes*, 98.

The "evocative power" of Hawksmoor's work has been noted by some architectural historians, like Kerry Downes, as one its most discernible features; as such, the effectiveness of his architecture, as we discussed earlier, comes from the way it solicits the aid of the subconscious mind and works "on the emotions without the intermediacy of the intellect."¹⁵⁴ Human emotions are a familiar feature of every civilization, past and present, distant or near. Feelings like sorrow and remorse, sadness and happiness, piety and pride, are all understandable at some level in all societies; as such they transcend the cultural, historical, and geographical boundaries we normally use to differentiate between societies. However, these intuitive and primordial archetypes of emotion often inform our perceptions without the approbation of our conscious mind; nevertheless, as the "evocative power" of Hawksmoor's architecture demonstrates, these archetypal emotions have a unique input in the formation, or *creation*, of a perception and play an important part in his work. Using *good fancy*, Hawksmoor is able to discern the similitudes which exist between certain diverse material forms, past and present, and their immaterial, subliminal-emotional content. The architectural forms that emerge, having been made from diverse parts, are recognizable not because they resemble "any corporeal thing," but because they resemble the "Phantasticall Inhabitants" latent in our collective unconscious. Hawksmoor appeals to this aspect of human cognition to create a perception of the thing being perceived.

For him, mosques, pagodas, and pyramidal forms were inspired by the same inborn impulses that gave Greek and Roman temples, Renaissance domes, and Gothic

¹⁵⁴ Downes, *Hawksmoor*, 21.

spires their form. Hawksmoor perceived this continuity between form and original emotion and his designs "suggest that for him the empathetic and symbolic nature of certain ornamental forms, defined by custom and memory, carried more weight in the manipulation of the observer's senses and mood than did the use of geometry and canonic proportions."¹⁵⁵ Architecture had something to gain by having a kind of "primitive" appeal to a specific range of emotion intelligible only at the level of the senses, as opposed to the intellect; Hawksmoor's architecture is evidence of this.

By accommodating Hobbes' notion of *good fancy* in his architecture, Hawksmoor allowed room for *imagination* in formulating his designs. Wren, on the other hand, thought imagination, or Fancy, to be inimical to the advancement of science, and therefore architecture. Imagination existed outside the material world and as such was not governed by fixed scientific laws of nature. With no fixed laws to abide by, imagination caused men to combine or unite things at will according to their feelings and desires; "instead of reading God's stamp on nature" and creating things "as they are in fact", it caused men to "impress their own stamp upon creation" and to produce things "as they want them to be."¹⁵⁶ This was a common concern for Baconians, as it was for Wren. But it is precisely this which Hawksmoor avails himself of that makes his work so compelling.

Despite this key difference, however, the variety of facades composed by Hawksmoor at Greenwich do reveal a "natural sympathy" with the geometrical feeling of

¹⁵⁵ Hart, *Hawksmoor*, 82.

¹⁵⁶ Eugene McCreary, "Bacon's Theory of Imagination Reconsidered," *Huntington Library Quarterly* 36.4 (1973), 320.

Wren's architecture.¹⁵⁷ For the King William block Hawksmoor reworks themes from his earlier projects at Easton Neston and for the King's Gallery at Kensington Palace [94] to create facades for the inner court and the western "rear" range [95,96]. The same applies for the eastern "rear" facade of Queen Anne block [97], whose barren stone and arcuated apertures recall his contemporaneous projects for Christ Church Spitalfields, St. Alfege Greenwich, and St George Bloomsbury [98]. Like Wren had at the Sheldonian Theater, Hawksmoor created each facade as an end in itself, never considering their aesthetics as part of a unified complex. Wren was ok with this aesthetic discrepancy; indeed, he permitted it.

CLASSICISM, SCENOGRAPHY AND WREN

This brings up an important point though, while this may be true, Wren did not think that this kind of discrepancy was permissible when it came to the scenography of the Royal Hospital [1,84]. Classical rules like unity, harmony and balance were important to him in this regard. The pavilions of King Charles Block and Queen Anne block which front the Thames, while not *identical* in every regard, are equals, and the domes and colonnades behind respond in kind. Every facade which does not appear in the scenographic vista Wren allows to be treated as a separate entity, as something not a part of the whole; "the backs of buildings and the insides of courts concerned him less than the great central tableau."¹⁵⁸ But when it came to scenography, he understood that its effect relied on the congruity and unity of the whole—i.e. from a fixed position on the

¹⁵⁷ Downes, *Hawksmoor*, 20.

¹⁵⁸ Downes, *Wren*, 110.

Thames. That the main vista is aesthetically uniform, and that such disparate aesthetic treatment is given to the facades of the inner courtyards as well as the outward facing ranges, is telling evidence that Wren conceived of the entire project at Greenwich in perspective, and, therefore, in scenographic terms. To be sure, perspective was, for Wren, an important part, if not *the* most important part, of the design process, and it was to be preferred over architectural models and orthographic representation.¹⁵⁹ He also believed that perspective had been the guiding light in design for ancient Romans in all their building projects, and that the timeless validity of their architecture was a result of this; if perspective achieved this for Rome, he says, "why should not Perspective lead us back again to what was Roman?"¹⁶⁰ Thus, we can be fairly certain that Wren began with perspective at the Royal Hospital for Seamen, whether on procedural grounds or from the desire emulate the grandeur of Rome. It is when we start to identify specific components of Wren's design philosophy that we begin to see more clearly that the "whole" for Wren at Greenwich was what existed from a privileged, fixed vantage point on the Thames. He says that there "are different Reasons for Objects, whose chief View is in Front, and for those whose chief View is sideways" and that in "Things to be seen at once, much Variety makes Confusion," but in "Things that are not seen at once, and have no Respect one to another, great Variety is commendable."¹⁶¹ A number of important observations can be made from this. First, it explains why the structures along scenographic axis, which being "seen at all once," are treated with aesthetic consistency. Conversely, it explains the aesthetic diversity found in the peripheral

¹⁵⁹ Wren, *Parentalia*, Appx. Tract I, 237.

¹⁶⁰ Ibid, Appx. Tract IV, 256.

¹⁶¹ Ibid, Appx. Tract I, 237.

facades, which themselves, being "not seen at once," are entitled to more "Variety." What mattered for Wren was the coherence of the display, and at Greenwich this depended on the unity of the aesthetic articulating the scenographic perspective; just like in theater design, the stage fronting the audience was the main scene while stage right and stage left counted for naught, likewise at Greenwich the "stage" fronting the main audience carried the entire weight and demeanor of the Hospital complex; the main audiences in this case being the foreign envoys and ambassadors sailing up the Thames on their way to London. With the stage now set, literally and metaphorically, Wren proceeded to carry out the Greenwich project in the same frame of mind as his project for the rebuilding of London. That is, through architecture he planned to elevate England to the status its "Situation, Wealth, and Grandeur... [it] justly deserve; in respect also of the Rank she bore with all other trading Cities of the World, of which tho' she was before one of the richest in Estate & Dowry, yet unquestionably the least beautiful."¹⁶²

Like a debutante making her first appearance in high society, so to was England in Europe with the Greenwich Hospital, and like the debutante whose maturation and status have made her eligible for the ranks of the upper-class, so to had political and Naval power done for England. The vocabulary of classicism was the only aesthetic dressing suitable enough to dignify England's elevated geopolitical status; and its use broadcast this new station. This is why classicism so recommended itself at Greenwich despite its checkered history on English soil; the transition from absolute to Limited Monarchy, the rise of commerce and Parliament, the charity of the monarch, and the

¹⁶² Ibid, Part II, Sect. II, 117.

unrivalled power of the British Navy qualified The Royal Hospital for Seamen to be treated in the "Grand Manner" of the ancients.

Conclusion

Scenography and classicism were the architectural metaphors used to describe power, and as such turned the Greenwich Royal Hospital for Seamen into a metaphor for English power. These architectural metaphors are tremendously effective in this regard, however they are less effective in communicating the precise elements of this power. What may have been implicit in the meaning of Greenwich is explicit at the Hall of King William block in the painted works of James Thornhill [99], where little is left to the imagination as to who and what was responsible for England's prosperity. In the Painted Hall (1708-1727) all the elements of British power vividly come to life, and Thornhill carries into his works the original spirit which had compelled the founding of Greenwich.

On the ceiling of the Lower Hall he glorifies the political, maritime, and commercial basis of England's power and wealth. In the center [100], the benevolent rule of the Protestant monarchy of William and Mary is celebrated along with Naval power and the fruits of war and commerce [101].

In the Upper Hall [102], the elements of power are treated and interwoven together in a similar way. On the ceiling [104] are the figures of Queen Anne and Prince George of Denmark; below, on the west wall, is King George I and the royal family [103], which is flanked to the north by his landing at Greenwich in 1714 and to the south

by the landing of William III Prince of Orange [105]. Aside from illustrating the proponents of English power, the Painted Hall as a whole is also a narrative about the triumph of law and order, showing that the Protestant monarchy of the late Stuarts and the subsequent Hanoverian Succession occurred under the auspices and security of "maritime power and mercantile prosperity."¹⁶³

Wren never questioned the traditional and symbolic connotations of scenography and classicism, and by manipulating these organizational devices and their sources, he was able to arrive at a grammar applicable to a building demanded by his society. If we recall Wren's statement that "architecture has its political use," we should also recall that Wren follows this statement with an itemized list describing the kind and the purpose of such architecture. He begins the list by first equating political architecture with "public buildings" and then defines a public building as "being the Ornament of a Country." High regard for the Navy was unanimously felt in all corners of English society. King William and Queen Mary, Hawksmoor observed, had "taken most particularly into their Royal Consideration the great signal Services, and the many Advantages (to the Publick) arising from the Seamen, and the public Security by the Maritime Power."¹⁶⁴ This sentiment was shared by both houses of Parliament; the House of Lords recognized "The Weight which the Naval Force of Great Britain has so lately and visibly had, in asserting the Honour of your Majesty's Crown, and the Rights and Possessions of our Country"¹⁶⁵; and the House of Commons believed it to be the "indispensable Duty of those who have just Sense of the great Importance of the Trade and navigation of this

¹⁶³ Bold, *Greenwich*, 153.

¹⁶⁴ Hawksmoor, *Remarks*, 8-9.

¹⁶⁵ *Ibid*, 23-24.

kingdom, to provide proper Encouragement for our Seamen; and common Justice requires that we should take a compassionate Care of those ... who have served faithfully.¹⁶⁶

The political and public nature of the Greenwich project is apparent, and by Wren's standards this meant that its architecture ought to be the ornament of England. However, for Wren, architecture has its political use only in so far as "it establish[es] a Nation, draws People and Commerce," and "makes the People love their native Country". Paradoxically, the glorifying methods of absolutism—scenography and classicism—were the architectural expressions recruited for this task. We have described the many reasons why such expressions were preferable to Wren and why they met with acceptance in England. However, perhaps there are other grounds that welcomed the use of these expressions.

There is no denying that the Royal Hospital at Greenwich was a national emblem of pride and power. It not only honored the privileged position of the Navy, but it also set in stone the terms of England's existence. However, the presentational value of scenography and the universal legibility of classicism were also compatible with the thoughts, feelings, and conditions of England's consumer society. In a nation whose eye was on profit, the visual language of scenography and classicism were just as commercially expedient as they were politically expedient. As such, questions about whether or not this visual language was appropriate for a Naval hospital passed into the background. What mattered was its publicity. In political terms, Greenwich functioned as an ornament of the nation. But in commercial terms Greenwich functioned as a

¹⁶⁶ Ibid, 24.

commodity, a material item possessed by England—a “store-front” so to speak—and as a commodity the language used to articulate it became a commodity as well; on these grounds perhaps the visual language was judged and accepted by Englishmen and women. In light of this, it would do us no harm to consider how Wren's design for the Royal Hospital for Seamen converged on what was of political value and what was of commercial value.

Bibliography

- Ackerman, James S., and John Newman. *The Architecture of Michelangelo*. 2nd ed. ed. Chicago : University of Chicago Press, 1986. Web.
- Alberti, Leon Battista. *On Painting*. Trans. John Spencer. New Haven,: Yale University Press, [1966]. A Yale Paperbound, Y-175 Web.
- , Cosimo Bartoli, and Giacomo Leoni. *The Ten Books of Architecture : The 1755 Leoni Edition*. New York : Dover Publications, 1986. Web.
- Argan, Giulio Carlo. *The Baroque Age*. 1st pbk. ed. ed. Geneva, Switzerland : Skira, 1989. Web.
- Bacon, Edmund N. *Design of Cities*. Rev. ed. ed. New York,: Viking Press, [1974]. A Studio Book Web.
- Bacon, Francis. *Advancement of Learning*;. 2nd ed. ed. Oxford : Clarendon press, 1880. Web.
- , and John Pitcher. *The Essays*. Harmondsworth : Penguin, 1985. Penguin Classics Web.
- . *Novum Organum*;. London : George Routledge & Sons, [1905].
- Blunt, Anthony. *Artistic Theory in Italy, 1450-1600*. Oxford,: Clarendon Press, [1956]. Web.
- Bold, John. "Comparable Institutions: The Royal Hospital for Seamen and the Hôtel Des Invalides." *Architectural History* 44 (2001): 136-44. Web.
- . *Greenwich : An Architectural History of the Royal Hospital for Seamen and the Queen's House*. New Haven : Published for The Paul Mellon Centre for Studies in British Art by Yale University Press, in association with English Heritage, c2000. Web.
- Brewer, John. *The Sinews of Power : War, Money, and the English State, 1688-1783*. 1st Harvard University pbk. ed. ed. Cambridge, Mass. : Harvard University Press, 1990. Web.
- Cast, David. "Seeing Vanbrugh and Hawksmoor." *Journal of the Society of Architectural Historians* 43.4 (1984): 310-27. Web.
- Crosby, Alfred W. "A Renaissance Change in European Cognition." *Environmental History Review* 14.1/2 (1990): 19-32. Web.
- Downes, Kerry. *The Architecture of Wren*. New York : Universe Books, c1982.

