



FONTES **E**-Quellen und Dokumente zur Kunst 1350-1750
Sources and Documents for the History of Art 1350-1750

BALTHAZAR GERBIER:

*Counsel and Advise to all Builders; For the Choice of their Surveyours,
Clarks of their Works, Bricklayers, Masons, Carpenters, and other Workmen
therein concerned. As also, In respect of their Works, Materials and Rates
thereof. Together with several Epistles to Eminent Persons, who may be
Concerned in Building (London 1663)*

herausgegeben und kommentiert von

CHARLES DAVIS

mit zweiundzwanzig Abbildungen und einem Exkurs

FONTES 8

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AS ALSO
In respect of their Works, Materials
and Rates thereof.

Together with several *Epistles* to
Eminent Persons, who may be
Concerned in *Building*.

Written by Sir *Balthazar Gerbier,*
Douvily, Knight.

London, Printed by *Thomas Mabb,* dwelling on
St. Pauls-Wharff neer the *Thames,* 1663.

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CA. = Balthazar Gerbier, *Counsel and Advise to all Builders*, London 1663

Introduction:

COUNSEL AND ADVICE: 'OWNERS OF BUILDING' AND THEIR TRUSTEES

The two architectural treatises written by Balthazar Gerbier, his *Brief Discourse* (1662) and his *Counsel and Advise* (1663) are both little considered texts, and neither has received detailed or systematic attention. The public of readers to whom Gerbier proposes his two architectural treatises is, essentially, that of builders, that is, of patrons of buildings. In English the word 'builder' refers both to the owner who builds, that is, who orders and pays for a building, and to the man, often a contractor, who builds, who, that is, materially realizes the building. The intended meaning is usually clear from the context, although confusions may arise. With the word 'builder' Gerbier usually, if not always, means the patron-builder. While Leon Battista Alberti's architectural treatise was not intended so much for architects as for patrons, his was a theoretical approach, despite the wealth of empirical observation contained in the *De re aedificatoria*. Gerbier's approach is practical. Further Gerbier's purpose is not to furnish design ideas with a pattern book like Serlio's, although this he promises to do later. There are no illustrations in either of Gerbier's architectural books, and such illustrations are necessary to communicate design conceptions. Serlio was the first to address systematically the question of practical building construction, using simple, uncomplicated language, and in these two respects Gerbier is similar.

Neither of the two redactions of Alvise Cornaro's brief treatise on architecture (before 1555 circa) were published until four centuries later, and it would be difficult to maintain that his words were often read. Gerbier, nevertheless, knew Padua, and, in a kind of ideal tradition, Gerbier seems to follow some traits of Cornaro's work. Cornaro's treatise was directed to the construction of houses. He distances himself from the aesthetic architectural theories of his time. Cornaro addresses himself to builders, to patrons, to citizens ("*cittadini*") as the users of buildings, and not to architects. He also distances himself from contemporary architectural writing, and he will not treat the classical architectural orders, because, he says, "*ne son ormai pieni li libri*". Cornaro's approach is pragmatic. He places beauty and aesthetic values lower than "*comodità*"; Similarly Gerbier gives first place to "Solidity". Cornaro is not a Vitruvian follower, and Gerbier neglects the Vitruvian tradition as well, using, as Cornaro, words currently in use. Gerbier's advice about the placing of balconies ("contracting the Balconies within the upright of a column, in that weight is not prejudicial when it rests on its Center"; p. 15) seems to echo Cornaro's strictures regarding "*pozzoli*" (balconies; "*niuna cosa esca fuori del diritto dei muri*", Polifilo edition, p. 94). Cornaro's seventh rule, to make the openings of doors and windows only so large as need be (pp. 95f.), is paralleled in Gerbier's counsel to limit the width of windows and doors so as not to weaken the fabric (pp. 18-19). Gerbier's formula for the height of windows and doors (p. 20) resembles Cornaro's ("*due quadri*"). Both authors focus on doors, windows, and "chimneys". The civil habitation constitutes the central theme of both works; both offer practical advice in the construction of houses from a technical and economic point of view. Many of Cornaro's tenets seem to have been absorbed by Andrea Palladio, who also proposed to use ordinary language understood by contemporary architects and *maestranze*.

The *Elements of Architecture* (London 1624) by Sir Henry Wotton (1568-1639) was a very early English architectural treatise, if not the first. It is also addressed to the patron and builder, and it is much concerned with the requirements of the English house. Wotton spent

very many years in Venice, and he knew Padua well, including, quite possibly, the heirs of Alvise Cornaro. Gerbier follows Wotton in maintaining that the aim of architecture is to build well (“the end is to build well”) and in identifying ‘commodity’, ‘firmness’, and ‘delight’ as the three chief requirements of a good building (for Gerbier, “conveniency”, “solidity”, and “ornament”), but Gerbier’s dependence upon Wotton does not seem so great as sometimes maintained, and it has never been demonstrated in detail. Wotton’s *Elements* is often written in a humorous vein and with a light touch, and this offered a pattern for Gerbier to follow. Wotton was a dilettante (a “lover of architecture”), and he attempted to furnish potential aristocratic patrons with standards for building. His treatise is brief, small in format, and without illustrations, all traits corresponding to Gerbier’s two treatises. It was, in part, written to make a favourable impression on the first Duke of Buckingham, Gerbier’s master.

Only a small handful of architectural texts were written in English before Gerbier, most notably that of Wotton, just mentioned, and John Shute’s *First and Chief Groundes of Architecture* (London 1563). Until the eighteenth century English architectural writing was rare. Gerbier is scarcely mentioned in Rudolf Wittkower’s “English Literature on Architecture” (in: *Palladio and English Palladianism*, London: Thames and Hudson, 1974, pp. 94-112), who emphasizes that almost no English architects wrote on architecture until Colin Campbell’s *Vitruvius Britannicus* of 1715. The one exception, John Shute, can make claims to being a professional architect that are far less persuasive than those of Gerbier, whom Wittkower labels an “amateur”. Wittkower’s assessment of architectural writing in seventeenth-century England is dismal (p. 102): no treatise written by an architect, unqualified translators and editors, translations of translations, only partial translations or abstracts, or abstracts of abstracts, semi-literate.

Gerbier’s treatises might also be compared to the *L’Architecture françoise des bastimens particuliers* (Paris 1624), by Louis Savot, Medecin du Roy, a non-professional treatise addressed to building dwellings. It was new when Gerbier visited Paris in 1625, and Savot treats building in detail, giving the prices of many building materials (pp. 252-310).

With his omnivorous and eclectic interests, Gerbier seems to have read, as did many of his English contemporaries (see *infra*), Fréart de Chambray’s *Parallele* (1650), which compared ancient architecture with modern and included a collection of ten principal authors who had written upon the five orders of architecture. Gerbier’s several references to the architecture of King Solomon, to his temple and palace and to the house built for Pharaoh’s daughter (*D.*, p. 3; *CA.*, pp. 26, 53, 99), appear to reflect his familiarity with the writings of Juan Bautista Villalpando, a Spanish architect and hermetic theoretician (1592-1608), who believed that classical architecture derived from that of Solomon (cf. Villalpando and Jerónimo del Prado, *In Ezechlielem explanationes et apparatus urbis ac templi Hierosolymitani*, in 3 volumes, Rome 1596 and 1604). Villalpando’s writings were very influential in seventeenth-century Germany, France, and England.

In the text that follows, it is attempted to give an outline account of the two treatises, with greater emphasis devoted to the *Counsel and Advise*, and to analyse their structure and content. The attempt is made to define the character of the treatises in light of their content, and to isolate their originality through a specific reading of Gerbier’s intentions in treating of the realization of buildings. (See also the introduction to *FONTES 7*). In particular, the unusually detailed definition of the rôle of the Clerk-of-the-Works emerges as a distinctive feature of Gerbier’s discussion of building. Gerbier’s emphasis lies in the technical, practical, material, and economic-and-financial aspects of building. In his treatise there may be discerned perhaps

unique testimonies concerning the economics of building and the world of work in the building trades. These observations are developed in more detail in the following remarks.

The present text, Balthazar Gerbier's *Counsel and Advise to all Builders* of 1663, represents a continuation of FONTES 7, Gerbier's *Brief Discourse concerning the three chief Principles of Magnificent Building. Viz. { Solidity, Conveniency, and Ornament*, London 1662. Gerbier's *Counsel and Advise to all Builders* was printed in the first half of the following year, and it indeed presents itself as an extension of and, in some respects, the completion of the earlier *Brief Discourse*. And, in 1664, both works were printed together in a single book under the title, *The First and Second Part of Counsel and Advice to all Builders* (...), London 1664. In his remarks "To the Courteous Reader", Gerbier promises a subsequent "large work (with Copper Plates)", in which not only the forms and measurements of all the mouldings of the five orders would be illustrated, but also the columns, the ornaments of doors and windows, courts, houses, guarding-gates, together with some façades, and the dimensions of houses in the city and the country, and churches, towns, houses and steeples, with all the appertenances belonging to them. And he promises further to give the costs that a builder might anticipate when undertaking a building, according to its size ("extent" and "height") and according to whether it be built of stone or brick, or both. Gerbier's project for a large and magnificent architectural treatise was, however, doomed, and he met his death apparently before the year 1663 came to an end.

Following the electronic version of the TEXT of Gerbier's Counsel and Advise will be found "A biographical Note" and a "Bio-bibliography" for Balthazar Gerbier. These are corrected, revised, and amplified versions of similar texts found in FONTES 7. These texts are followed by an extensive "Glossary" of names of persons and places and of other words and technical terms relating to architecture and the building trades that may be in need of elucidation by some readers, including those unfamiliar with seventeenth-century English. The "Glossary" constitutes a commentary to the text, and it is followed by a modernised version of the text of Gerbier's Counsel and Advise, which also contains elements of commentary.

A Dutchman of French origin, Balthazar Gerbier (1592- 1663), is often presented as a somewhat quixotic figure who crossed the stage of Stuart England. Initially in the service of George Villiers (from 1618 circa), the extravagant Duke of Buckingham (died 1628), who had captured the affections of King James I. Gerbier also found favour with Charles I, who knighted him in 1638 and whose Master of the Ceremonies Gerbier became in 1641. As the Stuart monarchy was interrupted with the execution of Charles I at the beginning of 1649, Gerbier's fortunes came to a near stand still. When, following the more than a decade long interregnum of the Commonwealth, the Stuart Restoration came under Charles II in 1660, despite the aged Gerbier's efforts, his career never recovered in the brief period before his death in 1663.

The diffidence which later British commentators have accorded Gerbier's accomplishments as courtier, diplomat, painter, would-be architect, and architectural writer seems in contrast to the estimate of him held by Peter Paul Rubens, Gerbier's friend of many years (from 1625), who seems to have opened his heart in friendship to Gerbier's wife and young children during his visit of many months to London in 1629-1630, when he stayed in Gerbier's house. Stechow has doubted the picture of friendship between the two men, proposed by most writers. A few recent treatments (Freedberg, Chaney) have attempted a more balanced assessment of Gerbier.

More particularly, chroniclers of architectural writing in England have accorded little merit to Gerbier's two attempts to write brief essays on architecture ("slight tracts"; "neither important"). But, once dismissed, little effort has been expended to understand them. The opinion that Gerbier's literary works have little value is, at least in part, an echo of a remark of Samuel Pepys, in his diary for May 28, 1663, a remark regularly cited whenever Gerbier and his writings are mentioned and one which records that "At the coffee-house in Exchange Alley I bought a little book, 'Counsell to Builders', by Sir Balth. Gerbier. It is dedicated almost to all the men of any condition in England, so that the Epistles are more than the book itself, and both it and them are not worth a farthing, that I am ashamed that I bought it." (*Diary and Correspondence of Samuel Pepys*, London 1876, vol. II, pp. 223-224; most citations substitute, with relish, the word 'turd' for "farthing"). Despite Pepys dismissal of Gerbier's little book, subsequent commentators have nevertheless admitted that his descriptions in *Counsel and Advise* (1663) of building materials and their prices are among the earliest published in Britain, and thus a not insignificant contribution to English architectural history, and that his marginal remarks concerning contemporary building practices are illuminating and of interest. It is further acknowledged that the influence of Renaissance hermetic thought in his writings is exceptional. This is most apparent in Gerbier's repeated assertions that the dimensions and rules of architecture, including the orders and their proportions, were all directly prescribed by God, the "Surveyor of Heaven and Earth", for Noah's Ark and Solomon's Temple.

A BRIEF DISCOURSE CONCERNING THE CHIEF PRINCIPLES OF MAGNIFICENT BUILDING: Content and Outline

The content of both of Gerbier's two architectural treatises (1662, 1664) is architecture. The earlier treatise, *A Brief Discourse concerning the chief Principles of Magnificent Building*, with which we are concerned here, may in its first part reflect a lesson or lecture held in or planned for Gerbier's much earlier Academy (1648-1649). Gerbier's principal theme, as announced in the title, is "*MAGNIFICENT BUILDING*", and this theme is elaborated in terms of the three basic Vitruvian concepts, solidity, convenience, and ornament (*firmitas, utilitas, venustas*). Gerbier's exposition is practical, and it is developed with questions easily accessible to the layman. At the outset Gerbier explicitly eschews a discussion of geometry as the theoretical foundation of architecture, and he leaves a discussion of the classical architectural orders aside, giving precedence to themes that users of buildings readily understand: ventilation, heating, and the placement of windows, doors, chimneys; thwarting thieves and whores; leaking roofs and flooding cellars; sun, wind, rain, and drafts from window casements, and these considerations are interspersed with numerous and often entertaining references to exotic architectural usages in classical and oriental antiquity and in the New Lands, as well as to alternative architectural practices at foreign courts and in foreign lands, all calculated to arouse the curiosity of the insular Englishman. Conceived as an opening or introduction to the subsequent *Counsel and Advise* of the following year, Gerbier's *Discourse* attempts to engage the attention and interest of a wider public of cultivated readers who may not be, initially, concerned with the technicalities of the building trades but who may have the means and desire to build.

In the first section of the treatise (*D.*, pp. 1-28) the themes of 'solidity', 'conveniency', and 'ornament' are developed, if not perfunctorily, in terms of rather mundane considerations, the topics of which unfold in much the following sequence: the firmness of the ground for the foundations; a somewhat dismissive assessment of 'high architecture' as the true topic for

architectural treatises; the functional placement of doors, windows, and chimneys for practical use and comfort; navigation (staircases); the maintenance of buildings and the costs of maintenance; the siting or settings of buildings; the use of architectural models and the requirement to conform to the model in building; bricks and mortar; the need to accord freedom of action to the surveyor or architect in his execution of the project according to the model; the planning of costs prior to the commencement of building.

The second part of Gerbier's treatise treats the Palace of the Prince, and it is at this point that the *raison d'être* of the "magnificent building" of the title and the rôle of this consideration in the entire treatise becomes evident. A new Royal Palace was on the agenda of Charles II as early as 1660, when John Webb mentions "his Majesty's command to design a Palace for Whitehall". Here is surely the proper context for viewing the second part of Gerbier's *Discourse* of 1662 (pp. 28-44). With reference to the "Royal Palace" Gerbier develops a variety of topics. He begins with "Solidity", the first principle of architecture, and then turns to the requisite spacious grounds, the inner courts and offices, and the need to have the first story built in vaulted construction. Magnificence must be expressed on the façade and in the interior spaces in correspondence with the greatness of the Prince. To achieve these effects the architect himself must be possessed with an Alexander-like soul: "the lines and strokes of the architect must be *Alexander-like*: his figures and statues, *Colosses*, his *Pyramidis* like those of *Ægypt*". Here Gerbier's conception seems coloured by a trace of aesthetic sublimity.

Gerbier then turns abruptly to a long consideration of the Royal Stable, a topic which held great interest for him. The kitchen follows the stall: both demand ingenuity and careful workmanship, and in the Princely cookery preparations of the edibles are to be dainty, elegant, tasteful ('neat' and 'neatness'), which is more essential than the trappings of serving the edibles themselves. The prince's roof is to be covered in lead (as the Pantheon in "brass") or in blue slate. Finally Gerbier addresses the sources of greatness in the Palace of the Prince, in a notable discussion that touches upon the ultimate ends of architecture, a theme alluded to in the title of his work.

Gerbier concludes with a discourse apparently aimed at his rival Inigo Jones and intended, it appears, to demonstrate that he, Gerbier, can surpass Jones's achievements.

At the beginning of his *Counsel and Advise to all Builders* (pp. 1-4), published the following year, 1663, Gerbier offers a brief summary of his *Discourse* on 'solidity', 'conveniency', and 'ornament':

"A little manual which I formerly set forth (concerning the three chief principles of magnificent building, *viz. Solidity, Conveniency and Ornament*) do in the first place note the incongruities committed by many undertakers of buildings, who (both within and without doors) do confound the aforesaid principles. It notes how the Grecians and Romans (the best builders) have proceeded on undisputable Rules, not subject to fancies, for if men should be enslaved by weather-cock-like-spirits to make their buildings according unto things *a la mode*, especially of hats, bands, dublets and breeches; how might workmen laugh? And would not some (who cannot jeer without making use of scripture) quote *Ecclesiasticus*: "He that is hasty to give credit is light minded", chap. 19, v. 4. "And he that teacheth a Foole, as one that glueth a pot-sheard together", chap. 21, v. 7.

"Secondly, it notes how several great and judicious princes and magistrates have proceeded in their edifices, what they have shunned, and what they have curiously Observed; the particular care of Surveyours, their choice of materials, even to the preparing of their lime and

clay: The care of their bricklayers in laying of a foundation, and that they have been firm and resolute in their undertakings to proceed on a well composed model, since alterations in a well begun building are very prejudicial.

“Thirdly, it notes the distinction between the well ordering of the Palace of the Sovereign, and that of meaner Habitations; and it cites some remarkable structures, as that between Babylon and Espaham, at a place called Carimonsharan; as also several remarkable ones in Europe. It omits not the description of the princely stables, and the necessary offices to their palaces, (as well as rooms of state, for great festival shows, and ordinary use) It also points at several incongruities committed by Surveyours; and who minded more to show that they were skilled in describing of columns, pilasters, cornices and frontispieces (though for the most part placed as the wild Americans are wont to put pendants at their nostrils) than to have studied convenience, and what most necessary.”

Gerbier’s recapitulation is, if mainly retrospective, in part prospective, and aligned to the themes of his new treatise. Leaving aside the anecdotal components of Gerbier’s *Discourse* concerning the basic principles of magnificent building, which he introduces to leaven the matter, the basic aim of the *Discourse* becomes clear: it is to explain the basic principles of building to “lovers of building” in a way that will be useful and helpful to them, that is to men who wish to build. In this aim, ‘magnificence’ is an overlay or qualification, owing to the emphasis on princely building, which dominates in the second part of the treatise. Building itself is a necessity of all mankind, once it advances beyond a primitive stage of civilization, and the three principles of Solidity, Convenience, and Ornament apply to all architecture. These, in turn, correspond to the Vitruvian triad of *firmitas*, *utilitas*, and *venustas*, in their various formulations and permutations. Gerbier makes clear that *firmitas* (structural stability and durability) is the most important of the three parameters, and it is followed, first by *utilitas* (functionality and social decorum), and then by *venustas* (ornamentation and beauty), which never impedes strength or convenience. In a more detailed view of the contents of the treatise, we see that, following the brief introduction to his first principles, Gerbier turns to more concrete considerations which are listed below in a topical outline.

The first part of the treatise (until page 28) then treats the topics in the order as they are listed below:

- pp. 7-11: The placement of windows, doors, and chimneypieces.
- pp. 11-14: How stairs should be made.
- pp. 14-15: The maintenance and durability of buildings.
- pp. 15-16: Siting and the selection of land on which to build.
- pp. 16: Consultation of experts and the use of models in the building process.
- pp. 17-19: Windows: glass, frames, shutters, locks.
- pp. 19-21: Mortar and lime.
- p. 21: Foundations.

- pp. 22-24: The use of a finished and complete model as an invariable guide to the construction of the building; avoidance of changes in plan.
- p. 24: Bricks.
- pp. 24-25: Stone in England.
- pp. 25-28: The prior and careful advance planning of building costs.

In the second part of his *Brief Discourse*, Gerbier turns to a more specific theme, the palaces of rulers, and more specifically to the palace of the sovereign prince, the King of England (pp. 28-39). He treats the following topics in the order that they are listed below:

- pp. 28-31: Palaces of sovereign princes.
- pp. 31-35: Royal stables.
- pp. 35-36: The Royal kitchen.
- pp. 36-37: The Roof of the Royal palace.
- pp. 37-39: The main body of the Royal palace.
- pp. 39-40: Theatrical scenes, or scenery, and scenography (with criticisms of Inigo Jones and the Banqueting House: pp. 40f.).
- pp. 40-44: The greatness of the sovereign and his future Royal palace, to be built to match the sovereign's greatness; greatness in architecture is not equivalent to greatness in size.

COUNSEL AND ADVISE TO ALL BUILDERS: Content, Structure, and Outline

The tone of the second treatise is more sober and workman-like. Here practical counsel and advice to owners and builders stand in the foreground, and the treatise represents the point of arrival for the *Discourse* of the previous year. If the first treatise reads at times as Gerbier's advertisement for himself, in *Counsel and Advise* self-promotion plays a far more limited and secondary part. The later treatise, which is explicitly presented as a continuation of the first – through frequent references, extending even to the inclusion of a lengthy “repetition of the summary contents of the former printed Discourse” at the beginning of the new “manual” –, does however allow Gerbier an opportunity to present his not inconsiderable knowledge of and experience in the practice of building and in the building trades, and thus it offers an occasion to demonstrate his capacity as a building supervisor. These services are also promoted in a rather extraordinary number of dedicatory epistles to “eminent persons who may be concerned in building”. As has been seen, for Samuel Pepys the dedications were so many that they appeared to be addressed “almost to all the men of any condition in England”, but to justify their number Gerbier adduces the precedent of Antonio Pérez (1534-1611; “once Secretary of State to Philip II of Spain”) in his treatise *Peregrino*, dedicated to

“eminent persons”, not only in Spain, but in France and England (see Pérez’s pseudonymous *Pedaços de Historia o Relaciones* [...], published under the name of Rafael Peregrino). Gerbier writes that his treatise concerns building, a matter of public interest, and of interest to a number of addressees, who, they or their friends, “may have occasion to make use of it [in building]”, and thus it is freely offered to all – democratically –, “freely offered as to the upper, so to the lower end of a Table, like a fresh gathered Fruit”. Moreover, none of those who accept it, are “craved to patronize it”, and hence the dedicatory epistles are not presented as ‘begging’ letters. In a second issuing of *Counsel and Advise*, in the same year, Gerbier made a change in the order of the dedicatory epistles, and an additional one to Sir William Killigrew was added. A new, second edition of this work was published in 1664 without the epistles, and this electronic edition (*FONTES* 8), also omits them. They will be supplied in a subsequent number of *FONTES*, which will constitute Gerbier, III.

Gerbier’s *Counsel and Advise to all Builders* has, until this point, been described as a treatise, and a treatise it is, if by ‘treatise’ we understand a written work, written formally and methodically with a subject, or, with even less definition, as a literary work, a book. Gerbier even refers to it as “this Treatise” (fol. g 3 *verso*), but in his table of contents (fol. [g 6] *recto*) he lists, “The contents of this MANVAL”, defining his genre more exactly. In addition, he writes of “This little Manual” (g 2 *recto*), “this manual” (g 2 *verso*), “these summary notes” (g 3 *recto*), and “this Manual” ([g 4] *verso*), and, on page 1, he calls his *Brief Discourse* “a little Manual”. While in a general way, *Counsel and Advise to all Builders* is doubtless a treatise, it is not a genuine architectural treatise as such. It does not pretend to be a written account of the general principles of architecture, treated systematically or formally. It does not attempt a theoretical exposition of architecture, nor seek to align architecture with the sciences or with the liberal arts. One might consider his treatise a tract, as a pamphlet treating, even advocating a particular topic. But Gerbier’s “little Manual” is aimed at consumers, builders, a small book, a handbook, a concise treatment or even a summary intended for consultation, and Gerbier’s self-definition of his work as a ‘manual’ is a convincing description of its genre.

On the two pages preceding page one of his *Counsel and Advise to all Builders*, Gerbier provides a table of contents to his “manual”. It reads as follows.

THE CONTENTS OF THIS MANUAL.

- 2 *A Repetition of the summary contents of a former printed Discourse, concerning the three chief Principles of Magnificent Building, to wit, Solidity, Conveniency, and Ornament.*
- 3 *The choise of a Surveyor, how to try him, and what his duty is?*
- 4 *The choise of a good Clark of the works, and what he is to do?*
- 5 *The duty of all Master Workmen.*
- 6 *The severall proportions of the five Orders.*
- 7 *Particulars to be minded by all Builders.*
- 8 *Rates and Prises of Materials, and of the severall works belonging to the Building.*

- 9 *That those who Build, or Build not, will (as those who marry, or marry not,) have just cause to repent.*

Gerbier begins the numeration of his topics with the number two instead of the number one, and, in addition, the order of topics within the book does not entirely reflect his initial outline. Gerbier's topic number 6 is in fact subsumed in his topic number 4 (our III. [4]). The following table reflects the realities of the treatise and furnishes the page numbers on which the topics are treated, retaining the terms of Gerbier's summary account of his treatise.

THE CONTENTS OF THIS MANUAL. [c. g 6 r-v]

- I. [2] A *Repetition of the summary contents of a former printed Discourse, concerning the three chief Principles of Magnificent Building, to wit, Solidity, Convenience, and Ornament.* (pp. 1-4)
- II. [3] *The choice of a Surveyor, how to try him, and what his duty is?* (pp. 4-24)
- III. [4] *The choice of a good Clerk of the works, and what he is to do?* (pp. 24-58)
- IV. [5] *The duty of all Master Workmen.* (pp. 58-61)
- V. [6] *The several proportions of the five Orders.* (As a separate chapter, in this position the Orders are omitted; this material is included in Chapter III [Clerk-of-the-Works], pp. 29-41.)
- VI. [7] *Particulars to be minded by all Builders.* (pp. 61-62)
- VII. [8] *Rates and Prices of Materials, and of the several works belonging to the Building.* (pp. 62-92)
- VII.bis [More advice to Builders.] (pp. 92-102)
- VIII. [9] *That those who Build, or Build not, will (as those who marry, or marry not,) have just cause to repent.* (pp. 102-110; the specific topic: pp. 104-108) [= Concluding Statement]
 - (a) Refers to the first printed *Discourse*, concerning Solidity, Convenience, and Ornament (pp. 102-103)
 - (b) The choice of the Clerk-of-the-Works (pp. 103-104)
 - (c) Comparison of the regrets of building and those of marriage (pp. 104-108).
 - (d) Expenditures in building. (pp. 108-109)
 - (e) Good wishes to builders. (pp. 109-110)

ERRATA CORRIGE (p. [111])

COUNSEL AND ADVISE: SUMMARY AND ANALYSIS

Following the second outline above, the summary and analysis of Gerbier's *Counsel and Advise* provides a reading of each of the nine sections of the treatise, attempting to identify the purpose and function of each, to define the content and character of the treatise, and to isolate the significant ideas and points of view proposed. This method reveals more clearly the aims of the treatise as well as aspects of its interest as a testimony to the history of architecture in its time, when read in a social perspective.

TO THE COURTEOUS READER:

The book opens with Gerbier's foreword to the reader, his "To the Courteous Reader", with, in its formula of address, a slight trace of formal, respectful deference. Departing from an initial assumption that all creatures – from sightless moles to the most Argus-like men – are continually building, Gerbier sees that these are, then, all builders, ones in need of practical more than of philosophical rules. Gerbier begins immediately to define the nature of his treatise, its aims, and the public for which it is destined. Practical and empirical in character, his little "Manuall" is aimed at men, owners and proprietors, who want to build – noblemen, landowners, rich bourgeoisie –, and it formulates practical advice and counsel for them and for the men they entrust to supervise the construction of their buildings, Surveyors and especially Clerks-of-the-Works. The question of *lessico*, or vocabulary, arises immediately on the first page: Gerbier will use plain, intelligible terms, the words the workmen use and understand. He does not aim to rival continental treatises on architecture, but intends, instead, to serve those entrusted by Owners of Buildings (Trustees, Stewards, Pay-Masters) to oversee the building of the works, working with English Master Workmen and Labourers.

Numerous contrasts emerge from Gerbier's initial remarks, terms which serve to characterise his book (in the terms corresponding to the second term of each contrast): the Philosophical *versus* the Mechanical; Architecture *versus* Construction, Building, or Architecture high and low; Design *versus* the crafts of construction; Architects and perhaps surveyors *versus* contractors, builders; the intellectual, theoretical Treatise *versus* the Manual, a practical handbook; Latinate, Vitruvian vocabulary *versus* plain-spoken, workshop words; the noble, cultivated Patron *versus* Workmen and manual labourers; the Grecian and Roman manner, Paris and Rome, the "Scæne" and the "Tiber" *versus* England town and country.

Gerbier's is, of course, in part a literary pose. His many dedicatory epistles are addressed to the high and mighty of the land, and his 'plain-spoken' text is interspersed with words, phrases, and topics "a-la-mode" calculated to appeal to a more elevated patronal taste. Gerbier announces a future princely *folio* work with copper plates to cover the terrain of architectural design – the forms and measures of mouldings, of orders, columns, ornaments of doors and windows, courtyards, houses, gardens –, and he attempts a justification of the very many dedicatory letters prefixed to his work, which is, he maintains, in the public interest, as it is about Building, a universal topic, as he had defined architecture or building as necessary and socially useful. His public, his readers are then those who, themselves or their friends, may want to use it in actually building.

CONTENTS:

The address to the Reader is followed by “The Contents of this Manual”, which was reviewed above, and it, in turn, is followed by the text of the treatise proper (pages 1-110).

COUNSEL AND ADVISE:

The treatise begins with a rather detailed and clearly organized summary of the earlier *Discourse concerning the three chief Principles of magnificent Building, Solidity, Convenience, and Ornament*, as quoted above (pp. 1-4). Then Gerbier turns to the matter at hand, writing, “I shall now in the following lines treat more on the matter by way of Council and Advice to all Builders, *etc.*” First he addresses the question of the Surveyor, and then he turns to the Clerk-of-the-Works.

SURVEYORS, Selection, Trial, Criticism:

Part II. [3]: “*The choice of a Surveyor, how to try him, and what his duty is?*” (pp. 4-24)

Gerbier’s *Counsel and Advise* is not a normative manual for architects or for architectural design. The architect is not the protagonist of the treatise, and this becomes very clear in Gerbier’s treatment of the Builders’s “choice of their Surveyors” – “The choice of a Surveyor, how to try him, and what his duty is?”. In what Gerbier writes the emphasis is on the process of selection (“choise”), the trying, testing of the aspirant architect, more than an enumeration and description of his rôles (“duties”). Many reservations concerning the architects of Gerbier’s own time are registered, and the latter part of the treatment of the surveyor devolves into a series of general maxims and considerations about building and buildings which the owner could as easily understand as the surveyor and which, indeed, the owner might use to evaluate his architect’s performance. One result of Gerbier’s advice is that it allows the owner-builder to retain the reins in his own hands. The architect is not proposed as a candidate for a position as a trustee of the owner, one who will supervise the building process.

Gerbier’s concluding remark in this section reads: “Finally, he [the surveyor] ought from time to time to visite the work, to see whether the Building be performed according to his direction and moulds.” This formulation, which at a first reading might seem to prescribe a supervisory rôle for the architect, in reality underlines his extraneousness to the concrete process of building. First, the architect’s only ‘true’ rôle is that of the designer, the furnisher of the design, and, second, his supervisory rôle is to be exercised in time only intermittently and irregularly. The surveyor is not entrusted with the day-to-day supervision of the building process, and thus the design of building and the supervision of the construction are conceived as two distinct and separate functions in the building process. In Gerbier’s paradigm of building the architect is set at the sidelines of the central organizational problems of a construction project, as a kind of design consultant but not a supervisor. His architect is slightly less than the architect in a classical sense, as the creator and designer of buildings.

Gerbier advises the builder on how to choose his architect. He proposes that the builder subject aspiring ‘candidates’ to a sort of ‘audition’ or interview (“How to try the capacity of a Surveyour”, p. 9). Have him draw a ‘Ground Plot’ in the builder’s presence, and let him describe the best place for a building site, the ordering of the rooms, the placement of win-

dows, doors, chimney-pieces, etc. Gerbier's notable reservations concerning the Surveyor lead to an extended critical digression aimed at the run-of-the-mill surveyors of the day. Here Gerbier observes that now many "modern and daily [*present-day*] buildings" are "so exceedingly defective". Gerbier lays this "ill-building" at the doorstep of architects, who (1) have too little experience, (2) are more interested in financial gain than in good building, and (3) are blind to the mistakes of their workmen (p. 8; cf. p. 4: the surveyor's "incongruities"). All of these are valid reasons not to trust surveyors as the trustees of the owners and as building supervisors. Gerbier's implicit advice to the owner is to not entrust architects with this function (see also p. 104). Similarly, many architects had advised patrons not to rely on contractors to do their building.