- . *Hawksmoor*. New York,: Praeger, [1970, c1969]. Web.
- Evelyn, John, Benjamin Tooke, and John Savage. *Numismata: A Discourse of Medals, Antient and Modern. Together with Some Account of Heads and Effigies of Illustrious, and Famous Persons, In Sculptures and Tailedouces, of Whom We Have No Medals Extant; and of the Use to Be Derived From Them. To Which Is Added a Digression Concerning Physiognomy*. London: Printed for Benjamin Tooke, 1697.
- Frommel, Christoph L. "Papal Policy: The Planning of Rome during the Renaissance." *The Journal of Interdisciplinary History* 17.1 (1986): 39-65.
- Fürst, Viktor. *The Architecture of Sir Christopher Wren*. [1st edition.] ed. London,: Lund Humphries, [1956]. Web.
- Hart, Vaughan. *Nicholas Hawksmoor: Rebuilding Ancient Wonders*. New Haven: Yale University Press, 2002.
- Hawksmoor, Nicholas. *Remarks on the Founding and Carrying on the Buildings of the Royal Hospital at Greenwich [Electronic Resource]*. London : printed by N. Blandford, MDCCXXVIII. [1728].
- Hobbes, Thomas, and Mary Whiton Calkins. *The Metaphysical System of Hobbes : In Twelve Chapters from Elements of Philosophy Concerning Body, Together with Briefer Extracts from Human Nature and Leviathan*. 2nd ed. ed. Chicago : Open Court, 1910. Web.
- , and Ferdinand Tönnies. *The Elements of Law, Natural and Politic ...* London : Simpkin, Marshall, and Co., 1889. Web.
- . *Leviathan; Or, the Matter, Forme, and Power of a Commonwealth Ecclesiasticall and Civill*. Oxford,: J. Thornton, 1881. Web.
- Hutt, George. *Papers Illustrative of the Origin and Early History of the Royal Hospital at Chelsea*. London,: Printed by G. E. Eyre and W. Spottiswoode, 1872. Web.
- James, Lawrence. *The Rise and Fall of the British Empire*. 1st U.S. ed. ed. New York : St. Martin's Press, 1996.
- Johnson, Eugene J. "Jacopo Sansovino, Giacomo Torelli, and the Theatricality of the Piazzetta in Venice." *Journal of the Society of Architectural Historians* 59.4 (2000): 436-53. Web.
- Kalina, Pavel. "European Diplomacy, Family Strategies, and the Origins of Renaissance Architecture in Central and Eastern Europe." *Artibus et Historiae* 30.60 (2009): 173.
- Kimball, Fiske. "Luciano Laurana and the 'High Renaissance'." *The Art Bulletin* 10.2 (1927): 125-51.
- Lotz, Wolfgang. *Studies in Italian Renaissance Architecture*. Cambridge, Mass.: MIT Press, c1977.

- Lowry, Bates. "High Renaissance Architecture." *College Art Journal* 17.2 (1958): 115-28.
- Mariage, Thierry. *The World of André Le Nôtre*. Philadelphia : University of Pennsylvania Press, c1999. Penn Studies in Landscape Architecture. Web.
- McCreary, Eugene P. "Bacon's Theory of Imagination Reconsidered." *Huntington Library Quarterly* 36.4 (1973): 317-26. Web.
- McRae, Robert. "The Unity of the Sciences: Bacon, Descartes, and Leibniz." *Journal of the History of Ideas* 18.1 (1957): 27-48.
- Merton, Robert K. "Science, Technology and Society in Seventeenth Century England." *Osiris* 4 (1938): 360-632.
- Millon, Henry A., and Vittorio Magnago Lampugnani. *The Renaissance from Brunelleschi to Michelangelo : The Representation of Architecture*. 1st ed. ed. Milan : Bompiani, c1994.
- Mumford, Lewis. *The City in History: Its Origins, its Transformations, and its Prospects*. [1st ed.] ed. New York,: Harcourt, Brace & World, [1961].
- Nagel, Alexander, and Christopher S. Wood. *Anachronic Renaissance*. New York: Zone Books, 2010.
- Norberg-Schulz, Christian. *Baroque Architecture*. Milan : Electa ;, 1986. History of World Architecture
- Onians, John. *Bearers of Meaning : The Classical Orders in Antiquity, the Middle Ages, and the Renaissance*. Princeton, N.J. : Princeton University Press, 1988.
- Pevsner, Nikolaus. *An Outline of European Architecture*. Rev. ed. ed. London : Thames & Hudson, 2009.
- Robinson, David M., and Stuart Harrison. "Cistercian Cloisters in England and Wales Part I: Essay." *Journal of the British Archaeological Association* 159.1 (2006): 131-207. Web.
- Rosand, David. "Theater and Structure in the Art of Paolo Veronese." *The Art Bulletin* 55.2 (1973): 217-39. Web.
- Rosenthal, Earl. "The Diffusion of the Italian Renaissance Style in Western European Art." *Sixteenth Century Journal* 9.4 (Winter1978): 33-45. Web.
- Sekler, Eduard F. *Wren and His Place in European Architecture*. London,: Faber and Faber, [1956].
- Shiqiao, Li. *Power and Virtue : Architecture and Intellectual Change in England 1660-1730*. London ;: Routledge, 2007..
- Sibley, Frank. "Aesthetic and Nonaesthetic." *The Philosophical Review* 74.2 (1965): 135-59. Web.
- Soo, Lydia M. *Wren's "Tracts" on Architecture and Other Writings*. Cambridge,

- UK: Cambridge University Press, 1998. Web.
- Summerson, John. *Architecture in Britain, 1530-1830*. New Haven: Yale University Press, 1993.
- . *Inigo Jones*. New Haven: Yale University Press, 2000.
- . *The Classical Language of Architecture*. Rev. and enl. ed. ed. London : Thames and Hudson, c1980. World of Art Library Web.
- . *Heavenly Mansions and Other Essays on Architecture*. New York : Norton, [1998]. Web.
- Thompson, John D., and Grace Goldin. *The Hospital : A Social and Architectural History*. New Haven : Yale University Press, 1975. Web.
- Thorpe, Clarence De Witt. *The Aesthetic Theory of Thomas Hobbes, with Special Reference to His Contribution to the Psychological Approach in English Literary Criticism*,. Ann Arbor [Mich.]: The University of Michigan press, 1940. University of Michigan Publications. Language and Literature, v. 18 University of Michigan Publications. Language and Literature Web.
- Upton, Anthony F. *Europe, 1600-1789*. London : Arnold, 2001. Arnold History of Europe Web.
- Varriano, John L. *Italian Baroque and Rococo Architecture*. New York : Oxford University Press, 1986.
- Whinney, Margaret Dickens. *Wren*. New York : Thames and Hudson, 1998, c1971. World of Art Web.
- Willey, Basil. *The Seventeenth Century Background; Studies in the Thought of the Age in Relation to Poetry and Religion*,. London,: Chatto & Windus, 1934. Web.
- Wittkower, Rudolf. *Architectural Principles in the Age of Humanism*. New York: Norton & Company, 1971.
- . *Palladio and Palladianism*. New York,: G. Braziller, [1974].
- Womack, Peter. "The Comical Scene: Perspective and Civility on the Renaissance Stage." *Representations* 101.1 (2008): 32. Web.
- Woodhouse, A. S. P. "Puritanism and Democracy." *The Canadian Journal of Economics and Political Science / Revue canadienne d'Economie et de Science politique* 4.1 (1938): 1-21. Web.
- Wren Jr., Christopher, Ernest J. Enthoven, and E. H. New. *Life and Works of Sir Christopher Wren. from the Parentalia; Or Memoirs*,. [London,: E. Arnold, 1903]. Web.

Illustrations



Fig 1. Royal Hospital for Seamen (1696-1751), Greenwich, England, Christopher Wren
(Image: Wikimedia Commons)



Fig. 2. Satellite images of route up River Thames to Greenwich Hospital (red dot). (Images: Google Maps and Wikimedia Commons)



Fig. 2a. Brasília, Brazil (Image: Wikimedia Commons)



Fig. 3. Les Invalides (1671-1708), Paris, Liberal Bruant and Jules Hardouin-Mansart (Image: Wikimedia Commons)



Fig. 4. Chelsea Royal Hospital (1682-1692), England, Wren (Image: <http://afternoontea.co.uk/>)



Fig. 5. (above left) "Imperator" statue of Charles II (c. 1680's), Grinling Gibbons, Chelsea Hospital (Image: Wikimedia Commons)



Fig. 6. (above right) Chelsea Hospital, aerial view (Image: <http://imagescaler.hbpl.co.uk/>)



Fig. 7. Greenwich Hospital aerial (Image: <http://breedon-special-aggregates.co.uk/>)



Fig. 8. Chelsea Hospital facing Thames (Image: <http://chelsea-pensioners.co.uk/>)

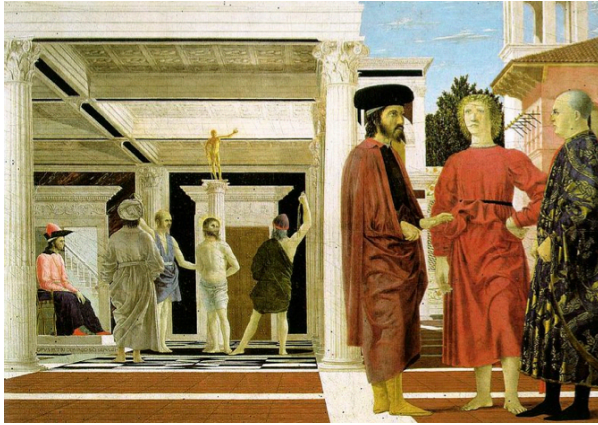


Fig. 9. Perspective and architecture in painting. (top) *Flagellation of Christ* (c.1455-1460), Urbino, Piero della Francesca. (middle) *Christ Giving the Keys to Saint Peter* (c.1480), Sistine Chapel, Rome, Perugino. (bottom) *Funeral of Saint Bernardino* (1486), Rome, Pintoricchio. (All Images: Wikimedia Commons)



Fig. 10.
 (top) Urbino Panel (Image: <http://rolfgross.dreamhosters.com>).
 (middle) Baltimore Panel, human figures thought to be added later (Image: <http://classconnection.s3.amazonaws.com>).
 (bottom) Berlin Panel (Image:: <http://classconnection.s3amazonaws.com>).
 All three Panels date c.1476; their authorship is still a matter of debate.

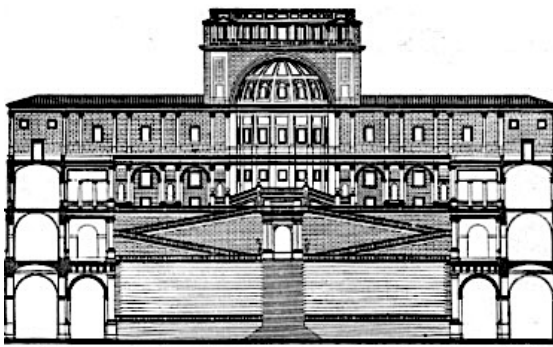


Fig. 11. (above left) Belvedere elevation (Image: <http://gardenvisit.com>)
(above right) Belvedere terminating niche (1506+), Vatican City, Donato Bramante (Image: <https://s-media-cache-ak0.pinimg.com>)

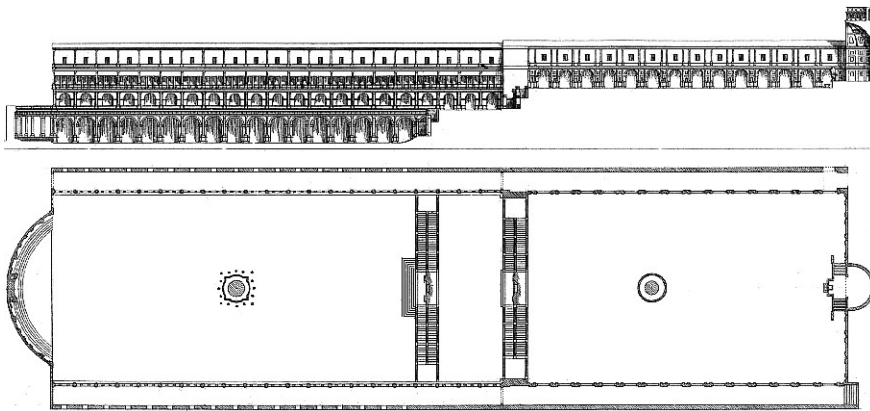


Fig. 12. Belvedere plan and side elevation (Image: <http://quondam.com>)

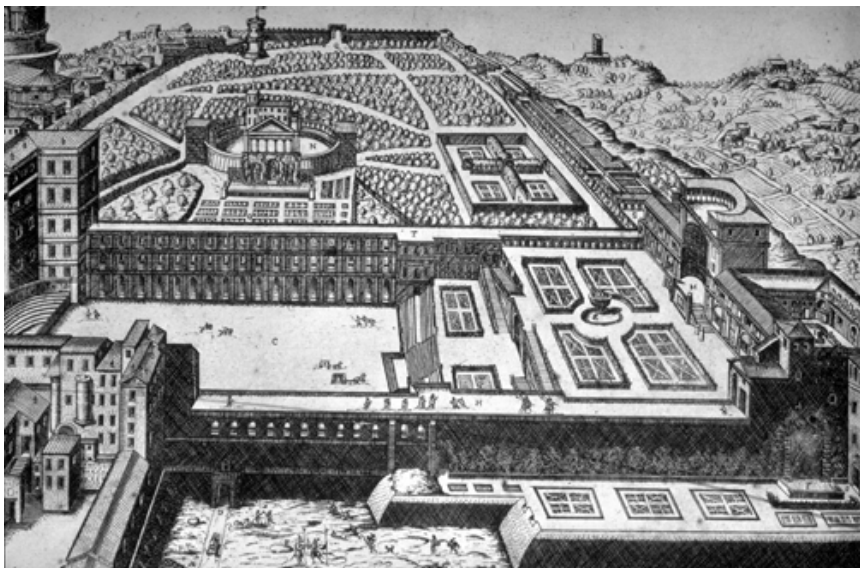


Fig. 13. Belvedere engraving (Image: <http://witcombe.sbc.edu>)



Fig. 14. Campidoglio, 1568 engraving by Etienne Duperac (Image: Wikimedia Commons)

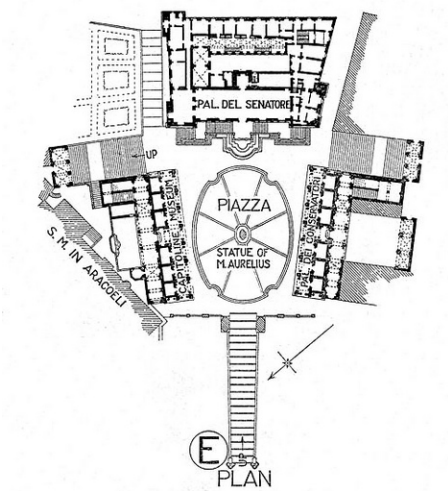


Fig. 15. Campidoglio plan. (Image: Courtesy of Penn State Libraries Collection)



Fig. 16. (left) View up Campidoglio Cordonata (Image: <http://buffaloah.com>).
(right) Palazzo Senatori (1560's+), Rome, Michelangelo (Image: <http://classconnection.s3amazonaws.com>)



Fig. 17. (above left) Belvedere, 1565 engraving by Etienne du Perac (Image: Wikimedia Commons)



Fig. 18. (above right) Piazzetta, Venice (Image: Onians, John. *Bearers Of Meaning*. Princeton: Princeton University Press, 1988.)

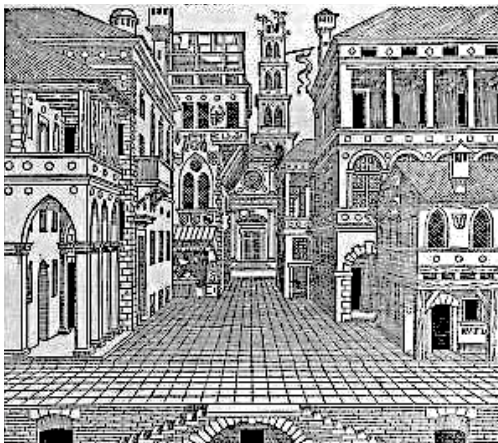


Fig. 19. (above left) Comic Scene, Serlio (Image: Serlio, Sebastiano. *Tutte L'Opere D'Architettura Et Prospetiva*. Trans. Vaughan Hart and Peter Hicks. New Haven: Yale University Press, 1996.)

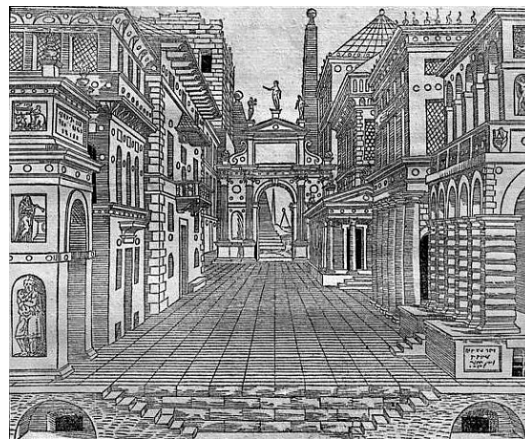


Fig. 20. (above right) Tragic Scene, Serlio (Image: Serlio, Sebastiano. *Tutte L'Opere D'Architettura Et Prospetiva*. Trans. Vaughan Hart and Peter Hicks. New Haven: Yale University Press, 1996.)



Fig. 21. (above left) Loggetta (1537+), Venice, Jacopo Sansovino (Image: <http://sp.yimg.com>)

Fig. 22. (above right) Zecca (1537+), Venice, Sansovino (Image: <http://2bp.blogspot.com>)



Fig. 23. Libreria (1537+), Venice, Sansovino (Image: <http://bfdm.smugmug.com>)

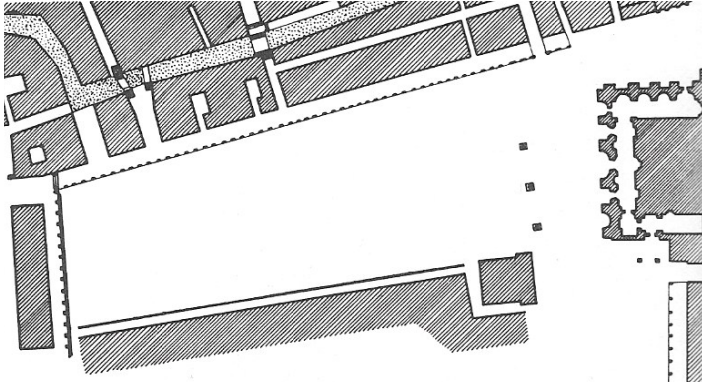


Fig. 24. Piazza San Marco before Sansovino alterations (Image: Lotz, Wolfgang. *Studies in Italian Renaissance Architecture*. Cambridge: MIT Press, 1977.)

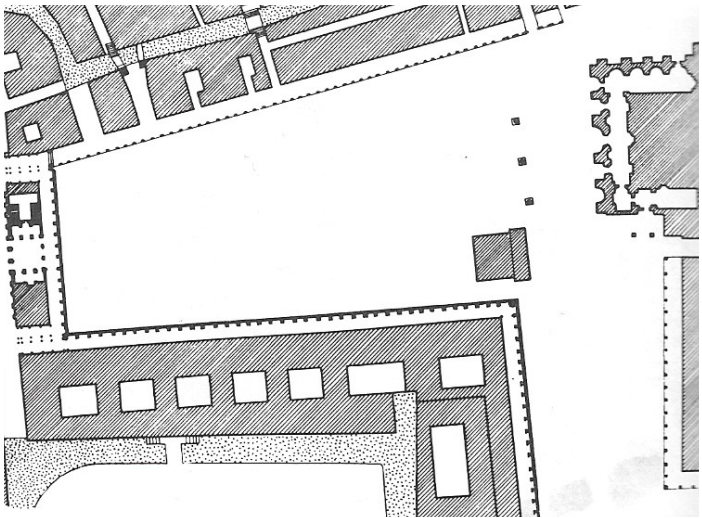


Fig. 25. Piazza San Marco after Sansovino alterations (Image: Ibid)



Fig. 26. Basilica of San Marco “repositioned” at center. (Image: Wikimedia Commons)

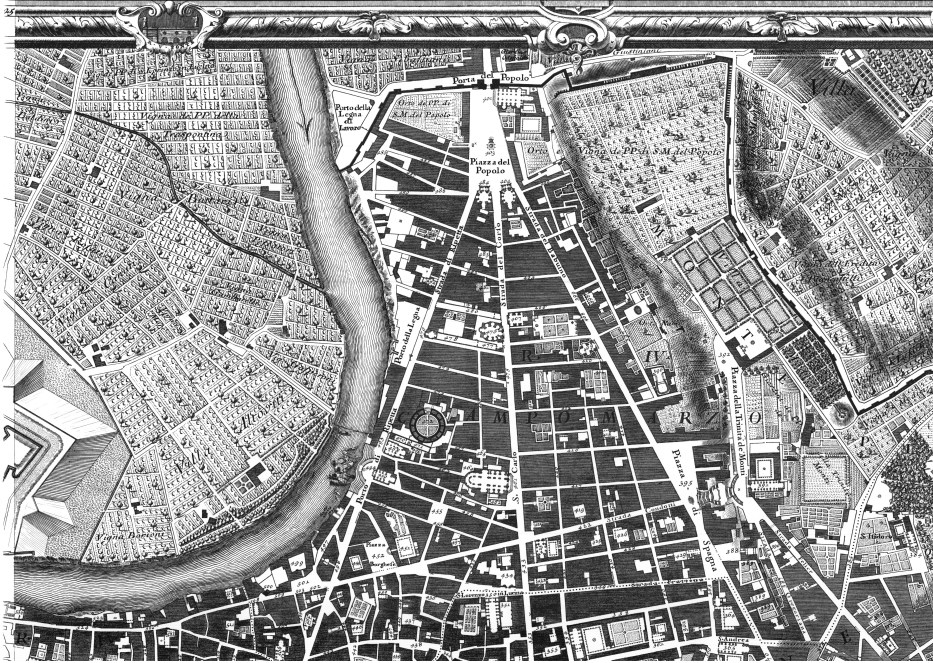


Fig. 27. Nolli Map of Rome (1748), Battista Nolli (Image: Wikimedia Commons)



Fig. 28. Piazza del Popolo, Rome (Image: Varriano, John. *Italian Baroque and Rococo Architecture*. New York: Oxford University Press, 1986.)



Fig. 29. St. Peter's dome, Rome (Image: Wikimedia Commons)



Fig. 30. (above left) Piazza St. Peter's (Image: <http://classconnection.s3.amazonaws.com>)



Fig. 31. (above right) detail of Bernini's colonnades (Image: <http://images2.mygola.com>)

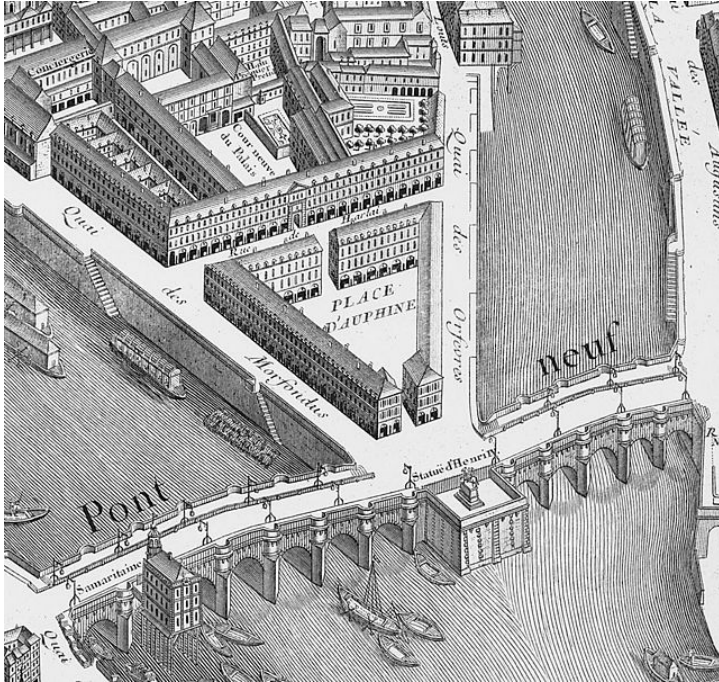


Fig. 32. Place Dauphin (1607+), Paris, 1739 engraving by Michel-Etienne Turgot (Image: Wikimedia Commons)



Fig. 33. Place Dauphin entrance elevations (Image: Wikimedia Commons)

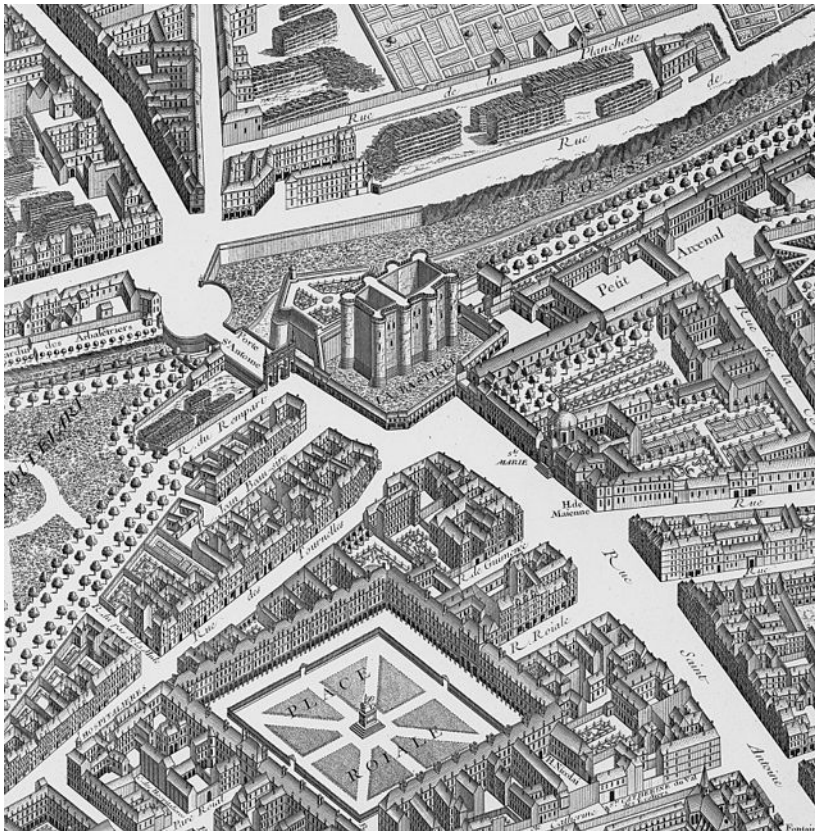


Fig. 34. Place des Vosges, Paris, 1739 Turgot engraving (Image: Wikimedia Commons)



Fig. 35. Place des Vosges elevations (Image: <http://media.theagencyre.com>)



Fig. 36. Sant'Agnese (1652+), Piazza Navona, Rome, Carlo Rainaldi, Francesco Borromini, Girolamo Rainaldi (Image: Wikimedia Commons)



Fig. 37. Aerial view of Piazza Navona with dome of Sant'Agnese at left (Image: Zucker, Paul. "Space and Movement in High Baroque City Planning," *JSAH* 14.1, (1955).)