The indispensable knowledge and skills of the architect are presented as the art of drawing and perspective, and the architect must understand fitness ("conveniency") or decorum (the owner-builder in relation to the social function of the building, its purpose and use). Gerbier defines the surveyor's rôle as the "Architect of the compleat Fabrik" (*D.*, p. 23); he must furnish a "finished Model of the entire Design", and the necessary drawings and templates for its execution by the master workmen (*D.*, p. 22; *CA.*, p. 5: "Draughts, Models, Frames").

Thus the architect is seen almost exclusively as the designer of the building, one who furnishes a project in drawings and models, but with little practical responsibility for supervising the erection of buildings, beyond a largely *post facto* inspection to determine the correctness of the execution. In 1567 Philibert De L'Orme saw a similar separation of the intellectual planning of the architect from the executive process of building performed by supervisors, *capomastri* and the *maestranze*, when he defined the rôle of the architect, stating that he was not to be also a builder. For Alberti the architect is not a carpenter or a joiner; the manual worker is instead his instrument. Gerbier, at more than one point in his texts (*D.*, pp. 16-17, 22-23; *CA.*, p. 3), emphatically urges owners not to deviate from the architect's plan or model, once it is established.

After the surveyor is 'tried', Gerbier turns, rather than to a discussion of the architect's competencies, to a rather long series of considerations which very nearly constitute an elaborate check-list by which the owner might evaluate his architect, a set of practical considerations ranging from façade disposition, to the placement of windows and doors, the disposition of rooms, the avoidance of "rediculous ornaments", etc. Here proscription plays a leading rôle. Practical maxims and rules of thumb tell the builder how to avoid mistakes and errors. Advice is more utilitarian and functional than aesthetic and artistic. There are quite general guidelines for avoiding mistakes caused by ignorance and which lead to "ill-building", a frequent object of Gerbier's scorn. The author contrasts the "ill-built Palace" with the "compact Building" (firmly put together, embodying solidity, or *firmitas*), the latter holding the promise of continuing "the Name and Memory of the Builder" for posterity, enhancing the owner's posthumous repute, just as "a stock of children" will carry his name forward in time (p. 5). As a warning to the owner-builder, the reward for building well is set against the penalty for building poorly, "since an ill built Palace leaves a perpetual reflection of Ignorance on the Builder"!

III. [4] *The choice of a good Clerk of the works, and what he is to do?* (pp. 24-58)

This section of Gerbier's brief treatise is notable for its length, thirty-five pages, although it should be noted that this section also includes Gerbier's treatment of the five orders of architecture, with, in addition to the Clerk's rôle in communicating their forms to the masons, a more general consideration of their proportions. Gerbier's treatise is unusual in the attention it devotes to the administrative function in the process of building. Earlier treatises had accorded the most prominent rôle to the architect, and to a lesser extent to the several masters of the building trades who materially executed the construction. Scamozzi's invectives against the '*capomastro*', almost in the sense of a '*capocantiere*', afford some insights into conflicts and problems arising in the material execution of the architect's designs, but in general the quite significant part played by building administrators, with various competencies, in the erection of buildings is neglected in architectural treatises and, at least in Italy, these far from secondary figures in the operation of a building enterprise have often been neglected by architectural historians.

Gerbier writes that "The second choice to be made, is, that of a fit Clerk of the Works", but before he comes to the question of choice (which he effectively never reaches, except by implication), he describes the duties and responsibilities of the Clerk-of-the-Works, "what he is to do", and his description enumerates a perhaps surprisingly large number of functions that the Clerk performs. In the list that follows Gerbier's specifications have sometimes been made slightly more explicit or rendered in more current terminology.

- (1) The Clerk need know the prices of materials.
- (2) He needs to know the "rates" of all things pertaining to building, that is, the amount, degree, *etc.*, of anything in relation to units of something else, *e.g.*, the rate of pay for a day or a week.
- (3) The Clerk must know where the best prices and rates are to be had.
- (4) He must provide materials to the workmen; that is, he is responsible for procurement and supplying the building site.
- (5) He should avoid delays in the supply of materials and in other matters, *e.g.*, he must coordinate the proper sequence of building operations and mobilize labour, so that one group of workmen will not be kept waiting to continue work until that of another group is supplied. Thus he must assure a steady supply according to a schedule of deliveries. A schedule of deliveries implies an equally explicit schedule of work.
- (6) He should note in his book (a sort of bookkeeping journal, or daybook, of daily receipts and expenditures) the arrival of materials and of all the essential requisites for building as they are supplied. Here the Clerk's rôles as comptroller, bookkeeper, and accountant begin to emerge clearly. The Clerk is explicitly identified as "a controulr" over the Master workmen (p. 104), and the title controller, or comptroller is used in the sense of a person in charge of expenditures and finances as in a business, government, *etc.* In Gerbier's view the Clerk still unites administrative and accounting functions. His accounts were probably subject to audit and would have been rendered or submitted to the builder, but Gerbier is not explicit on this point (cf. point 12, *infra*).

(7) He is to distribute materials in an orderly and timely fashion.

(8) In the distribution of materials he must exercise discretion, seeing that the workmen do not gain a margin for waste, and be watchful that materials are not subtracted from the *cantiere* by thieving workmen.

(9) In general, the Clerk must be exceedingly watchful of the workmen, and the extent and variety of supervisory items identified by Gerbier imply that the Clerk will be present, if not continuously on the building site, at least very, very frequently and regularly. This constant watchfulness, vigilance, and supervision aims not only to avoid waste and theft, but also to see that the work is performed well and without avoidable damage to materials, and further to avoid that inferior materials be employed (in particular, bricks of inferior quality or stones with sandy veins) and to see that the preparations for work are carried out carefully and that short-cuts are not undertaken which will impair the final work. There seems no end to the potential misdeeds of the workmen which must be guarded against – their hands must be constantly watched, and their feet as well, for their tendency to idleness and “lazinesss” – even to walking off the job – was, in Gerbier’s eyes, very marked. Specific directives are issued for each category of craftsmen and workmen, all of whom appear as objects of distrust.

(10) The Clerk must ensure that the various building operations are performed in the proper seasons, when newly laid or set work will not be damaged by changes in weather.

At this point Gerbier turns to his long discussion of the architectural orders (p. 29-42). It is formally part of his consideration of the supervision of the masons: the workmen must observe exactly the surveyor’s “Molds” (templates) and work close and clean joins with little mortar between the stones, but it is in reference to the dimensions of the orders that the masons are to observe in their work that the five classical architectural orders make their appearance. Gerbier’s treatment of these will be outlined below (see ORDERS, *infra*), but in Gerbier’s subsequent discussion several more functions of the Clerk-of-the-Works emerge.

(11) *Instruction and Motivation:* In executing the architectural orders, the surveyor’s prescriptions must be observed, but beyond that the Clerk’s task seems to be to see that the masons understand and observe the general rules of the orders, and thus the good “Clerk of the works” will “call upon every workman of the masons to see them perform according unto such exact patterns” (p. 38), which seems another instance of Gerbier’s liking for trial performances and examination, in what appears to belong to what, with only little exaggeration, might be called a pattern of distrust – the suspicion of the surveyor is followed by the suspicion of master workmen and labourers – a distrust which embraced indeed all parties that might incur costs to the building fabric. And, almost paradoxically, Gerbier later states that the Clerk shall indeed recommend to the Workmen “committed to his charge” that “they work for perpetual fame”, as do “most of the *Italians*”. The Clerk must also seek to keep masters and workmen committed to the building project, bearing responsibilities for labour management and discipline, exercised perhaps first of all through monetary incentives and disincentives.

(12) *Bills and disbursements:* The Clerk-of-the-Works must examine carefully the bills submitted to him, bills which he must attest, *e.g.*, “as on materials of weight, as ‘Sauder’ (*solder*), wherewith an unconscionable Plummer can ingrosse his Bill” (p. 47) – the solder must be weighed and well-managed. The attesting of bills suggests that the Clerk himself was subject to accountability.

(13) *Supervision of appraisal of quantities supplied*: So too must the “Measurer of the Work” be watched, to ensure that he does not measure to the disadvantage of the building works (p. 48).

(14) *Quality control*: Not only quantities must be checked, but the quality of supplies as well: green glass panes must not be substituted, when white panes are paid for (p. 47).

When it is the turn of the carpenter, Gerbier issues a number of caveats concerning their performance, and he paints a picture of careful and close supervision of their work, drawing up almost a catalogue of the tasks that they perform, with quite specific glosses of the principal mishaps and misdeeds in which they may incur, all of which the Clerk must be very careful not to suffer, in all, a close, hands-on, ‘eyes-on’ operation.

Finally, the Clerk himself should be subject to the censure of the Surveyor at the point in time when materials are delivered. As mentioned, his accounts might be inspected and audited.

Gerbier does not treat of the Clerk’s responsibility for the maintenance of the building, but his awareness of this question emerges clearly in his *Brief Discourse*, when he reports approvingly that “the Duke of Arscot, who built much in Brabant, and designed in his Will ten Thousand Guilders *per annum*, to support and alter what he had built amiss” (pp. 15-16).

ORDERS:

Gerbier’s treatment of the architectural orders proceeds almost exclusively in terms of a modular system of proportion with reference to the dimensions of the columns and of the orders, extending to cover the proportional dimensions of arches or porticos, or, as he calls them, “galleries” (both with and without pedestals). This approach might suggest Gerbier’s familiarity with Vincenzo Scamozzi’s *Idea dell’architettura universale* (Venezia 1615), with its notably detailed treatment of modules, but the numbers of the modules that Gerbier prescribes for each of the five orders do not match those given by Scamozzi, and Gerbier may have relied on the more recent work of Roland Fréart, Sieur de Chambray (1606-1676), the *Paralleled de l’architecture antique et moderne* (Paris 1650), where the orders of all earlier theorists are critically compared with selected ancient Roman examples. In 1664 John Evelyn issued a translation of Fréart’s *Parallel* between ten principal writers, Italian and French, on the orders. Gerbier’s prescriptions are proposed as binding rules; he writes of “the Indisputable, best and truest proportion to be observed therein (...)”, and of the “perfect shape of the said order [Tuscan]”. He speaks further of comparing “all the best grounded Authors of the *Greeks* and *Romans*” (as Fréart had done), and refers to the “Rule of the Ancient Masters, whose Reliques (*relics, remains*) [are] to be seen throughout most places of *Italy* (...)”. The reliance on authority appears to be based on (1) continental architectural treatises and (2) the remains of antiquity in Italy.

A closer examination of Gerbier’s treatment of the orders might clarify its sources and character and determine if his treatment of the question might make claims to originality. In any event, Gerbier appears to have considered his sources and not to have copied blindly. He is concerned with the mason’s ability to translate the dimensions of the modular systems (“Models” [‘modules’] in the masons’s “Vocation phrase”) into stone. He proposes rules of thumb, somewhat simplified, for the mason’s convenience, and treats or ‘translates’ the

Latinate nomenclature of the forms of the orders into simpler, everyday names for better communication with the workmen. He is sensitive to the distinct character of the several orders and to their interrelation when combined with one another, as well as to the rôle of perspective in the application of the modular systems and to the advantages of proper proportions for structural stability and for the durability of buildings. In addition, Gerbier advocates the adaptation of the ornaments of the orders to the particular “genius” of the owner-builder (“warriors”, “men of peace”, etc.). Nor does Gerbier omit to introduce the “Microcosme Man”, the Vitruvian figure with a “perfect concordance among the dimensions of a man’s body”, as a correlative justification of the modular system of proportions.

MATERIALS, LABOUR, AND RATES:

Following the two sections devoted first to the competencies of the Clerk-of-the-Works (the question of his choice is never directly broached) and then to the architectural orders, Gerbier turns to the third topic considered under the rubric ‘Clerk-of-the-Works’: a discussion devoted predominately to building materials – timber; foundations; roofs of lead and slate; bricks and bricklayers, making and pricing; lime and burning lime; paving bricks – including prices and cost of these. The Clerk’s expertise concerning building materials and workmen’s labour, their procurement and costs, constitutes one of his central competencies. All of this underlines that the Clerk-of-the-Works must have technical knowledge of materials and of their working and prices. Gerbier considers further the advantages and disadvantages of the owner-builder obtaining materials, such as timber or clay for bricks, from his own lands or from external suppliers. Self-supply may entail further supervisory capacities for the Clerk, and in the treatment of materials many of the same supervisory functions mentioned above recur, including the Clerk’s ability to estimate the quantities of stone, timber, and brick required to erect a building of determinate dimensions. The discussion of material includes a substantial quantity of technical information about building materials that extends beyond the description of the Clerk’s rôle, but which serves to demonstrate Gerbier’s expertise in this area.

THE CLERK:

What Gerbier describes for the Clerk-of-the-Works is a fairly expansive position at the head of the execution of the building, a kind of manager beside the architect as a designer, but actually assuming nearly all the executive functions that might have accrued to the surveyor, and a supervisory position over the Master Workmen, who are responsible for their workmen but who do not assume a rôle as a ‘*capocantiere*’. A perhaps initial administrative function as scribe and bookkeeper seems to have expanded beyond the systematic recording of building transactions to assume many more functions and competencies, demanding a more specific technical, economic, and financial knowledge of building in a broad sense. The Clerk has become at once the comptroller, bookkeeper, and accountant. But the Clerk has become much more than a financial administrator. He is an overseer whose purview includes not only the overseeing of expenditures for materials and payrolls and the overseeing of constructive procedures, but also elements of quality-control, cost-control, protection and conservation of inventory; he becomes an efficiency expert; he is charged with the procurement, supply, and distribution of materials and labour, with the organization of work and of the work force (personnel), one charged specifically with the responsibility for the workmen, a charge requiring a very substantial presence at the work-site and a significant rôle in the day-to-day operation of the *cantiere*. He assumes an instructional rôle vis-à-vis the work force when he

attempts to transmit to the workmen the formal vocabulary of the (in England) still-new classical style and to motivate the workmen to work well and for ideal motives (“perpetual fame”). He has expertise in the measurement of size, distance, and weight and knowledge of the cost, prices, and rates of materials, manufacture, and labour. He is possessed of technical knowledge of materials and their working, if not the manual skills of execution, and he has a knowledge of markets. He is the trustee or delegate of the owner, a builder, who because of other commitments or a lack of desire, does not follow the execution of the building process in person, but who chooses to entrust it to an expert building administrator or supervisor. His status and educational and cultural preparation (as a literate and educated layman, with financial skills) is distinct from and superior to that of the men who work for him, and thus, unlike traditional master masons, he is not a first among equals, but marks a distinct fracture in the stratification of building. Unlike a foreman, who works and supervises, the Clerk only supervises. If not an architect, he has assimilated the culture of the new architecture, having mastered Vitruvian language and being possessed of the knowledge and ability to translate it into the words of the building site. In short he has become, at least in Gerbier’s formulation of this position, a major protagonist in the process of building. The imperative for supervision is necessitated by the complex division of tasks on which building itself is predicated. In short, Gerbier’s Clerk-of-the-Works has been placed at the centre of the entire construction process, charged with organizing the works of building, the *fabbrica*. All the managerial and administrative problems in coordinating the components (materials, work force, finances, logistics) that have to come together to get the building built pass through his hands. He organizes the unusually complex elements of production that characterizes the building industry and upon which it is predicated.

Gerbier’s Clerk-of-the-Works was not necessarily an official in a public office as part of a large centralized regime such as the King’s Works, but he might be employed as a manager and overseer by private patrons, “lovers” of building (*D.*, p. 1) or “lovers of Art” (*CA.*, p. 41). In his fortieth and last dedicatory epistle of the *Counsel and Advise*, to William Winde (‘Wine’), the Earl of Craven’s godson who completed Hampstead Marshall following Gerbier’s death, Gerbier offers a detailed description of drawing plans for fortifications as well as habitations, drawn strongly and in colours according to material and function. ‘Clerk-of-the-Works’ is an established title in English architecture (see the Grove-Macmillan *Dictionary of Art*, 7, p. 420). The term ‘Purveyor of the Works’ is occasionally used with a similar meaning, but this term appears to be fairly recent in origin (see especially Richard Goldthwaite, *The Building of Renaissance Florence*, Baltimore: Johns Hopkins Press, 1980, pp. 159ff. *et passim*). ‘*Provveditore*’, an office with a long history in Italy, is a near equivalent.

MASTER WORKMEN, The Selection and Regulation of Master Workmen:

The brief section concerning ‘Master Workmen’ (IV. [5], pp. 58-61) elaborates, for the Builder and his delegates, criteria for selecting and regulating the master workmen to the end of obtaining a maximum of good and timely work for the proprietor of the building. Here, too, advice is both prescriptive and proscriptive. Master workmen shall be stably employed by the works and not journeymen, who wander from building site to building site; they shall lead their men, working directly with them. Work is to be performed and delivered according to a pre-established time schedule, and it is to conform to the building plan of the surveyor, as conveyed by models, drawings, and templates. Master workmen should be responsible for paying their workmen, and wages should be held low so that workmen do not accumulate money in their pockets and decide to leave the works for other building sites. The concrete tasks and duties of the various master workmen are not treated in this section, as Gerbier’s

initial outline suggests, but they are enumerated in the pages devoted to “Rates and Prices” (*infra*). The Master Workmen are seen almost entirely from the proprietor’s, or builder’s perspective, and Gerbier’s advice aims to further the owner’s interests. Building is a labour intensive process and labour its primary resource, and thus the mobilization of labour through the master workmen was essential to building.

ADVICE AND CAVEATS FOR BUILDERS:

The “Particulars to be minded by all Builders” (VI. [7]) are quite brief (pp. 61-62: “As for the Builder and Proprietor”). The Owner-Builder shall himself procure his own materials and have them worked, keeping a good supply in hand for all eventualities, especially to make good the mistakes of the workmen, who require much patience. The Builder must further always observe the three chief principles of building outlined earlier in Gerbier’s *Brief Discourse*. Actual construction should take place only between March and September (a prescription implying for the workmen many months each year without wages).

RATES AND PRICES:

The long section devoted to “*Rates and Prices of Materials, and of the several works belonging to the Building*” (VII. [8], pp. 62-92: “As for Prises”) contains further advice to the builder, with regard, in particular, to financial considerations relating to the usual quantities or anticipated costs for given quantities or units of materials and of labour or services supplied by the building trades and master workmen, clearly a question of primary interest to a man who contemplates undertaking to build. This somewhat unusual component of Gerbier’s treatise had been the principal topic of a brief treatise which had appeared only four years previously: Thomas Wilsford, *Architectonicae, or the Art of Building*, London 1659, but Wilsford’s work is much more technical in nature and has a far more limited perspective, although it contains valuable information concerning contracts and the assessment of completed work. Only in eighteenth-century England do such ‘price books’ become fairly frequent.

First the various materials of building are treated in terms of what they cost to buy: bricks, tiling, flints, slating, and timber, the last considered in detail, the several varieties of wood, as well as standard cuts of timber and the sources of timber supply. There follow the main parts of the building: roofs, frames, partitions, doors, windows, ceilings. In the discussion of what the Master Workmen and their subordinates cost, there emerges a detailed picture of what they do (their “duties”) and what they furnish to the works: stone carvers, playsterers, glaziers, house painters, smiths, plumbers, masons. For these, see the relative entries in the *Glossary*.

In general terms, Gerbier counsels that prices are variable over time, and he urges the Builder to weigh considerations of what is best and what is cheap, to consider the costs of labour in relation to the costs of materials, and to consider further the differences between building in the city (London) and building in the country. At the end, Gerbier appends a brief section concerning building prices in Holland (pp. 90-91), a section which testifies to his direct interest in and knowledge of ‘rates and prices’ and which suggests that the prices he gives for materials and labour in England are not merely derivative from other sources.

MORE ADVICE FOR BUILDERS:

In Part VII bis (pp. 92-102), a section not included by Gerbier in his topical outline (“Contents of this Manual”), the author continues his advice to all Builders (“Particulars to be minded by all Builders”), remarking that “to compleat these matters, I shall note what is most necessary”, and he thus begins to move toward a conclusion. This section includes a number of general considerations. It urges seeking new sources of less expensive building material, including importing timber from foreign sources. This perspective extends to the choice and sources of the work-force as well.

There appears, at this point, an extended section, almost a digression, devoted to thieves. First Gerbier complains of “ill Building” and “ill Builders”, both apparently common: the buildings – “Paper-like walls, Cobweb-like windows, doores made fast as with Pack-thread” – are vulnerable to thieves. For Gerbier thieves are rampant, even in “northern Nations”, and he is greatly concerned with securing building and their inhabitants against theft. The edifice appears to be seen as a safe-box, secured and armed with shutters, doors, iron bars, locks, and bolts. Security may not be a high priority in the art of architecture, but it was of the greatest interest to owners of properties both in the city and in the country, that is, to the public of Gerbier’s treatise.

Then Gerbier moves rapidly to his last points of general advice to the builder. He relates succinctly the choices to be made relating to siting and setting, the extent of the courtyard, the problems a Porch or Portico may bring with it, the requirements of an entrance Portal, chimneys, the main staircase, cellars, the finding of good air and the avoidance of bad air, all basic considerations in the planning of a house.

CONCLUSION:

At this point Gerbier arrives at the proper conclusion to his treatise (“To take my leave of all Builders, I must conclude with what followeth.”; p 102; VIII. [9], pp. 102-110). Before coming to the topic announced in the table of contents – “*That those who Build, or Build not, will (as those who marry, or marry not,) have just cause to repent.*” –, Gerbier urges the reader to join his two treatises together, and not to be tired by the practical terminology and names of the building trades, even as workmen are wont to scoff at those who use polished language. He, Gerbier, has aimed, in the place of Persons of “Eminent Quality”, to write in terms workmen will understand (“workmen-like termes”), so that these words may serve for a Clerk-of-the-Works to speak to them and be understood, a reiteration of the public to whom the treatise is addressed, Builder and their trustees, administrators, and supervisors who represent the proprietors in the actual building, as, for instance, Gerbier had done for the Duke of Buckingham at York House in the 1620s.

Gerbier’s second concluding point concerns now the choice of the Clerk-of-the-Works: he must find acceptance by the Master Workmen, but he cannot himself be a Master Workman who works alongside the other workmen, as the other masters will suspicious of him and not follow his instructions. The owner must choose a trustee he can trust, and then give him his trust. Here Gerbier recognizes that the Clerk is entrusted with the owner’s personal interest and that he is responsible for the owner’s property, and thus the owner must have full confidence in his chosen Clerk.

Only at this point does Gerbier reach his comparison between building and marriage: both will give cause to repent, while both bring rewards. This theme is conceived as one of what Gerbier considers his “recreative passages”, to give a finish to the work that is pleasing to the reader. It is, ultimately, an argument in favour of building: the builder must not inhabit a house built to fit the fancy of someone else; he pays no rent; makes no expensive alterations; he will delight in spending on choice materials, in possessing a store of precious woods, and may perhaps become profitably engaged in the timber trade with distant and exotic places.

Finally Gerbier bids his builder well, builders of palaces and of private habitations: may they all have good success and possess their habitations in peace and prosperity. And may his interlocutors, the Surveyors, Masterwork men, Journey men and Labourers all “behave themselves as they ought”.

AN ASSESSMENT OF GERBIER’S *COUNSEL AND ADVISE*:

Students of architectural writing in England have failed to grasp the interest and significance of Gerbier’s architectural treatises, according them very slight importance. Without attempting to accord Gerbier an undue status, it must be admitted that the lists of prices and rates in his work do not exhaust the points of interest his work holds. Certainly his work cannot be set beside the works of the Italian and other continental theorists, from Alberti, to Serlio, Vignola, Palladio, Scamozzi, and others. His aim was not architecture in their sense. He disclaims any ambition to rival continental books on architecture: “Nor is this present age void of a number of Authors, who have written more on Architecture than any Clark will have time to learn by heart” (CA., fol. g 3 *recto*), or “in this refined age, which abounds in books, with the portraictures of the out and inside of the best buildings” (p. 7-8; cf. p. 41). As has been said, Gerbier’s intention was not to write a normative manual for architects treating architectural design. That might have fulfilled the expectations of a Samuel Pepys, who in any event was never engaged in building, and who also acquired Gerbier’s “Armoires Royales”, a large collection of heraldic drawings by Gerbier (Pepys Library, Magdalene College, Cambridge). But Gerbier replaces the architect as the protagonist of his treatise with consumer, the Owner-Builder and his delegates, and the focus shifts from aesthetic concerns and architectural plan-ning to the realization of the edifice and to the workplace. Gerbier does not occupy himself with the working process of the architect, with Vitruvius as a fountain-head of architectural tradition, with a definition of architecture, or with the relationship of architecture with science or the liberal arts. Nor does he treat universal rules of proportion, nor numbers and geometry as sources of beauty. The work is written for patrons, buyers of architecture, and while it is true that Gerbier affronts the canonical theme of architectural treatises, the five classical orders, they are treated in a secondary, accessory way. Gerbier’s two treatises have been somewhat unjustly judged for not being what it was never intended that they be, despite the fact that Gerbier is fairly clear and explicit about his intentions. One has the impression that his tracts are referred to, but scarcely read.

Gerbier writes in the vernacular, and there are no illustrations, and hence no visual design patterns offered. As we shall see there are few Vitruvian terms, and practical building lies at the centre of interest: constructional reality, costs, comfort, safety. To an extent Gerbier is in line with developments in seventeenth-century France.

The title of *Counsel and Advise* identifies the topic of the book very clearly as advice to Owner-Builders on how to choose their Surveyors, their Clerks-of-the-Works, their Brick-

layers, Masons, Carpenters and other Workmen, promising to treat also Materials and Rates, that is, the costs of Building. Then on page g 3 *recto*, we read that these summary notes will serve those entrusted by Owners of building that they better perform their task and have more credit with the workmen. In fact, the Clerk-of-the-Works stands at the centre of the process of realizing of the building (cf. p. 103), and certainly Gerbier, with the knowledge he displays of the workings of this position, recommends himself for this position. The central theme of his work is building administration, and this is an unusual theme and focus in architectural treatises. Most known information about the organization of building derives from contracts and building accounts. The discussion of building materials had enjoyed a much more secure place in writing about architecture, but Gerbier's concern with prices and rates is less common, and it results from his patronal perspective and concern with procurement.

Putting aside the stereotype of Gerbier as the quirkish foreigner in England and abandoning a typically English dismissive attitude (the reverse face of English deference), which has led commentators to pooh-pooh nearly everything Gerbier attempted, it becomes possible to take him and his two treatises more seriously through an attempt to understand them and to use them as a looking glass. Certainly it was not Gerbier's conscious aim to offer a sociology of work and the workplace, but owing to his particular perspective, Gerbier offers very many lateral glimpses of aspects of the world of work in the building trades. And these may be profitably read from a perspective which was not necessarily that of the author. The reader must, however, be alert to what is implicit, as well as to what is explicitly stated. Far more than a text about architecture 'pure', we may read Gerbier as a social tract. Sometimes expository, sometimes anecdotal, Gerbier's little considered text may be read for its focus on the realization of the building, for its view of the operation of the construction process, with its protagonists and its many participants. It reveals something of the world of work – its organization, hierarchy, and differentiation –, of the concrete tasks of building, of the masters and workmen with their technical competencies, spheres of responsibility, and tools, language, and communication, and of the functions of remuneration, supervision, and servitude – and thus it testifies to the part played by rank, status, and stratification in the world of work. And, with the concern with the building plans of the new Stuart court of Charles II (1660-1685), sociology yields to a concern with the politics of building. Gerbier's book serves as a reminder that building or construction, even on a relatively small scale, requires rather advanced organizational techniques, if owing only to the highly developed division of labour and skills and to the complexities of procurement and transport, with materials coming, at times, from distant lands, and that this confluence and fusion of many and diverse elements is indeed a defining trait of the building industry. It is in the place of an organizational coordinator that Gerbier positions his Clerk-of-the-Works: not just a scribe and accountant, but a logistics expert charged with procuring, maintaining, and transporting material, personnel, and equipment.

But that aside, within the patterns of social relationships, Gerbier affords a view of the strains within the social order of building, a view of the conflictual relationships among the participants in the hierarchy of construction, a process seen, by Gerbier, mainly from the perspective of patronal distrust vis-à-vis the several contractual parties – in particular a generalized distrust of the work force that appears to extend beyond the intrinsic need for the regulation and discipline of the labour force –, but in addition there are conflicts between supervisor and supervised and rivalries among the groups of workmen, all taking place in a stratified world of work and construction in which the builder had capital to expend and in which all the participants, labourers as well as suppliers, were constrained to divide economic scarcity among themselves.

As we have seen, like Cornaro and Wotton, Gerbier was offering rather practical advice, mainly for building houses, to patrons, to owners of grounds who wanted to build. What his commentators, concentrating on Gerbier's motives of personal advancement (at what must have seemed a rather advanced age), have largely overlooked about Gerbier's treatise, is:

(1) Its insight into the work world, the tasks of the workmen, and the picture that emerges of the complexity of the building works. It includes a number of themes of interest for the process of construction in England at the time. These include Gerbier's testimony to the persistence of traditional, old-fashioned improvisation during the building process, which Gerbier staunchly opposes (see: Montes Serrano, 2000).

(2) Gerbier is, along with John Shute (*The First and Chief Groundes of Architecture*, London 1563), Francis Bacon ('On Building', in: *Essays*, 1597, no. 45), and Henry Wotton (*The Elements of Architecture*, London 1624), among the few early writers of a treatise on architecture in England. As early as 1648 he offered lessons on architecture in his short-lived Academy.

(3) The clear separation of architectural design from the execution of buildings that is described by Gerbier.

(4) The unusually detailed image of building administration, and especially the explicit and detailed definition of the position of the Clerk-of-the-Works as the overseer and administrator of the realization of buildings.

(5) Gerbier's testimony for the use of three-dimensional building models and templates in this period. Gerbier even advocates raising full-scale "Molds" (templates) into position on the building site to test them empirically (CA., pp. 17-18; see: Montes Serrano, 2000).

(6) 'Plain-spoken' is a strain that extends from Serlio to Cornaro and to Palladio. The rather slight presence of a Vitruvian or even vaguely Vitruvian vocabulary in Gerbier's treatise is notable. He uses the term 'capital', but explains that it is called a 'Head', as a 'base' is called a 'Foot'. And, if there is an 'ovolo' and a 'cymatium', there is no '*echinus*'. The 'gul' (*gola*) becomes a 'throat'. If we hear 'architrave', the word 'entablature' does not occur. The 'cornice' is a 'cornish'. In short, the depth of Vitruvian nomenclature is shallow, including only a relatively few essential terms which had made their way into common speech (p. 32).

The explanation of Gerbier's lexical choice, which was for him a principal point and a point of principle, lies, as he himself states or implies several times, in the centrality of the Clerk-of-the-Work's rôle in the supervision of the building. In so far as he functions as the owner-builder's delegate in the building process, he is in charge of the process of the execution of the construction. The Clerk is identified explicitly as "a controulér" (controller) over the Master workmen (p. 104), and it is repeatedly affirmed that the workmen must be spoken to in their own language. Near the close of his treatise Gerbier reiterates, "therefore I have now offered; to write in such workmen-like termes, as may serve for a Clark of the works to speak unto them" (p. 103).

If we look at Gerbier's vocabulary *in extenso*, looking for traces of a Vitruvian lexicon or at least words closely associated with the classical vocabulary of architecture, it is possible to identify the following terms, sometimes expressed in slightly simplified or vernacular, or anglicized variants: acanthus, architrave, base, capital, Composite, Corinthian, cornice, dentil, Doric, enrichment, fascia, flutes, frieze, Ionic, module, order, ovolo, pedestal, pilaster, plinth,

portico, quoins, Rustic, shaft. But equally noticeable is the absence of other words or terms or their equivalents expressed in something resembling a classical vocabulary: abacus, archivolt, astragal, attic, caryatid, cavetto, console, corona, cyma recta, echinus, entablature, entasis, guttae, intercolumniation, metope, modillion, mutule, pediment, scotia, soffit, stylobate, torus, triglyph, tympanum, volute. Thus *lessico* is presented as an element of communication and mediation between unlike and unequal participants in the process of building. It is not simply a lowering of the niveau of speech to accommodate inferior classes, for in Gerbier's recognition of the preference of workmen for plain-spoken words, and his acceptance of their desire, there is an implicit recognition of his appreciation of and respect for the technical knowledge and competency of the Master workmen. That many of Gerbier's terms are not readily found in dictionaries of architecture suggests that the centre of gravity of his Manual is somewhat singular. For not a few of his usages, Gerbier is the single authority whom the *Oxford English Dictionary* adduces.