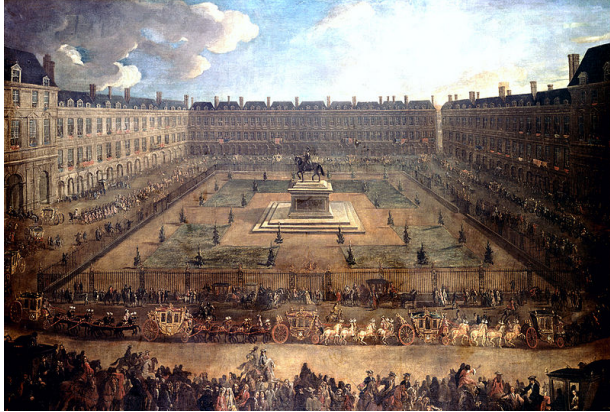


Fig. 38. Place des Vosges (Image: Wikimedia Commons)



Fig. 39. Val-de-Grace (1645+), Paris, Francois Mansart (Image: Wikimedia Commons)



Fig. 40. College des Quatre Nations (1662+), Paris, Louis Le Vau (Image: Wikimedia Commons)

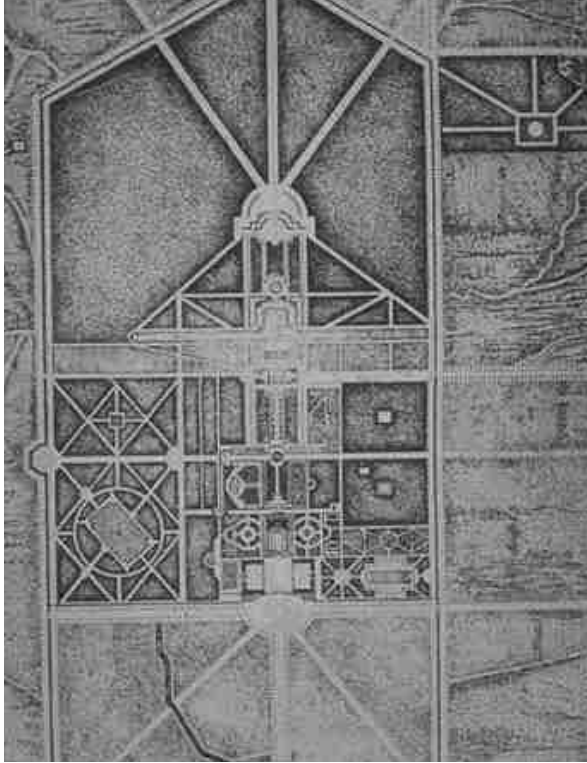


Fig. 41. Vaux-le-Vicomte (1658-1661), garden plan by Le Notre (Image: <http://french-at-a-touch.com>)



Fig. 42. Versailles (1661+), garden plan by Le Notre (Image: Wikimedia Commons)

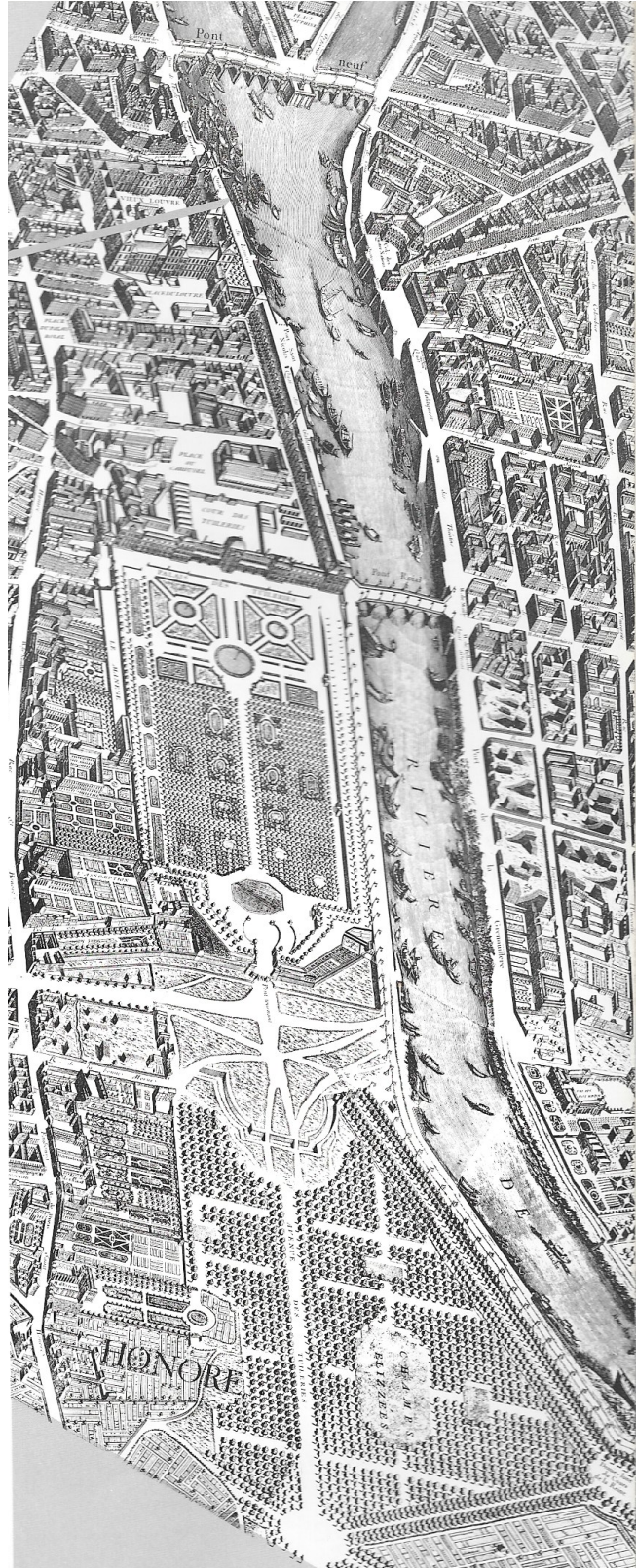


Fig. 43. Turgot engraving of Paris, detail showing Le Notre's Tuileries and Urban extensions (Image: Wikimedia Commons)



Fig. 44. (above left) Sant'Andrea della Valle, Rome, façade (c.1623+) Carlo Maderno and Carlo Rainaldi (Image: Wikimedia Commons)



Fig. 45. (above right) Santa Susanna, Rome, façade (1597-1603) Carlo Maderno (Image: Wikimedia Commons)



Fig. 46. Val-de-Grace (1634-1667), Paris, Francois Mansart, Jacques Lemercier, Pierre Le Muet, and Gabriel Leduc (Image: Wikimedia Commons)



Fig. 47. Louvre East Wing (c.1670's), Paris, Claude Perrault (Image: Wikimedia Commons)

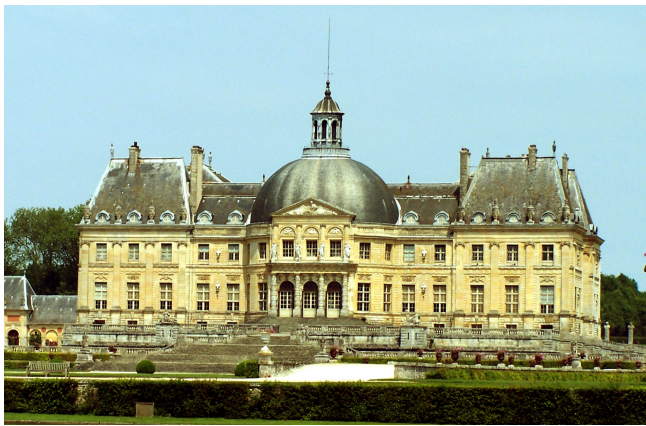


Fig. 48. Vaux-Le-Vicomte (1658-1661) (Image: Wikimedia Commons)



Fig. 49. Chateau de Maisons (1630-1651), Francois Mansart (Image: Wikimedia Commons)

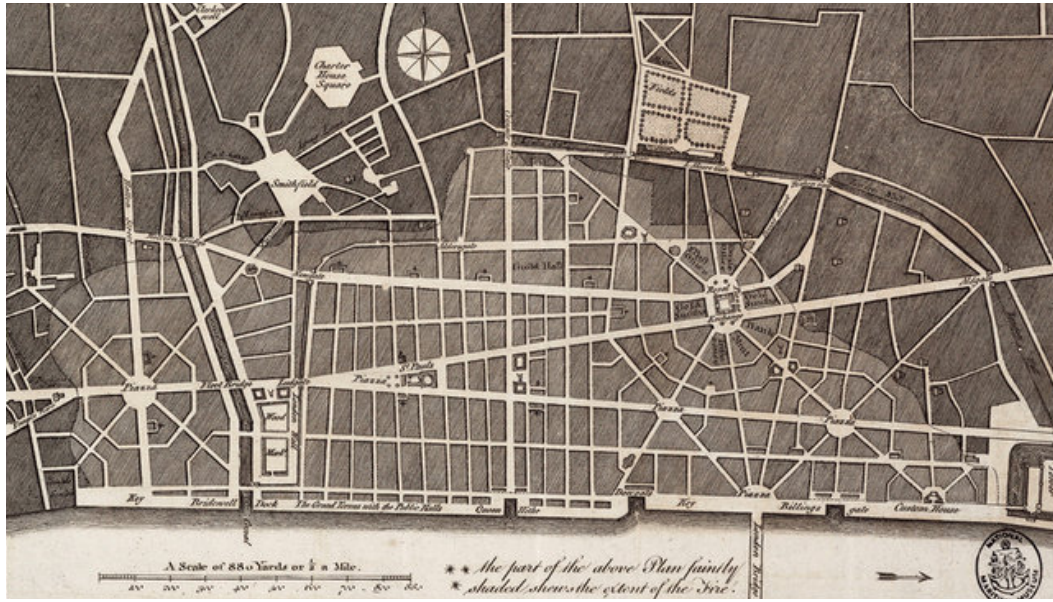


Fig. 50. Plan of London (1666), Wren, St. Paul's at "wedge" center left, the Royal Exchange center right at radial axis (Image: <http://imageweb-cdn.magnoliasoft.net>)



Fig. 51. (above left and right) St. Paul's (1675-1720), London, Wren (Image: Wikimedia Commons)



Fig. 52. Wren's London. Paul Draper painting c.1982 (Image: <http://draperdrawings.com>)

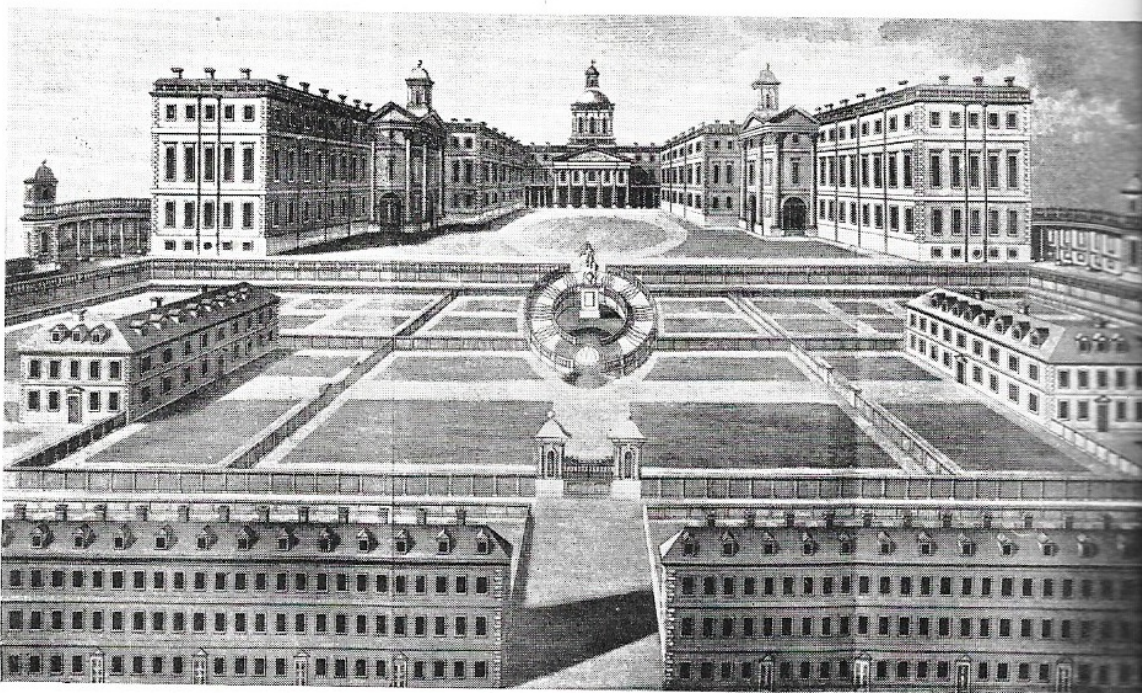


Fig. 53. Winchester Palace (1683-1685) (Image: Downes, Kerry. *The Architecture of Wren*. New York: Universe Books, 1982.)