In the complex process of building, with its multiplicity of actors and its large variety of skills, trades, and manufacturing processes, the question of 'language' was scarcely a negligible one, and indeed successful building was predicated upon efficient communication between the architect and the owner and between the owner and his representatives and suppliers and workmen.

It was into this context that Gerbier, through his double publication of 1662 and 1663, seeks to introduce, or re-introduce himself. In the pages of his two little manuals, with their advice to men wishing to undertake building, he implicitly offers his services to such men, first, perhaps, as a surveyor, and, failing that, and perhaps with greater seriousness of intent, as a clerk-of-the-works, a position that corresponded to his experience as an administrator in the execution of building.

Bibliographical references:

Alvise Cornaro, "Scritti di architettura", in: Pietro Cataneo, Giacomo Barozzi da Vignola, *Trattati*, ed. Elena Bassi *et al.*, Milano: Edizioni il Polifilo, 1985

EEBO, 'Early English Books Online', contains digital facsimile page images of nearly every book printed in Britain and in British North America from 1473 to 1700. This electronic archive contains 36 works by Balthazar Gerbier, many quite brief. The Deutsche Forschungsgemeinschaft (DFG) has, as part of its Nationallizenzen Program, a national license for Germany for EEBO, which makes the digitised facsimile images of these books available online within Germany, directly in many libraries and, upon registration, to private persons resident in Germany (www.nationallizenzen.de). These are not, for the most part, searchable full texts.

A 1663 edition of *Counsel and Advise* has been recently offered on the antiquarian book market for £ 3,600 Sterling (2008).

THE TEXT

Counsel and Advise
TO ALL

BUILDERS;

For the Choice of their
Surveyours, Clarks of their Works,
Bricklayers, Masons, Carpenters, and
other Work-men therein concerned.

AS ALSO

In respect of their Works, Materials
and Rates thereof.

Together with several *Epistles* to
Eminent Persons, who may be
Concerned in *Building*.

Written by Sir *Balthazar Gerbier*,
Douvily, Knight.

London, Printed by *Thomas Mabb*, dwelling on
St. *Pauls*-Wharff neer the *Thames*, 1663.

To the Courteous Reader.

Whereas all Creatures from the Mole (that hath no great sight) to the most Argus like above ground, are continually a [= engaged in] Building, and stand in need then of Mechanical more then of Phylosophicall Rules: This little Manuall doth therefore point at the Choise of Surveyors, the Duty of Clarkes of the Works, Bricklayers, Masons, Carpenters, &c. who must be spoken unto in plain

g 2

plain intelligible terms, for that divers Workmen resemble those, whereof the Ecclesiastes, saith, That when a tale is told, then they will say, What is the matter? This manual doth both now and then proffer a word or two to cherish the Readers patience, for that bare names of materials, of forms, and several parts of works will too soon tire noble Persons; Nor is this present Age void of number of Authors, who have written more on Architecture then any Clark of the Works will have time to learn by Art ['art' = heart]:

[g 2 verso]

Art: These summary Notes will serve for such as are intrusted by Owners of Building, that they may the better perform their task, and have more credit with the several Master Workmen, who do love to be spoken unto in their own phrases; And Owners of Buildings [,] their Trustees, Stewards, and Pay-Masters being possest with the Rates of Materials, will be more at rest, than otherways if they should be, to seek to make perpetual enquiries after them, and be vext with ill grounded reports. Further-

g 3

Furthermore, you may gather out of this Treatise a Posie pleasing to your scent, and leave the gleanings, which are most proper to Mechaniks concerned therein, untill a large worke (with Copper Plates) shall have had time to be put forth, wherein not onely shall be represented in compleat measure the formes of all Moulding, of Orders, Columns, Ornaments for Doores and Windows, Court, Houses, and Garding-gates, and withall some Fronts, and Dimensions of Houses both in a City and in

[g 3 verso]

in the Country; Churches, Townes, Houses and Steeples, with all necessary appurtenances thereunto belonging; As also the charges a Builder may be at, according unto the extent and height of a Building, either made of stone, brick, or mixt.

You will have no just cause to infer that when the best building is mentioned (according to the Grecian & Roman manner) that therefore English Labourers shall need go with their Buckets to fill them at the Tiber, lesse to the Scène at Paris, to temper

[g 4 recto]

per their Morter well, nor your Surveyors, nor Master-workmen to be vext with things a-la-mode, if they will but observe Rules, Dimensions and Formes, which are not to be mended, lesse contradicted.

And as for the number of Epistles which are put to this Manual.

Anthoni Peres (once Secretary of State to *Philip* the second King of *Spain*) was a president for the putting of many Epistles to a Treatie which he Dedicated not onely to Eminent Persons in *Spain*, but also in *France* and

[g 4 verso]

and *England*, t'was his *Peregrino*, the main whereof represented a Demolisht Body; The scope of this is contrary to that, being about Building, his was a personal Interest, this a publick; its therefore the more freely offered to a number of Persons, who either themselves or friends may have occasion to make use of it; its freely offered as to the upper, so to the lower end of a *Table*, like a fresh gathered Fruit, and none of those who are pleased to accept it, are craved

[g 5 *recto*]

ved to Patronize it, it being held most unfit for any Author to crave, since no man is bound to answer for faults committed by another.

THE

[g 5 *verso*]

THE
CONTENTS
OF THIS
MANUAL.

2 *A Repetition of the summary contents of a former printed Discourse, concerning the three chief Principles of Magnificent Building, to wit, Solidity, Conveniency, and Ornament.*

3 *The choise of a Surveyor, how to try him, and what his duty is?*

4 *The choise of a good Clark*

[g 6 recto]

Clark of the works, and what he is to do?

5 The duty of all Master Workmen,

6 The several proportions of the five Orders.

7 Particulars to be minded by all Builders.

8 Rates and Prises of Materials, and of the several works belonging to the Building.

9 That those who Build, or Build not, will (as those who marry, or marry not,) have just cause to repent.

Counsel

[g 6 verso]

Councel and Advise

TO ALL

BUILDERS.

*For the Choice of their Surveyors;
Clarks of their Works, Bricklay-
ers, Masons, Carpenters, and o-
ther Workmen therein concer-
ned.*

A Little Manual which I formerly set forth (concerning the three chief Principles of magnificent Building, *viz. Solidity, Conveniency and Ornament*) doth in the first place note the incongruities committed by many undertakers of Buildings, who (both within

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within and without doores) do confound the aforesaid Principles: It Notes how the *Grecians* and the *Romans* (the best Builders) have proceeded on undisputable Rules, not subject to fancies, for if men should be inslaved by Weather-cok-like spirits to make their Buildings according unto things *a la mode*, especially of *Hats, Bands, Dublets* and *Breeches*; how might workmen laugh? And would not some (who cannot jeer without making use of Scripture) quote *Ecclesiasticus*, *He that is hasty to give credit is light minded, chap 19. v. 4. And he that teacheth a Foole, as one that glueth a pot-sheard together, cap. 21. v. 7.*

Secondly, It Notes how several great and judicious Princes and Magistrates have proceeded in their Edifices, what they have

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have shunned, and what they have curiously Observed; the particular care of Surveyours, their choice of Materials, even to the preparing of their Lime and Clay: The care of their Bricklayers in laying of a Foundation, and that they have been firm and resolute in their undertakings to proceed on a well composed Modell, since alterations in a well begun Building are very prejudicial.

Thirdly, It Notes the distinction between the well ordering of the Palace of a Sovereign, and that of meaner Habitations; and it cites some remarkable Structures, as that between

Babylon and *Espahan*, at a place called *Carimonsharan*; as also several remarkable ones in *Europe*; It omits not the Description of the Princely Stables, and the necessary

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sary Offices to their Palaces, (as well as rooms of State, for great feastival Shows, and ordinary use.) It also points at several incongruities committed by Surveyours; and who minded more to show that they were skill'd in describing of Columns, Pilasters, Cornishes and Frontispices, (though for the most part placed as the wilde *Americans* are wont to put their Pendants at their Nostrils) then to have studied Conveniency, and what most Necessary.

I shall now in the following lines treat more particularly on the matter by way of Council and Advice to all Builders, &c.

Whosoever is disposed to Build, ought in the first place to make choice of a skilful Surveyour, from whose Directions the several

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several Master-work-men may receive Instructions by way of Draughts, Models, Frames, &c. For the better managing their intended work, since an ill built Palace leaves a perpetual reflection of Ignorance on the Builder; whereas a compact Building, whether City, Castle or House, like a stock of Children continue the Name and Memory of the Owner.

[Surveyours.] An exact *Architect* must have the Art of Drawing, and Perspective; ought to know what appertains to each Inhabitants Conveniency: Since there is a vast difference between the House of Prayer, and a Princes Palace, and meaner Habitations, nor is a Laboratorium for a Chymist fit either for Baking or Brewing.

[Perspective.] Therefore he ought to know wherein

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wherein is the use of Perspective, otherwise he will never rightly describe the dimensions of solid Bodies, which are to stand high; his Circles will seem Ovals in Breadth, and his Ovals Circles, and all his contrivances will be at randome; as it is said of some men, who first act, and afterwards consider excusing their mistake, which [*Errata*: “with”] they thought it otherwise.

[What to reflect on.] The Surveyour must in the first place consider the ground whereon the Building must be Erected, make a Distinction between a Plot in the City, and one in the Country; and then govern himself as the ground will give him leave; reflecting still on the Houses adjacent, and those which are opposite, if they be high to raise as high, if not higher, to prevent the smoaking of Chimneyes. Se-

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[The Seat.] Secondly, He must place the Front of a Building in the Country towards the East, if the place giveth leave; by which means he may shelter his double Lodging Rooms from the Northwest: [A *Nota Bene* to Builders.] He must cause all the back of his Stone-work (which stands within the Brick) to be cut with a Rasat [*Errata*: “Rabat”] three Inches broader then the breadth of his James and Cornish; which will hinder the Rain (driven by a feirce North-west winde) to peirce into the Inside of the Wall, and through the meeting of the Brickwork and Stone; whereunto the Morter affords the passage of the Water. It may be some will carp at this free Expression, pretending that Surveyours and Master Workmen (in this refined Age, which abounds in Books, with the Portractures

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tractures of the Out and Inside of the best Buildings) are not to seek the first Points of their apprenticeship: whom I ask the reason, why modern and daily Buildings are so exceedingly Defective? And whether it is not because many of them (if well considered) have been but Apprentices lately, as too soon become Journey-men; And that Surveyours (who either affect more the Building to themselves a strong Purse, or are blind in the faults which their Workmen commit) like careless Postillions, hasten with the Packet-Maile to the Post Office, be it never so ill girted, whereby it oft falls in the mid-way?

The Count of *Villamediana*, a rare *Spanish* Poet, having heard the Answer of a Sonnet of the King of *Spaines* Surveyour (to whom

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[The Count of *Villamediana* his witty expressions concerning a young Surveyour.] whom the Office of the Surveyour was confirmed, by reason he had all the Drawings and Books of his Deceased Father; and to excuse his young Experience said, to make use of them) replied to the young Surveyour, *Hazais come el Stomaco que coma herbas y caga Mierda*.

[How to try the capacity of a Surveyour.] The readiest way to try a Surveyour, is to put him to draw a ground Plot in the Builders presence [,] to make him describe the fittest place for a Seat, the ordering of Rooms, for Summer and Winter; to Contrive well the Staires cases, Doors, Windows and Chimneys; that the Staires may stand conveniently to the Stories, Doores and Windows; so placed, as that they may not be inconvenient to the Chimneys; the Bedstead place far from Doores and Windows, and

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and of a fit distance from Chimneys.

[Distinction between the height of seelings of Rooms.] And as for height of Seelings, the Surveyour ought to make a Distinction, between the height of a House, or Town-Hall; of a Colledge and that of a Church, the Hall of a private house, serving for the most part, but for a Passage, the others for a Receptacle of a whole Body (consisting of number of Persons) who for an houre or two joyntly breath in one place, and which may be Offensive.

[Natural Effect of Ayre.] Nature of Aire being to ascend, and when it meets (with a sudden opposition it spreads; Since the Nostrils (as the Pipes of Bellows) will attract to each Persons Braines the scent which is composed of that Steam.

The Surveyours skill and discretion will also be discovered by

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by the well contriving of the respective seelings of common Rooms, and Closets for private use; For as rooms of State, ought to be of an equall height, the seeling of a Closet (ten foot square, lesse or more adjacent to a Bed-chamber of State (which may be Thirty foot wide, Fourty in length, and Sixteen or Eighteen foot high) would be Proposterous, Inconvenient; and like a Barbers Com-case; Stair-case, and Steeple-like to hang Bells in.

A good Surveyour sheweth his Art, both within the Building, as on its Front; and in the fit mixture of Materials, Morter, Brick and Stone, being Simpathike stuff.

[Necessity for mouldings.] As for the manner of the Outside of a Building, there is a necessity for moldings about Win-

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Windows, and Doore Frontispieces, or Cornishes, none about Barns, Malt, Brew, or Glasse-houses; whereof the outsides (especially a Barn) hath no opening of Windows, so as the Rain and Droppings of the Thatch falls not in them, but onely on the ground. But as for Cornishes and Frontispieces over the Windows of a meer Habitation, being to it of the same use, as the broad Brim of a good Hat is to a Traveller in a rainy day.

[Ornaments] The good Surveyour will order Ornaments to the Front of a Palace, according unto its situation; shun too much carved Ornaments on that upright, whereas the Southerly windes raise much dust; And though the *Italian*, saying, maintaines, *Per Tanto variar Natura é bella*; Yet must the good Surveyour use

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use moderation in the ordering of Ornaments; shun in the first place, those Spectacle-like cant Windows, which are of Glasse on all sides; [Bay or Cant Windows Inconvenient.] For it may be supposed that the Inhabitants of such Houses and Rooms with Cant Windows (exposed to the Northwest) may well imitate a merry *Italian* Fisher, who (in a Winter windy, rainy day) had been stript to his skin, and having nothing left to cover him save his bare Net wherein he was wrapt (sitting on the highway) put his finger through one of the holes, asking to passengers what weather it was without doores.

[How Window (*sic*) ought to be placed] The expert Surveyour will repart the Windows to the front of a Palace, that they may (besides the affording of sufficient light to the rooms) leave a solid

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solid peeres between them, and to place some pleasing Ornament thereon, not prejudicial to the Structure, nor too chargeable for the Builder; shunning incongruities, as many (pretending knowledge in Ornaments) have committed, by placing between Windows Pilasters, through whose bodies Lions are represented to creep; [Rediculous Ornaments.] as those in *Queen-street*, without any necessity, or ground for the placing Lions so ill, which are commonly represented but as Supporters, either of weight, or of Arms in Heraldry.

[The Order to be observed on the Front of Buildings.] He ought further to imitate the old *Grecians* and *Romans*, in placing the rustick order next to the ground, as being most proper, both by reason it is the most solid of all the other orders; and that no blemish appeareth in the Rustick

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Rustick so soon as in a smood ashler.

[Concerning the placing of Balconies] The reason also for contracting the Balconies within the upright of a Col[u]mn, in [*Errata*: “is”] that weight is not prejudicial when it rests on its Center, no more than the great weight of Bels in a Steeple, if hung plum with the upright.

[Concerning the upper part of a Front without Railes and Barresters.] Moreover, He orders his top Cornish according unto the weight, which is laid upon it; For if the Builder (to spare charges of Railes, Ballesters and Pedestals with Ornaments of Balls) will have the Building to have no other finishing, he must lay a course of Stone on the Cornish, to keep the Walls dry, and clap up a fillet of Lead: As good Carpenters do frame their Railes to Ballesters to meet on the Pedestals, under the neck of the

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the Ball, so as the Raign doth not enter to rot them.

[The use of Perspective.] A Surveyour (well versed in Perspective) doth order the Cornishes and Ornaments according unto the height of the Stories: He ought to know what Diminution, Altitude doth cause; there is none perceived on the Latitude of an Horisontal Line: Longitude represented by lines drawing to a Center; from the Latitude causeth also a Diminution in the Eye.

The *Grecians* and *Romans* Surveyours, have ever been accustomed to make their Cornishes and Ornaments about Windows, of the upper Stories to be bigger than those of the lower; which *Michael Angelo* did observe in the Architrave; Freese and Cornish on the top of the Frontispiece of the Cardinal *Farnese*

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Farnese his Palace in Rome.

[*Raphael and Albert Durer, their method in Dimentions*] *Raphel d'Urbain and Albert Durer*, drawing a Steeple on the first ground of a board or cloath, whereon they did represent the figure of a man, standing (as it were) in the upper gallery; made the figure of that man of the same height of another which was to be set at the foot of such a Steeple; because there is no diminution of forme on a parpendicular line, which is set close to the edge of a cloath or bord; A point at the foot, or at the top is but a point, it being only distance from separated lines (drawn to a Center) which causeth a Diminution as to the sight.

Therefore all Surveyours ought to cause the wooden Molds (on which Masons must work, to be tryed by lifting them

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them as high as the Stone or wooden Figure is to be placed; to see how it may please the Judicious Eye; which is the best Jury and compasse.

Now concerning the well proportioned Doores and Windowes; Every man reflecting on Stature, ease and conveniency, needs not to call to his neighbour for to counsell him in this necessary proportion, since it must be granted, that if Doores and Windowes (in a solid Building of Stone or Brick) were as wide as they are high; it must be through necessity be a weakening to a Building. [What form of Doores, prove a weakening to a Building.]

The widenesse of the Doore, must be to serve for two to passe at once, that is to say; the Doores of Chambers of a Pallace, the height of the Doore the double of its width; all other Chamber doores

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dores of a convenient height for a man of compleat stature, to passe with a hat on his head: A gate for Coaches and Carts Loaden likewise fit to the purpose.

[Why Windowes must be high,] Windowes (because the light comes from above) must be higher then wide, the middle Transoms of them above six foot (Which is the common stature of a Man) since otherwise the middle Transome would be opposite to a mans eye, hindersome to the free discovering of the Countrey.

[The leaning height of Windowes.] The leaning height of the Windowes, ought to be three Foot and a half; since if otherwayes it will be incommodious, for being lower, it would require the bending of the back, which old men (when they have spent money and time in building) will

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will not finde so easy, as some wanton persons, who may be will affect low leanings, to make use either to sit on, and break the glasse-windowes, or to shew themselves in Quirpo to passengers.

[The height of windows.] The height of Windowes and Doores, must be as much again as they are wide; because they will otherwise offend the Judicious eye of persons who reflect on the former annotations, that shapes do alter by distances of place; as an Ovall seen from beneath, will seem to contract to a Circle; contrary to the sence of some Children, in whose sight their Parents seem extream tall because they are low themselves; But some Builders, (as Painters of low stature) affect to make Figures, door-wayes, & Windowes according unto their own height. A

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[Thresholds an old custome.] A good Surveyour shuns also the ordering of Doores with Stumbling-Block-Thresholds, though our forefathers affected them, perchance to perpetuate the ancient custom of Bridegroomes, when formerly at their return from Church, did use to lift up their Bride and to knock their head against that of the doore, for a remembrance, that they were not to passe the threshold of their House without their leave.

[The placement of Doores.] The doores ought to be all on a row, close to the Windowes, to gain roome, that when the doores are opened; they may serve for Skreens, and not to convey winde to the Chimney.

The Hearth of a Chimney ought to lie levell, without a border, raised hearths being dangerous

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gerous for the falling of coles on the boards, and likewise troublesome. [The inconveniency of raised hearths to Chimneys.]

The Chimney-mantles ought to be all of Stone or Marble, but if (to spare charges) the upper frame, sides and top be made of timber it will be most seeming to have them painted as Marble.

[The use of spaces between the Chimneys.] And if the building cannot suffer the Chimney to be made even with the upright of the wall, both sides may be made up to serve for hoards, if they are roomes of State, but if of common use for Cabinets.

It is necessary to cover the top of Chimneyes to keep out raine and Snow; the smoake holes can be very conveniently made on the sides of the heads of them.

[Roomes on moist ground to be Paved.] Roomes on moist grounds, do well to be Paved with Marble, because the bording otherwayes is

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is much subject to rott.

[No Timber Partitions to be suffered in the first Story.] A good Surveyour shuns the making of Timber partitions in the undermost Story.

He contrives free access to the double roomes, without makeing them through passage, whereunto the well placing of the Stares contributes, either by convenient passages about or under them; the composing of a fit and easy Staires being a Masterpiece, fit in respect of the place, convenient if the steps be deep and Low in the rise, for a straight ascending or descending (without bending of the sinewes) gives most ease to the body which doth rest better on his bones, then on Sinewes. [Deep and low Steps best.]

The good Surveyour doth contrive the repartitions of his ground plot, so as most of the necessary Servants may be lodged

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ed in the first ground story; whereby there will be lesse disturbance, lesse danger of fire, and all the Family at hand on all occasions.

Finally, he ought from time to time to visite the work, to see whether the Building be performed according unto his direction and Moulds.

*The second choise to be made,
is, that of a fit Clark of
the Works.*

A Clark of the Works must be verst in the prises of Materials and the rates of all things belonging to a building; know where the best are to be had, provide them to the workmens hands; to prevent a retardment in their severall proceedings;

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ings; that the Carpenter may not stay for the Brick-layers, nor the Brick-layers, nor Masons for the Carpenters, he ought also to note in his book the materials, and all necessarys as they are brought in, distribute them orderly; and though Nailes to some seem not very considrable, yet ought the Clarke of the worke to be discreet in the distributing of them to some Carpenters, whose pockets partake much of the Austruches stomachs; his eyes must wander

about every workmans hands, as on those of the Sawyers at their Pit, that they waste no more then needs in Slabs; on the Labourers hands in the digging of the foundations, for the Brick-layers that all the loose earth be removed, and springs observed. That

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That no Car-men turne or tumble down their Bricks, but the Lauourers to take them out of the Cart and pile them to prevent dammage.

To suffer no Sammell Bricks to be made use of, not so much as in the choar of a Foundation.

[Concerning Brick-layers.] The Brick-layers to lay no foundation except the ground be first Ram'd, though it seem never so firm.

[Observed in the foundation of *Solomons* Temples.] No great and small stuff hudled together in the foundation, but laid as even as possibly can be, to ram it the better and the more equall, and must be of solid hard stuff, with no concavities, daubed over with store of Morter, which sinks unequally, and is the cause of the unequall setting or [*sic* = of] the Work.

Likewise to watch the Brick-layers hands, to use often their line,

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line, and plum-rule, make small scaffling holes, [No making of Scaffling in the morning.] and neber (if possible be) suffer them to begin their Scafflings in the morning, but before their leaving of their work; for if in the morning, most of them will make it a day of gathering of Nuts and fruit (if they are in the Countrey) and therein spend the best part of their day; and one must not permit them to take the best boards and other stuff for their Scafflings.

[Concerning Morter.] *Item*, See the Morter well tempered, since if unequall in thickness; that which is thin, will cause the work to settle more in one place then in the other, and the joynts to spue out the Morter; especially of work made at the latter end of the year, when no brick-work without doores ought to be laid, for that

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that it hath not had sufficient time to dry thorowly; and will therefore by the setting of the work in the after-season, be so much the more retarded, and be the worse to the Building, Hangings, or Wainscot set up against it.

Moreover, to see the Brick-layers take good sollid Bricks to hue, since if any thing Sammel the work will molder away; and every night to lay boards on their work to keep it from raine.

[Concerning Masons.] It is to be noted, that the Mason must work no Stone with Sandy veines, or that which (having been new taken out of the Quarry) hath been exposed to Rain, Snow or Frost.

As for the Workmen, they must observe exactly their Surveyours Molds, and work close and neat joynts, use but little Morter

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Morter between them, not only because much Morter will be washed away, but that Cornishes will also appear as a ranck of open teeth, and they must not forget to shoare the middle part of the head of the Windowes, as well as the sides, to prevent an unequall settling of the work, and consequently cracks; both in the Heads, James, and Sils.

As for the Dimentions which the Masons are to observe in their work, in reference to the orders. They must devide the Tuscan, Column, or Rustick, Base and Capital (which is as much to say as feet and head) seven times its thicknesse, the Architrave, Freeze and Cornish one fourth part of the Column with Base and Capitall.

If they make the said order without

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without a Pedestall they must divide its whole height into 17. parts and a half, which (in their vocation phrase) are called Models, and are divided into 12. equall parts; If they are directed by their Surveyour to make them with a Pedestal, then are they to devide the whole height into 22. and one sixth part, for that the perfect shape of the said Order requires a Pedestall, which must have a third part of the Column, with Base and Capital.

[Nota.] It seldom happens that a Pedestal is put to the Tuscan Order, because (as it represents an Atlas) and that no man will take a Dwarff to reach to the first Story of a Building) the said order requires, not to be set as a Candlestick on a Cubbert, its as a Substantive, that can stand without an Adjective: Some *Venetian*

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Venetian Ladies, must have their Shoppins to stand on, and were they as strong as the Tuscan they would not need some of their Masaras to lean upon.

[Dimention of all Pedestals.] But as for Pedestalls to the to the other following orders; a Builder shall do well to see the Masons observe this generall rule; That the Pedestals with their Ornaments, must be one third part of the Column with its Basis and Capitall (feet and head as aforesaid) even as in the Ornaments above the Architrave, Freese and Cornish, must make one fourth part of the same.

This must then be understood as followeth, *viz.* The Mason must in the making any of the Frese orders, devide the hight of the Column with its Ornament into nineteen parts, then take the height of the Column with its Basis

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Basis and Capital, and make the divisions of the Models according to its order.

[Names of the severall formes or moldings on the body of the Column.] Now the names of the several formes on the body of the Column are, *viz.* theining *[sic]* over of the Capital under the neck; Then followeth the Freese, the List, the Ovolo, the Cimatium, the list of the Cimatium, the Architrave, the list of the Architrave, the Freese, Gul or Throat, the lists, the Crown, the lists or Rule, the Round; and finally the Ovolo. And the Clarke of the Works speaking in these termes, will be as well understood by the Masons as one at Sea among Mariners; saying, Steere, or Larboard.

[Concerning the Dorick order.] *Item,* If the front of the Building is adorned with the other orders (as the Dorick is) to follow the Tuscan, this proportion must

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must be observed, *viz.* The height of the whole Column with its Base and Capital, must consist in 20. Models, that is to say, a Dorick Column without a Pedestall; the Modell must be divided in twelve parts, the foot with the nethermost band must be one Modell, the Column between the Foot and Head 14. Models, the head one. The Architrave, Freese and Cornish, is to be one fourth part with the Head and Foot, so as this makes up the aforesaid Number, and such a compleat form, as is neither to be controuled nor mended, & is that which the *Grecians* and *Romans* have found to be a Dimension sunk down from above, as all those who have made it their respectfull observations of the Dimensions the Creator hath been pleased to give to the Micro-

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Microcosme Man, they have found that there is a perfect concordance, amongst them, a Body consisting of so many Models of so many height of Heads; A Head of so many distances between the one Eye and the other, nay even in the gaping of a well-proportioned Mouth, except forced by a kinde of Screw or Gag, which may break the Jaw-bones asunder. [Perfect concordance among the dimensions of a mans body.]

[Proportion of open Galleries with Columns.] If the undermost part of a Front (as many Palaces in *Padua* and other cities in *Italy*) is left open as the Gallery in the *Bedfort-Piatza*; The Indisputable, best and truest proportion to be observed therein is; if according a Dorick Order, the Height must be devided into twenty parts, one of those must be the Model; the distance between the two Pilasters are three Models

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dels, the widenesse of the Arch, half the length of the Column, which is set out in the midst of the Pilaster, one third part of a Model more then its half, which is to be generally observed in all the other orders; This is for Galleries with Columns without Pedestals; but Galleries, with these the Column must be divided into twenty five, and one third part which makes a Model; the breadth of the Pilaster must be five Models, and the distance between the Pilasters ten

Models, the half of the height of the Arch, which will make that perfect shape as must satisfie all Judicious Eyes. *Item*, It must be remembered that the height of the Pedestal of the Dorick must consist of five Models and one third part: And as for Ornaments (as Imbrodery or Lace on good

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good Stuff) they are as various as the occasions of the owners may require, or those things whereunto their Genius doth tend; if Warriors, Trophies; if men of Peace, Olive-branches; and all what affrights not.

[Division of the Ionick order.] The *Ionick* Columns, their height must be of twenty two parts and a half; each Model being one of the twenty, must be divided in eighteen, because it stands so much higher, as distance (which the contracts the work) requires more height; since otherwayes the third story of the Columns would shorten so much, which is the fundamental reason that perspective must be observed by a good builder, and not yielded to the particular fancies of some of them.

The Architrave of such a Column

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lumn must consist in one, & one quarter Model of the eighteen, the Freese of one and a half, the Cornish one and three quarters, which being added together makes foure Models and an half, and the one quarter of the *Ionick* Column, the Base and Capital comprised.

In the making Galleries of this order (which being most slender and more tall) the breadth of the Pilasters must be three Models, the Breadth of the Arch eight and a half, since the height must be seventeen Models, which is twice the breadth; but if these Columns are set on Pedestals, then must the whole height of them be divided into twenty eight parts and a half, allowing six Models for the height of the Pedestal with its Ornaments, and so it will fall out, that as the breadth

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breadth of the Arch shall be eleven Models, the height twenty two, the breadth of the Pilasters foure, and so a proportionable Body to the height of the Story, and the weight it is to bear; which is one of the main considerations of a good Builder; when to the contrary, Columns ill proportioned and ill placed, prove often a weakening to a Building, and seem as Organ pipes to stand in the Ayre for a shew, as Cornishes too broad, happen the sooner to decay; but to this order there ought to be one third part of a Model. [Ill effect of two broad Cornishes.]

To proceed on the form recommended to a good Clark of the works, to call upon every workman of the Masons to see them perform according unto such exact patterns made in good Wainscote; [Which doth not shrink.] The next is the

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the Corinthian, [Divisions of the Corinthian order.] who if without Pedestals, must be divided into twenty five Models, and those into eighteen parts; the distance between the Columns foure Models, and two third parts of a Model; Because the Architrave about it may not bear too much, and that the Models in the Cornishes may be just over the middle of the Column.

But if Arches or Galleries made of this Order; the distance between the Pilasters must be nine Models, the height to the top of the Arch eighteen Models, and the breadth of the Pilaster three Models: Galleries with Pedestals must be divided in thirty two equall parts, and one of them a Model; the distance between twelve and the height to the top twenty five, one more then ordinary because

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because the height doth diminish the proportion of its true height; so the Pedestal seven Models, &c.

[Composite Order.] The Composite Order must be made of the same proportions of the Corinthian; all the difference between them is only in the members of the Head and Foot, as all Surveyours and Master Workmen shall finde this to be most true; After they shall have compared all the best grounded Authors of the *Greeks* and *Romans*, and that here is not an *Iota* differing from them; for it is a Rule as certain, as that without the same, there cannot be a perfect building made, no more then a man could without good Orthographie write true English; so as no man can have just cause to say, there is a new Rule prescribed unto them, since it

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it is the same which will be found in all true Books concerning that matter; It is the Rule of the Antient Masters, whose Reliques to be seen throughout most places of *Italy*, makes many strangers that come there gape so wide, as that they need no Gags. Let them but look on the Columns of the Temple of Peace and the Pantheon in *Rome*, they shall see more men that gape after them then in other parts: Pipers and Potters to sit in Tavernes, and they shall finde in those lovers of Art an Humility, as hinders them to crack, and boast never to utter, *Well enough for the time*.

Most of the *Italians*, being of the humor of the old Carver, who had ingraven his own Name and Portraiture so deep in the Shield of *Pallas*, as it could never

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never have been put out without defacing the figure; they work for a perpetual fame; which a good Clarke of the works is to recommend unto the Workmen committed to his charge.

[Concerning the Carpenters.] That the Carpenters be good husbands in the managing of the Builder his Timber, in the cutting of their Scantlings, their sparing to make double Mortises, which doe but weaken the Summers.

To lay no Gerders, which are needlesse and hindersome to the boarding of a Roome, no Summers to be laid, except the ends of them are either pitcht or laid in Loam, to preserve them from rotting, as is done by the heat of Lime whereof Morter is maid; And therefore in *Italy, France, Germany*, and among the most Prudent and Solid Builders, the free

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free Masons put stone Cartoeses in the top of the inside walls, which are bearers to the Summers, as such Cartoeses are seen in divers Churches, and some of them are Carved in Ornamental Figures.

[The manner of the Carpenter to lay his timber.] *Item*, The Clarke of the works must have a care to see the Carpenters to cock the main Beams into the Lentals, to hold the wall the better, that they pin down a planck (three inches thick) all along the top of the Summer, to hold fast the Brick-work, after the Brick is raised to the height of the Summer, and that the Joyces be framed 2½. or three Inches under the top of the Summers; that for the boarding roomes smooth; the Carpentets lay Bridges overwhart the Joyces, joyned in the top of the Summers, that the Boarding be

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be with breaking Joynts, which is the phrase of the Workmen, and is the manner of flooring of roomes of Note.