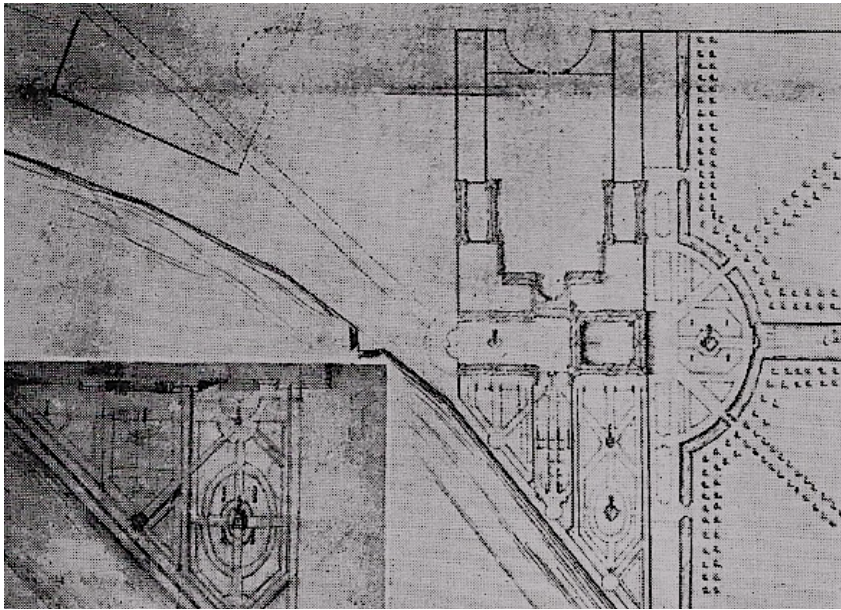


Fig. 54. Hampton Court Plan (1689+) (Image: Sekler, Eduard. *Wren and His Place in European Architecture*. London: Faber & Faber, 1956.)



Fig. 55. Hampton Court, (above) Courtyard, (below) East Front (Images: Wikimedia Commons)

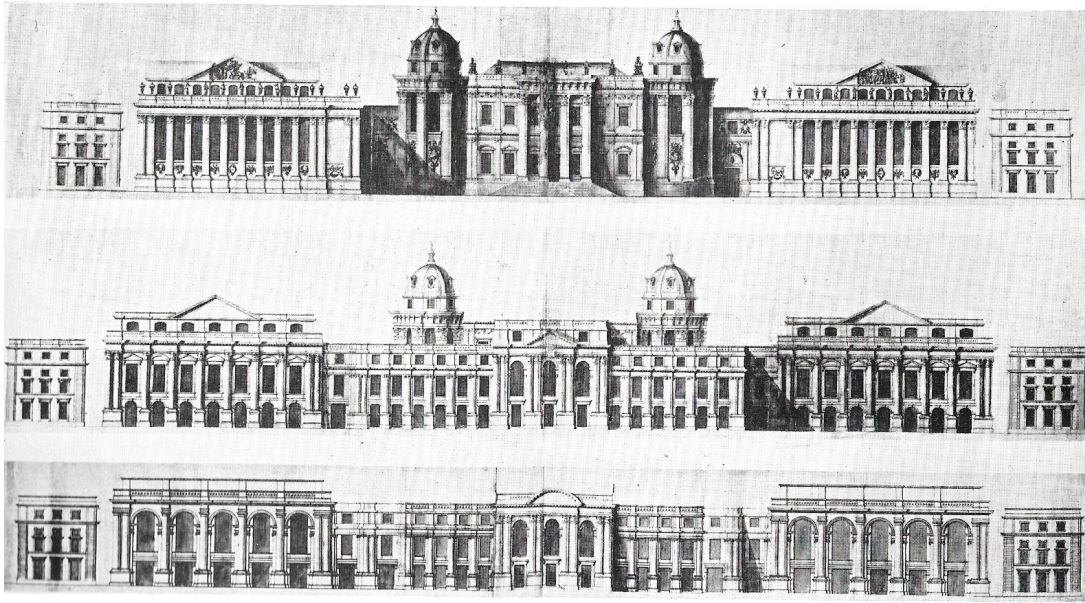


Fig. 56. Whitehall Palace elevations, 1st great design (Image: Sekler, Eduard. *Wren and His Place in European Architecture*. London: Faber & Faber, 1956.)

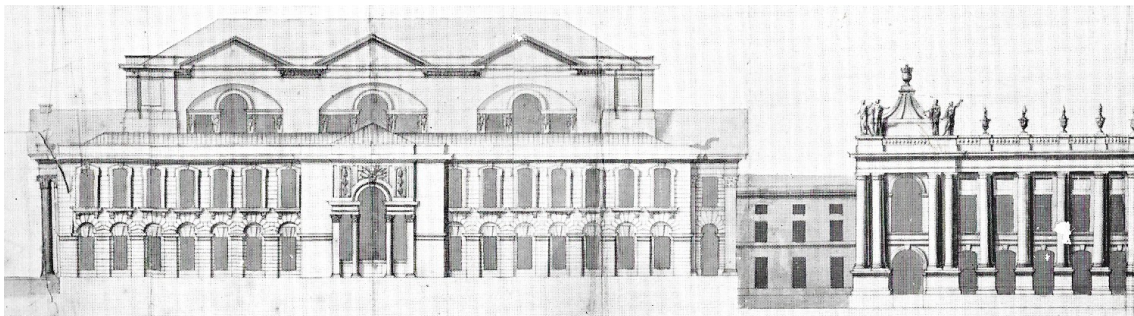


Fig. 57. Whitehall Palace proposed Houses of Parliament, 1st great design (Image: Sekler, Eduard. *Wren and His Place in European Architecture*. London: Faber & Faber, 1956.)

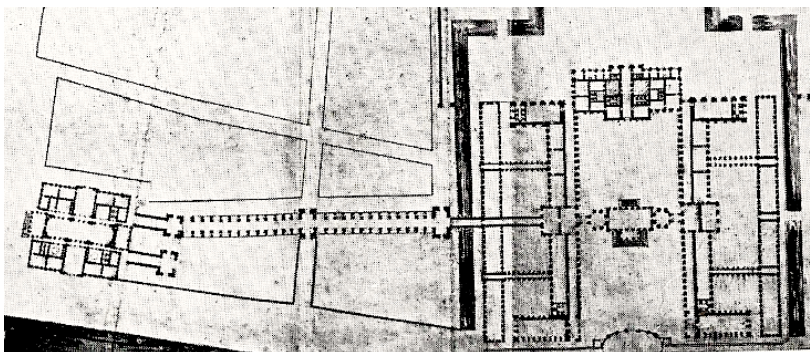


Fig. 58. Whitehall Palace plan, 1st great design, Houses of Parliament shown on far left (Image: Sekler, Eduard. *Wren and His Place in European Architecture*. London: Faber & Faber, 1956.)



Fig. 59. Banqueting House (1619+), London, Inigo Jones (Image: Wikimedia Commons)

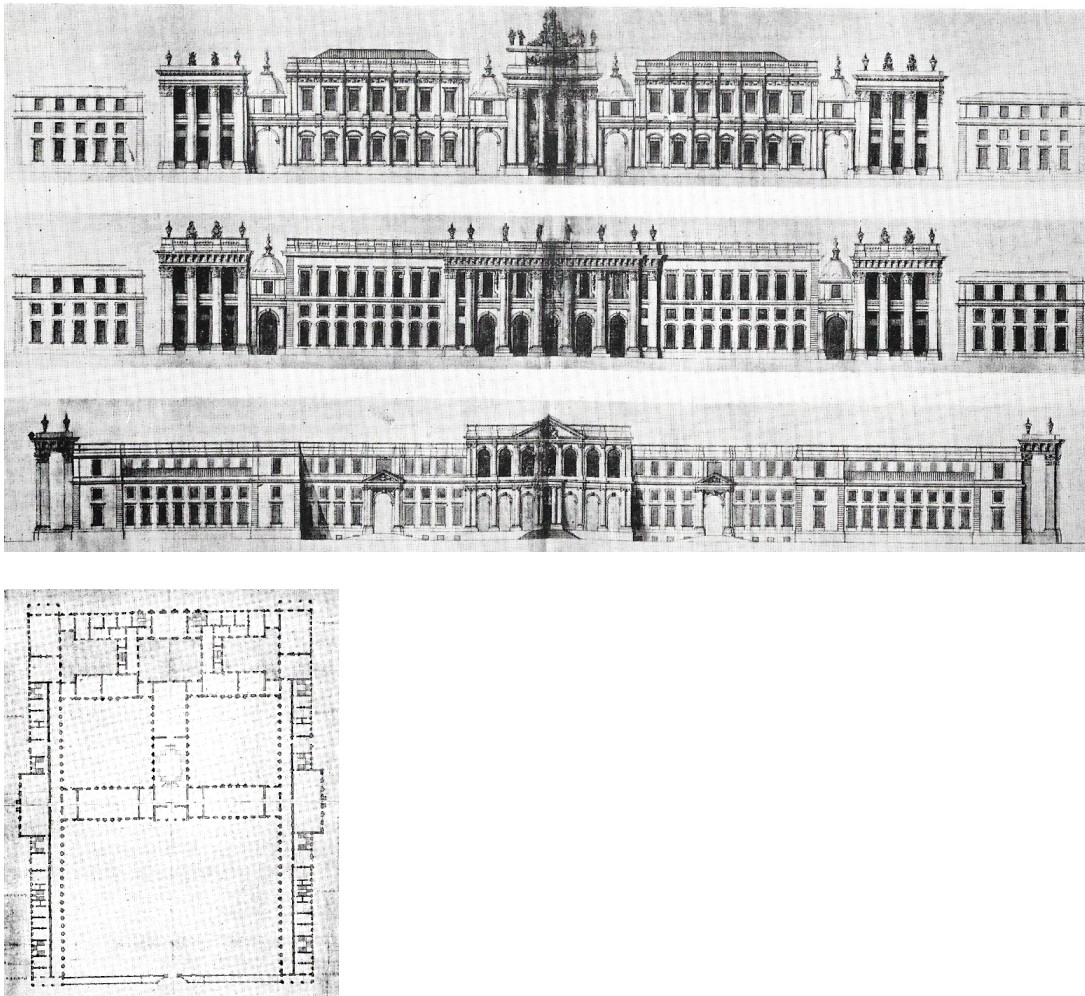


Fig. 60. Whitehall Palace 2nd great design, (above) Elevations, (below) Plan (Image: Sekler, Eduard. *Wren and His Place in European Architecture*. London: Faber & Faber, 1956)

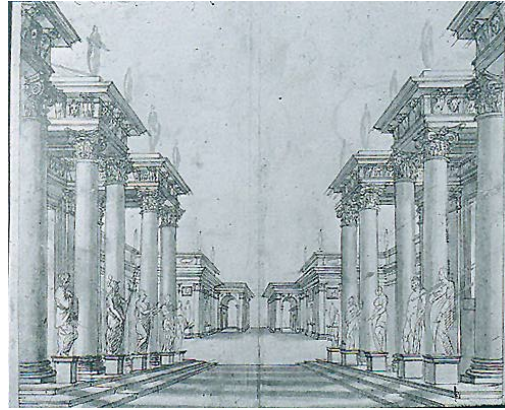


Fig. 61. (above left) *A Street in Perspective*, Inigo Jones (Image: Orgel, Stephen and Roy Strong. *Inigo Jones: The Theatre of the Stuart Court*. 2 Vols. London: Sotheby Parke Bernet Publications, 1973; Vol. 1.)

Fig. 62. (above right) *A Roman Atrium*, Inigo Jones (Image: Ibid, Vol. 2)



Fig. 63. (above left) Queen's House (1616-1635), Greenwich. (above right) Banqueting House (1619-1622), Whitehall Palace, London.

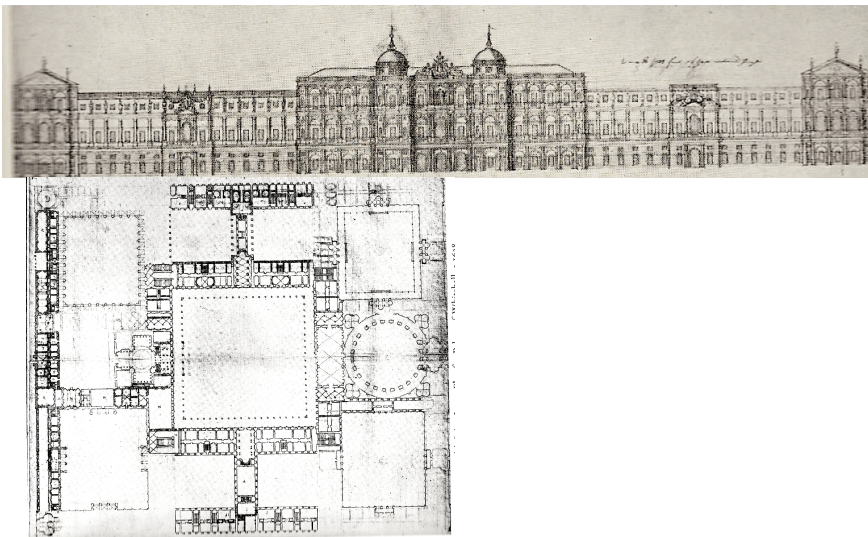


Fig. 64. (above) Jones' Design for Whitehall Palace River Front Elevation (c. 1638). (below) Jones' Plan for Whitehall Palace (c.1638) (Images: Summerson, John. *Architecture in Britain, 1530-1830*. New Haven: Yale University Press, 1993)

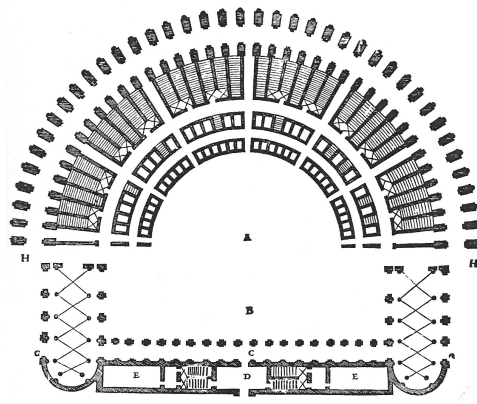


Fig. 65. (above left) Aerial of Sheldonian Theater, Oxford. (Image: <http://news.bbc.uk>)
 (above right) Plan of Theater of Marcellus, Serlio. (Image: : Serlio, Sebastiano. *Tutte L'Opere D'Architettura Et Prospetiva*. Trans. Vaughan Hart and Peter Hicks. New Haven: Yale University Press, 1996.)
 (below right) Reproduction Model of Theater of Marcellus. (Image: <http://messala.de>)



Fig. 66. (above left) Sheldonian Theater, Vice-Chancellor's Chair. (Image: <http://cynic.org.uk>)
 (above right) Sheldonian Theater, Entrance. (Image: <http://hummingbirdmedia.com>)

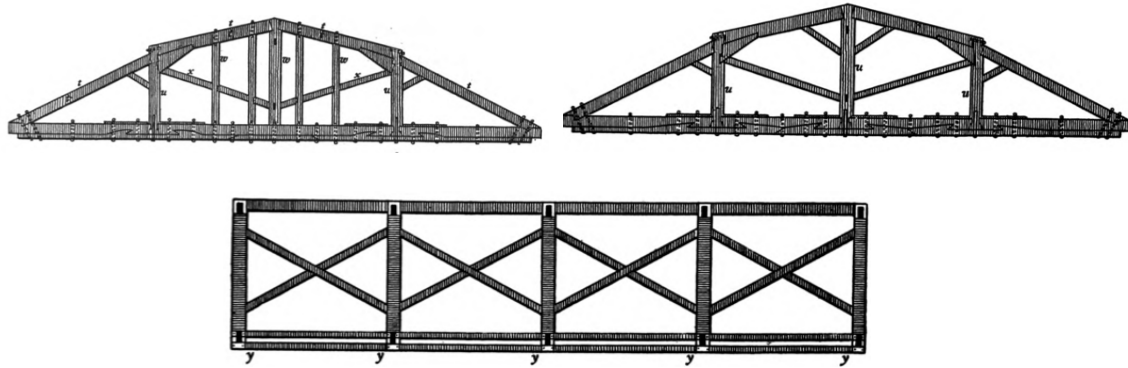


Fig. 67. Truss System designed by Wren for the Sheldonian Theater. (Image: Wren Jr., Christopher and Ernest Enthoven, and E. H. New. *Life and Works of Sir Christopher Wren. From the Parentalia: Or Memoirs*. London: E. Arnold, 1903)



Fig. 68. Interior of Sheldonian Theater, Detail showing use of Corinthian Order. (Image: <http://aasid.parsons.edu>)



Fig. 69. (above left) Sheldonian Theater Façade. (Image: <http://ox.ac.uk>)

Fig. 70. (above right) Chateau Vaux-le-Vicomte, Frontispiece. (Image: Wikimedia Commons)



Fig. 71. (above left) San Giorgio Maggiore (1566-1610), Venice, Palladio.

(above right) Il Redentore (1577-1592), Venice, Palladio. (Images: Wikimedia Commons)



Fig. 72. Sheldonian Theater, Side Elevation. (Image: Wikimedia Commons)

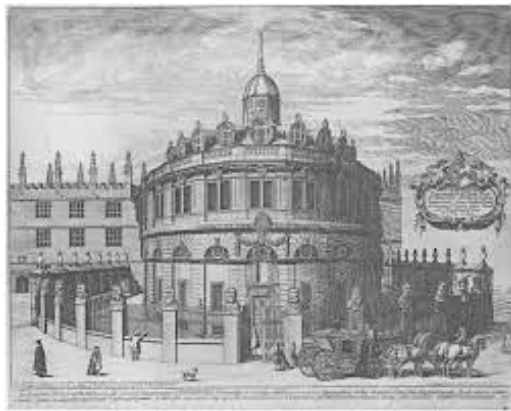


Fig. 73. (above left) Sheldonian Theater showing Wren's preliminary scheme with French Dormer Windows. (Image: Geraghty, Anthony. "Wren's Preliminary Design for the Sheldonian Theatre," *Architectural History* 45, 2002)

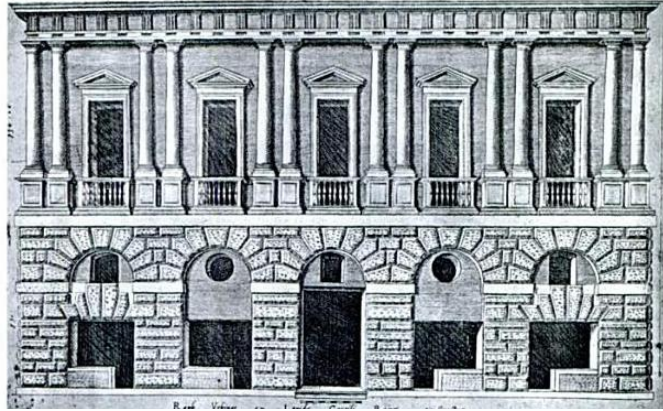


Fig. 74. Palazzo Caprini (c. 1510), Rome, Donato Bramante. Renaissance Palace façade developed by Bramante. (Image: Wikimedia Commons)



Fig. 75. Royal Observatory (1675+), Greenwich, Robert Hooke and Wren. (Image: <http://media-cache-ak0.pinning.com>)



Fig. 76. King Charles Block (c. 1660's), Greenwich, John Webb. End Pavilions added by Wren 1696-1710. (Image: Wikimedia Commons)

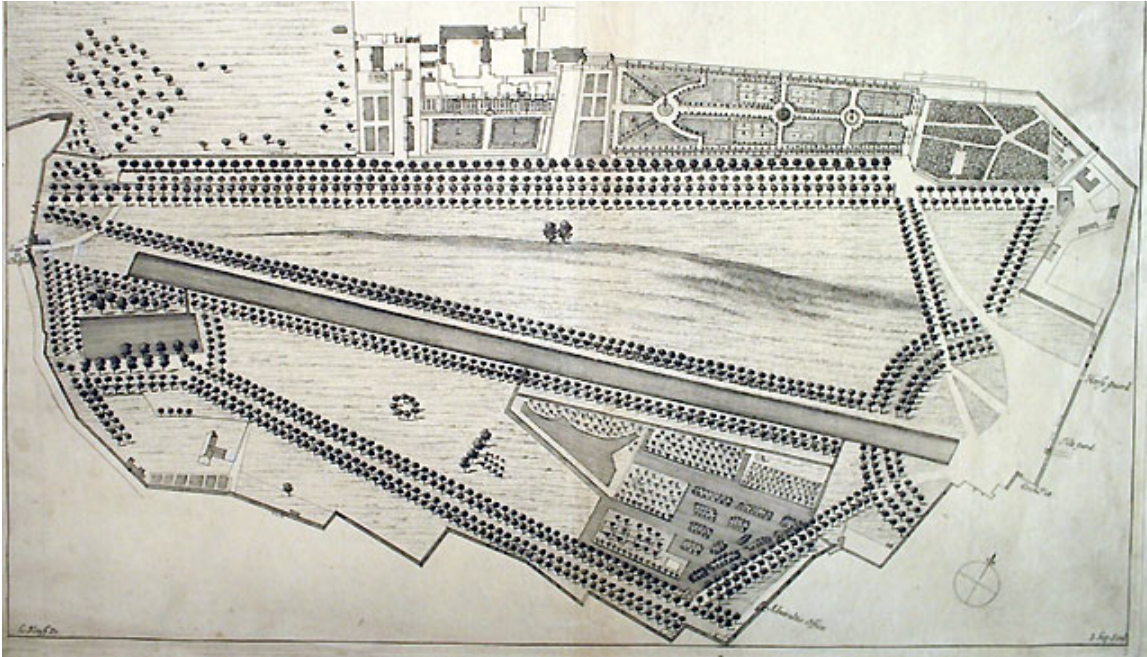


Fig. 77. St. James's Park (c. 1660's), plan by Andre Mollet. (Image: Wikimedia Commons)

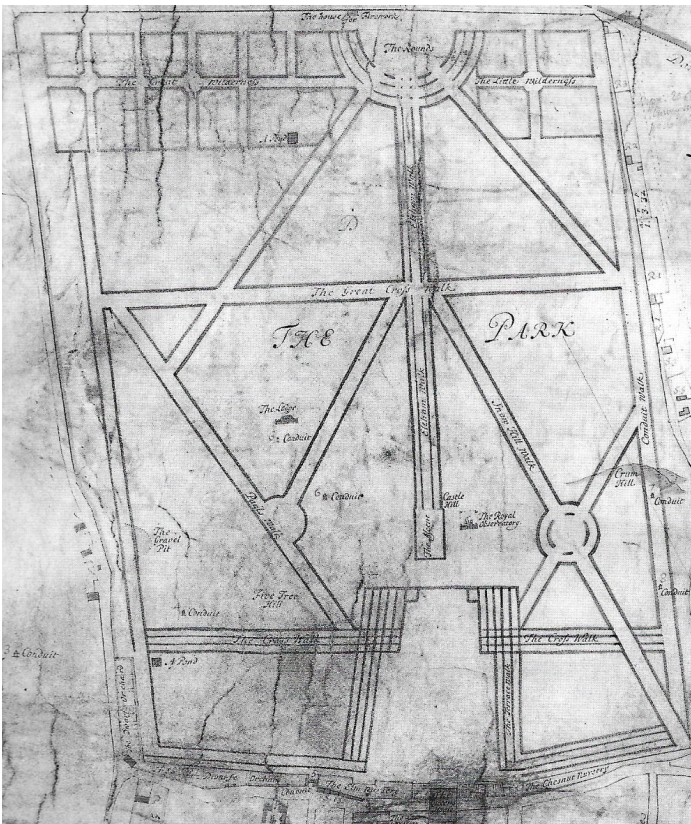


Fig. 78. Plan of Greenwich Park showing principle features of the Restoration design (c. 1695), drawing by Samuel Travers. (Image: Bold, John. *Greenwich*. New Haven: Yale University Press, 2000)

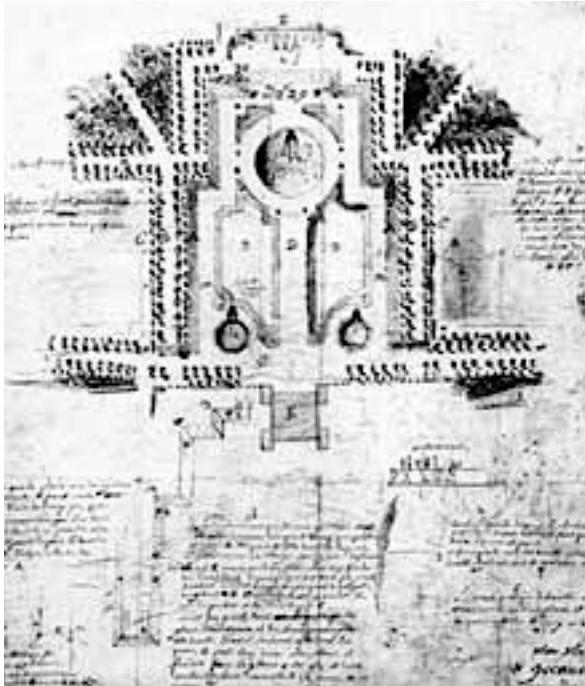


Fig. 79. Design for a Parterre in Greenwich Park (c. 1666), Andre Le Notre. Queen's House is shown at bottom of plan. (Image: Ibid)



Fig. 80. Queen Anne Block, Greenwich. (Image: Wikimedia Commons)