[Height of doors and windows.] That the doore-cases (well ankered into the wall) be made as high again as they are wide, and so must well proportioned window-casses be, both for giving better light (which descends from above) and that the peeres of Brick or Stone between them, will fall to be of a fit width to be a strengthening to the building.

Item, The Clark of the works must be very carefull not to suffer the Carpenters to lay any Timber under the Chimneys; since by the laying of Timber under them, many houses have been set on fire and burnt to the ground.

He must see the Carpenters to observe

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[Scantlings for substantial Floores.] observe the Scantlings following, *viz.* (for substantial Floores of roomes thirty foot wide) Summers for the first seeling eighteen and fourteen Inches, to be framed in such a proportion as may serve to make an *Italian* fret Seeling. The Lentals eight

and ten Inches square, the Joyses nine and three Inches; [Scantling for Seelings of roomes thirty foot wide.] The Summers of the second Floore fifteen and seventeen, to be beams of the Roof for the principal Rafters to stand on, and the like for the fret Seelings: The principal Rafters for the Roof to be at ten and eight at the lower end, nine and seven at the top; The Purlains for the Roof nine and eleven, single Rafters six and three Inches, and to be framed edge-ways, which Scantlings are fit for substantial Structures, but not usuall

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sual in Lime and Haire Birdcage-like-Buildings; Moreover he must not only (as a true Clarke) with his Eyes follow the workmens hands in the framing of their Work, and as before said, that no waste be made of the Timber, nor of the least Slab, nor of Brick, nor Brickbats, nor Stone; he must not suffer Brickcarts to overturn the load of Bricks brought to the work, which is an insupportable abuse, but too often committed in the Countrey, whereby a world of good Bricks are reduced to morsells, [Abuse committed with the overturning the loads of Bricks.] and this by meere lasinesse of the Labourers, who (as better rationals in *London*) ought to take the bricks out of the Carts and pile them.

And as to a Building wherein divers sorts of Materials are used, the care of the Clark of the Works

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Works must be on all of them, as well as on the least (as I said before in the distribution of Nales) as on materials of weight, as Sauder, wherewith an unconscionable Plummer can ingrosse his Bill. The Clarke is to see Sauder waied & well managed, and in the attesting of Bills have a care not to pass his eyes slightly over them, least when a Plummer sets pounds of Candles used about his Sauder, that trick prove as insupportable as that of one, who having played away a round summ of his Masters Stock in a Journey to the *East-Indies*, set in his Bill to have paid a hundred pound for Mustard.

He must likewise have a clear insight on the Glasse paines of the Glasier; suffer no Green paines of Glasse to be mixt with white. He

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He must with his Eyes follow the Measurer of the Work, his Rod, or Pole; so the line where with the Joyners work is measured, that it be not let slide through the Measurers fingers, since the Joyners works hath many goings in and out; and a Leger de Mayne may be prejudicial to the paymasters purse.

It were likewise better to agree with Painters, to have their work rated on running measure, and on the straight, as the Carpenters work who (being of an honest *Josephs* profession) are as deserving to be well payd as the Painters, who do but spend the sweat of Wall-nuts (to wit oyle) the Carpenters that of their browes.

Finally the Clarke of the works, ought to be subject to the censure of the Surveyor, on the

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the point of all the materialls which are brought in.

[Concerning the use of Timber.] And as for Noble men (or others) who have Timber of their own (& in whose grounds good clay for bricks is to be had, [J]) their best course is, to sell Timber (which they can spare, and intend to build with,) some yeares before it must be put to the Carpenters tooles.

Likewise to mannage the uffall, of the Timber. [Concerning foundations.] And as for the foundation of their building, it ought to be raised at first leaning hight; and then to let it rest to settle, for if only brought level with the ground, it will prove but as a receptacle of the wet, that falls on it: and if but a foot high above ground, it will be pusht down again, but being leaning high, it will be preserved, and may be covered if

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if the moneth of *October* draweth on when its fit Trovell men should be dismist till the next spring following.

Item, to cause the foundation of the intended building to be generally laid, without leaving any touchings, since walls new begun on them will settle more unequal then those carried on in an intire range: [The best covering.] As for coverings of buildings, Lead is best for Churches, for who would Rob them but *Goths* and *Vandalls*.

[Concerning blew slates.] Blew slates are most comely for a Noblemans Palace, they are not as heavy as Tiles, nor doe not soon rott, nor gather an unpleasing moss; besides that when some of the slates are broke, the Slater mends them with little charge; a rooff covered with them is of an equall colour, when

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when as red tiled roofs the least breaking of them makes great chargeable work for the Tiler, who often removes ten Tiles to lay two new ones in their place; and renders the Noble mans roof, as a beggars Coate.

[Concerning burning of Bricks.] As for burning of Bricks, if Noblemen care not to make a business [*Errata*: “Abisme”] in their Parks or grounds, they shall do well to cause the Clark of the works to look well to the workers of the Clay, for if it be not well wrought, the bricks will never be good.

It is usuall to pay five shillings *per* thousand, for the making and burning of Bricks, the Clay digging therein comprehended; and all materials being provided to the brickmakers hand.

But as for those who can have Bricks,

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Bricks from Brickills near at hand. [Between burning & buying of bricks, but six shillings and eight pence difference, in twenty thousand.] And who love to keep their Park and grounds even and handsome, they may take notice that in the number of twenty Thousand of Bricks bought or made, there is not above six shillings & eight pence difference, *example*, There goeth four load of Sand, which (with the carriage) cost two shillings six pence. In Straw to the making of twenty Thousand of Bricks above five shillings. The tooles and bringing of water five shillings, the digging of the Clay tenn shillings, charges for hedging fourty shillings; the preparing of the ground five shillings, besides the making of a Kill, which will consume for the making of twenty thousand of Bricks, fifteen load of wood, & cost ten shillings the load. Of Bricks

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Bricks burnt in a Clam (being burnt with Sea-coales) there are at the least in twenty thousand, five thousand unfit for work, and though some Brick-layers pretend that Sammell Bricks are good enough to fill the Choare of a wall, it is not so; Since most Sammell Bricks are no better than dust; and what resistance dust can be, when waight is laid upon it, any rational man can judg by the several cracks in walls, whereof the Choares are hollow; and therefore the description of the foundations of the Temple, and the Palace of *Solomon* bears, that it was made with smooth hard stone. [The foundation of the Temple and Palace of *Solomon*.]

Many Brickmakers are accustomed to dig the top spit (which is no better then dung) and to throw it with the other clay

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clay, and it is the cause that many Bricks are brickle, so as in few years houses are made with them moulder away like durt. [An *Item* for those who do let out ground for buildings.]

To prevent the being overreacht with bricks, they ought to be taken out of the clam by account from the Brickmaker, who under takes to make them in ones ground, he is to keep to him self those that are not fit for use.

[How to measure the Clay which hath been digged.] The way for the Clarke of the works, to measure the quantity of Clay which hath been digged, is to measure the pit (out of which it hath been taken) square, which is six foot square, six foot in length, three foot in breadth, and three foot in depth, which makes one thousand of Bricks.

Men dig clay for six pence the thousand,

Lime

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Lime digged in ones ground is commonly burnt in a kill, at four shillings *per* load, Lime bought cost four shillings a quarter, six pence a Bushell, forty shillings a load.

[Inconveniency of putting Chalk in walls, of Houses on springish ground.] Those that mind the making use of Chalk in their walls, must be contented (if the ground hath springs) with the green molding, which breaks through the whited walls within doores.

Walls about a Parke or Court, may be fited [*Errata*: “filled”] with Chalk, which may be digged for eighteen pence *per* load, bought for two shillings and six pence the load.

[The number of Bricks in a square Rod] He that desires to know how many thousands of Brick, a Parke wall, or that of the building of a House will require, can make his account on the description following, *viz.* A square Rod of a wall, two foot thick takes

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takes nine thousand of bricks, nine quarters of Lime to a Rod, nine Load of sand, at fourteen pence *per* Load.

Some good Country Brick-layers do work at twenty seaven shillings the Rod, the bricks not being rubed.

[The Rate of Brick-layers then work.] Good *London* Brick layers will work the Rod for forty shillings, rubed Bricks, the inside for thirty three shillings, arches comprised.

The fittest bigness of a good brick; is nine Inches and a half long, four and a half, and a half quarter broad, two Inches, a quarter and a half thick, which will raise a foot in the Morter with four bricks.

As for Lime, the refyning whereof (according unto the *Grecian* and *Roman* manner, is mentioned in the former printed

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ted discourse, of the three Principles of Magnificent Building) the generall custome in *Europe*, is to burne it in kills, which is a slow way. But if there were such a quantity of wood, as in the *Indies* there could be more lime burnt in twenty four hours, then otherwayes in a Moneth: [The manner of burning lime in *China*.] The burning of lime in *China* and in other parts of the *Indies*, being as followeth, *viz.* They make a round Pile of great wood, leaving a cross hallow way through it from the bottom, almost to the top, which is raised to a hight according to the Circle, there is proportionably so much Stone heaved thereon as it will hold, the fire is put in the Center, and in the middle of every cross way, and as it burnes makes an Overture at the top, and the stone burning by degrees falls still in

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in the middle of the pile, and of the Walks, which at last is covered with the Cinders of the burnt wood, and proves a most strong well burnt Lime; Which if it were mixt with *Holland* bricks (called Clinkart a yeallow Brick as hard as flint, []) bought for twenty three shillings the thousand would make walls as durable as if of Marble, if not better.

[The best Paving in Stables.] Those Clinkarts are very fit for the Paving of Stables, and walks in a Court, for they lye very smooth and close.

*As for the choice of Master
Workmen.*

KIng Henry the Eighth shewed a good president (when the Serjeant Plummer calling

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ling his workmen to caste in his presence a Leaden Medal which was given him: The King told him he would have no walking Master Workman.

Those therefore which are fit to be employed are working Masters, and not those who walk from one Building to another; since Journey-men will no more work well, then Souldiers fight without a fighting Captain; Feathers on a Captains hat, nor compasses in master workmens pockets do not the deed, nor will any Master workman deny to have had as much more done, and well, by bestirring their Hands and Tooles in their work mens presence then otherways.

This doth not entrench on those who are undertakers of Buildings, but insisteth onely on the

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the necessity of sufficient Master Workmen, actually employed in every work.

[Master workmen bound to a precise time] The chosen Masterworkmen must be bound to a prefixt time for the performance of their undertaking, to observe exactly the Model and Moulds held forth to them by the chosen Surveyour, & to make good at their own cost what they do amisse.

[Masterworkmen to pay their own men.] They are to mannage the paying of their own workmen, on such a Contract as they have made with the Proprietor of the Building; For the Master workmen must keep his workmen under a certain regular proportion of pay, to hinder them from spending their wages to fast, and to run to other works, as many (upon slight occasions) doe.

[To shun reprehending of Master workmen openly.] It is also very necessary to shun the reprehending a Master Work-

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Workman of any oversight before his men, but rather privately; since it would be to him as prejudicial as a check to a Commander at the heads of his Troopes.

As for the Builder and Proprietor.

IT is best for the Builder to buy his own Materialls, have his works done by the Rod or square.

Have in reserve (to make good payment) such a stock of his own as he can well spare; and against mistakes of workmen a stock of Patience.

Be a constant observator of the three chief Principles of Building; viz. *Solidity*, *Conveniency* and fit *Ornament*: Never suffer

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suffer his workmen to begin to build before the Moneth of *March*, nor continue longer in the building of walls then untill half *September*; remitting setting of walls untill the next Spring after.

Observe the severall Annotations in the former Printed *Discourse*, on the three chief Principles of Building: concerning the well ordering both of Roomes of State and ordinary use and Staires, the form of Offices and Stables; as also the contrivances and properties belonging to Gardens.

As for Prises.

EXperience speaks that as times change, and occasions differ, prises may alter; Nor is that

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that which is best cheap, always the best profit, but Merchantable ware.

[Rates of Bricks.] Bricks in some parts are delivered at the work, for 16s. 8d. the thousand.

[Rate of Brick work.] Some will build a Rod 16½ Foot square, 1½ Bricks, all Materials comprised for 5 pound.

For the old Tiling at thirteen shillings, foure pence a square.

New Tiling at 1. pound five shillings a square, finding all Materials.

The straight Arches, at one shilling *per* foot.

The Flints, at four pence *per* foot.

The Cornishes, one shilling *per* foot.

Slating with blew Slates the workmen finding all, will cost seven pence *per* foot, the workmanship

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manship only will cost three pence *per*. foot.

Twelve thousand Slates will make one square.

Slates will cost sixteen pence *per* thousand delivered at *London*.

[Prices of Timber.] Good Oaken Timber is bought in some parts of the Country for thirty three shillings *per* Load consisting of fifty foot; in and about *London*, for forty three shillings, forty four, forty five, forty seven and fifty at the Merchants Yarde.

White Fur, twenty five, twenty six, twenty seven and sometimes twenty eight, according as the seasons be.

Yellow Fur (called Dram) being very good, forty five shillings the load, the names are these following, *Esterrund, Westbeelee, Longlound, Laurwat, Landifor,*

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for, Tonsberry, Holmstrand, Dram, Christina, Swinsound, Frederick-stadt, Helleroane, Moss, Drontom, Bergen and Stavenger.

The prices of these Deales are uncertain, for according to the goodness so they are in price; for in all these places, there are both bad and good, which generally are sold from four pound *per. Cent.* to six pound *per. Cent.*, if ordinary length; long Deales, which are about fourteen or fifteen foot long, are from seven pound *per. Cent.* to twelve pound *per. Cent.*

An Estimate of Scantlings and Prices.

OF Oaken Gerders fifteen Inches one way and eleven the

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the other, two pound ten shillings.

Oaken Gerders thirteen Inches one way and eleven the other, two pound two shillings.

Joyces seven Inches one way and three the other a square, two pound two shillings.

Firr Gerders fourteen Inches one way and nine the other, one pound eighteen shillings.

Firr Gerders twelve Inches one way and nine the other, Joyces six Inches one way and three the other at a square, one pound sixteen shillings.

Oake Roofing raysing pieces eight Inches one way, six the other; Purloynes nine Inches one way and seven the other, one pound fifteen shillings.

Principal Rafters nine and six at one end, eight inches and five inches the other, small Rafters three

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three inches and foure inches at a square, *ibid*.

Of the same Scantlings of firr at one pound nine shillings.

Oaken Carcass, ground plates nine inches one way, seven inches the other; Story Posts backwards, nine inches one way and six inches the other pricked posts. Interdices and Braces seven inches and five inches, quarters two and four, the other second story posts, eight inches one way and six the other, prick post seven inches one way, five the other, interdices and braces six inches one way and foure inches; third and half Story Posts to be seven inches one way, five the other, Enterdices or braces five one way and four the other, quarters two and three at a square,

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square, one pound fifteen shillings.

The same Scantlings of firre, one pound nine shillings.

Partitions at a square, eighteen shillings.

Seeling Joyces on Cellaring, ten shillings.

Oaken Windows with a double Rabet and with an edge on the one side as a light, three shillings six pence.

Ivory doors glued and Battined at nine shillings.

Joyners Worke.

FOR Columns all under twelve inches at six pence an inch, upon the Diameter of the Column.

From twelve to fifteen inches at nine pence an inch, upon the Diameter

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Diameter of the Column.

From fifteen to eighteen inches at twelve pence an inch, upon the Diameter of the Column.

All Ballisters at one peny an Inch, upon the Diameter of the Ballister.

If the Ballisters be two inches over, it is two shillings a doozen.

Three inches over, is three shillings *per* doozen, and so to six shillings a doozen.

Heads and Pendills foure inches Diameter, at four pence a head, six inches Diameter six pence a head.

Balls twelve inches Diameter, at two shillings six pence a piece.

Balls eighteen inches Diameter, at three shillings a piece.

This work hath been done cheaper by some which do not very

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very well understand the Trade.

Item, Manger, Rack and planking of a Stable is eight shillings per foot in length, the ordinary five shillings.

Carvers Worke.

THE upper work cut with leaves at six pence *per* foot.

The wave with Lace under it at one peny *per* foot.

Small Beads with round ones and long ones at one peny, and and [*sic = a*] half peny a foot, the edges and anckers at foure pence *per* foot, the lower Wave with leaves at four pence the foot.

The round Freese eight inches deep cut with leaves at one shilling eight pence *per* foot.

The Wave on the Architrave cut with leaves, at seven pence *per*

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per foot; Beades in the Fasia, cut at round, at two pence a foot.

The single gallace five inches and a half broad, twelve pence *per* foot.

The upper Wave cut with Leaves at six pence *per* foot.

Great beads round and long together two pence half peny *per* foot, the Edges and Anchers at four pence *per* foot.

The Dentiles at three pence *per* foot, the lower leaves with flowers, at four pence *per* foot.

The Freese six inches and half deep, and cut with Capitals, at nine pence the foot.

Flowers for the Crosse worke in the galace in these quains, a foot over and seven inches deep cut with Leaves and Beads at eight shillings *per* piece the workmanship onely. The

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The Capitals of the Pillars for the Staires comming out of the Lodgings into Saint *James* Parke, cost twelve shillings *per* piece the Carving.

The Cartouches of the flat form cost two shillings six pence a piece.

Concerning a Roof.

A Roof being forty foot long and twenty foot wide, the Principal Rafters ten and seven inches, Purloyns the same, Plates the same, small Rafters foure and five inches, will take six Load twenty six foot of Timber; one square thereof will be twenty seven foot.

A Roof being as above said in length and with the principal Rafters being eight & six inches, the

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the Purloynes the same, the Plates the same, the small Rafters, foure and three inches; the Coller beams eight and three inches, ten foot long, will spend foure load twenty eight foot of Timber, one square nineteen foot.

A Roof being as abovesaid, the Principal Rafters being seven and five inches, the Plates the same, the Purloynes the same; Small Rafters foure inches and three inches, the Coller beams seven and three inches ten foot long, will require three Loads twenty foure foot Timber, one square fourteen and a half foot of Timber.

A Roof being as abovesaid, the Principal Rafters six and foure inches, the Purloynes the same, the Plates the same; small Rafters three inches, Coller beams

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beams seven and three inches, ten foot long, will be two loads and a half of Timber; one square is ten foot and three quarters of Timber.

Partitions.

The principal Timber six and seven inches, quarters four and two, one square will be twenty foot and a half of Timber with doore posts.

The Principal Timber five and six inches, quarters foure and two, will be nineteen foot and a half of Timber.

The Principal Timber five and foure inches, quarters foure and two, one square will be thirteen foot Timber.

The Principal Timber foure and three inches, quarter three and

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and two, one square will be ten foot Timber.

Flowers.

A Flower being forty foot long, twenty foot wide, the Summers fourteen and twelve inches, the Joyces three and twelve inches, will be five load of Timber; one square is thirty one foot & half of Timber.

A Floore as abovesaid, Summer thirteen and eleven inches, Joyce three and Eleven inches; one square will be thirty foot Timber.

A Floor as abovesaid, Summers twelve and ten inches, Joyces three and ten inches; one square will be twenty nine foot Timber.

A Floor as abovesaid, Summers

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mers eleven and nine inches, Joyces three and nine inches; one square will be twenty five foot of Timber.

A Floor as abovesaid, Summers eight and nine inches, Joyces six and three inches, Joyces six and three inches; one square will be fifteen and half foot of Timber.

Architrave doore-cases, the Post eight foot high, foure foot wide, the post being nine and seven inches, is twelve foot of Timber.

Architrave door cases, the Post seaven foot high, three foot and a half wide, the Post being nine and seaven Inches, is twelve foot of Timber.

Architrave door cases, the Post seaven foot high, three foot wide, the Post being six and seaven Inches head and soyle, the

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the same is seaven foot of Timber.

Architrave door cases, the Post seaven foot high, three foot wide, the Post being six and five Inches head and soyle, the same is five foot of Timber.

These particulars are to be understood, as if the building were to be measured after it is framed.

So that this is no just rule for the quantity of Timber, by reason there is a great deal of waste in the sawing, and bringing of the Timber to a square, but the larger the Timber, the lesse waste there will be; and the nearer to these proportions.

In this work, there must be an allowance for the waste of the Timber, for the benefit of the Carpenter, in case the Timber

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ber be his, if not, to the Proprietor of the building.

Girt measure of the Timber is the best for the buyer, because there is more in the circular measure then in the square; this is used in the Country, in *London* not, the Timber being squared before it be brought to *London*.

The Playsterers Work.

One hundred of Lathes will cover six yards of seeling, and lathing is worth six pence the yard, one hundred of Lime will lay ten or twelve hundred of Lathes.

Playster of *Paris*, the workman finding all, is worth one shilling a yard, upon brickwork it

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it is worth sixteen pence, or eighteen pence the yard.

Ruff cast upon Lath being very well done, is worth eighteen pence the yard, upon brickwork it will be done very well for twelve pence, or ten pence the yard.

Ruff cast upon Lath-work, the owner finding all, is worth eight pence a yard.

Upon Brick-work or Stone, is worth six pence a yard.

To Lath and lay with Lime and haire, the owner finding all the stuff, it will be done for two pence a yard.

Playstering upon Lath, ten pence a yard, some have done it for eight, and nine pence the yard.

Playstering upon Brick-work at four pence a yard, and some for three pence a yard.
White-

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White-washing and stopping, at three pence a yard.

Playstering of Lime upon hart lath is worth two pence the yard, some have done it for six pence a yard, and two pence rendering with Coate of Lime and hair on it.

Greenwich playstering, to be lathed and laid with Lime and haire, and a Coate of fine playster, the selings & Partitionings at one shilling two pence a yard, in Town, one shilling five pence.

A Cornish with two faces, all of it two foot deep, at two shillings six pence a yard, running measure; a Cornish at the foot of an Arch, sealing done with Lime and hair, eleven Inches deep, at one shilling nine pence the yard.

Architrave, Freese, and Cornish of three foot, three Inches deep;

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deep, done for three shillings two pence a yard, running Measure.

*Playsterers work in Fret
seelings.*

A Fret Seeling as at *Summerset*-house, in the Privy-Chamber, and in the Drawing Chamber, done with square Ovalls round; with a Cornish round about the roomes, the Fret having a dubble golose in the bottome, and a Cornish on the side, six Inches deep, and all the members inriched according to the moulds therewith measured flat in square yeards, without girting the work with a Line, is worth six shillings the yeard square.

Whiting and Stopping of fret Seelings,

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seelings at two pence a yard, whiting and stoping of old plain walls and seelings at one penny a yard, whiting of new walles at three pence farthing a square.

The workmanship only in Lath and Lathing three pence the yard, rendering two pence a yard.

A Friese made with foulding two foot deep, at five shillings a foot running measure.

Fret seelings the moulding, six Inches deep and full of work, with inrichments in the moulding and fouldage in angles and squares, the workmanship only at five shillings a yard, measured flat.

One Tun of Playster of *Paris* will lay twenty nine yards of Lath-work, three quarters of an Inch thick, one Tun will lay as much again upon Brick-work. Walls

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Walls done in faire black for a Tennis-Court, at one penny a yard, the workman finding all.

Glaserye

THE best French Glasse wrought with good lead, well summoned, is worth sixteen pence a foot.

The best English Glass wrought with an Arch well leaded, and summoned at seaven pence a foot.

Ordinary Glass for quarries at five pence half penny a foot.

Painters-work.

For a fair Stone-colour in oyl upon windowes and doores at twelve pence a yard, For

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For a Timber colour in oyl, on doores and windowes, at ten pence a yard.

Wainscot put into Walenut red colour, in distemper at six pence a yard.

Painters work of ordinary lights of windowes in oyl, at six pence a yard.

To lay a fair white colour in oyl, on Cornish of Timber, and on Stairs, and Rails and Balisters fourteen pence a yard.

The laying over a Wall, white in oyl, twelve pence a yard.

Painting of the fairest green, that can be in distemper, and varnisht is one shilling a yard.

Frames seaven Inches and a half broad gilded, the ground a Timber colour cost three pence farthing, for one Inch broad, and a foot in length. Other

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Other rich carved frames, painted and gilded, the gold fifteen Inches broad, the ground a fair white colour cost five shillings a foot.

Painting in white and gold, upon flat moulding, and set off with shading, like carving one Inche broad, and a foot long is worth four pence, or five pence a foot.

Painting the outside of ordinary windowes, is at three pence a light, and some at two pence a light.

Doore-case and doors at two shillings a peece, the outside only.

Gilding for workmanship of the gold, at twenty shillings a hundred.

Nota, The Painters are to colour over their windowes thrice.

Smiths

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Smiths work.

Iron Bars, Hinges, Bolts, Staples, great Hookes, are worth three half pence the pound weight, Cross garners four or five pence the pound weight.

Iron Casements about two foot high, three shillings six pence a peece, and others according to their bigness.

Concerning the Plummer.

Every Foot of new lead square, is worth thirteen or fourteen shillings the yard, besides souder at nine or ten pence the pound.

In exchange of old lead for sheets

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sheets new run, is allowed three shillings in every hundred weight for waste.

Every square foot of lead run thin, to serve for gutters; waith commonly six or seven pound, if old eight or nine.

Leaden gutters are at twenty shillings the hundred.

The Masons work.

For the Base called gross-table, at the bottome of a building, seven pence *per* foot.

For an Architrave of eight Inches to a window, eight pence *per* foot.

For a Freise to that Architrave, six pence *per* foot.

For the Cornish (being about ten Inches thick) one shilling two pence *per* foot. For

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For the Pilaster to the same Architrave, seven Inches thick, six pence *per* foot.

For scrowles to the said windowes, six shillings a piece.

For scrowles and leaves of second story windows, six shillings *per* window.

For the Capitol, to the stooles of those windows twelve pence *per* foot.

For the quines six pence *per* foot Ashler measure.

For Belconies with Raile and Ballastre to the above said windowes four pound *per* Belcony, being four foot high and tenn foot about.

For raile and ballaster on the top of a building, nine shillings *per* yard.

For Architrave to doores, one shilling six pence *per* foot.

For cleansing and setting again

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gain old work, as window stuff, grostable, watertable, cornish, quines, and Ashler, four pence *per* foot one with another.

For new cleansing an old front, and piecing the mouldings where it is broken, four pence *per* foot.

Paving of *Portland* stone, eight pence *per* foot.

White and black marble pavement a foot square, costs at *London* two shillings six pence laid.

To be carried and laid in the Country, three shillings six pence.

The Namur-stone gray and white, the same price.

The Rans five shillings mixt with white.

The Rans and Purple six shillings.

The

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The prices in Holland.

White Marble pavement the foot, three shillings; the black, eighteen pence.

The black and white or red and white Marble polist, five shillings.

Black glased *Holland* pan tiles, six pound the thousand; sometimes five pound, & four pound ten shillings.

Cassy rough pavement, at three pence half penny the yard workmanship, with materials twelve pence, though the paviours will exact sixteen pence.

Pavement with Pibble-stone, fifteen and eighteen pence the yeard, square.

Paving tiles six Inches, eight, ten, and twelve, from six shillings to twenty the hundred.
As

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As for the paving of Courts, to prevent the overgrowing of grasse, and the charge of too often weeding. It would not be a miss to lay chalk or lime under the paving, and to do the same in guardens under gravel walks,

This is only a rate for the ordinary way of paving allowed by Act of Parliament, for which price, but very slight work hath been furnished; till such time as Mr. *Le Coeur* (having undertaken the Commissioners paving works) hath contrived such a plenty in stone, which hitherto was so scarce that by consequence he hath since rendered the work more plausible at the very same rate. But there is another way yet far more substantial which the same under-

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undertakers, and society have industriously invented; whereby they are not only able to make a most substantial good pavement; but are likewise capable by that same certain new invention to maintain it durable for twenty one years long, in reparation at a yearly small rate, but must of necessity cost them much more then sixteen pence once, for all at the first paving.

If materialls could be had at lower rates then the aforementioned. It would be as well done to seek for such materials, as to look to the goodness of them. So in the choise of the Workmen for on those who can work best.

To compleat these matters, I shall note what is most necessary.

First,

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First, That what contributes more to the fatall ends of many good Mothers Son, is ill Building Paper-like walls, Cobweb-like windowes, doores made fast as with Pack-thread, purposely to tempt men who through extream want are become weary of a languishing life, and to whose fatall end, ill Builders are in a manner accessary.

Let not the *Hollanders*, *German*, nor any other Northern Nation Vant of their scarcity of theeves (nor those of *Delf* in *Holland*; who when the Town Mason had desired them to choose a day to visit the publick Gallows which he had made, said that they would serve for them and their Posterity) but attribute the same scarcity to that defence they are wont to make against Theeves; but that defence consists not in a super-

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superfluous care of putting locks and bolts upon doores or wooden shutters to windowes, nor iron bars in them that will serve turne, except those locks, bolts, shutting windowes, and barrs are made and set on as they ought to be.

The *Hollanders*, their [*Errata*: “wooden”] wooden shutters are dubble-deal bordered wainscot-like-framed within with Battens, fluted without as the body of a Dorick Column; that the rain beating on them, may the better run down and carry away the dust which may be gathered on them, and that they may not rot so soon as they would, otherwise if they were garnished without with battens; they paint them also in strong oyle colour thrice over to resist the weather the better; the Carpenters do frame them so exact

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exact to the width and height of the stone casement of the window, as that scarce a knife could be thrust between them; they are not hung with cross garnets; because such are easily taken off, nor are the broad sholders of an iron hook the onely thing that can hinder theeves to loosen such a window, nor iron bars; Theeves having a way to remove iron bars without breaking of them, or making half so much noise as on a wooden bar.

The iron hinges ought to be framed between the two deal bords, whereof the shutting window is made, and the head of the hing is to be so well fitted in the stone, as that no accesse can be had to it, the bolts within straight or crooked, must have a shutter at its taile. Now

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Now if a Builder will not be at the charge of such shutters without doores, they must then have wooden or iron bars to secure those within.

Doores may be secured not onely by a wooden or iron barr, but by a strong chain hung at the one end in an iron ring, at the other end in a like ring, both united with a strong Padlock, then any Porter may open a gate or doore six inches lesse or more to receive a Packet in the night when it so happens.

Nor do provident builders rivet locks only at the one side, for that a thief within doores in correspondence with one without, makes that single riveting of no use as to security, rivets to locks must be enterlaced with rivets between the double bord, nor should the key hole of an outward

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ward doore of a house be left uncovered in the night, for if through the negligence of him that is the keeper of the gate, neither bolts, nor barrs are remembered; Why? a pick-lock may soon open such a doore or gate; it is an easy contrivance to have a bolt with a large head that shall cover the key-hole of a doore or gate, to make fast from without to the inside, and so secure the lock; and if the key of that bolt is brought at night to the owner of the Palace, none can run out a gadding or drinking.

And so much may suffice for the securing of doors and windowes, onely this more. That there ought to be an iron plate of the width of the doore, and foure foot high walled in within, so fastened on both sides as

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as that no violence from without can make a breach, since in divers places, Rouges have taken up the causey or pavement before a doore, and then with facility loosened the bricks under the threshold to make a passage into the House.

But as for thieves who do untile houses, such may be kept out, if the seeling be bordered or made up of plates of thin, or arched with brick as is practised in the Banks of *Loane*, which in other parts are erected for the relief of the Necessitious.

Furthermore, in reference to the main of the contents of a former Printed Discourse, concerning the three first Principles of Magnificent Building; As the well choosing of a fit place for a Building, is a Capital point, to set it right, and the giving a fit extent

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extent to the Court, so the making to it a Porch ought to be well considered; For as a Porch serves to a Hall, to distribute Almes to the Poore; a Portch proves often cumbersome, being the receptacle of foul creatures, who as soon gotten into a Court make it their randevouze; Nor is a Porch so convenient to the Palace of a Prince, whose Person must be attended by a great retenue, and no man to stand in his passage; But if a Portch be affected, let it then be a vaste *Portuco*, as that of *Solomons* House was, and that he Built for *Pharoahs* Daughter.

Now as for the placing a Gate or Doore to enter into the Hall of a Palace; None will deny but that Greatnesse and Conveniency being conjoynt fits best. The entrance into a Hall is not so

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so proper in the middle as at the end, when the ground plot is yet to choose and to be ordered; But if there be a constraint, which is most prejudicious to a Building, the entrance must be set as much towards the end as possible can be, to set the Chimney well, and the main staire case in so fit a place, as that it may not be subject to a like fatall accident as happened to *William* Prince of *Orange* at *Delf*, when he was shot by one who stood behinde a Column, opposite to the Staires of that Prince his House.

The rise, width and depth of steps shall not need to be repeated, since they have been described, and reasons alledged for their dimension, mentioned both in the former Printed and in this discourse; nor shall repetitions be necessary concerning the

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the reason, why the first Floore of a building should not lye level with the ground; The first for Health; the second for neatnes since any floor level with the ground receives more dirt from abroad; the third for greatness, which appears more by an assent; the fourth for the Vaulting of Sellars or any other Offices; and the fifth to have the floores more dry; Onely I shall insert this story of one in Authority, *Who passing by a Town wherein the People generally did not live out the thirtieth yeare, of their Age, caused all the baok [= 'back' (1564 edition)] of their Houses to be made the Front, and the windowes which were forward to be made up, to free them from that infectious Aire that did shorten their Lives, which had its effect accordingly;* and it is therefore I do so much insist on the point

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point of placing a Building where good Ayre is, & that neither chimneys nor doores may be so placed as to serve for the attracting of infectious Aire, which kills more then the sword or the Seas overturnes Ships.

To take my leave of all Builders, I must conclude with what followeth.

First that when they shall be pleased, to take a Posey out of the former Printed Discourse, and joyne it, to what may please them, out of this they will finde, that both hit the main marke, to wit, *Solidity, Conveniency, and Ornament*, altogether to be observed in true Building. That all what is represented is for their profit and satisfaction, that the manner and phrase of the first discourse, was to that end intermixt with recreative passages, th[at ?] the

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the Reader should not be tired with the Mechanicks their Phrases, and proper Names of their several Trades, through some of them are wont to scoffe at those whose language is polisht; as if a Person of Eminent Quality, (Born to the Highest Concernment of a State) should have learned their words, and have spent therein part of his pretious time; And therefore I have now offered; to write, in such workman-like termes, as may serve for a Clark of the works to speak unto them.

Secondly, That all owners of Buildings, shall do well to make choice of such a person for their Clark as the Master workmen will endure, which they will not, if he be a Master workman, whom they will not only suspect to have a design to underminde and

H 4

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and supplant them, but obey not, pretending to know more themselves; Nor is it fit that there should be such a controuler over a Master workman, as a workman: The same is to be

observed with a Surveyor to prevent all quarrels and contests: for as every Cook commends his own Sauce; more than one Cook to a dish will spoil it, there cannot be two suns in the Firmament, one Generall over another; nay two Cocks among Hens.

In a word, an Owner must trust, or never make choice of Trustees; For if otherwise, let him be certain that his purse will be incessantly abused.

Thirdly, Let all Owners be prepared to *Repent*, whether they Build or not, for it is likewise the fate of many that Marry or Marry not.

Let both the one & the other lay

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lay as in a Scale their several Charges, Vexations, Cares, Labours and Pleasure; they will finde this to be true; *viz.* If they build they must be at great present disbursments, vext with as many over-sights (as Printer setters will commit faults, as appears by the Errataes at the end of books) And to be overreacht in bargains concerning their Materials, as also in work done by the great or day.

If they Build not, they are subject to the inconveniencies of Houses built according unto the fancies of the Owners, and when they shall cast up the sums of money spent in the rent (besides many chargeable alterations) they shall finde that they might have built a better and more fit habitation for them and their posterity; So will it be with men that Marry or Marry not.

The

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The first will have had cause to exercise the Vertue of Patience, and if he be a high *German* (especially a Swab) such as have wives, that believe their husbands doth not love them, except they be beaten, Why? They will be practitioners in the mortification of their own flesh and bones; for let women say what they will, they are bone and flesh of man, and not the head, though some of them would ware the Bonnet and the Britches to boot; Well the husband (after all his paines and Vexations) if he can turn all things to the best, will have (as the *Italian* saith) a sound *gusto*, he will have observed the *French* saying; *Lietes doits, a l'herbe que tu cognois*, and by a mixture of good blood (sprung from a clear spring) settle his name to posterity.

If

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If he marry not, O how many dangerous encounters for him both in body and soul!

And how can such a one contest the Divine decree; That it is not good for man to be alone?

Paradise would have been but a Wildernesse without a Woman; Nor can trees speak a word of comfort to a good man when stretched forth in his cold bed, tired of the Labours of a darke Winter day, and let such a one, at the end of the year cast up his bill, he will finde to

have spent more in presents of consideration about another mans one; and if he be a Tradesman in Potting, Gadding, Codlings, Pudding-pies and Bare-baiting, (with ranting creatures) then if he had been married; therefore if men must Repent, let them have somewhat that is called *meum*

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meum without offence for their Repentance.

Now if these two sorts of men, the one will resolve on the affirmative, delight to spend money on choise Materials, as in particular to imitate *Solomon*, in the procuring of precious Wood; they may take notice (if they please) that store of precious Wood can be had for the bording of Princely Palaces, both for Colour, Aromatick smell and Durance; to make square framed Pannels (more rich then those which are seen at *Paris* in the Cabinets of the Palace called *Orleans*) which precious Woods are to be had in severall parts in the *West-Indies*, some whereof are as red as the fairest *Vermilion* some yeallow as Gold, hard as Marble; besides rare *Madera*, and other variously figured, as the Right

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Right Honourable the Lord *Willouby* of *Param* well knoweth, what extent of Land about *Surrenam* is beset with speckled wood, and is not above six weeks sail from *England*, where ships full of lading, may be had besides large Timber eighty foot high, straight, without a knot [at *Abscoa.*]; and at no other cost but felling and lading, more advantageous then to pay for Furr from *Norraway*; besides a very gainfull returne of *Amber Greese* and vendible commodities in exchange of Iron Tools, Sissers, Knives, old Linnen and trifles.

To conclude, *May all Builders both of Palaces and of particular Habitations have a good success and possesse them in Peace and Prosperity.*

May also all Surveyors, Masterwork-

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workmen, Journey men and Labourers behave themselves so as they ought.

Take well this former Counsel and Advice, give no admittance to Pride, the Enemy of all Learning; Whereof a King was such a Lover, as that when near the houre of his leaving the World He saw one advance more then others to him within the Curtain of his Bed, he askt, Whether he could learn him anything that was Good.

FINIS.

Nota, The first discourse concerning *Solidity*, *Conveniency* and *Ornament*; is to be had at Mr. *T. Heaths* within *Lud-gate* at the golden *Globe*.

[unpag. = 111]

Errata's in the Treatie.

In Page 6. line 11. read with, for *which*. p.
7. l. 10. Rasat, r. *Rabat*. p. 15. l. 5. in, r. *is*.
p. 51 l. 11. abisness r. *Abisme*. p. 55. l. 14. fitted, r. *filled*. p. 94. l. 9. their, r. *wooden*.

BALTHAZAR GERBIER: A BIOGRAPHICAL NOTE:

Sir BALTHAZAR GERBIER: born Middelburg, in Zeeland, 23 February 1592; died Hampstead Marshall, Berks, 1663 (the date of Gerbier's death has been the subject of some uncertainty, and, in light of future research, the presently accepted '1663' may change), the son of Anthony Gerbier and his wife Radigonde Blavet, protestant refugees from France; active in England. Courtier, diplomat and political agent, calligrapher, miniature painter; scenographer; architect, publicist, writer on architecture and other topics, art collector and art dealer, gold prospector, deviser of financial and banking instruments, traveller to the Continent and to the New World, promoter of an academy.

In his youth Gerbier practised calligraphy and miniature painting. At the death of his father, he accompanied a brother to Basque Gascony, where he acquired a knowledge of drawing, architecture, fortifications, and "the framing of war-like engines". Gerbier accompanied the Dutch ambassador to London in 1616. There he soon entered the service of George Villiers, later the powerful Duke of Buckingham (certainly by 1619), for whom in 1624-1625, and probably earlier, he carried out major alterations at York House in the Strand, where he acted as the Keeper, or "*maestro di casa*" (it is sometimes said), and Master of the Stables. In 1625, he went with Buckingham to Paris, where he met Rubens, perhaps not for the first time, and with whom he became intimate. Gerbier collected important works of art on a large scale for Buckingham, among them a number of Venetian paintings (Titian, Bassano, Tintoretto). Gerbier's pamphlets contain numerous allusions to his frequent missions abroad. After Buckingham's assassination in 1628, he entered the service of King Charles I, who stood godfather to Gerbier's son. Subsequently Gerbier was knighted by Charles in 1638, and appointed Master of the Ceremonies at the court in 1641. Gerbier claimed a certain "Anthony Gerbier, Baron Douvilly", as his great-grandfather, and on occasion used the title himself. Gerbier also claimed himself to speak "several languages", as he surely did, with his French and Spanish ancestry, and to have "a good hand in writing, skill in sciences, as mathematics, architecture, drawing, painting, contriving of scenes, masques, shows and entertainments for great Princes (...) as likewise for making of engines useful in war".

In 1641, according to Gerbier's own account, he was promised Inigo Jones's place as Surveyor of the King's Works, a post he had long coveted. Enmity toward Jones marks Gerbier's later writings. In July 1641 he was effectively replaced as Master of the Ceremonies, and his career as a courtier was at an end. He kept an Academy at Bethnal Green (Gerbier, *The Interpreter of the Academie for Forrain Languages and All Noble Sciences and Exercises*, London 1648, "more sophisticated architecture"; including a discussion of architecture in English and French, pp. 170-183, which anticipates his *Brief Discourse*). During the Interregnum he sought gold in the America's. When, in 1660, he returned to London he was suspended again from the office of Master of the Ceremonies. And in 1660 he also published two pamphlets promoting plantations in the Americas. He may have designed triumphal arches for King Charles II's reception in London in 1660. It was at this time that he published his two architectural treatises, advertising his availability as an architect and architectural supervisor. In 1662, he was in charge of designing Hampstead Marshall, a country house, for Lord Craven – a contemporary pronounced it "inconceavably ugly". He died the following year. A number of Gerbier's drawings survive, but the destruction of his buildings have impeded the assessment of his work as an architect. John Summerson (1953) quite reasonably attributed the York House Water-Gate, which survives in the Embankment Gardens, London, to Gerbier. Gerbier's own mentions of this work, along with others that implicitly belong to him,

appear to speak for this assignment, but the work is often given to Jones, and Summerson seems to have withdrawn his suggestion in 1991, the year before his death. Nevertheless, the York House gate might fit seamlessly into a garden landscape by Rubens. Gerbier's criticisms of Inigo Jones have been received poorly in England, where Jones is viewed as an untouchable cultural hero, but the continental Gerbier, with his cosmopolitan experience, may have found Jones and his art in some of their aspects provincial. Gerbier's antipathy toward Jones was shared by several contemporaries.

When Rubens went to England in 1629, he lodged with Gerbier at York House for many, many months. In 1619, Gerbier had taken a thirty-one year lease on the house at the east side of the York House gatehouse. At this time Rubens painted a group portrait of Gerbier's family (Washington, National Gallery of Art).

In the prospectus for his academy (1648) Gerbier proposed instruction in "Hebrew, Greeke, Latine, Spanish, High Dutch, and Low Dutch", as well as "both Ancient and Modern Histories, joyntly with the constitutions and Governments of the most famous Empires and Dominions in the world; the true Naturall and Experimentall Philosophy, the Mathematicks, Arithmetick, and the keeping of Books of Accounts by Creditor and Debitor", and further, "All Excellent hand-writing, Geometrie, Cosmography, Geography, Perspective, Architecture, Secret motions of Scenes, Fortifications, The Besieging and Defending of Places, Fire-works, Marches of Armies, Ordering of Battailles, Fencing, Vaulting, Riding the Great Horse, Musick, Playing on all sorts of Instruments, Dancing, Drawing, Painting, Limning, and Carving, etc." Gerbier did publish a fairly substantial treatise on fortifications (*The Interpreter of the Academie for Forrain Languages, and all Noble Sciences and Exercises concerning Military Architecture, or Fortifications*, [London] 1649), in addition to various pamphlets containing his public academy lectures.

BALTHAZAR GERBIER: BIO-BIBLIOGRAPHY:

Both Joachim von Sandrart (*Teutsche Akademie*, 1675) and William Sanderson (*Graphice*, 1658) mention Gerbier.

Gerbier figures large in the literature on Rubens: see, *inter alia*, Rubens's correspondence and William Noel Sainsbury, *Original unpublished papers illustrative of the Life of Sir Peter Paul Rubens: as an artist and a diplomatist*, London: Bardbury and Evans, 1859.

See also:

Michael George De Boer, "Balthazar Gerbier", in: *Oud Holland*, 21, 1903, pp. 129-160

Wolfgang Stechow, "Peter Paul Rubens's Deborah Kip, Wife of Sir Balthasar Gerbier and her Children", in: *Studies in the History of Art*, vol. [5], National Gallery of Art, Washington, 1973 (1974), pp. 6-22

Clovis Whitfield, "Balthazar Gerbier, Rubens, and George Vertue", in: *Studies in the History of Art*, vol. [5], National Gallery of Art, Washington, 1973 (1974), pp. 23-31

David Freedberg, "Fame, Convention and Insight: On the Relevance of Fornebergh and Gerbier", in: *Ringling Museum of Art Journal (Papers Presented at the International Rubens Symposium)*, April 14-16, 1982), 1, 1983, pp. 236-259

Fiona Donovan, *Rubens and England*, London-New Haven: Yale University Press, 2004 (Many pages are devoted to Rubens and Gerbier, but these are not a substitute for the abundant primary sources.)

For biographies of Gerbier, see:

Hugh Ross Williamson, *Four Stuart Portraits*, London 1949, pp. 26-60

Edward Chaney, "Notes towards a Biography of Sir Balthazar Gerbier", in: Edward Chaney, *The Evolution of the Grand Tour*, London-Portland: Frank Cass, 2000, pp. 215-225

See further:

Lita-Rose Betcherman, "The York House Collection and its Keeper", in: *Apollo*, 92, 1970, pp. 250-259

Carlos Montes Serrano, "Modelos ingleses del siglo XVII. De Balthazar Gerbier a Christopher Wren", in: *Revista de arquitectura*, 4, 2000, pp. 37-48 (also online)

David Howarth, "The *Entry Books* of Sir Balthazar Gerbier: Van Dyck, Charles I and the Cardinal-Infante Ferdinand", in: *Van Dyck 1599-1999, Conjectures and Refutations*, ed. Hans Vlieghe, Turnhout: Brepols, 2001, pp. 77-87

Marika Keblusek, "Cultural and political brokerage in seventeenth-century England: The Case of Balthazar Gerbier", in: *Dutch and Flemish Artists in Britain 1550-1800*, ed. Juliette Roding, Eric Jan Sluijter, Bart Westerweel, Marijke van der Meij-Tolsma, Eric Domela Nieuwenhuis, Leiden: Primavera Pers, 2003 (= *Leids Kunsthistorisch Jaarboek*, 13), pp. 73-82

The following biographical entries for Gerbier indicate much additional literature:

[Anonymous] "Gerbier, Sir Balthazar", in: *Dictionary of National Biography*, vol. 8, first published 1889/1890, pp. 1106-1108 (very full and detailed information)

Rudolf Oldenbourg, "Gerbier d'Ouvilly, Balthazar", in: *Thieme-Becker*, vol. 13, Leipzig 1920, pp. 444-445

John Bold, "Gerbier, Balthazar", in: *Macmillan Encyclopedia of Architects*, ed. Adolf K. Placzek, New York and London, 1982, vol. 2, pp. 186-187

Howard Colvin, *A Biographical Dictionary of British Architects 1600-1840*, 3rd revised edition, New Haven and London: Yale University Press, 1995, pp. 396-398 (ample and well-informed)

Edward Chaney, "Gerbier, Sir Balthazar", in: *Grove-Macmillan Dictionary of Art*, vol. 12, London and New York: Macmillan Publishers, 1996, pp. 340-341 (brief but informative; see Chaney 2000, *supra*, for a fuller treatment)

Sophie Reinhardt, "Gerbier (G. d'Ouvilly), Balthazar (Balthasar)", in: *Saur Allgemeines Künstler-Lexikon*, vol. 52, München-Leipzig: K. G. Saur Verlag, 2006, pp. 63-65

See further:

John Summerson, *Architecture in Britain 1530 to 1830*, London-Melbourne-Baltimore: Penguin Books, 1953, pp. 92, 96, pls. 50 A and 50 B

Johannes Dobai, *Die Kunstliteratur des Klassizismus und der Romantik in England*, 4 vols., Bern 1977-1984, vol. I, 1974, pp. 378 ff.

John Bold, *John Webb: Architectural Theory and Practice in the Seventeenth Century*, Oxford: Clarendon Press, 1989

Hanno-Walter Kruft, *Geschichte der Architekturtheorie von der Antike bis zur Gegenwart*, Studienausgabe. Vierte Auflage, München: Verlag C. H. Beck, 1995, pp. 262, 592

The most detailed general treatment of Gerbier's architectural writings, in the context of his time and place, is found in:

Eileen Harris, *British Architectural Books and Writers 1556-1785*, Cambridge: Cambridge University Press, 1990, pp. 43-45, 206-208, 380

Temporally overlapping Harris's treatment, and extending more than an additional half-century, is: John Archer, *The Literature of British Domestic Architecture 1715-1842*, Cambridge and London: MIT Press, 1985, 1104 pp., which also includes general architectural treatises and ones on the classical orders.

See also: Laurence Hall Fowler and Elizabeth Baer, *The Fowler Architectural Collection of the Johns Hopkins University, Catalogue*, Baltimore, Maryland: The Evergreen House Foundation, 1961, pp. 117-118 (Gerbier, CA, 1663, 1.a ed., cat. no. 137, pp. 117-118 (bibliographic description))

Editions:

D.: London 1662, printed by A.M.; London 1664, printed by Thomas Mabb; London 1665, printed by A.M.

CA.: London 1663, printed by Thomas Mabb; London 1663 (another issue, with same title imprint, and an additional epistle to Sir William Killigrew)

1664: *The First and Second Part of Counsel and Advice to All Builders* (...), London 1664, printed by Thomas Mabb (includes CA. and D.)

D. was reprinted in: *Architectural Publication Society Detached Essays* (1854); D. and CA., Gregg reprint, 1969.

GLOSSARY

There follows a glossary of technical and architectural terms contained in both of Gerbier's architectural treatises (*D.* and *CA.*), including antiquated and unusual or unfamiliar usages, as well as the names of places and persons. The forms of the lemmata or words included in the glossary are given according to Gerbier's seventeenth-century orthography, which is notably variable and occasionally idiosyncratic, and further not always that of a native speaker or a schooled writer of the language. The glosses provided here are compilatory in character, and they are closely derived from, for the most part, a limited number of printed sources and a large number of online sources. The questioning reader is invited to control the accuracy of the definitions provided in printed references work and, with less expenditure of effort, though online searches. I have relied, in the first instance, on early texts collected in: Terence M. Russell (ed.), *The Encyclopedic Dictionary in the Eighteenth Century: Architecture, Arts and Crafts*, Cambridge 1997, in 4 volumes, in as much as these sources are neither temporally nor culturally distant from Gerbier and his usages. Further printed sources are listed below, at the end of the glossary.

The GLOSSARY serves as (1) a commentary to Gerbier's text, and (2) a list of potential search terms (*Suchbegriffe*, *Stichwörter*; *parole chiavi*), and, as such, fulfills the function of an index. As a simple reading list it affords a detailed overview of the content of Gerbier's two treatises.

D. = *A Brief Discourse concerning the three chief Principles of Magnificent Building.*
Viz. { *Solidity, Conveniency, and Ornament*, London 1662

CA. = *Counsel and Advise to all Builders; For the Choice of their Surveyours, Clarks of their Works, Bricklayers, Masons, Carpenters, and other Work-men therein concerned*,
London 1663

ACANTE LEAVES: Acanthus, in architecture, is an ornament in the Corinthian and Composite orders, being the representation of the leaves of the acanthus plant in their capitals. (*Akanthus*; *acanthé*; *acanto*).

ALBION: Originally the Greek and Roman name for Britain; most ancient known name of Great Britain; also: Britain (*poet.*).

ALEXANDER AND DARIUS WRATTLE FOR MASTERY IN PERSIA: Alexander the Great and Darius III of Persia (circa 380-330 B.C.), deposed during Alexander's conquest; Battle of Issus, 333 B.C.

ALIBIS: Albis, the name Gerbier gives for an Indian tribe or people.

ALTITUDE: Height.

AMBER GREASE: Ambergris, an odoriferous pale gray waxlike substance, which originates as a secretion in the intestines of the sperm whale and is found floating in tropical seas, used as a fixative in perfumes.

AMPHITHEATERS: Amphitheatre, a spacious building, either round or oval, having its Area or Arena encompassed with rows of seats, rising gradually one over the other, with porticoes both within and without. Among the ancients, appointed for the exhibiting of spectacles or shows to the people: as, the combats of gladiators and those of wild animals. (*Amphitheater; amphithéâtre; anfiteatro*).

AMPHITHEATERS AT VERONA AND ROME: The amphitheatre of Vespasian, called the Coliseum, and that at Verona, called the Arena, in Italy, are the most celebrated now remaining from Antiquity. (*Kolosseum; colossé; colosseo*).

ANCHERS: Anchors; heads of iron ties. Anchors (in architecture), a sort of carving sometimes resembling an anchor, or arrow-head, placed as enrichments in the orders; these anchors and eggs being carved alternately throughout the whole buildings.

ANTHONI PERES: Antonio Pérez, 1534-1611, Spanish statesman and secretary to Philip II.

APPRENTICES: Apprentices, learners of a craft, bound to serve, and entitled to instruction from, their employer for a specified time.

ARCH: Arch, in architecture, is a concave building, raised with a mould bent in the form of the arc of a curve, and serving as the inward support of any superstructure; vault (*Bogen; arc; arco*).

ARCHBISHOP OF YORK: High-ranking cleric of England, second only to the Archbishop of Canterbury.

ARCHITRAVE: Architrave, that part of a column or order or order of columns which lies immediately upon the capital; the lowest member of the frieze, and of the whole entablature. Loosely applied to any moulding around a door or window, with profiles resembling an architrave. (*Architrav, Hauptbalken; architrave; architrave*).

ARCHITRAVE DOOR-CASES: see ARCHITRAVE-DOORS.

ARCHITRAVE-DOORS: Those doors which have an architrave on the jambs and over the door, upon the cap-piece, if straight, or on the arch, if the top be curved.

ARTHOIS: Arthois, Artois, a former province of northern France. Its principal cities are Arras, Saint-Omer, Lens and Béthune.

ASHLER: Ashlar, a term among builders, by which they mean common or free stones, as they come out of the quarry, of different lengths and thicknesses; square-hewn stones. (*Haustein, Werkstein, Quader, Werksteinmauerwerk; pierre de taille; pietra di taglia, concio*).

ASHLER MEASURE: see ASHLER.

ATLAS: The Titan supposed to hold up the pillars of the universe. In architecture, a name given to those figures, or half-figures of men, so much used instead of columns or pilasters to support any member of architecture.

AUSTRICHES: Austrich, obsolete form of ostrich.

BAGNI DE CICERONE: "Baths of Cicero", seen by Count Adolph of Bentheim-Tecklenburg und Steinfurt, 1597-1600.

BALCONIES, BALCONY: Balcony, a projecture beyond the surface or plane of a wall, supported by pillars or consoles, and encompassed with a ballustrade (*Balkon; balcon; balcone*).

BALLESTERS; BALLISTERS: Baluster, a small column, or pilaster of different sizes. Their dimensions and forms are various, according to the fancy of the workman, frequently adorned with mouldings. They are placed with rails on stairs, in the fronts of galleries in churches, also around altarpieces, on terra-walks, and in balconies and platforms. Balustrade, a series or row of balusters. (*Baluster; balustre; balustro*).

BANQUETTING HOUSE: Banqueting House in Whitehall, Westminster, London, by Inigo Jones, ca. 1620.

BANQUETTING ROOM OF WHITEHALL: Single two-story double-cube room within the Banqueting House, *supra*.

BASE: Base, a stand or support; in architecture, from the Greek 'rest' or 'support', it is used to signify any body which bears another, but particularly for the lower parts of a column and a pedestal. The base is supposed to be the foot of the column (*Basis, Postament; base; base*).

BATTEN; BATTENED; BATTENS: Batten, a long narrow piece of squared timber; a strip of wood used for clamping the boards of a door; to strengthen or secure with battens. (*Lagerholz; bois gisant; travetto, travicello*).

BAZE: see BASE.

BEADS: Bead, a round moulding in the Corinthian and Roman order, carved in short embossments, like beads in necklaces, usually about one-fourth of a circle. A bead-plain is often set on the edge of each fascia of an architrave.

BEAMS: Beam, in building, the largest piece of wood in a building, being laid across the walls and serving to support the principal rafters of the roof (*Balken; poutre, solive, bau; trave*).

BED CHAMBER OF STATE: Official room, intended for sleeping in; bedroom. The Gentlemen of the Bed-Chamber are persons of the first rank, whose office it is to wait a week in the King's Bed-Chamber, lying by the King on a Pallat-Bed all night, and to wait on the King when he eats in private.

BEDFORT-PIAZZA: Bedford-Piazza, Bedford's Piazza in the Covent Garden, a district in the City of Westminster, London, Covent Garden Piazza was the site of a green market, earlier belonging to the Earls and Dukes of Bedford.

BELCONIES; BELCONY: see BALCONIES, BALCONY.

BERGEN: Bergen, Bergin, a large city in Norway, earlier as part of Hordaland; supplier of fir timber.

BLACK GLAZED *HOLLAND* PAN TILES: Red clay roofing tiles with a curved profile; Dutch and Belgian pan tiles are often glazed in colours. (*Dachpfanne; panne; tegola olandese / fiamminga*).

BLEWISH STONE OF THE QUARRIES OF LIEGE AND NAMUR: see NAMUR.

BLEW SLATE: Blue slate; slate, a blue fossile stone, very soft when dug out of the quarry, and on that account easily cut or sawed into thin long squares or escallops, to serve in lieu of tiles for the covering of houses. 'Tis dearer than Tiles, but far more durable.

BOARDING: Boarding, material for boards; boards collectively.

BOARDING ROOMS: Bording rooms, eating rooms.

BOARDS: Boards, a long thin usually narrow piece of sawn timber (*Brett; planche, asse*).

BOLT; BOLTS: Bolts of iron in building are of three kinds: plate, round, and spring-bolts.

BRABANT: Brabant has been the name of several administrative entities in the Low Countries with different geographical extents; a former duchy now divided between Belgium and the Netherlands.

BRACES: Brace, a piece of timber framed in with bevil joints. Its function is to keep the building from swerving either way, that is, stabile.

BREECHES: Breeches, short trousers.

BRICK: Brick, a fat reddish earth, formed into long squares, 4 inches in breadth, and 8 or 9 inches in length, by means of a wooden mould. (*Backstein; brique; mattone*).

BRICK-BATS: A piece of brick, also as a missile.

BRICK-CARTS: Brick carts, carts for transporting brick, including on the building site.

BRICKKILLS: Brick kilns or ovens. (*Ziegelei, Ziegelofen; four à briques; fornice per mattoni*).

BRICKLAYERS: Bricklayers, workmen who construct and surface with brick.

BRICKMAKER: Brickmaker, craftsman who fabricates brick.

BRICKWORK: Construction in brick.

BRICKLE: Brickle, brittle, fragile.

BRIDGES: Bridge, a work of masonry, or timber, built over a river, canal, or the like, for the convenience of crossing the same.

BRUXELLS: Bruxelles, Brussels, the largest city in Belgium.

BUILDERS: Builders, those who build, whether owners or building contractors, and the like. One who builds, especially a contractor who builds houses.

BUILDERS PURSES: Builders's purses or pocketbooks; the funds or monies of the builders.

BUILDING: Building, any place erected by art, whether for convenience, for religion, or for magnificence (*d'Aviler*).

BUSHELL: Bushel, measure of capacity (8 gallons) for corn, fruit, *etc.*

BUTTERISES; BUTTRISES: Buttress, a kind of butment built archwise; or a mass of stone or brick, serving to prop or support the sides of a building, wall, *etc.* (*Strebepefeiler*, *Strebewerk*; *contrefort*; *contrafforte*).

BY THE GREAT / BY THE DAY: Expressions for workmen paid by the job, or by the day.

CABINETS: Cabinet, the most retired place in the finest apartment of a building, set apart for writing, studying, or preserving anything very precious.

CAIN AND ABEL IN YORK-HOUSE GARDEN: From the Medici in Florence in 1601 came an over-lifesize marble statuary group of Samson and a Philistine by Giovanni Bologna, presented to the Duke of Lerma as a diplomatic gift (now Victoria and Albert Museum), and often mistakenly called Cain and Abel. The Duke of Buckingham acquired the group from Valladolid through the agency of Gerbier and installed it in the gardens of his residence, York House, in London.

CANT WINDOWS: Windows projecting beyond the naked wall, beyond the plane or surface of the wall, as bay windows, advanced from the wall line. Cant, polygonal, part-polygonal, canted.

CAPITAL; CAPITALL: Capital, the uppermost part of a column or pilaster, serving as the head or crowning thereof; placed immediately over the shaft, and under the entablature; also HEAD. It is a principal and essential part of an order, of column or pilaster. (*Kapitell*; *chapiteau*; *capitello*).

CAPRAZOLA FIESCATI: Caprarola in the province of Viterbo, the site of the Villa Farnese. 'Fiescati', for 'Frescati', 'Frascati', with a comma separation of two place names. Ed. 1564: "Caprarola, Frascati".

CARIMONSHAHAN: Carimonshahan, in Persia, between Babylon and Isfahan.

CARIPOWIS: Caripowis, a name Gerbier gives for an Indian tribe or people.

CAR-MEN: Car men, conveyors of carts.

CARPENTER: Carpenter, woodworker; see CARPENTERS-WORK; CARPENTRY.

CARPENTERS-WORK: Carpenters's work, in a building, includes the framing, flooring, roofing, the foundation, carcass, doors, windows, *etc.*

CARPENTRY: Carpentry, the art of cutting, framing, and joining large pieces of wood, for the uses of building.

CART; CARTS: Cart, strong two-wheeled vehicle used in farming, *etc.*, for heavy goods, also for driving in.

CARTOESES: see CARTOUSES.

CARTOUSES: Cartouche, an ornament in architecture, sculpture, *etc.*, representing a scroll of paper. It is usually a table, or flat member, with wavings; whereon is an inscription, devise, ornament of armory, cypher, or the like. Sometimes made of stone, brick, plaster, wood, *etc.*, for buildings. Also a coat-of-arms with ornamental surround, usually with scrolls. (*Kartusche*, *Wappen*; *cartouche*; *stemma*). 'Cartouse': variant of cartouche, as volute, mutule, modillion, corbel; 1611: "Modillion, a cartridge, cartoose, a foulding bracket or corbel".

CARVERS WORK: Carvers's work includes leaves, wave with lace [perhaps 'interlace'], small beads, round beads, round frieze, beads in fascia, great beads, dentils, edges and anchors ('anchors and eggs': egg-and-dart), friezes, capitals, flowers, cartouches.

CARVING: Carved work; carve, cut, produced by cutting, cut to adorn material with figures or ornament cut into it.

CASEMENTS: Casemate or casement, in building, is a hollow moulding, which some architects make one-sixth of a circle, and others one-fourth. Casement, the hinged part of a window, attached to the window frame; the wide concave moulding in door and window jambs; see WINDOW-CASES.

CASSY ROUGH PAVEMENT: Rough cast pavement; see PAVEMENT. Rough cast walls, an external rendering of rough material, usually applied in two coats of cement and sand onto which gravel, crushed stone, or pebbles are thrown before the second coat is dry; also called 'pebble dash'.

CASTER IN BRASS: Brass caster, bronze caster.

CAUSEY: Before a door, pavement with small stones (*ant.*; *dial.*).

CELLARING: Cellaring, Cellar, basement.

CENTE CAMERE: 'Cento Camere', a thermal complex near Musignano. Not the "Seven Halls of Titus", a great water reservoir ("cistern") near the Baths of Titus and Trajan in Rome; cf. Gerbier, *Subsidium peregrinaribus*, Oxford 1665, pp. 101-102.

CHALK: Chalk, lime.

CHARIBDIENS: A name Gerbier gives for Indian tribes or people ("several Charibdiens"). Charibdien: 'Caribbean' (?), Dutch 'Cariben', 'Caraiben'; French 'Caraiben'. From Carib,

Island of Carib or Kalinage people; the Carib Indians: the 'Carib', an ethnic group present in the Lesser Antiles and parts of adjacent South America; a West Indian or Caribbean person.

CHEAPSIDE: Cheapside is the street in the City of London which links Newgate Street with the junction of Queen Victoria Street, Cornhill, Threadneedle Street, Princes Street, Lombard Street, and King William Street, the former site of one of the principal produce markets in London, 'cheap' broadly meaning 'market' in medieval English.

CHELMINOR IN PERSIA NEAR SARAS: Chelminor, near Saras in Iran.