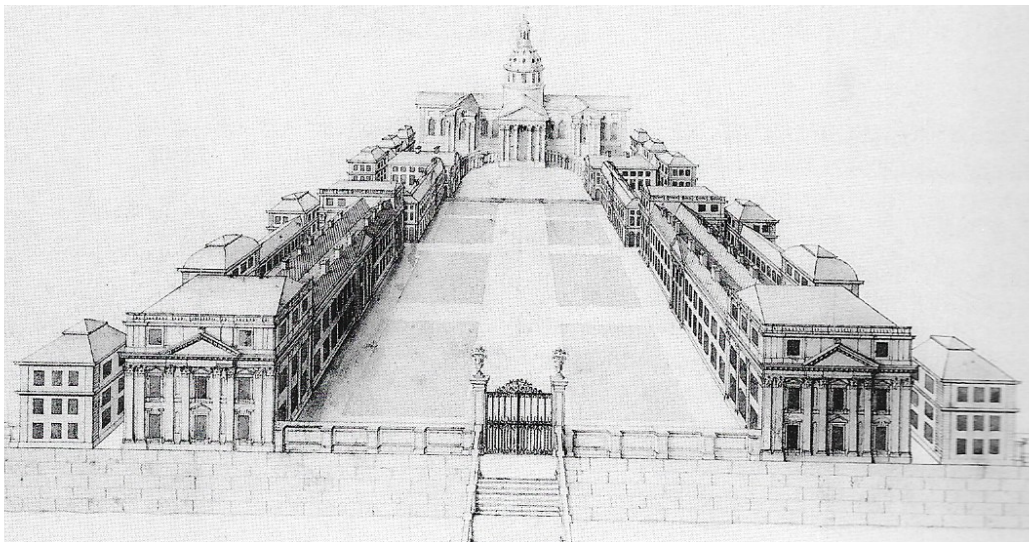
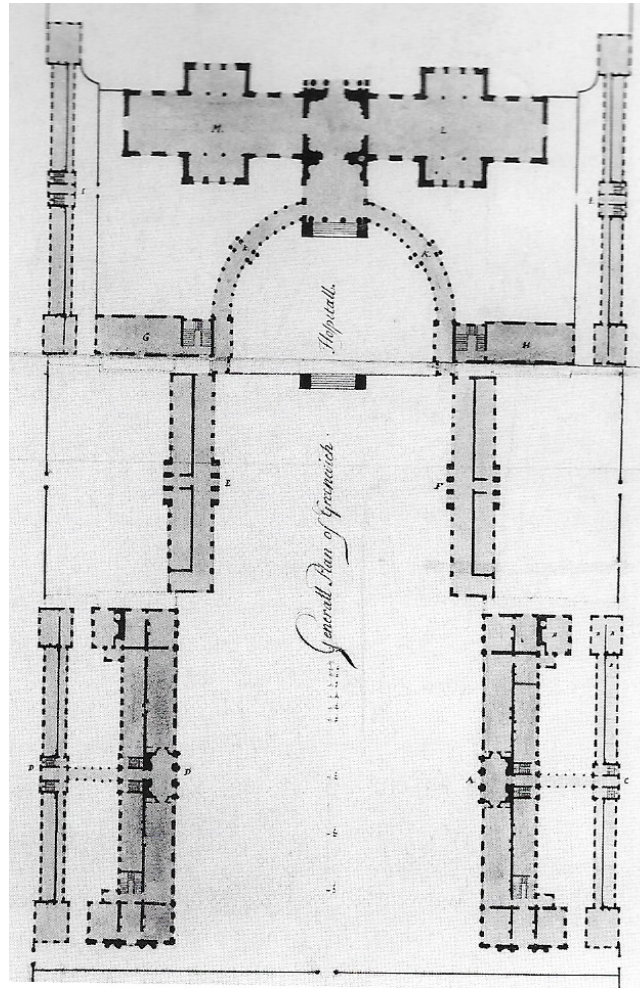


Fig. 81. (above) Initial Grand Design, Plan.
 (below) Initial Grand Design, Reconstructed Elevation. (Images: Bold, *Greenwich*)



Fig. 82. (clockwise from top left) Les Collège des Quatre Nations, engraving by Israel Silvestre c. 1670 (Image: <http://wga.hu>). Sorbonne (Image: <http://theavenuestory.com>). St. Peter's (Image: <http://toms-travels.net>). Les Invalides (Image: Wikimedia Commons)



Fig. 83. Avenue leading from Queen's House to Thames (Image: <http://pinimg.com>)



Fig. 84. Twin Domes flanking perspective/vista (Image: Wikimedia Commons)



Fig. 85. Flanking Domes at Piazza del Popolo, Rome (Image: Ibid)

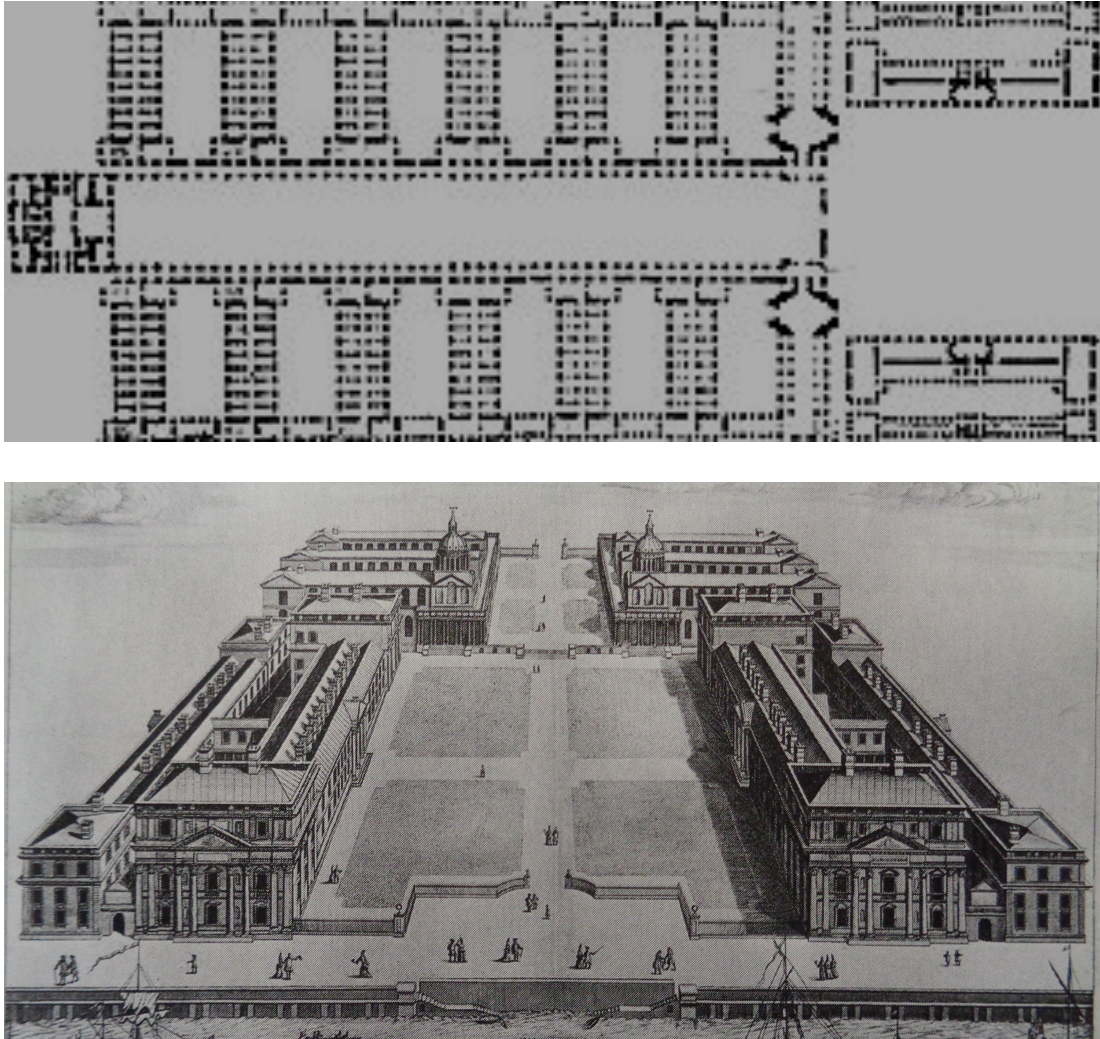


Fig. 86. (above) Wren's Second Grand Design for Greenwich (Image: Sekler. *Wren*.)
(below) Unofficial engraving based on Second Grand Design for Greenwich (Image: Bold. *Greenwich*.)

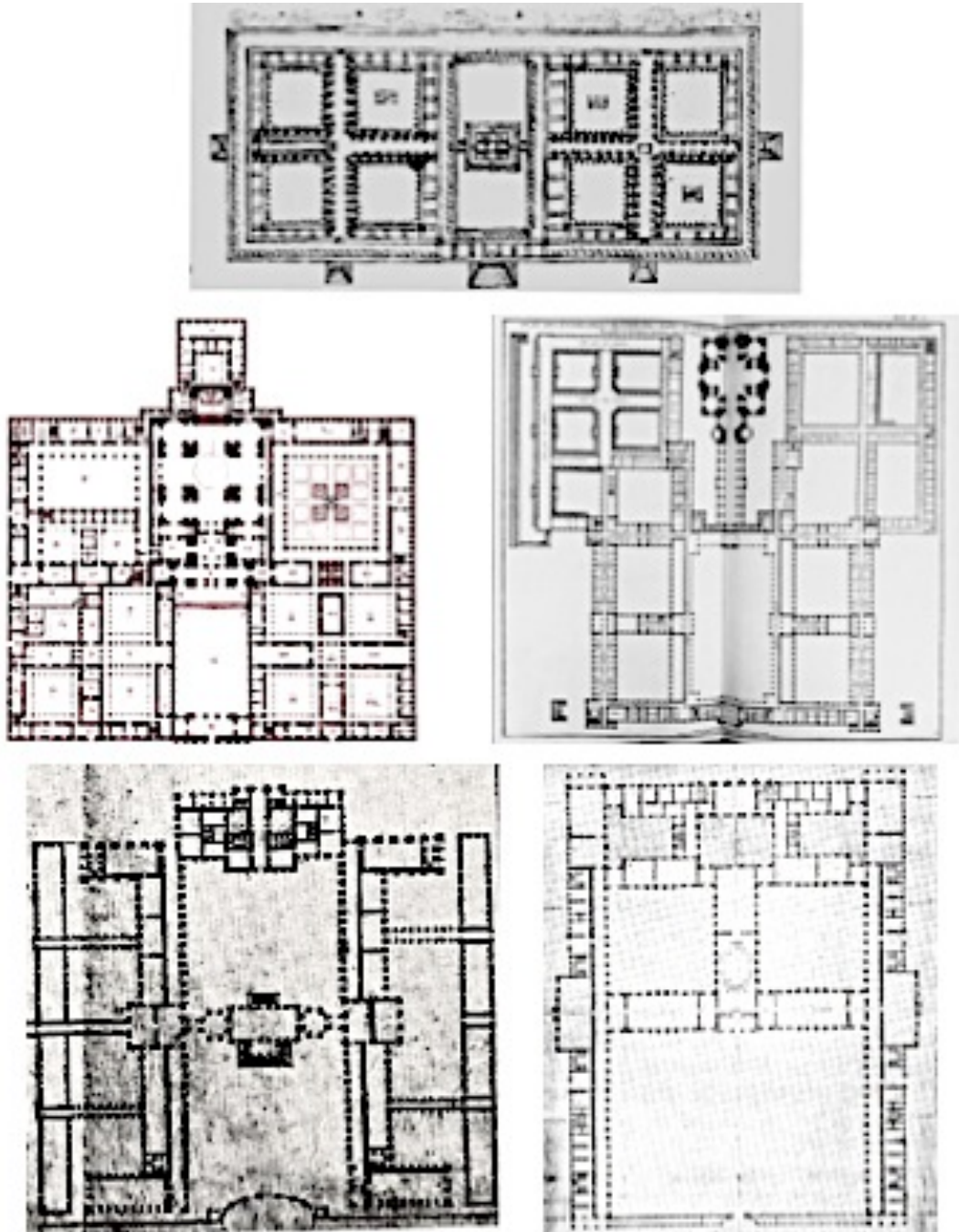


Fig. 87. (clockwise from top) Ospedale Maggiore, Milan, Filarete (Image: Thompson, John. *The Hospital: A Social and Architectural History*. New Haven: Yale University Press, 1975). Les Invalides (Image: Bold. Greenwich.). Wren's 2nd Grand Scheme for Whitehall Palace (Image: Sekler. *Wren*.). Wren's 1st Grand Scheme for Whitehall Palace (Image: Ibid). Escorial (Image: Wikimedia Commons).