CHIMNEY: Fireplace; in architecture, in an apartment, wherein the fire is made. The parts of a chimney are the jambs, or sides, coming out perpendicularly, sometimes circularly, *etc.*, from the back; the mantle-tree rests on the jambs: the tube, or funnel, which conveys away the smoke; the chimney-piece, or moulding, on the aforeside of the jambs over the mantle-tree, and the hearth, or fireplace. CHIMNEY-piece, in building, a composition of certain mouldings of wood or stone, standing on the aforeside of the jambs, and coming over the mantle-tree.

CHIMNEY-MANTLES: Mantle-piece; see CHIMNEY.

CHIMNEY-SHAFTS: see CHIMNEY.

CHINA: Gerbier appears to refer to the Americas.

CHOARE: Core.

CHRISTINA: Christiana, a name for Oslo.

CHURCH: With regard to architecture, *d'Aviler* defines a large vessel extended in length, with nave, choir, isles, chapel, belfry, *etc.*

CIMATIUM: Cymatium, cimatum, or cima, in architecture, a member, or moulding of the cornice, whose profile is waved, *i.e.*, concave above, and convex at the bottom; frequently also called *doucine*, *gorge*, or *gula recta*; especially by the French; by Italians *goletta*, *i.e.*, *parva gula*, but more usually, *Cymatium*, among us; as being the last, or uppermost member, *q.d.* the *cyma*, or summet of the cornice. Some write it *simaise*. (*Kyma*, *Kymatium*; *cyma*, *cima*, *cimase*).

CISTERNES: Cisternes, reservoirs for storing water.

CITY: see COUNTRY.

CLAM: Clam, a clamp or kiln where bricks are burnt.

CLARK OF THE WORKS: Clerk-of-the-works. Keeper of accounts and building administrator; similar in some respects to a foreman, who, however, both works and supervises; an overseer of building works; an officer who superintends the erection of buildings, *etc.*, to secure the proper quality of material and execution of the works, as well as to record expenditures and control costs. *Clerk*: a person employed in an office to keep records, accounts, *etc.*, literate and numerate. When writing was not an ordinary accomplishment of the laity, the

offices of writer, scribe, secretary, keeper of accounts and the transaction of all business involving writing were discharged by clerks (see *Dictionary of Art*, vol. 7, p. 420).

CLAY: Clay, stiff, tenacious earth; material of bricks, pottery. *etc.*

CLAY-MAKERS: see CLAY.

CLINKART: Clinkart, a Dutch name. Clinkers are such bricks as are glazed by heat of the fire in making. A hard yellow brick fit for paving stables. (*Klinker*; *clincker*).

CLOSE WALKS: see WALKS.

CLOSET: Small room.

COATE OF FINE PLAYSTERING: Finishing of plaster.

COATE OF LIME AND HAIRE: Finishing of plaster. White mortar used in plastering walls and ceilings, made of ox-hair mixed with lime and water, without any sand.

CODLINGS: Codlings, codling; a variety of hard apple, roasted apples; limestones partially burnt.

COLLEDGE: College, a body of colleagues; independent corporation of scholars in a university.

COLLER BEAMS: Collar beams; collar beam, or collar tie, a horizontal tie beam in a roof truss that connects two opposite rafters. Also collar brace; a tie beam. (*Kehlbalken*; *petit*-, *second entrait*, *entrait superieur*; *contracatena*).

COLOMBS: Columns, see COLUMN.

COLOSSE; COLOSSES: Colossus, a statue of prodigious size, representing a giant.

COLUMN: In architecture, a round pillar, made to support or adorn a building, the principal or reigning part of an architectural order. (*Säule*; *colonne*; *colonna*).

COM-CASE: Comb case, as part of the toilet of men; the barber's comb case.

COMMON ROOMS: Rooms used collectively for business or social purposes.

COMPACT: "compact Building" (CA., 5), compacted, closely and firmly put together (*obsolete* or *arch.*), hence solid, firm; embodying solidity, *firmitas*.

CONTRACT: Business agreement for supply of goods or performance of work at a fixed price. (*Vertrag*; *contratto*).

CONVENIENCY: Convenience; the correspondence of the building to its end. (*Schicklichkeit*; *convenance*; *convenienza*, *decoro*).

COPING: Coping of a wall, the top or cover of a wall, made sloping to carry off rain water.

CORNISCH: Corniche, or cornice, the uppermost member of the entablature of a column, or that which crowns the order; crowning. Cornice is loosely applied to almost any horizontal moulding forming a main decorative feature, especially to a moulding at the junction of walls and ceiling in a room. (*Gesims; corniche; cornice, modanatura*).

CORNISH WITH TWO FACES: Cornice with two facias or fascias.

COUNT OF VILLAMEDIANA: Count of Villamediana, Juan de Tarsis or Tassis (1580-1622), Spanish writer, granted by the king the title “conde de Villamediana” in 1603.

COUNTREY, in opposition to CITY: among other architectural contrasts, the costs of materials, labour, and transportation were often variable, land and buildings determining a different tenor of life.

COURSE OF STONE: Continuous layer of stone in a building; a continued range of stones, level or of the same height, throughout the whole length of the building; without being interrupted by an aperture.

COURT: A space enclosed by walls or buildings. (*Hof; cour; cortile*).

CROSS GARNERS, GARNETT: Type of hinge.

CROWN: The uppermost member of the cornice, called also corona and larmier; corona, a large flat strong member of the cornice, so called, because it crowns not only the cornice, but the entablature, and the whole order. The French call it the *Larmier*, our workmen the drip, as serving, by its great projecture, to screen the rest of the building from the rain. Corona, the part of a cornice forming a sudden projection over the bed-moulding.

CUBBERT: Cupboard, a table on which to display cups and plates, *etc.*; a sideboard. A recess or piece of furniture with a door and usually shelves for storing crockery, provisions, or other small items.

CUPELO: Cupola, small rounded dome forming a roof. (*Kuppel; cuople; cupola*).

DEALES: Deale, deal, a piece of sawn fir or pine wood between seven and nine inches broad, six feet long and 3 inches thick; a quantity of these; fir or pin wood. A deal is a part or a division of a whole; a (specified, now usually *great* or *good*) quantity. A piece of sawn timber (now always fir or pine) of standard size; a plank or board of fir or pine; timber in such planks and boards. (*Diele; planche; tavola*).

DELF IN HOLLAND: Delft.

DEMI-CIRCLE : Half-circle.

DENTILES: Dentils, a small square block used in a series in Ionic, Corinthian, and Composite cornices, and sometime in Doric. (*Zahnschnitt; dentelure; dentello*).

DESIGN: Design, or draught, with regard to the arts and sciences, signifies the thought, plan, geometrical representation, distribution, and construction of a painting, poem book, or building, *e.g.*, This painter has shown the first design of his piece, in which the figures are well disposed.

DIMENSION; DIMENSIONS: measureable extent, as length, breadth, thickness, area, volume, *etc.*

DIMINUITION: In architecture, a contraction of the upper part of a column, whereby its diameter is made less than that of the lower part.

DISTEMPER: Distemper, painting on plaster wall with colour mixed with yolk of egg, size, *etc.*, instead of oil.

DOOR-CASES: Door casements, frames.

DOORE: Door, hinged or sliding barrier, usually of wood or metal for closing the entrance to a building or room. In architecture, an aperture in a wall to give entrance and exit in and out of the building or an apartment thereof. (*Tür; porte; porta*).

DOORE POSTS: Door post, or door jamb, side post of a doorway.

DORICK COLUMN: Column of the Doric order. (*Dorische Ordnung; ordre dorique; ordine dorico*).

DOUBLE RANGE: In two rows.

DOUBLE-DEAL: Double planked.

DRAM: Dram, yellow fir, so called by workmen.

DRAUGHTS: Draught, drawing, outline or preliminary drawing, plan of something to be constructed; design. Draught, or, as it is pronounced, Draft, in architecture, the figure of an intended building described on paper; wherein is laid down by scale and compass the several divisions and partitions of the apartments, rooms, doors, passages, conveniences, *etc.*, in their due proportion.

DRAWING CHAMBER: Salon or drawing room, a room in a house where visitors may be received, deriving from the sixteenth-century terms, 'withdrawing room' and 'withdrawing chamber'; also in large households owners could withdraw there for privacy.

DRONTON: Dronton, Holland.

DROPS: Possibly 'guttae', ornaments in the form of little cones, used in the plafond of the Doric cornice, or on the architrave, beneath the triglyphs, representing a sort of drops, or bells, usually six in number.

DUBBLE GOLOSE: Probably 'double golas'; see GULE.

DUBBLE-DEAL BOARDED: Double deal-boarded; plank, floor, floorboard; a deal board is a piece of sawn timber (fir or pine) in such planks or boards. Still used in Australia.

DUBLETS: Doublet, close-fitting garment, worn by men, with and without sleeves and short skirts.

DUKE OF ARSCOT: Duke of Arscot, or Arscott, or Aarschot, Charles III de Cröy, Duke of Cröy and Asrschot and Prince of Chimay (1560-1612). Gerbier purchased paintings from his collection in Antwerp in 1619 on behalf of the Marquess of Buckingham, George Villers, the future Duke (see Robert Hill, in: *Journal of the History of Collections*, 15/2, 2003, pp. 211-228).

DUKE OF BUCKINGHAM: George Villers (1592-1628) was the great favourite of King James I of England, and one of the most highly rewarded royal courtiers in history; named Duke of Buckingham in 1623. He acquired York House in the Strand by the early 1620s. He was assassinated in August 1628 by a Puritan fanatic. Villers was the patron of Gerbier from shortly after 1616 onward. Gerbier found paintings for Viller's collection and negotiated their purchase, acting as the keeper of the Duke's collection. Gerbier oversaw the remodelling of York House from 1625 circa.

DUKE OF LARMA: Duke of Lerma, Francisco Gómez de Sandoval y Rojas (1552/1553-1625), Spanish statesman and favourite of King Philip III and his chief minister.

DURANCE: Lasting quality; durability; a function of solidity.

DUTCHESSE OF CHEIVERUSE: Duchess of Chevreuse, south of Paris, Marie de Rohan-Montbazon (1600-1679), duchess de Chevreuse. Mlle de Montbazon, a French aristocrat of great personal charm, who placed herself at the centre of all intrigues of the first one-half of the seventeenth century in France.

ENTERDICES: Interdice, intertie: a horizontal piece of timber, *etc.*, connecting two vertical pieces.

ENTERLACED-KNOTS: Interlaced knots.

ESPAHAN: Esphan, or Esfahan, Isfahan, a beautiful city in Iran, south of Tehran.

ESTERRUND: Esterrund, Östersund in Sweden.

FABRICK: Fabric, edifice, building. (*Gebäude; édifice; edificio*).

FAIR WHITE COLOUR: Beautiful white colour.

FAIRE BLACK: Beautiful black colour.

FAIRE STONE-COLOUR: Beautiful stone-colour.

FARNERS IN ROME, PALACE: Farnese Palace in Rome, a prominent Renaissance palace, begun by Antonio da Sangallo il Giovane, 1515 circa, and completed by Michelangelo (third story).

FASIA: Facia, or fascia, in architecture, by the workmen, called *faccia*, *facio*, or *face*, a broad list or listel, fillet, or band, particularly used in architraves, and pedestals. A plain horizontal band. (*Band, Faszien; fascies; fascia*).

FEASTIVAL SHOWS: Festival shows; musical or theatrical performances on special occasions, with scenographic stagings.

FILLET: Fillet, or filet, a little square member, or ornament, used in divers places, and on divers occasions, but generally as a sort of corona, over a great moulding. The fillet is the same with what the French call *reglet*; the Italians, *lista*, or *listella*, and others, *band*, or *bandelette*. A narrow horizontal strip separating the larger curved mouldings in a cornice or base.

FINISHING MORTER: Fine mortar or plaster without sand for finishing walls and ceilings; see MORTER; COATE.

FLANDERS BRICKS: see CLINKART. Dutch, or Flemish bricks, used to pave yards and stables, and for soapboilers Fatts [= Vats ?], and cisterns.

FLAT MOULDING: Mouldings with flat profiles.

FLEET-BRIDGE: At FLEET STREET's east end is the Fleet Bridge.

FLEET-STREET: Fleet Street, a street in London, named after the River Fleet, that leads from the City of London to the City of Westminster.

FLINTS: Flint, hard stone of nearly pure silica found in pebbly lumps, hard and unyielding.

FLOORES: Floors, the underside of a room, or that part we walk on. Floors are of diverse sorts; some of earth, some of brick, others of stone, *etc.* Carpenters, by the word floor, understand as well the framed work of timber, as well as the boarding over it.

FLOWERS: Flower, for 'floor', 'floors'; Gerbier's peculiar spelling thereof.

FOOT: Base.

FOULDAGE: 'Foldage', in plaster or stucco decoration, possibly drapery, scrolls, folding stuff, or leaf ornament. Heraldry: Foldage, when these kinds of leaves have several foldings and turnings, as in mantles (1688); running of foldage in the margent [= margin] of the pannels (1703).

FOULDING: Folding; see FOULDAGE.

FOUNDATION; FOUNDATIONS: That part of the building under ground, or the mass of stone, *etc.*, which supports a building, or upon which the walls of a superstructure are raised.

FOUNTAINS: Jet of water made to spout and the structure made for it.

FRAMES: In Joinery, *etc.*, a kind of case, wherein a thing is set, or enclosed, or even supported, as a window frame, a frame of a picture, or a table. CA., p. 5: "Draughts, Models, Frames &c.", drawings, models, templates (see Montes Serrano, 2000, p. 12).

FREDRICK-STADT: Fredrickstatt, Fredrikstad (Frederiksstad), Norway.

FREESE, FREEZE: Frize, or frieze, or freeze, in architecture, a part of the entablature of columns, more usually written, and pronounced freeze. Freeze, that part of the entablature between the architrave and cornice, properly a large, flat face or member separating the

architrave from the cornice. In essence the frieze is a plain horizontal band between the elaborately shelving cornice above and the architrave below. (*Fries; fiese; fregio*).

FREE-STONE: Free stone, fine grained easily sawn sandstone or limestone.

FRET SEELINGS: Fret ceilings. Fret, or frette, in architecture, is a kind of knot, or ornament, consisting of two listels, or small fillets variously interlaced, or woven, and running at parallel distances, equal to their breadth.

FRIESE: see FREESE, FREEZE.

FRIZE: see FREESE, FREEZE.

FRONT: Façade. In architecture, the principal face or side of a building, or that presented to the chief aspect or view. (*Fassade; façade; facciata*).

FRONTISPICE; FRONTISPIECE: The portal, or principal face of a fine building; the façade, or the principal feature of a façade; or a pedimented entrance doorway. (*Frontispiz; frontispiece; frontespizio*).

FRUITAGE: Various fruits, as ornament, carved and moulded.

FUR; FIRR: Fir, kinds of coniferous tree with needles placed singly on the shoots; fir timber.

GADDING: Gadding; 'to gad', go from one place to another; rove. Gerbier's use is unclear.

GALLERY (Open galleries); GALLARIES: Galleries, loggias, porticoes. A covered place in a building, much longer than broad, and which is usually on the wings of the building, serving to walk in. The Galleries of Padua and Bologna attracted the notice of foreign travellers to Italy. See PORTICO. (*Galerie; gallerie; galleria, loggia, portico*).

GARDENS: Garden, piece of ground devoted to growing flowers, fruit, or vegetables.

GARDENS ALONG THE RIVER: Along the River Thames.

GARDING-GATE: Guarding gate, an entrance gate for protection and to control entry.

GARLANDS: Wreath of flowers, leaves, fruit hung as decoration.

GASCONY WINES: Gascony in Basque, a place in France known for its wines, where Gerbier had visited.

GATE AT TEMPLE-BARR: Gate at TEMPLE BARR, a stone gate which marked the boundary of Temple Bar until 1878. By the late Middle Ages a wooden archway stood on the spot. Badly damaged in 1666 by the Great Fire of London, it was replaced by Wren's Temple Bar Gate in Portland stone (1669-1672).

GATE OF YORK-HOUSE: See PORTICO OR WATER-GATE.

GERDERS: Girders are the largest pieces of timber in a floor. Their ends are usually fastened into the summers, or brest-summers, and the joists are framed in at one end to the girders.

Girding-beams in building are the same as girders. (*Dachbalken, Träger; poutre; trave del tetto, trave di sostegno*).

GILDING: Covering with a thin layer of gold laid on as gold leaf or otherwise.

GIRT MEASURE OF TIMBER: Quarter girt (girth) measure, a method of measurement for round timber (basal area and volume) in which the unit of measure is the Hoppus foot; taken in the woods, as circumference.

GLASIER: Glazier, one whose trade is to glaze windows (fit with glass), *etc.*

GLASSE: Glass (*Glas, verre, vetro*)

GLASSE PAINES: Panes of glass; panes, single sheets of glass in compartment of window.

GLASSE-HOUSES: Glasshouse, or greenhouse, structure with walls of glass or panes of glass.

GLASSERYE: Glass manufactory; glass house.

GLEWED: Glued, fastened or joined with glue, an adhesive substance.

GLOBE WITHIN LUDGATE: Ludgate was the westernmost gate in London Wall; see *GOLDEN GLOBE*.

GOLDEN GLOBE: Golden Globe (“*Nota, The first discourse concerning Solidity, Conveniency and Ornament; is to be had at Mr. T. Heath’s within Lud-gate at the Golden Globe.*”). In the mid-18th century the Golden Globe was the name of a bookseller’s establishment (“at the Golden Globe under the Piazza on London Bridge”, 1750), which moved to several different locations. In the 17th century, it was apparently to be found at Ludgate, Ludgate Hill (now High Street), or Ludgate Street. Ludgate Hill is a hill in the City of London, near the old Ludgate, a gate to the city that was taken down, with its attached jail in 1780. Ludgate Hill is the site of St. Paul’s Cathedral. Ludgate Hill is also a related street which runs west from St. Paul’s Churchyard to Ludgate Circus, where it become Fleet Street. It was formerly a much narrower street called Ludgate Street.

GOTHISH: Gothic, the pointed-arch style, including in England the Early English, Decorated and Perpendicular; not classical; barbarous, rude, uncouth.

GRAVEL WALKS: Walks or alleys, laid with gravel; in gardening, to lay, or form a walk with gravel, all the good soil is to be pared away, below the roots of any grass, or weeds; the place filled two or three inches with coarse gravel; gravel, coarse sand and small water-worn or pounded stones, much used for laying paths and walks.

GREAT ARCHITECT AND SURVEYOR OF HEAVEN AND EARTH: The Lord God.

GREAT BEADS: Large beads; bead, a round moulding in the corinthian and Roman orders, carved in short embossments, like beads in necklaces.

GREENWICH PLAYSTERING: Undetermined. Greenwich is a district in southeast London on the south bank of the River Thames in the London Borough of Greenwich.

GROSTABLE: Gross-table, a variant of 'grasstable', (*Arch.*), as earth-table, the plinth of a wall, or the lowest course of projecting stones immediately above the ground.

GROTO: Grotto, or *grotta*. In natural history, a large deep cavern or den in a mountain or rock; also artificial grottoes. (*Grotte; grotte; grotta*).

GROUND BEFORE THEIR PALACES: The land in front of a magnificent palace.

GROUND PLOT: The ground on which a building stands or is to stand. (*Grundstück; terrain; lotto, terreno, cantiere edile*).

GROVES: Grove, in agriculture, a little thick Wood. In very large and magnificent gardens, a grove is usually a plot of trees, enclosed with Palissades, consisting of tall trees, as Elms, Horse-Chestnuts, *etc.*, the tops whereof make a tuft or plume, and shade the ground below.

GUL or THROAT: see GULE.

GULE: Gule, gueule, or gola, a wavy member, whose contour resembles the letter S. This member is of two kinds, *recta* and *inversa*, the *gula recta* with its cavity above and convexity below. Some derive the word from the resemblance these members bear to the *gula*, or throat of a man. (*Karnies; gola*).

GUTTERED COLOMBES: Guttered columns, that is fluted columns, also called channelled and striated columns, whose shafts are adorned with flutes or channelings. (*Kannelierung, Kanneluren; cannelures; scanalatura*).

GUTTERS: Gutters are a kind of vallies in the roofs of buildings, serving to receive and drain the rain waters. (*Rinne, Dachrinne; gouttière; grondaia, doccia, canale di gronda*).

HABITATION: A dwelling place or house. (*Habitat; habitation; abitazione*).

HALL: Hall is a large room at the entrance of a fine house, palace, or the like. (*Saal; salle; sala*).

HANGINGS: Linings for rooms, made of Arras, Tapestry, *etc.* (*Wandteppich, Bildteppich; tapisserie; arazzo*).

HANGINGS OF TAPISTERY: see HANGINGS: Tapestry, or Tapisstry, a curious kind of manufacture, serving to adorn a chamber, or other apartment, by hanging, or covering the walls thereof.

HAYNAULT: Haynault, Hainaut, province of modern Belgium, part of Wallonia; here the County of Hainaut, an historical region in the Low Countries.

HAZAIS COME EL STOMACO QUE COMA HERBAS Y CAGA MIERDA.: *Hazais come el Stomaco que coma herbas y caga Mierda.*; the Count of Villamediana's answer to a young surveyor (CA., p. 9).

HEAD: Head, the capital of a column. (*Kapitell; chapiteau; capitello*).

HEARTH, HEARTH OF A CHIMNEY: The hearth, or fireplace with the hearth-stones before it.

HERCULES: Hercules, Heracles, Greek hero of prodigious strength, who performed twelve immense labours.

HINGES: Hinge, movable joint or mechanism like that whereby a door is hung on a side post. (*Angel, Gelenk, Scarnier; pivot, grond; perno, spina*).

HOAK: Undetermined (*CA.*, p. 101).

HOATTS: Hoast, *obsolete* form of host, a man who keeps a public place of lodging or entertainment, for payment; the landlord of an inn, inn-keeper.

LAGRIMA-CHRISTI: Lacrima Cristi; Lacryma Christi (also Lachryma Christi, “tear of Christ”) is the name of a celebrated Neapolitan wine produced on the slopes of Mount Vesuvius; an old wine frequently mentioned by poets and writers.

HOLLAND: Holland, the Netherlands.

HOMSTRAND: Homstrand, Holdstrand, Sweden.

HOOKES: Hook, a piece of metal or other material bent back at an angle or with a round bend, for catching hold or for hanging things upon, *slang*: anchor.

HOUSE: Building or habitation. (*Haus; maison; casa*).

HUE: Hue, hew.

IMBOSSSED CARVED IMAGERY ON THE FRONTISPIECE OF A PALACE: Embossed decoration and images carved on the façade of a palace; embossed, that is, formed or fashioned in relief, including statues and bas-reliefs.

INGING: ‘Inging’ does not appear to be a word.

INIGO JONES: Inigo Jones (1573-1652), an English painter and stage designer for masques who visited Italy before 1603 (and again in 1613/1614) and became an architect, bringing the classical Italian style to England and revolutionizing English architecture.

INNER-COURT: Inner courtyard (*Hof, cour, cortile*).

INRICHMENTS: Enrichments, ornamental decoration, intensification and amplification of profiles and mouldings of the orders of a building, *etc.* Certain standard types of carved enrichment are appropriate to certain standard profiles, but, in many instances, there is wide latitude for choice in enrichment.

INTERDICES: see ENTERDICES.

IONICK COLUMN; IONICK ORDER: Ionic column, Ionic order, the order distinguished by the two large scrolls or volutes of its capital. (*Ionische Ordnung; ordre ionique; ordine ionico*).

IONIO: Ionio, Ion, the hero Ion, son of Xuthus, the son of Hellen, from whom the Ionians were descended.

IRON BARS: Iron bars, bars of iron, see SMITH.

IRON CASEMENTS: casements of iron; see CASEMENT.

ISABELLA INFANTA OF SPAIN: Infanta Isabella Clara Eugenia of Spain (1566-1633), married to Albert VII, Archduke of Austria, and with him joint sovereign of the Habsburg Netherlands in the Low Countries and in the north of France.

JAMES: Jambs; jamb, side post of doorway, window, fireplace, *etc.*, *i.e.*, the straight side of an archway, door, or window. (*Gewände, Laibung; jamb, jambage, embrasure; stipite*).

JOURNEY-MEN: Journeyman, qualified mechanic or artisan who works for another, (*fig.*) a mere hireling.

JOYCE: Joist.

JOYNER: Joiner, a woodworker, especially one who makes furniture, house fittings, and other woodwork, lighter than a carpenter's.

JOYNERS WORK: Joynery, the art of working wood, and of fitting or assembling various parts or members of it together. The French call it 'menuiserie', from 'minutaria', small work, by which it is distinguished from carpentry, which is conversant in the larger and less curious works.

JOYNTS: joints, joins. Joint, the juncture, articulation, or assemblage of two or more things. In architecture, the separation between the stones, which is filled with mortar, plaster, or cement. In carpentry, *etc.*, joint signifies the several manners of assembling or fitting pieces of wood together.

JOYSES: Joists (or joices), onto which the boards of floors, ceilings or roofs are laid and nailed. A joist is one of the horizontal supporting members that run from wall to wall, wall to beam, or beam to beam to support a ceiling, roof, or floor. A floor joice, ceiling joice.

JUDICIOUS EYE: Possessed by one whose knowledge and experience allows him to see with discernment and sound judgement; the best "compass".

KILL: Klin, see KILN; BRICK-KILLS. (*Ziegelei, Ziegelofen; four à briques; fornice per mattoni*).

KILN: Kiln, furnace or oven for firing or burning, baking, and drying, especially for calcining lime and baking bricks.

KING JAMES: James I of England (1566-1625; King of England from 1603).

KITCHIN: Kitchen, the part of a house where food is cooked. (*Küche; cuisine; cucina*).

LA GROTA DE LA SIBILA CUMANA: La Grotta della Sibilla Cumana on the south side of the Lago di Averno, west of Naples, where the Sibyl Cumana made her oracles; cf. Gerbier, *Subsidium peregrinaribus*, Oxford 1665, pp. 101-102.

“LA MATINA ALLI MONTI, LA SERA ALLI FONTI”: There appears to be no corresponding saying in Italian.

LA PESSINA ADMIRABILE : La Pessina Admirabile, ‘Piscina Mirabilis’, Piscina Ammirabile or Mirabile di Pozzuoli (Baja); ancient water repository; cf. Gerbier, *Subsidium peregrinaribus*, Oxford 1665, pp. 101-102.

LABOURERS: Workmen, especially a man doing for wages work that requires strength or patience rather than skill. (*Arbeiter, Handarbeiter; operaio*).

LANDIFOR: Landifor, Landifour.

LAPETIT VIENT EN MANGEANT: «*L'appétit vient en mangeant* » (Amyot, Rabelais, and others).

LARBOARD : Larboard, the side of the ship which is to the left hand looking from the stern toward the bows, or starboard.

LATH: Lath, in building, long, thin, narrow slips of wood used in tiling and walling, especially for use as support for slates or plaster. (*Latte, Putzträger; latte; listello, corrente, cantinella*).

LATHE: Lathe, an engine for the turning of wood, metals, and other materials, a very ancient invention.

LATH-WORK: Plasterers’s work laid upon lathes.

LATITUDE: Latitude, full horizontal extent; breadth.

LEAD: Lead (*Blei; plomb; piombo*).

LEAD BLEW SLATES: Slates of a darker blue colour.

LEADEN GUTTERS: Leaden gutters, gutters or drain or rainwater pipes made of lead, formerly common.

LEAVES: Leaf, hinged part or flap of door, shutter, window, table, *etc.* Also leaf ornament.

LEAVES OF WINDOWS: see LEAVES.

LEGER DE MAYNE: ‘Leger-de-mayne’ (*main*), slight of hand; the performance of tricks by which nimble action deceives the eye; jugglery.

LENTALS: Lintels, a horizontal beam or stone bridging in an opening. (*Stürz; linteau, sommier; architrave*).

LESTER: Leicester, city in the East Midlands of Engand.

LEWIS 13th: see LEWIS 13TH FRENCH KING.

LEWIS 13TH FRENCH KING: Louis XIII of France (1601-1643).

LIEGE: Liège (Luik), in Belgium.

LIETES DOITS, AL'HERBE QUE TU COGNOIS: The *French* saying; *Lietes doits, a l'herbe que tu cognois*.

LIGHTS; LIGHT: Lights, window lights, window openings, panes. Light, a window or opening in a wall for the admission of light, particularly any of the divisions or subdivisions of a window.

LIME: Lime, white caustic alkaline earth (calcium oxide) got by burning of limestone; kinds of rock chiefly carbonate of calcium, and used for making mortar.

LINES OF PERSPECTIVE: Sight lines diminishing in the distance.

LIST: Listel; see FILLET, a narrow, flat, raised band down a shaft between the flutes in a column or along an arch or a roll moulding; also the uppermost member of a cornice. Also called cincture, fillet, and reglet; a little square moulding disposed in certain parts of columns serving to crown or accompany larger mouldings, and to separate the fluting of columns. (*Leiste; listel, listeau, lista, listello*).

LIST OF THE ARCHITRAVE: see LIST.

LIST OF THE CIMATIUM: see LIST.

LISTS or RULE (reglet): see LIST.

LOAD: Load, a fixed amount or quantity of one delivery of building materials, the amount usually carried; a recognized unit in measure and weight of building materials such as bricks and timber.

LOAM: Paste of clay and water; composition of moistened clay and sand with chopped straws, *etc.*, used in making bricks, plastering, *etc.*

LOANE: Perhaps Louvain (Leuven; Löwen), Belgium (Brabant).

LODGING ROOMS: Lodging rooms, hired rooms for sleeping; sleeping quarters; dwelling place.

LODGINGS: Lodging, accomodation or hired rooms.

LONGITUDE: Longitude, length (*ant.*); now angular distance east or west from a standard meridian.

LORDS AND COMMONS ASSEMBLED IN PARLIAMENT: House of Lords and House of Commons, the English Parliament of legislature.

LOUVER AT PARIS: Palais di Louvre, Paris, ancient royal residence.

LUD-GATE: Ludgate was the westernmost gate in London Wall; see GOLDEN GLOBE.

MADERA: Madera, Madère, Portuguese Island in the Atlantic Ocean, Maderia.

MAGNIFICENT BUILDING: The title of Gerbier's first printed discourse on Building; building in an especially fine manner, generously and with a certain ostentation and luxus.

MANGER: Box, trough, in stable, *etc.*, for horses or cattle to eat from.

MANUAL: Small book for handy use; handbook.

MARBLE PAVEMENT: Marble floors.

MARBLE POLIST: Polished marble.

MARY OF MEDICIS: Marie de Médicis (1573-1642), Queen of France.

MASON; MASONS: Mason, a person employed in the raising of a stone-building. Masonry is the art or craft of hewing or squaring stones, and cutting them level and perpendicular for the uses of the building. In a more limited sense, masonry is the art of assembling and joining stones.

MASONS WORK: The principal tasks of the mason are to make the mortar, to raise the walls from the foundation to the top, to form the vaults, and to employ the stones delivered to him. When the stones are large, the business of hewing or cutting them belongs to the stone-cutters, although these are often confounded with the masons.

MASTER OF CEREMONIES: This person is in charge of protocol and of ceremonies observed on state or public receptions, also in receiving foreign dignitaries, to attend all ambassadors from crowned heads in their public entrances.

MASTER WORKMEN: The master workman is a skilled and accomplished workman, originally one qualified by training, experience, and rank to teach apprentices; a master in business on his own account and not a hireling, often supervising other workmen.

MATERIALLS: Materials, the matter from which buildings are made: wood, stone, brick, *etc.*

MEASURER OF THE WORK: He who measures material and works supplied to the building-works, responsible for seeing that materials are of the proper measure and for determining or controlling the amounts to be paid.

MECHANICAL: Mechanical, physical; of, pertaining to, or caused by physical properties, forces, agents, *etc.*; pertaining to mechanics as a science; physical conditions or properties; practical rather than philosophical or speculative. Here, not architecture as a fine art, but as a mechanical art, the practical part, with instructions for the practice of building, concerned with manual operations, arts, trades, occupations, with machines or tools.

MERCHANTABLE WARE: Saleable wares or goods; marketable; suitable or prepared for purchases or sale, as merchantable timber.

METROPOLITAN: For 'metropolis', the see of a metropolitan bishop, as archbishop; hence belonging to an ecclesiastical metropolitan; also the principal church of the metropolis.

MICROCOSME MAN: Man as a microcosm of the universe (macrocosm); humanity as an epitome of the universe, as the 'Vitruvian' man inscribed in a circle and a square. The physical body of man as 'the magical mirror of the universe' is Greek and philosophic in origin; it also permeated the thinking of Hermetic philosophers and alchemists in seventeenth-century England (Fludd; Browne). Man viewed as the 'epitome' of the great world or universe.

MODEL, MODELS: Model, module, in architecture a certain measure, or bigness taken at pleasure, for regulating the proportions of columns, and the symmetry or distribution of the whole building. Architects usually choose the half-diameter of the bottom of the column for their 'module', and this they divide into parts, or 'minutes'. See Vignola, Palladio, Scamozzi, Chambray, Desgodetz, Le Clerc. (*module; module; modulo*).

MODELL: Model, an original or pattern prepared for copy or imitation. Here model is often used with the signification of 'template' (a pattern or gauge, usually a piece of thin board or metal plate, used as a guide in cutting or drilling metal, stone, wood, etc. Hence, a model or pattern, used to direct and control the work of craftsmen. The word 'model' frequently refers to drawings (from *modello* [Italian]).

MODELL OF THE ENTIRE DESIGN: A complete finished model of the entire design", probably a three-dimensional model in wood or pasteboard.

MODELS: see MODEL, *supra*.

MOLDS: see MOULDS.

MOORISH GROUND: Moorland, Marshland, boggy and swampy.

MORTER: Mortar, a preparation of lime, sand, etc., mixed with water, serving as a cement, to bind the stones, bricks, etc., of a building. The proportion of sand and lime in mortar is extremely variable. (*Mörtel; mortier; malta; calcina*).

MORTISES: Mortoise, or moritse, in carpentry, etc., a kind of Joint, wherein a hole or incision of a certain depth is made in the thickness of a piece of wood, which is to receive another piece, called a tenon, for the jointing or fastening of the two together. (*Holz-/ Zapfen; tenon; tenone, calettatura*).

MOSS: Kinds of small herbaceous cryptogamous plant, some growing in bogs, others on the surface of the ground, trees, stones, roofs.

MOSS: Mott (place name), where fir grows and a source of fir timber.

MOULDINGS: The contours given to projecting members, e.g., bead moulding, chevron, cable moulding, ovolo moulding, wave moulding. Mouldings, or ornaments, are projections beyond the naked of a wall, column, wainscot, etc., and by the various dispositions and com-

binations of mouldings may be made an infinite number of different profiles for all sorts of orders and compositions, regular and irregular; and yet all the kinds of mouldings may be reduced to three, namely, square, round, and mixed, composed, that is, of the other two. (*Leiste; lista, listello; Gesims; corniche, moulure; cornice, modanatura*).

MOULDS: In the mechanic arts, *etc.*, a cavity artfully cut, with design to give its Form, or impression to some softer matter applied therein, as clay for bricks, but moulds are used as well by miners, founders, glassiers, goldsmiths, sculptors, masons, plumbers, and others. A hollow matrix. (*Form; moule; forma*). MOLD, MOULD also used in the sense of a pattern by which something is shaped; a model; a pattern, commonly a thin plate of wood or metal, used by masons, bricklayers and plasterers as a guide in shaping mouldings, *etc.*; a templet, a template.

MUNIKCH IN BAVARIA: Munich (*München*) in Bavaria (*Bayern*); the reference is to the Residenz in Munich.

NAILES; NALES: Nails, in building, are little metal members, serving to bind or fasten the parts together. The several kinds of nails are very numerous. (*Nagel; clou; chiodo*).

NAKED (in architecture): The naked of a wall is the surface or plain, from whence the projectures arise, or which serves as a ground to the projectures.

NAMUR: Namur ('Nameur' in Wallon; 'Namen' in Dutch) is a city and municipality in Wallon in southern Belgium.

NAMUR-STONE GRAY AND WHITE: Namur stone, the great black marble of Brabant, otherwise known as 'Namur Stone'.

NECK: Necking, a narrow, annular moulding around the bottom of a capital between it and the shaft of the column. (*Hals, Halsring; gorge, collier; collare, collarino*).

NEWPORT: English port city.

NOAHS ARCK: Noah's Ark, a large vessel built at God's command to save Noah and his family and the animals of the world from the Great Flood (*Genesis, 6-10*).

NORRAWAY: Norway.

NUMBER: Quantity, or count.

OAKEN CARCASSE: A core of oak wood, as veneer on an oak carcass, the ground or block of dry wood to which is glued.

OAKEN TIMBER: Timber of the oak tree.

OAKEN WINDOWS: Window frames of oak wood.

OFFICES: Rooms and bureaus of officials, administrators, and clerks of an established work, for transacting business (*Arbeitszimmer, Büros; bureaux; uffici, uffizi*).

ORDER: Order, in architecture, a system of the several members, ornaments, and proportion of columns and pilasters, or a regular arrangement of the projecting parts of a building, especially those of a column, so as to form one beautiful whole. The five principal orders are the Tuscan or Rustic, the Doric, the Ionic, the Corinthian, and the Composite or Roman. An order is the total assemblage of parts comprising the column and its appropriate entablature. (*Säulenordnung*; *ordre d'architecture*; *ordine architetonico*).

ORNAMENT; ORNAMENTS: Ornaments, in architecture, express all the sculpture or carved work, whereby a piece of architecture is enriched; see **ENRICHMENTS**; **ORDER**. Ornament: *venustas*; beauty accompanied by grace and elegance; reciprocal commensurability of the parts; symmetry; the ornamentation of the construction.

ORTHOGRAPHIE: Orthography, or spelling of words; in architecture, orthography is the drawn elevation of the building, as distinct from the 'ichonography' (plan).

OVERTURE: Overture, aperture; an opening, orifice, hole.

OVOLO: Ovolo, *ovum*, a round moulding whose profile in the Ionic and Corinthian capitals is usually a quadrant of a circle, whence it is also popularly called the 'Quarter Round', also 'echinus'.

OWNERS: Owner, proprietor, possessor; the owner of the property and the building he erects upon it. 'Owner' and 'builder' may be synonymous.

OYLE: Oil, here mainly oil-based paints.

PADLOCK: Padlock, a detachable or portable lock, designed to hang on the object fastened.

PAINTERS: Painters, here workmen who colour walls, woodwork, houses, and buildings with paint.

PAINTERS-WORK: Painting of windows, doors, wainscot, cornices, stairs, rails, walls, frames, door-cases, doors, *etc.*

PAIRE OF STAIRES: Pair of stairs. Stair in building, whereby we ascend and descend from one story to another; a set or flight of stairs or steps; here 'pair' does not signify doubled; sometimes step-ladder. (*Treppe*; *escalier*; *scala*).

PALACE: Palace, in English, a royal-house, a name generally given to the dwelling-houses of kings and princes. In the course of time, the name has also been applied to the houses of other persons (*Palast*; *palais*; *palazzo*).

PALACE OF SOLOMON: see **SOLOMONS PALACE**.

PALACE OF THE DUKE OF ORLEANCE: Palais of the duc d'Orleans, Paris.

PALACES OF SOVEREIGNE PRINCES: The palaces of reigning monarchs.

PALLACE OF DARIUS AND CYRUS THE GREAT: The Palace of Darius the Great, mentioned in Daniel 8.

PALLACE; LIKE CARDINAL WOLSEYES ILL-PLACED ONE: York Palace, when belonging to Cardinal Thomas Wolsey, before 1530.

PAN TILES: Pan tiles, a form of roofing tile, S-shaped in section. See BLACK GLAZED HOLLAND PAN TILES. (*Dachpfanne; panne; tegola oldandese / fiamminga*).

PANNELS: Pannel, or panel, in joinery, *etc.*, a tympanum or square or rectangular piece of wood, sometimes carved, framed, or grooved in a larger piece between two montants or upright pieces, and the two traverses or cross-pieces; of various forms, square, hexagonal, *etc.*

PANTHEON AT ROME: Pantheon (temple of all the Gods), a building in Rome, rebuilt in Hadrian's reign. The oldest standing domed structure in Rome.

PARKE: Park, an enclosure stocked with wild beasts, *tam Sylvestres, quam Campestres*; say our old Lawyers. (*Park; parc; parco*).

PARLIAMENT: Council forming with the Sovereign the supreme legislature of England (Lords and Commons).

PARPENDICULAR LINE: Perpendicular line, a line at right angles to the plane of horizon; erect, upright; plumb-line.

PARTITIONS: Partition, which divides into two; especially a light interior wall; divisions. The timber therefore, CA, p. 74. (*Scheidewand; cloison; parete divisoria, tramezzo*).

PAVEMENT: Pavement, a lay of stone, or other matter, serving to cover and strengthen the ground of diverse places, for the more commodious walking on, or the passage of carriages. (*Pflaster; pavé; pavimento*).

PAVING: see PAVEMENT.

PAVING OF COURTS: see BRICKS; CLINKART; FLANDERS BRICK.

PAVING TILES: The square tiles used in paving, called paving bricks, are variously sized, from six to twelve inches square.

PAVIOR; PAVIORS; PAVIOURS: A person who paves; bricklayers of paving; also 'pavier' (*ant.*).

PAY-MASTERS: Paymaster, official who pays troops, workmen, *etc.*

PAYNS (small): Small panes of glass.

PEDESTAL; PEDESTALL; PEDESTALS: Pedestal, in architecture, the lowest part of an order of columns, being that which sustains the column, and serves it as a foot or stand. (*Piedestal, Postament, Sockel; piédestal; piedestallo*).

PEERES: Piers; see PILLAR.

PENDANTS: Pendant, or pendent, something that hangs, in architecture, an ornamental projection that hangs down; in an open timber roof, a supporting wooden post placed against a wall.

PENDILLS: Also 'pendle'; see PENDANT.

“PER VARIAR NATURA É BELLA”: Famous aphorism, it was variously attributed (Michelangelo, Leonardo, Cervantes, Lope de Vega, Tasso) and counted among Queen Elizabeth's favourites.

PERSPECTIVE: The art of delineating visible objects on a plane surface, such as they appear at a given distance or height, upon a transparent plane, placed perpendicularly to the horizon, between the eye of the beholder and the object. In the practice of the perspective of a building, great regard is had to the height of the horizontal lines, all above the horizontal, being seen in the upper part, and all above it in the under part, whence perspective becomes divided into the high and low sight.

PHANTEON: see PANTHEON

PHAROAH'S DAUGHTER: Pharaoh's daughter, who was the wife of Solomon, cemented the alliance of Israel and Egypt. Slaves produced many structures for Solomon, including a palace for Pharaoh's daughter.

PIBBLE-STONE: Pebblestone; pebble, a small smooth rounded stone, worn by the action of water, ice, sand, *etc.*, more fully 'pebble stone'; used for walkways, *etc.*

PICK-LOCK: Pick lock, or picklock, a person who picks (opens) locks; a thief.

PILASTER: Pilaster, a shallow pier or rectangular column, sometimes isolated, but more often set into the wall, and only showing a fourth or a fifth part of its thickness. A pilaster is the representation in relief of a column against a wall. (*Pilaster, Wandpfeiler; pilastre; parasta*).

PILLARS: Pillar, a pier, or a kind of irregular column, round and isolated, not usually in the proportion of a classical order. Pillars are either too massive or too slender for a regular architecture; not restrained by any rules, their parts and proportions are arbitrary. A square pillar is a massive work, called also a PEER (Pier), serving to support arches, *etc.* The word 'pillar' has no specific meaning in the context of classical architecture. (*Pfeiler; piler, pile; pilastro, pila, pilone*).

PLANKING: Planks, or boards, collectively, especially used for flooring or some other surface. (*Plank, Diele; asse, tavola*).

PLATES (Roof): Tiles or shingles; also wall sidings as overlapping rows of slates.

PLAYSTERING OF LIME: Lime plaster (*Putz; enduit; intonaco*).

PLAYSTERING UPON BRICK-WORK: Plaster applied to cover bricks.

PLAYSTERING UPON LATH: Plaster applied to a support of lathes.

PLAYSTERERS: Plasterer, a person who plasters, applies plaster.

PLAYSTERS WORK: Plastering on lathes, brickwork, and stonework, *etc.*; white-washing; sizing; making mouldings, cornices, ceiling frames, *etc.*, of plaster, or stucco.

PLINT: Plinth; a plinth of a wall is a term used for two or three rows of bricks, advancing out from the wall, or, in general, for any flat high mouldings serving in front of a wall to mark the floors, *etc.* (*Plinthe; plinthe; plinto*).

PLUMMER: Plumber; plumbery is the art of casting, preparing, and working lead, and of its use in buildings. The chief article of plumbery is the sheets and pipes of lead, and these make the basis of the plumber's work in building (*Klempner; piombier; idraulico*).

PLUM-RULE: Plumb-rule; mason's instrument for determining the vertical, consisting of a line or cord with a plumb (ball-like lead weight) attached, fastened to, and swinging freely on the surface of a narrow straight-edge (rule) board marked with a longitudinal line which, when its position is in vertical, coincides with the string. Hence: 'plumb', 'à plomb', *i.e.*, vertical.

POLIST: Polished; marble takes a beautiful polish.

PORCH: A Porch to a church, palace, or other spacious building. A portico, a vestibule supported by columns; much used at the entrance of ancient churches, temples, *etc.*; a covered place before the principal door. A portico is a place for walking under shelter. (*Vorhalle, Veranda; vestibolo; atrio, portico*).

PORTCH: Porch; see PORCH.

PORTICO OR WATER-GATE AT THE RIVERSIDE: The York Water Gate (1626-1627), now Victoria Embankment Gardens, London; made for York House for the Duke of Buckingham, Gerbier's employer and patron in these years, and possibly to Gerbier's design (York House: *D.*, p. 28 *et passim*). The word 'portico' may derive from 'porta' (gate, door), yet it is applied to any disposition of columns which form a gallery, without any immediate relation to doors, or gates.

Image: http://en.wikipedia.org/wiki/Image:York_Water_Gate.jpg .

PORTLAND STONE: Portland stone is, according to Wikipedia, a limestone from the Jurassic period quarried on the Isle of Portland, Dorset.

PORTRACTURES (*edil.*): Portractures (spoken 'portratures') for 'portraits'; Gerbier writes of "portractures" (elevation drawings) of the interior and exterior of a building.

PORTUCO: Portico (*supra*). (*Portikus; portique; portico*).

POST: Vertical members (columns, posts, piers).

POSTILLONS: Postilion, postillion, one who rides a post-horse, a post-boy; a swift messenger.

POSTERN: Secondary door or gate.

PRIMAR TO APPRENTICES: Primer for apprentices; primer, an elementary (school) book for teaching beginners; a small introductory book.

PRINCIPAL RAFTERS: Rafters in buildings are pieces of timber, which stand by pairs upon the reason, meet in an angle at the top, and help to compose the roof of the building; see BEAMS; RAFTER.

PRINCIPAL TIMBER(S): Timber includes all kinds of felled and seasoned woods, used in building, here the largest dressed or sawn timbers, such as BEAMS.

PRINTED DISCOURSE: The “first printed discourse” refers to Gerbier’s *Brief Discours concerning the Three Chief Principles of Magnificent Building* of 1662 (FONTES 7).

PRISES: Prices, costs in monies.

PRISES OF MATERIALS: Prices, costs of building materials.

PRIVY-CHAMBER: A privy chamber was a private apartment in a royal residence in England. The gentlemen of the privy chamber were servants to the Crown, who were to wait and attend on the King and Queen at court.

PROPORTION: Proportion, in architecture, the just magnitude of the members of each part of a building, and the relation of the several parts to the whole, *e.g.*, of the dimensions of a column.

PROPRIETOR OF THE BUILDING: see OWNER.

PROSPECT: see PROSPECTIVE. Also the building seen from a favourable vantage point; its visual setting.

PURLAINS: Purlains, purlins, in roofs, horizontal longitudinal timbers, those pieces of timber that lie across the rafters, on the inside, to prevent them from sinking in the middle of their length.

PURLOYNED: Having purlins.

PYBALD: Piebald, of two colours, irregularly arranged, especially black (or dark) and white, usually used of an animal, especially of horses. Gerbier refers contemptuously to the spotty appearance of old red tile roofs, in contrast to a present-day nostalgic taste for tile roofs with a patina of the past.

PYRAMIDIS : Pyramids; in ancient Egyptian architecture, a sepulchral monument in the form of a huge stone structure with a square base and inclined sides meeting at an apex; more generally, any structure of this form.

QUEEN-STREET: Queen Street, a street in London. The houses in Great Queen Street built by John Webb.

QUINES: Quoins, the corners of walls, especially the dressed stones at the corners of buildings, usually laid so that their faces are alternately large and small (the French *coin* means

‘corner’). The term is used especially when the external angles of buildings are emphasized by rustication.

QUIRPO: Gerbier refers to “wanton persons” who may misuse windows to show themselves “*in Quirpo*” to passers by. ‘In quirpo’ is apparently an expression derived from Spanish and now almost entirely in disuse. Quirpo (*cuervo*) was a name given to a jacket fitting close to the body. The polyglot Gerbier’s “wanton persons” may simply mean to allude to the indecent exposure of the body (*cuervo*). In English: ‘Cuerpo’ [Sp. *cuervo* body], only found in the phrase *in cuerpo* (quirpo), without the cloak or uppergarments, so as to show the shape of the body; in undress; also *fig.*; sometimes *humourously*, without clothing, naked.

RABET: Rabbet, a step-shaped reduction cut along the edge or face or projecting angle of wood, usually to receive edge or tongue of another piece. Rabbeting, in carpentry, the planing or cutting of channels, or grooves, in boards.

RACK: Rack, in a stable, a vertically barred frame for holding animal fodder.

RACK POLES: Bars of a RACK.

RAFTERS: see PRINCIPAL RAFTERS. (*Sparren, Sparrendach; chevron; puntone, tetto a capriata*).

RAILE; RAILES: Rail, railles. A bar, originally of wood, fixed in a horizontal position to provide support or for hanging things on; also a continuous series of bars forming such a railing.

RANS AND PURPLE: The phrase occurs under “Mason’s work”.

RANGE: Place or arranged in a row, run or spread out in a line; row, line, tier, or series of things, as of buildings.

RANGED: see RANGE.

RANS: Ran, a certain length of twine (?).

RATES: Costs, cost per unit of measure or weight; a fixed or assigned price, charge, or value.

RELIQUES: Relics, remains of ancient architecture in Italy.

REPARATION: “In reparation”, in repair; maintenance, maintained. (*Instandhaltung; manenance; mantenimento*).

RIDGES OF THE ROOF: The horizontal, longitudinal timber at the apex of a roof supporting the ends of the rafters. Ridge, the highest part of the roof or covering of a house.

RIVET; RIVETING: Rivet, a short nail or bolt for fastening together metal plates or the like, the headless end of which is beaten out after insertion to secure or fasten with rivets or as with rivets.

ROD (square): Unit of linear measure, as perch, especially for land; the length of a rod is 5½ yards; a square rod, 30¼ square yards.

ROOF: Roof, in building, the uppermost part of the building, its covering. The roof contains the timber-work, and its furniture of slate or tile, wherewith a house is covered. (*Dach; toit; tetto*).

ROOMES OF STATE; ROOMS OF STATE: A state room is usually one of a suite of very grand rooms, designed to impress, the term being widely used in the 17th and 18th centuries.

ROUND FREEZE: Round frieze; pulvinate. (*Pulvinus; pulvinato*).

ROYAL PALACE: Palace of the King or Queen.

ROYAL PALACE; ON SIDE OF SAINTS JAMES'S PARK: St. James Palace.

RUBED BRICKS: Rubbed bricks (or 'rubbers') were first cut with a saw and then rubbed against another brick or stone; see 'Tuckpointing'. Rubbed brickwork or gauged brickwork is a form of brickwork utilizing relatively soft bricks, which can be cut with a saw to exact shapes for the voussoirs of arches, *etc.*, and the rubbed on stone to produce very smooth surfaces for fine jointing.

RUFF CAST UPON LATH (UPON LATH-WOTK): Rough cast; see CASSY ROUGH.

RULE: Rule, regula, or ruler, a very simple instrument, of wood or metal, thin, narrow, and straight; serving to draw straight lines.

RULE; RULES: The normative prescriptions and proscriptions of classical architecture.

RUNNING MEASURE: A term used in timber transactions, here measurement to a certain payment.

RUSTICK ORDER: Rustic order, an order with applications of rustication, with rustic quoins, rustic work (with rough surfaces of the stone, rather than smooth), *etc.* (*Rustika; rustique; opus rusticum*).

SAINT JAMES PARKE: St. James Park; a 58-acre park in Westminster, in Central London, the oldest of the Royal Parks in London.

SAMMELL BRICKS: Softer, unfired bricks; insufficiently fired bricks. Samel or Sandal bricks are such as lie outmost in a kiln or clamp, and consequently are soft and useless, as not being thoroughly burnt.

SAUDER: Solder (pronounced 'soder'), a metal alloy used in the molten state as a metallic binder. Soft solders are commonly composed of lead and tin.

SAWYERS: Sawyer, a workman or craftsman who saws with a saw, an instrument serving to cleave, or divide into pieces diverse solid matters, as wood, stone, marble, *etc.*, here wood, as in the dividing of timber into boards. The sawyers trade constituted a considerable group of craftsmen in England even in the late 18th century. (*Säger; scier du bois; segatore*).

SCAFFLING HOLES: Holes for supporting scaffolding.

SCAFFLINGS: Scaffoldings. (*Gerüst; échafaudage; impalcatura, ponteggio*).

SCANTLINGS: Small beams, under five inches in breadth and depth; a size to which stone or timber is to be cut; set of standard dimensions for parts of a structure. For the sizes or scantlings of rafters, it was provided by Act of Parliament, that principal rafters from 12 foot 6 inches, to 14 foot 6 inches long, be 5 inches broad atop, and 8 at the bottom, and 6 inches thick. In regard to timber, the scantling is the thickness and breadth, the sectional dimensions; in the case of stone the dimensions of thickness, breadth, and length. The word is a variation of scantillon, a carpenter's or mason's measuring tool; also used of the measurements taken by it, and of a piece of timber of a small size cut as a sample. Scantling: In general, small, insignificant in size or extent (*obsolete*). Measured or prescribed size, dimensions, or calibre, with reference to material objects, generally with reference to the measurement of wood or stone. A block or slice of stone of a fixed size; a small beam or peice of wood, specifically one less than 5 inches square.

SCEANS: Scenes, stage or theatre, place on which something is exhibited, as a play or drama or comedy; their settings of painted canvas or woodwork.

SCHEAMES: Scenes; see SCEANS.

SCROWLES: Scrowls, or scrolls, in architecture; an ornament in the form of a scroll of paper partly rolled; or in classical architecture a volute, as in the Ionic or Corinthian column, a scroll or spiral contortion; also a curved ornamental form. (*Helikes, Schnecke; elice*. Scrollwork: *Rollwerk, Schweifwerk; enroulement; cartoccio*).

SCULPTOR: A person who makes sculptures; sculpture being the art of cutting or carving wood, stone, or other matter to form various figures for representations, as also of fashioning wax, earth, plaster, *etc.*, to serve as models or moulds for the casting of metal figures. (*Bildhauer; sculpteur; scultore*).

SEA-COALES: Sea-coal, a name for mineral coal ('coal' in the ordinary modern sense, as distinguished from charcoal).

SEELING JOYCES: Ceiling joists, see JOYSES.

SEELINGS: Ceilings, in building, the upper part, or roof of a lower room, or a lay, or covering of plaster over lathes, nailed on the bottom of the joists that bear the floor of the upper room. (*Decke; plafond; soffitto*).

SELLARS: Cellars, underground room, also a place where wine is kept. (*Keller; cave, caveau; cantina*).

SELLERIDGE: A chamber associated with the seller, or cellar. A "celleridge of bottled wines", as a wine-cellar; a warehouse room in the cellar; *Shakespeare*: "You hear this fellow in the celleridge". Also 'cellarage' (cellaridge, selarage): provision of cellars; cellar accommodation; cellars collectively; also the charge therefor, as for a wine cellar.

SEPULTURE DE LE NOBILI ANTICHI: Ancient Roman tomb structures, probably those along the roads leading from Rome, but perhaps in South Italy; cf. Gerbier, *Subsidium peregrinaribus*, Oxford 1665, pp. 101-102.

SERGEANT PLUMMER: Sergeant Plumber, a position for a plumber; *e.g.*, His Majesty's Sergeant Plumber. Here the title 'sergeant' is prefixed appositively to the designation of an often inferior office, as sergeant-porter, sergeant-tailor, especially for royal servants. A sergeant is a serving man, attendant, servant.

SHIELD OF *PALLAS*: Shield of Pallas Athena, with the name and portrait of Phidias engraved in it.

SHOPPINS: Shoppins (obsolete); chopine, chopin: elevated shoes for ladies to stand on, raised above the ground by means of cork soles or the like.

SHUTTERS: Shutters, a set of wooden panels or iron plates, hinged, sliding, folding, or detachable, placed inside or outside the glass of windows to keep out heat, light, or thieves.

SHUTTING WINDOWS: Shuttered windows that may be closed.

SIEMENT: Cement. (*Zement; ciment; cemento*).

SIMMONED: Simmoned, simmon, joined or cemented together

SINGLE RANGE: see RANGE.

SLAB: Thin flat usually square or rectangular piece of stone or other rigid material.

SLAKT, lime: Slaked lime; to slake, combine (lime) chemically with water.

SLATE: Slate (*Schiefer; ardoise; ardesia*).

SLATER: A person who lays slate tiles.

SLATING: A layer or covering of slate tiles; the slates covering a roof.

SMALL BEADS: see BEADS.

SMALL RAFTERS: see Rafters.

SMITH: Smith, a worker in metal, especially one who forges iron; metalsmith, blacksmith; also in gold, silver, tin. (*Schmied; forgeron; fabbro*).

SMITHS WORK: Smith's work, iron bars, hinges, bolts, staples, hooks, iron casements, etc.

SMOOD: Smooth.

SOLIDITY: *Firmitas*, Gerbier's first principle of building.

SOLOMONS HOUSE: see *PHAROAH'S DAUGHTER*. Solomon's House is also the ideal College in Francis Bacon's Utopia (in: *The New Atlantis*, 1627).

SOLOMONS TEMPLE: Solomon's Temple in Jerusalem, the first Temple of the ancient Hebrew religion there, believed to have been built upon the hill which forms the site of the present day Temple Mount.

SOUTHAMPTON: Southampton, a city in the traditional county of Hampshire and the largest city of the south coast of England, and a major seaport on the English Channel.

SOYLE: Sill. (*Schwelle*; *Bank*; *Brett*).

SPHEAR IN AN ANGLE OF A GREAT CHAMBER IN St PEDRO È VATICANO IN ROME: Spheare, sphere (*sfera*), a globe of the Earth; see the so-called Giulio Romano globe, Vatican, Museo Sacro (Jacob Hess, in: *Warburg Journal*, 30, 1967, pp. 406-409, pl. 50e).

SPIT: Spit, a layer of earth of a spade's depth.

SPUE: Spue, spew.

St JERONIMO, AND ESCURIAL IN SPAIN: El Escorial, the Royal Monastery of San Lorenzo El Real, known as Monasterio de El Escorial or El Escorial, originally a property of the Hieronymite monks. In a dedicatory epistle in his *Counsel and Advise*, Gerbier refers to "St. *Jeronimo* called the *Escorial*".

St NICHOLAS-LANES END: St. Nicholas-Lane's End Stationiers, an establishment apparently at the end of St. Nicholas Lane, a street in Bromley, an urban centre in the London Borough of Bromley.

St. PAULS CHURCH: The church of Saint Pauls in London; St Paul's, the cathedral church of the diocese of London, on Ludgate Hill, City of London. The present church was designed by Christopher Wren.

STABLE; STABLES: Stable, a building set apart and adapted for sheltering, lodging, watering, feeding, grooming, and breeding horses, and also for keeping cattle. (*Marstall*; *écurie*; *scuderia*, *stalla* / *stalle*).

STABLE IN TURIN: Stable in Turin, the stable of Prince Tommaso di Savoia at Chambéry; see THOMAS OF SAVOY, PRINCE.

STAIRCASE; STAIRES: see PAIRE OF STAIRES. (*Treppe*; *escalier*; *scala*).

STAM-BOOKS: Stam-book, album (*Stammbuch*). A memorandum book, originally a family register.

STAPLES: Staples, metal clamps.

STARES: Stairs; see STAIRCASE.

STATUAES: Statues.

STATURE: Stature, height, especially of the human body.

STAVENGER: Stavenger, Norway.

STEER: Steer, rudder, stern, oar.

STEWARDS: Steward, a person entrusted with the management of another's property, especially the paid manager of a great house or estate.

STOOLES OF WINDOWS: Window stools, or sills of windows. (*Schwelle; seuil; soglia*).

STORY; STOREY; STORIES: Story, storey, the space between any two floors or the floor and roof of a building. The ground floor is the first story. (*Etage, Stockwerk; etage; piano*).

STREETS OF LONDON: Gerbier is interested in proposals to clean the streets of London and to enlarge some of them.

SUBURBS OF LONDON: The outlying districts of London.

SUMMERS: A summer, in carpentry, is a large piece of timber, which is being supported on two stone piers, or posts, serves as a lintel to a door, window, *etc.* (*Dachbalken; maître-poutre; trave del piano d'imposta del tetto*). A main beam in a structure (*generally obsolete*); a horizontal bearing beam in a building; *specifically* the main beam supporting the girders or joists of a floor, or the rafters of a roof.

SUMMER-SET-HOUSE: Somerset House is a large building, rebuilt 1776-1796, and situated on the south side of the Strand in central London, overlooking the River Thames, just east of Waterloo Bridge. The earlier building was long a royal residence of the Queen (under James I, Charles I, and Charles II, among others). Presently houses the Courtauld Institute of Art.

SURRENAM: Suriname, Surinam, a land in South America; Dutch Guiana.

SURVEYOR GENERALL: Surveyor of the King's Works, the head of the Royal Office of the Works, effectively the King's first architect.

SURVEYOR; SURVEYOUR: Architect, or leading building administrator. As a title of officials in various departments, offices, or works, *e.g.*, one who superintends the construction of a building, or the keeping of a structure in good order and repair.

SWINSOUND: Swinsound, a source of fir timber; fir which comes from Bergin, Swinsound (Svinesund, in western Scandinavia), Mott, Longland, Dranton, *etc.*, (which workman call Dram) being long, straight and clear, and of a yellow more cedry colour. Svinesund, a sound between Sweden and Norway.

TABLE-BOOKS: Table books; pocket notebooks. A book composed of tablets for memoranda; a pocket notebook or memorandum-book (*obsolete or rare*).

TAPOYERS: Tapoyer Indians, Tapuya Indians, a group of South American Indian tribes in eastern Brazil.

TEMPLE OF PEACE: The Temple of Peace (*Templum Pacis*) built in ancient Rome by Vespasian. It stood in the middle of the *forum Pacis*, north of the *basilica Aemilia*; part of the imperial Fora.

TEMPLE OF SOLOMON: see SOLOMONS TEMPLE.

TEMPLE-BARR: Temple Bar, London, the boundary of the westmost extent of the City of London on the road to Westminster, where Fleet Street becomes the Strand.

TOWN MASON (the): Official head mason in the employ of a town. (Mason: *Steinmetz*; *maçon*; *scalpellino*).

THOMAS OF SAVOY, PRINCE: Prince Tommaso Francesco di Savoia (1596-1656), son of Carlo Emmanuele I il Grande, duca di Savioa (1580-1630); 1620: Principe di Carignano. Gerbier (D., pp. 31-32) provides a detailed description of Prince Thomas of Savoy's Stable in Turin. In Gerbier's *Subsidium peregrinatibus* (...), Oxford 1665, p. 89, the location of "that most magnificent Stable, built by the late Prince Thomas of Savoy" (*manège des chevaux du prince Thomas*) is given more exactly as "Chambray", the "first Metropolitan of Savoy", entering from France, that is, Chambéry (now in France), where circa 1620 ff. the Stable was built (demolished before 1674). Schematic plan and very fragmentary documentation, in: François Isler, *Château des ducs de Savoie, 1295-1860, Chambéry*, Evian: Editions CLEOPAS, 2006, pp. 166-167. Gerbier was sent to Savoy of behalf of England (Gerbier, *A Manifestation*, 1651, p. 8), and his first-hand testimony to a lost building is noteworthy and neglected. Tommaso Francesco, Prince of Savoy-Carignano, was the Captain-General of the Spanish troops in the Netherlands and briefly provisional regent following the death of Isabella in 1633. His portrait by Anton van Dyck (Turin) was engraved by Paulus Pontius.

THREE BLACKBIRDS IN CANON-STREET: An establishment called Three Blackbirds in Cannon Street, London, possibly a tavern or inn.

THRESHOLD; THRESHOLDS: Threshold, a stone or timber sill across an external doorway. (*Türschwelle*; *soglia*).

TILER: A craftsman who lays tiles.

TILES: Tyles, tiles, in building, a sort of thin factious stone, used in roofs, *etc.*, of houses; or more properly, it is a kind of fat, clayey earth, kneaded and moulded of a just thickness, dried and burnt in a kiln, like a brick, and used in the covering of houses.

TILING: The covering of tiles; tiles collectively.