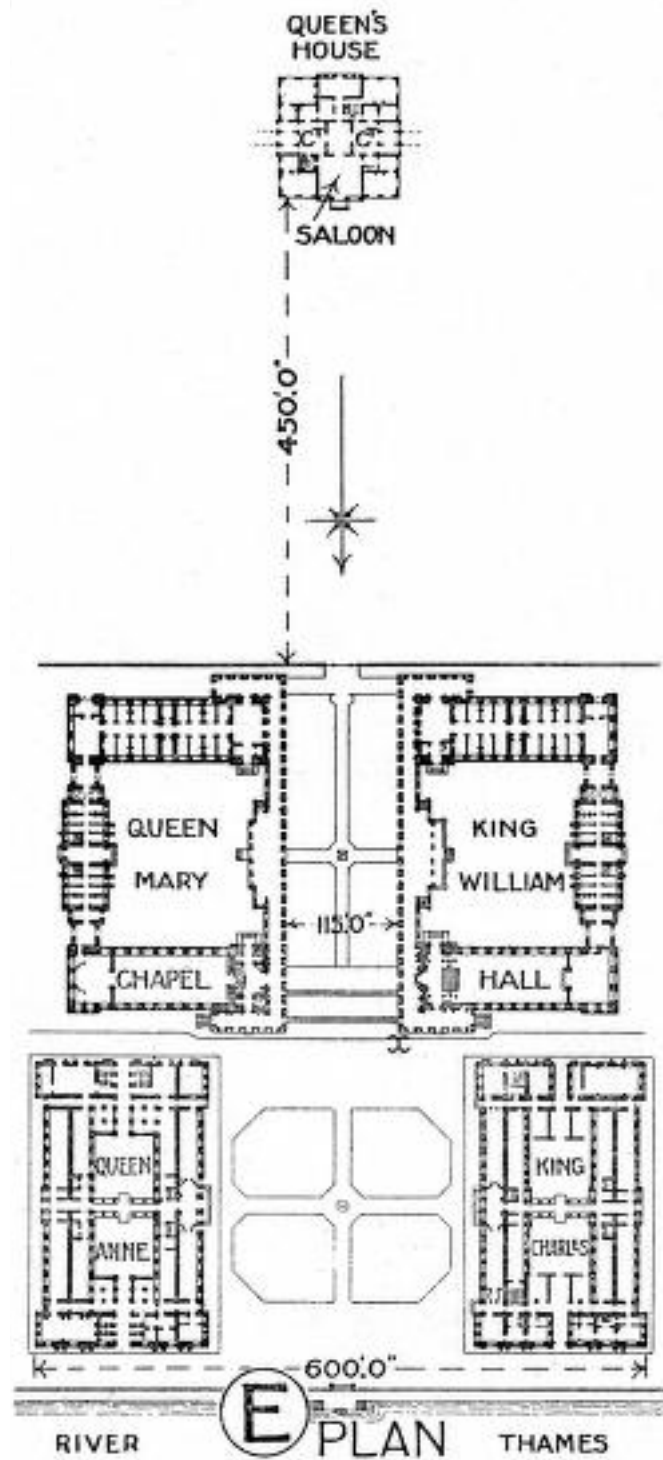


Fig. 88. Wren's 3rd and final Grand Design for Greenwich (Image: <http://quod.lib.umich.edu>)

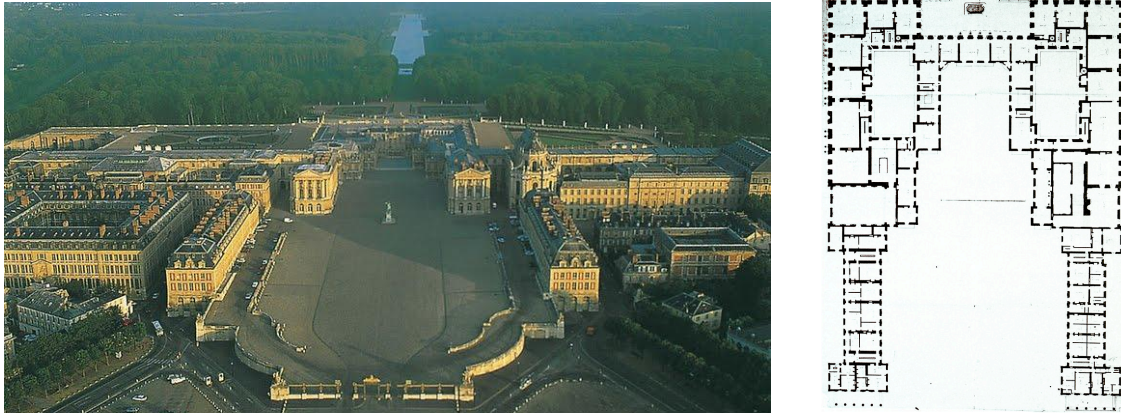


Fig. 89. (above left) Versailles (Image: <http://classconnection.s3.amazonaws.com>).
 (above right) Versailles plan excluding wings (Image: <http://photobucket.com>).

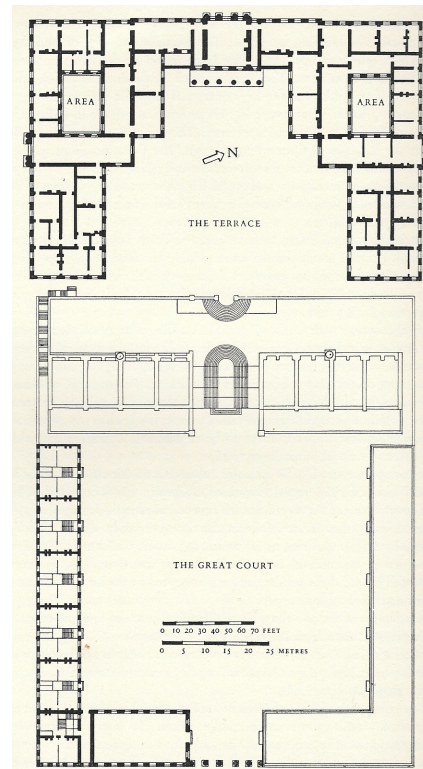


Fig. 90. Winchester Palace. Incomplete plan based on Wren's drawings (Image: Summerson: *Architecture in Britain*.).



Fig. 91. (above left) Les Invalides, Paris (Image: Wikimedia Commons)
(above right) Dome of Chapel in Queen Mary Block, Greenwich (Image: Wikimedia Commons)
(below) Detail of St. Peter's Dome, Rome (Image: Wikimedia Commons)



Fig. 92. Interior of Colonnade of King William Block (Image: <http://c2.staticflickr.com>)



Fig. 93. (left) Sheldonian Theater corner (Image: <http://bluffton.edu>)
(right) King William Block corner (Image: Wikimedia Commons)



Fig. 94. (left) Easton Neston North Façade (1694+), Nicholas Hawksmoor (Image: Downes, Kerry. *Hawksmoor*. New York: Praeger, 1970).
(right) King's Gallery (1695+), Kensington Palace, Hawksmoor (Image: <http://4.bp.blogspot.com>)



Fig. 95. King William Block "rear" (western) façade, Hawksmoor (Image: Wikimedia Commons)



Fig. 96. King William Block inner courtyard façade, Hawksmoor (Image: Wikimedia Commons)



Fig. 97. Queen Anne Block "rear" eastern façade, Hawksmoor (Image: <http://portcities.org.uk>)



Fig. 98. (clockwise from left) Christ Church, Spitalfields; St. George, Bloomsbury; St. Alfege, Greenwich. Hawksmoor (Images: Wikimedia Commons)



Fig. 99. Painted Hall (1708-1727), James Thornhill, Queen Anne Block, Greenwich Lower Hall in foreground; Upper Hall in rear (Image: <http://fslps.org.uk>)



Fig. 100. Lower Hall ceiling detail showing William and Mary at center (Image: <http://3.bp.blogspot.com>).

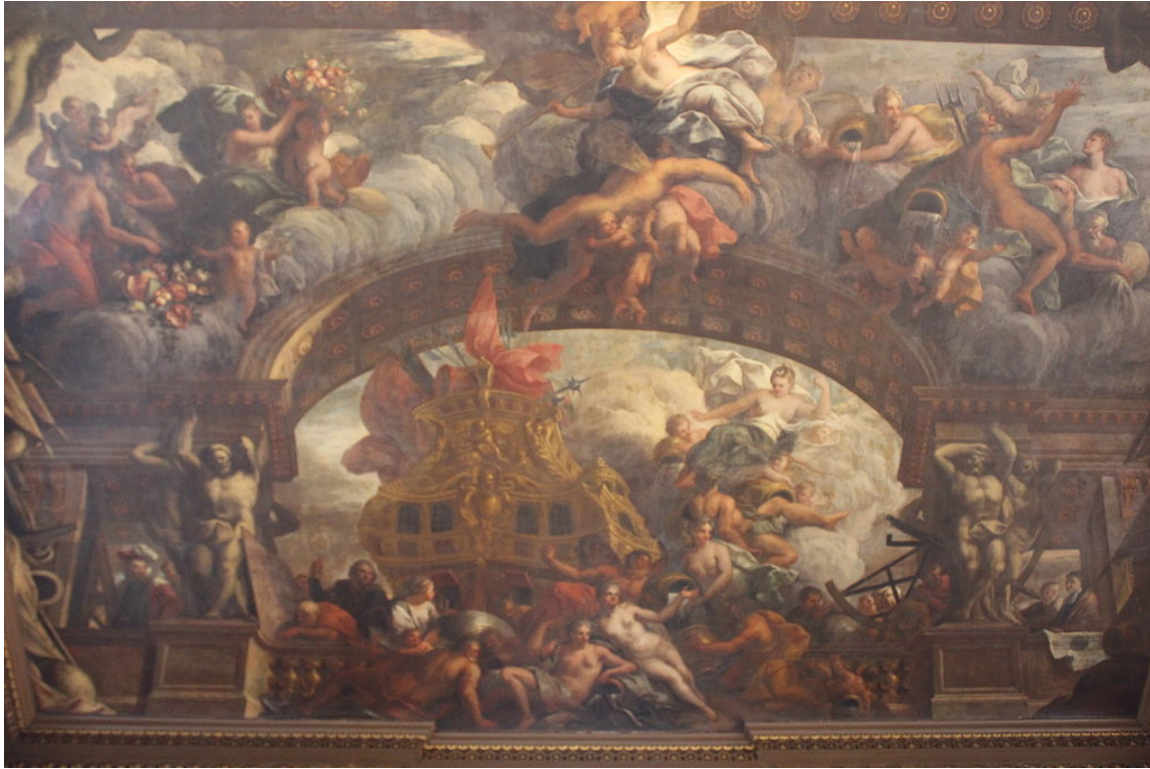


Fig. 101. Lower Hall ceiling detail. (above) British Man-of-War. (below) Captured Spanish galley (Images: Wikimedia Commons)



Fig. 102. Upper Hall (Image: <http://i.dailymail.co.uk>)

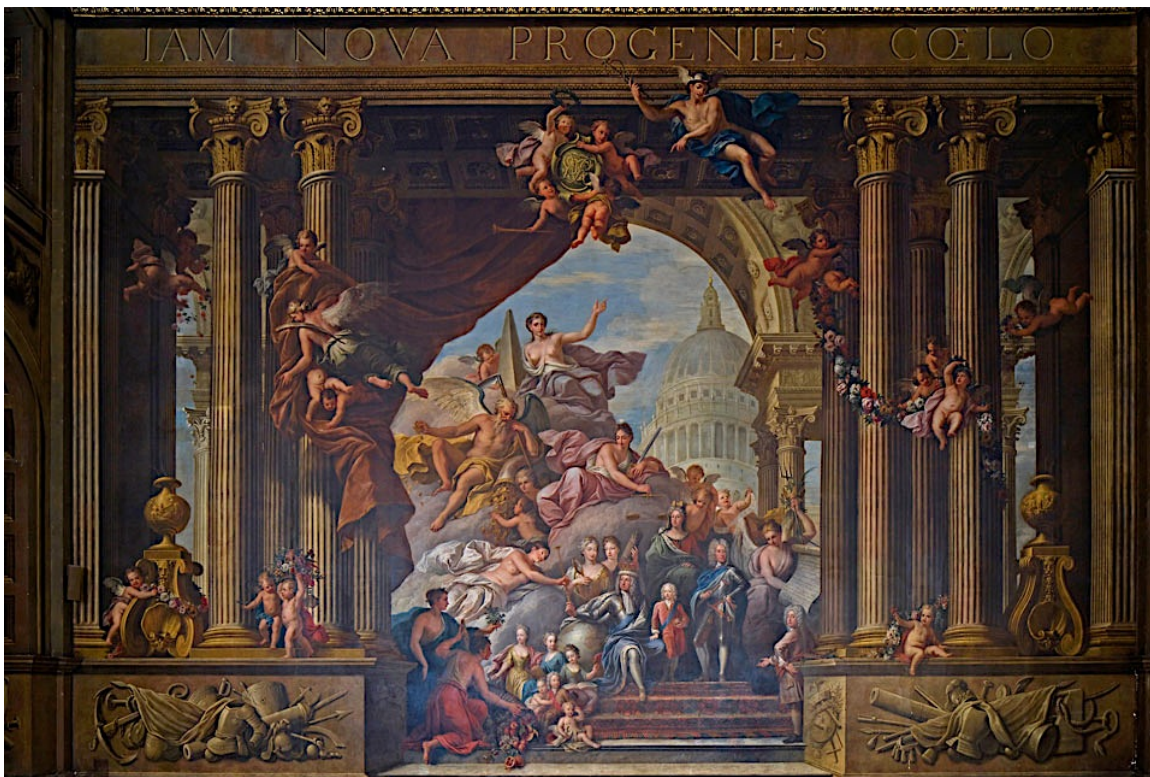


Fig. 103. Upper Hall west wall, King George I and the Royal Family (Image: Wikimedia Commons)



Fig. 104. Upper Hall ceiling, Queen Anne and Prince George of Denmark (Image: <http://ma-arch.co.uk>)



Fig. 105. (left) Upper Hall north wall, King George I's landing at Greenwich (Image: <http://farm1.static.flickr.com>).
(right) Upper Hall south wall, the landing of the Prince of Orange (Image: <http://artexpertswebsite.com>).