TIMBER: Timber includes all kinds of felled and seasoned woods, used in the several parts of a building. The kinds of timber are numerous, among them, oak, elm, beech, ash, fir, walnut-tree, chesnut-tree, poplar, aspen. (*Bauholz*; *bois*, *arbes*; *Bauholz*).

TIMBER BEING SQUARED: Wood cut to regular, rectangular shapes.

TIMBER COLOUR: Paint the colour of wood.

TOP OF CHIMNEYES: The chimney shafts that extend over the roof.

TOUTCHINGS: Touchings, (*Building*; *plural*) projections from the foundations of buildings, from which those of the adjoining building are begun (*obsolete*).

TOWN HALL: A large hall or building used for the administration of local governments. (*Rathaus*; *hôtel de ville*; *municipio*, *palazzo comunale* o *municipale*).

TOWN HOUSE: House in the city, as opposed to a country house.

TRADITIONS OF VIGNOLA: Vignola's *Regola delle cinque ordini* (1562); issued in innumerable subsequent editions and translations. Gerbier may refer to Joseph Moxon's pocket-sized English edition of Vignola in 1655.

TRANSOMS, TRANSOME: Transom window, among builders, the piece that is framed across a double light window. A window divided by a transom; a small window above a door lintel or above a larger window. (*Sturzriegel, Transom, Holm*).

TRIUMPHALL ARCHES ERECTED IN THE CITY OF LONDON: Temporary arches erected for specific and special occasions; those referred to by Gerbier were probably of his own design. (*Triumphbogen; arch de triomphe; arco di trionfo, arco trionfale*).

TROVELL MEN: Trowel men, who use a trowel. Trowel, a small hand-held tool with a flat blade of metal or wood used to apply and spread mortar, cement, plaster, *etc.* The term is still used, if rarely.

TRUSTEES: Those persons or proxies entrusted by the owner of a building to represent his interests, in controlling and administering the process of building.

TUILLERIES: The garden of the Louvre is called the Tuileries, as being a place where tiles were anciently made. But the term Tuileries does not only include the Garden, but also a magnificent palace, whose face takes up the whole length of the garden.

TUN: Ton, a measure of weight, 2240 pounds.

TUSCAN: Tuscan order, the lowest and most elementary of the five orders, and the most massive. (*Toskanische Ordnung; ordre toscan; ordine architetonico toscano*).

TUSCAN ORDER: see TUSCAN.

UNDERTAKERS OF BUILDING: see OWNERS; BUILDERS.

VALEDILID IN SPAIN: Valladolid, in Spain.

VAULTING OF CELLARS: Cellar vaults.

VERMILION: Cinnabar, a brilliant red pigment made by grinding cinnabar; of this colour.

VIGNAS IN ROME, CARDINALS: Cardinals's residences and farmsteads around Rome.

VIGNOLA: Giacomo Barozzi da Vignola (1507-1573), Italian architect, author of the *Regola delle cinque ordini* (1562).

VIRIONARIES (*sic*): *Visionaries*, a French comedy by Desmarets de Saint Sornin, 1637

WAINSCOT; WAINSCOTT: Wainscot, wainscotting; the timber-work serving to line the walls of a room, being usually in panels, and painted to serve in lieu of hangings. Even in halls it is common to have wainscot breast high, by reason of the natural humidity of walls. In taking dimensions, they use a string, which they press into all the mouldings, it being a rule

that they be paid for all where the plane goes. The timber lining to walls. (*Holzverkleidung, Täfelung, Paneel; panneau; pannello*).

WALKS: Walks, walkways, passages for walking along, especially connecting different sections of buildings.

WALL; WALLS: Wall, in architecture, a work of stone, brick, wood, making the principal part of the building, as serving both to enclose it, and to support the roof, floors, *etc.* (*Mauer, Wand; paroi, cloison; parete*).

WATER PIPES: Pipes for the conduit of water.

WATER-TABLE: Water table, off-set, the part of a wall exposed horizontally when the portion above it is reduced in thickness; often with a projecting drip mould on the lower edge to prevent water from running down the walls.

WAVE: Wave moulding, a compound moulding formed by a convex curve between two concave curves; Vitruvian scroll; running dog. (*Laufender Hund; meandre, bandes de vagues; cane corrente; corridietro*).

WAVE WITH BEADS (lower): Wave moulding, enriched by a bead moulding below.

WEST-INDIAN HERICAN-LIKE-WINDES: Hurricane.

WHITE FUR: White fir tree or timber; see FUR, FIRR.

WHITE LION IN St PAULS CHURCH-YARD: An establishment in the yard of the church of Saint Paul's in London; St Paul's, the cathedral church of the diocese of London, on Ludgate Hill, City of London. The present church was designed by Christopher Wren.

WHITEHALL: Whitehall is a road in Westminster (London) that leads to the area where the vast Palace of Whitehall stood before it burned in 1698. The Banqueting House is the only surviving portion of the former palace.

WHITE-WASHING: Whitewashing, brushing over walls, ceilings, etc., with a solution of quicklime or whiting and size to give a clean, white appearance.

WHITING AND STOPPING: Whiting and stopping are operations of painter and plasterers ("washing, stopping, whiting, sizing, blacking, colouring", 1718), stopping perhaps the filling in of imperfections in the wall surface. 'Stopping': A mixture or composition used to stop (close) holes, crevices, cracks, defects (a mixture of size and whiting).

WHITING; STOPPING: Whitewashing (brushing over walls, ceilings, etc., with a solution of quicklime or whiting and size to give a clean, white appearance); chalk prepared by drying, grinding, *etc.*, for use in whitewashing.

WILLIAM PRINCE OF ORANGE AT DELF: William, Prince of Orange and Nassau (1533-1584), William I the Silent.

WILLOUBY OF PARAM: Willoughby of Parham, Francis Lord Willoughby of Parham (1605-1666), English Baron, the 5th Lord Willoughby of Parham. An early supporter of

Parliamentarianism; later a Royalist. Twice governor of English colonies in the Caribbean (West Indies; 1650: Barbados). Colonizer of Suriname.

WINDOW-CASES: see CASEMENT.

WINDOWE; WINDOW: Window, *q.d.* Wind-Door, an aperture or open place in the side of a house, to let in air and light. (*Fenster; fenêtre; finestra*).

WOODEN CASEMENTS TREBLE RIVETED: see CASEMENT, RIVET.

WOODEN SHUTTERS: A set of wooden panels, hinged, sliding, folding, or detachable, placed inside or outside glass of window to keep out light, heat, or thieves. (*Fensterladen, Laden; contrevent, persien; imposta, persiane, scuri*).

WORKMEN: Workman, man hired to do manual labour. (*Arbeiter, Handwerker; ouvrier; operaio, lavorante*).

YELLOW FUR: Yellow fir tree or timber.

YORK HOUSE: York House in the Strand in London. It came to be known as York House when it was granted to the Archbishop of York in 1556. In the 1620s it was acquired by the royal favourite, George Villiers, 1st Duke of Buckingham. Gerbier worked there in the 1620s. See PORTICO OR WATER-GATE AT THE RIVERSIDE.

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A MODERNISED TEXT

A MODERNISED TEXT OF BALTHAZAR GERBIER, *COUNSEL AND ADVISE TO ALL BUILDERS* (...),
LONDON: PRINTED BY THOMAS MABB, 1663.

Modernisation has been largely restricted to spelling and to the substitution of archaic words with modern equivalents. Some persons and places have been identified, but for these the reader is, for the most part, referred to the 'Glossary'. Punctuation has sometimes been altered to aid comprehension. The modernised text is provided in order to aid the search function by giving words in a normalized form, as well to render the text more understandable by substituting obsolete usages with current ones.

The indications of topics printed in the margins of the book are given here between square brackets at the appropriate points.

Counsel and Advice TO ALL

BUILDERS;

For the Choice of their
Surveyors, Clerks of their Works,
Bricklayers, Masons, Carpenters, and
other Workmen therein concerned.

AS ALSO

In respect of their Works, Materials
and Rates thereof.

Together with several *Epistles* to
Eminent Persons, who may be
Concerned in *Building*.

Written by Sir *Balthazar Gerbier*,
Douvily, Knight.

London, Printed by *Thomas Mabb*, dwelling on
St. Pauls-Wharf near the *Thames*, 1663.

To the Courteous Reader.

Whereas all Creatures from the Mole (that has no great sight) to the most Argus like above ground, are continually engaged in Building, and stand in need then of Mechanical more than of Philosophical Rules: This little Manual does therefore point at the Choice of Surveyors, the Duty of Clerks of the Works, Bricklayers, Masons, Carpenters, etc. who must be spoken to in plain

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plain intelligible terms, for that diverse Workmen resemble those, whereof the Ecclesiastes, says, That when a tale is told, then they will say, What is the matter? This manual does both now and then proffer a word or two to cherish the Reader's patience, for that bare names of materials, of forms, and several parts of works will too soon tire noble Persons; Nor is this present Age devoid of number of Authors, who have written more on Architecture then any Clerk of the Works will have time to learn by heart:

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heart: These summary Notes will serve for such as are entrusted by Owners of Buildings, that they may better perform their task, and have more credit with the several Master Workmen, who love to be spoken unto in their own phrases; And Owners of Buildings, their Trustees, Stewards, and Pay-Masters being possessed with the Rates of Materials, will be more at rest, than otherwise if they should be, to seek to make perpetual enquiries after them, and be vexed with ill-grounded reports.

Further-

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Furthermore, you may gather out of this Treatise a Posey pleasing to your scent, and leave the gleanings, which are most proper to Mechanics concerned therein, until a large work (with Copper Plates) shall have had time to be put forth, wherein not only shall be represented with complete measurements the forms of all Mouldings, of Orders, Columns, Ornaments for Doors and Windows, Court, Houses, and Guarding-gates, and withall some Fronts, and Dimensions of Houses both in a City and in

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in the Country; Churches, Towns, Houses and Steeples, with all necessary appurtenances thereunto belonging; As also the charges a Builder may be at, according unto the extent and height of a Building, either made of stone, brick, or mixed.

You will have no just cause to infer that when the best building is mentioned (according to the Grecian and Roman manner) that therefore English Labourers shall need go with their Buckets to fill them at the Tiber, less to the Seine at Paris, to temper

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per their Mortar well, nor your Surveyors, nor Master-workmen to be vexed with things a-la-mode, if they will but observe Rules, Dimensions and Forms, which are not to be amended, much less contradicted.

And as for the number of Epistles which are put to this Manual.

Anthony Pérez (once Secretary of State to *Philip* the second King of *Spain*) was a precedent for the putting of many Epistles to a Treatise which he Dedicated not only to Eminent Persons in *Spain*, but also in *France* and

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and *England*; it was his *Peregrino*, the main whereof represented a Demolished Body; The scope of this [treatise] is contrary to that, being about Building – his was a personal Interest, this a public; it's therefore the more freely offered to a number of Persons, who, either themselves or their friends, may have occasion to make use of it; it's freely offered as to the upper, so to the lower end of a *Table*, like a fresh gathered Fruit, and none of those who are pleased to accept it, are craved

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ved to Patronize it, it being held most unfit for any Author to crave, since no man is bound to answer for faults committed by another.

THE

[g 5 *verso*]

THE
CONTENTS
OF THIS
MANUAL.

2 *A Repetition of the summary contents of a former printed Discourse, concerning the three chief Principles of Magnificent Building, to wit, Solidity, Convenience, and Ornament.*

3 *The choice of a Surveyor, how to try him, and what his duty is?*

4 *The choice of a good Clerk*

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Clerk of the works, and what he is to do?

5 The duty of all Master Workmen,

6 The several proportions of the five Orders.

7 Particulars to be minded by all Builders.

8 Rates and Prices of Materials, and of the several works belonging to the Building.

9 That those who Build, or Build not, will (as those who marry, or marry not,) have just cause to repent.

Counsel

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Counsel and Advice

TO ALL

BUILDERS.

*For the Choice of their Surveyors;
Clerks of their Works, Bricklay-
ers, Masons, Carpenters, and o-
ther Workmen therein concer-
ned.*

A Little Manual which I formerly set forth (concerning the three chief Principles of magnificent Building, *viz. Solidity, Convenience and Ornament*) does in the first place note the incongruities committed by many undertakers of Buildings, who (both within

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within and without doors) confound the aforesaid Principles: It Notes how the *Grecians* and the *Romans* (the best Builders) have proceeded on undisputable Rules, not subject to fancies, for if men should be enslaved by Weather-cock-like spirits to make their Buildings according unto things *a la mode*, especially of *Hats, Bands, Doublets and Breeches*; how might workmen laugh? And would not some (who cannot jeer without making use of Scripture) quote *Ecclesiastes*, *He that is hasty to give credit is light-minded*, chap 19. v. 4. *And he that teaches a Fool, as one that glues a pot-shard together*, cap. 21. v. 7.

Secondly, It Notes how several great and judicious Princes and Magistrates have proceeded in their Edifices, what they have

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have shunned, and what they have curiously Observed; the particular care of Surveyors, their choice of Materials, even to the preparing of their Lime and Clay: The care of their Bricklayers in laying of a Foundation, and that they have been firm and resolute in their undertakings to proceed on a well composed Model, since alterations in a well begun Building are very prejudicial.

Thirdly, It Notes the distinction between the well-ordering of the Palace of a Sovereign, and that of meaner Habitations; and it cites some remarkable Structures, as that between *Babylon* and *Espahan*, at a place called *Carimonsharan*; as also several remarkable ones in *Europe*; It omits not the Description of the Princely Stables, and the necessary

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sary Offices to their Palaces (as well as rooms of State, for great festival Shows, and ordinary use.) It also points at several incongruities committed by Surveyors; and who minded more to show that they were skilled in describing of Columns, Pilasters, Cornices and Frontispieces (though for the most part placed as the wild *Americans* are wont to put their Pendants at their Nostrils), than to have studied Convenience, and what [is] most Necessary.

I shall now in the following lines treat more particularly on the matter by way of Counsel and Advice to all Builders, *etc.*

Who so ever is disposed to Build, ought in the first place to make choice of a skilful Surveyor, from whose Directions the several

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several Master-workmen may receive Instructions by way of Draughts, Models, Frames, *etc.* For the better managing of their intended work, since an ill-built Palace leaves a perpetual reflection of Ignorance on the Builder; whereas a compact Building, whether City, Castle or House, like a stock of Children, continues the Name and Memory of the Owner.

[Surveyors.] An exact *Architect* must have the Art of Drawing, and Perspective; ought to know what appertains to each Inhabitants Convenience: Since there is a vast difference between the House of Prayer, and a Prince's Palace, and meaner Habitations, nor is a Laboratorium for a Chemist fit either for Baking or Brewing.

[Perspective.] Therefore he ought to know wherein

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wherein is the use of Perspective; otherwise he will never rightly describe the dimensions of solid Bodies, which are to stand high; his Circles will seem Ovals in Breadth, and his Ovals Circles, and all his contrivances will be at random; as it is said of some men, who first act, and afterwards consider excusing their mistake, which [*Errata*: "with"] they thought it otherwise.

[What to reflect on.] The Surveyor must in the first place consider the ground where upon the Building must be Erected, make a Distinction between a Plot in the City, and one in the Country; and then govern himself as the ground will give him leave; reflecting still on the Houses adjacent, and those which are opposite, if they be high to raise as high, if not higher, to prevent the smoking of Chimneys.
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[The Seat.] Secondly, He must place the Front of a Building in the Country towards the East, if the place gives leave; by which means he may shelter his double Lodging Rooms from the Northwest: [A *Nota Bene* to Builders.] He must cause all the back of his Stone-work (which stands within the Brick) to be cut with a Rabat three Inches broader then the breadth of his Jambs and Cornice; which will hinder the Rain (driven by a fierce North-west wind) to pierce into the Inside of the Wall, and through the meeting of the Brickwork and Stone; whereunto the Mortar affords the passage of the Water. It may be some will carp at this free Expression, pretending that Surveyors and Master Workmen (in this refined Age, which abounds in Books, with the Portraits

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traits of the Outside and Inside of the best Buildings) are not to seek the first Points of their apprenticeship: whom I ask the reason, why modern and present-day Buildings are so exceedingly Defective? And whether it is not because many of them (if well considered) have been but Apprentices lately, as too soon become Journey-men; And that Surveyors (who either affect more the Building to themselves a strong Purse, or are blind in the faults which their Work-men commit) like careless Postillions, hasten with the Packet-Mail to the Post Office, be it never so ill-girded, whereby it often falls in the mid-way?

The Count of *Villamediana*, a rare *Spanish* Poet, having heard the Answer of a Son of the King of *Spain's* Surveyor (to whom

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[The Count of *Villamediana* his witty expressions concerning a young Surveyor.] whom the Office of the Surveyor was confirmed, for the reason that he had all the Drawings and Books of his Deceased Father; and to excuse his young Experience said, to make use of them) replied to the young Surveyor, *Hazais come el Stomaco que coma herbas y caga Mierda*.

[How to try the capacity of a Surveyor.] The readiest way to try a Surveyor, is to put him to draw a ground Plot in the Builder's presence, to make him describe the fittest place for a Seat, the ordering of Rooms, for Summer and Winter; to Contrive well the Staircases, Doors, Windows and Chimneys; that the Stairs may stand conveniently to the Stories, Doors and Windows; so placed, as that they may not be inconvenient to the Chimneys; the Bedstead placed far from Doors and Windows, and

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and at a fit distance from Chimneys.

[Distinction between the height of ceilings of Rooms.] And as for height of Ceilings, the Surveyor ought to make a Distinction, between the height of a House, or Town Hall; of a College and that of a Church, the Hall of a private house, serving for the most part, but for a Passage, the others for a Receptacle of a whole Body (consisting of number of Persons) who for an hour or two jointly breathe in one place, and which may be Offensive.

[Natural Effect of Air.] Nature of Air being to ascend, and when it meets (with a sudden opposition) it spreads; Since the Nostrils (as the Pipes of Bellows) will attract to each Person's Brain the scent which is composed of that Steam.

The Surveyors skill and discretion will also be discovered by

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by the well-contriving of the respective ceilings of common Rooms, and Closets for private use. For as rooms of State, ought to be of an equal height, the ceiling of a Closet (ten foot square, less or more) adjacent to a Bed chamber of State (which may be Thirty foot wide, Forty in length, and Sixteen or Eighteen foot high) would be Preposterous, Inconvenient; and like a Barbers Comb-case; Staircase, and Steeple-like to hang Bells in.

A good Surveyor shows his Art, both within the Building, as on its Front; and in the fit mixture of Materials, Mortar, Brick and Stone, being Sympathetic stuff.

[Necessity for mouldings.] As for the manner of the Outside of a Building, there is a necessity for mouldings about Win-

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Windows, and Door Frontispieces, or Cornices, none about Barns, Malt, Brew, or Glass-houses; whereof the outsides (especially a Barn) has no opening of Windows, so as the Rain and Droppings of the Thatch falls not in them, but only on the ground. But as for Cornices and Frontispieces over the Windows of a mere Habitation, being to it of the same use, as the broad Brim of a good Hat is to a Traveller in a rainy day.

[Ornaments] The good Surveyor will order Ornaments to the Front of a Palace, according unto its situation; shun too much carved Ornament on that upright, whereas the Southerly winds raise much dust; And though the *Italian*, saying, maintains, *Per Tanto variar Natura é bella*; Yet must the good Surveyor use

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use moderation in the ordering of Ornaments; shun in the first place, those Spectacle-like cant Windows, which are of Glass on all sides; [Bay or Cant Windows Inconvenient.] For it may be supposed that the Inhabitants of such Houses and Rooms with Cant Windows (exposed to the Northwest) may well imitate a merry *Italian* Fisher, who (in a Winter windy, rainy day) had been striped to his skin, and having nothing left to cover him save his bare Net wherein he was wrapped (sitting on the highway) put his finger through one of the holes, asking to passengers what weather it was outdoors.

[How Windows ought to be placed] The expert Surveyor will repart [*divide* or *distribute*] the Windows to the front of a Palace, that they may (besides the affording of sufficient light to the rooms) leave a solid

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solid piers between them, and to place some pleasing Ornament thereon, not prejudicial to the Structure, nor too chargeable [*costly*] for the Builder; shunning incongruities, as many (pretending knowledge in Ornaments) have committed, by placing between Windows Pilasters, through whose bodies Lions are represented to creep; [Ridiculous Ornaments.] as those in *Queen-street*, without any necessity, or ground for the placing Lions so ill, which are commonly represented but as Supporters, either of weight, or of Arms in Heraldry.

[The Order to be observed on the Front of Buildings.] He ought further to imitate the old *Grecians* and *Romans*, in placing the rustic order next to the ground, as being most proper, both by reason it is the most solid of all the other orders; and that no blemish appears in the Rustic

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Rustic so soon as in a smooth ashlar.

[Concerning the placing of Balconies] The reason also for contracting the Balconies within the upright of a Column, is that weight is not prejudicial when it rests on its Centre, no more than the great weight of Bells in a Steeple, if hung plumb with the upright.

[Concerning the upper part of a Front without Rails and Balusters.] Moreover, He orders his top Cornice according unto the weight, which is laid upon it; For if the Builder (to spare charges of Rails, Balusters and Pedestals with Ornaments of Balls) will have the Building to have no other finishing, he must lay a course of Stone on the Cornice, to keep the Walls dry, and clap up a fillet of Lead: As good Carpenters do frame their Rails to Balusters to meet on the Pedestals, under the neck of the

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the Ball, so as the Rain does not enter to rot them.

[The use of Perspective.] A Surveyor (well-versed in Perspective) does order the Cornices and Ornaments according unto the height of the Stories: He ought to know what Diminution, Altitude causes; there is none perceived on the Latitude of an Horizontal Line: Longitude represented by lines drawing to a Centre; from the Latitude causes also a Diminution in the Eye.

The *Grecians* and *Romans* Surveyors, have ever been accustomed to make their Cornices and Ornaments about Windows, of the upper Stories to be bigger than those of the lower; which *Michelangelo* did observe in the Architrave; Frieze and Cornice on the top of the Frontispiece of the Cardinal *Farnese*

[17] *Farnese's Palace in Rome.*

[*Raphael* and *Albert Dürer*, their method in Dimensions] *Raphael d'Urbino* and *Albert Dürer*, drawing a Steeple on the first ground of a board or cloth, whereon they did represent the figure of a man, standing (as it were) in the upper gallery; made the figure of that man of the

same height of another which was to be set at the foot of such a Steeple; because there is no diminution of form on a perpendicular line, which is set close to the edge of a cloth or board; A point at the foot, or at the top is but a point, it being only distance from separated lines (drawn to a Centre) which causes a Diminution as to the sight.

Therefore all Surveyors ought to cause the wooden Molds (on which Masons must work,) to be tried out by lifting them

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them as high as the Stone or wooden Figure is to be placed; to see how it may please the Judicious Eye; which is the best Jury and compass.

Now concerning the well-proportioned Doors and Windows; Every man reflecting on Stature, ease and convenience, needs not to call to his neighbour for to counsel him in this necessary proportion, since it must be granted, that if Doors and Windows (in a solid Building of Stone or Brick) were as wide as they are high; it must be through necessity be a weakening to a Building. [What form of Doors, prove a weakening to a Building.]

The wideness of the Door, must be to serve for two to pass at once, that is to say; the Doors of Chambers of a Palace, the height of the Door the double of its width; all other Chamber doors

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doors of a convenient height for a man of complete stature, to pass with a hat on his head: A gate for Coaches and Carts Laden likewise fit to the purpose.

[Why Windows must be high,] Windows (because the light comes from above) must be higher than wide, the middle Transoms of them above six foot (Which is the common stature of a Man) since otherwise the middle Transom would be opposite to a man's eye, hindersome to the free discovering of the Country.

[The leaning height of Windows.] The leaning height of the Windows, ought to be three Foot and a half; since if otherwise it will be incommodious, for being lower, it would require the bending of the back, which old men (when they have spent money and time in building) will

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will not find so easy, as some wanton persons, who maybe will affect low leanings, to make use either to sit on, and break the glass-windows, or to show themselves in Quirpo to passengers [*passers-by*].

[The height of windows.] The height of Windows and Doors, must be as much again as they are wide; because they will otherwise offend the Judicious eye of persons who reflect on the former annotations, that shapes do alter by distances of place; as an Oval seen from beneath, will seem to contract to a Circle; contrary to the sense of some Children, in whose sight their Parents seem extremely tall because they are low themselves; But some Builders, (as Painters

of low stature) affect to make Figures, doorways, and Windows according unto their own height. A

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[Thresholds an old custom.] A good Surveyor shuns also the ordering of Doors with Stumbling-Block Thresholds, though our forefathers affected them, perchance to perpetuate the ancient custom of Bridegrooms, when formerly at their return from Church, did use to lift up their Brides and to knock their heads against that of the door, for a remembrance, that they were not to pass the threshold of their House without their leave.

[The placement of Doors.] The doors ought to be all in a row, close to the Windows, to gain room, that when the doors are opened; they may serve for Screens, and not to convey wind to the Chimney.

The Hearth of a Chimney ought to lie level, without a border, raised hearths being dangerous

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gerous for the falling of coals on the boards, and likewise troublesome. [The inconveniency of raised hearths to Chimneys.]

The Chimney-mantles ought to be all of Stone or Marble, but if (to spare charges) the upper frame, sides and top be made of timber, it will be most seemly to have them painted as Marble.

[The use of spaces between the Chimneys.] And if the building cannot suffer the Chimney to be made even with the upright of the wall, both sides may be made up to serve for hoards, if they are rooms of State, but if of common use for Cabinets.

It is necessary to cover the top of Chimneys to keep out rain and Snow; the smoke holes can be very conveniently made on the sides of the heads of them.

[Rooms on moist ground to be Paved.] Rooms on moist grounds, do well to be Paved with Marble, because the boarding otherwise is

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is much subject to rot.

[No Timber Partitions to be suffered in the first Story.] A good Surveyor shuns the making of Timber partitions in the under most Story.

He contrives free access to the double rooms, without making them through passage, whereunto the well-placing of the Stairs contributes, either by convenient passages about or under them; the composing of a fit and easy Stairs being a Masterpiece, fit in respect of the place, convenient if the steps be deep and Low in the rise, for a straight ascending or

descending (without bending of the sinews) gives most ease to the body which rests better on his bones, then on Sinews. [Deep and low Steps best.]

The good Surveyor contrives the repartitions [*divisions*] of his ground plot, so as most of the necessary Servants may be lodged

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ed in the first ground story; whereby there will be less disturbance, less danger of fire, and all the Family at hand on all occasions.

Finally, he ought from time to time to visit the work, to see whether the Building be performed according unto his direction and Moulds.

*The second choice to be made,
is, that of a fit Clerk of
the Works.*

A Clerk of the Works must be versed in the prices of Materials and the rates of all things belonging to a building; know where the best are to be had, provide them to the workmen's hands; to prevent a retardment in their several proceedings;

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ings; that the Carpenter may not wait for the Bricklayers, nor the Bricklayers, nor Masons, for the Carpenters, he ought also to note in his book the materials, and all necessities as they are brought in, distribute them orderly; and though Nails to some seem not very considerable, yet ought the Clerk of the work to be discreet in the distributing of them to some Carpenters, whose pockets partake much of the ostriches's stomachs; his eyes must wander about every workman's hands, as on those of the Sawyers's at their Pit, that they waste no more than need be in Slabs; on the Labourers's hands in the digging of the foundations, for the Bricklayers that all the loose earth be removed, and springs observed. That

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That no Cart-men turn or tumble down their Bricks, but the Labourers to take them out of the Cart and pile them to prevent damage.

To suffer no Samel Bricks to be made use of, not so much as in the core of a Foundation.

[Concerning Bricklayers.] The Bricklayers to lay no foundation except the ground be first Rammed, though it may seem ever so firm.

[Observed in the foundation of *Solomon's* Temples.] No great and small stuff huddled together in the foundation, but laid as even as possibly can be, to ram it the better and the more equal, and must be of solid hard stuff, with no concavities, daubed over with store of Mortar, which sinks unequally, and is the cause of the unequal settling of the Work.

Likewise to watch the Bricklayers's hands, to use often their line,

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line, and plumb-rule, make small scaffling holes, [No making of Scaffolding in the morning.] and never (if it be possible) suffer them to begin their Scaffoldings in the morning, but before their leaving of their work; for if in the morning, most of them will make it a day of gathering of Nuts and fruit (if they are in the Country) and therein spend the best part of their day; and one must not permit them to take the best boards and other stuff for their Scaffoldings.

[Concerning Mortar.] *Item*, See the Mortar well-tempered, since if unequal in thickness; that which is thin, will cause the work to settle more in one place than in the other, and the joints to spew out the Mortar; especially of work made at the latter end of the year, when no brick-work outdoors ought to be laid, for that

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that it has not had sufficient time to dry thoroughly; and will therefore by the setting of the work in the after-season, be so much the more retarded, and be the worse to the Building, Hangings, or Wainscot set up against it.

Moreover, to see the Bricklayers take good solid Bricks to hew, since if any thing Samel the work will moulder away; and every night to lay boards on their work to keep it from rain.

[Concerning Masons.] It is to be noted, that the Mason must work no Stone with Sandy veins, or that which (having been new taken out of the Quarry) has been exposed to Rain, Snow or Frost.

As for the Workmen, they must observe exactly their Surveyor's Molds, and work close and neat joints, use but little Mortar

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Mortar between them, not only because much Mortar will be washed away, but that Cornices will also appear as a rank of open teeth, and they must not forget to shore the middle part of the head of the Windows, as well as the sides, to prevent an unequal settling of the work, and consequently cracks; both in the Heads, Jambs, and Sills.

As for the Dimensions which the Masons are to observe in their work, in reference to the orders. They must divide the Tuscan, Column, or Rustic, Base and Capital (which is as much to say as feet and head) seven times its thickness, the Architrave, Frieze and Cornice one fourth part of the Column with Base and Capital.

If they make the said order without

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without a Pedestal they must divide its whole height into 17 parts and a half, which (in their vocation phrase) are called Models [*modules*], and are divided into 12 equal parts. If they are directed by their Surveyor to make them with a Pedestal, then are they to divide the whole height into 22 and one sixth part, for that the perfect shape of the said Order requires a Pedestal, which must have a third part of the Column, with Base and Capital.

[Nota.] It seldom happens that a Pedestal is put to the Tuscan Order, because (as it represents an Atlas) and that no man will take a Dwarf to reach to the first Story of a Building) the said order requires, not to be set as a Candlestick on a Cupboard, it's as a Substantive, that can stand without an Adjective: Some *Venetian*

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Venetian Ladies, must have their Shoppins to stand on, and were they as strong as the Tuscan they would not need some of their Masaras to lean upon.

[Dimension of all Pedestals.] But as for Pedestals to the to the other following orders; a Builder shall do well to see the Masons observe this general rule; That the Pedestals with their Ornaments, must be one third part of the Column with its Basis and Capital (feet and head as aforesaid) even as in the Ornaments above the Architrave, Frieze and Cornice, must make one fourth part of the same.

This must then be understood as follows, *viz.* The Mason must in the making any of the Frieze orders, divide the height of the Column with its Ornament into nineteen parts, then take the height of the Column with its Basis

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Basis and Capital, and make the divisions of the Modules according to its order.

[Names of the several forms or mouldings on the body of the Column.] Now the names of the several forms on the body of the Column are, *viz.* theinging [*sic*] over of the Capital under the neck; Then follows the Frieze, the List, the Ovolo, the Cymatium, the list of the Cymatium, the Architrave, the list of the Architrave, the Frieze, Gul or Throat, the lists, the Crown, the lists or Rule, the Round; and finally the Ovolo. And the Clerk of the Works speaking in these terms, will be as well understood by the Masons as one at Sea among Mariners; saying, Steer, or Larboard.

[Concerning the Doric order.] *Item*, If the front of the Building is adorned with the other orders (as the Doric is) to follow the Tuscan, this proportion must

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must be observed, *viz.* The height of the whole Column with its Base and Capital, must consist in 20 Modules, that is to say, a Doric Column without a Pedestal; the Modules must be divided in twelve parts, the foot with the nethermost band must be one Module, the Column between the Foot and Head, 14 Modules, the head one. The Architrave, Frieze and Cornish, is to be one fourth part with the Head and Foot, so as this makes up the aforesaid Number, and such a complete form, as is neither to be controlled nor amended, and is that which the *Grecians* and *Romans* have found to be a Dimension sunk down from above, as all those who have made it their respectful observations of the Dimensions the Creator hath been pleased to give to the Micro-

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Microcosm Man, they have found that there is a perfect concordance, among them, a Body consisting of so many Modules of so many height of Heads; A Head of so many distances between the one Eye and the other, nay even in the gaping of a well-proportioned Mouth, except forced by a kind of Screw or Gag, which may break the Jaw-bones asunder. [Perfect concordance among the dimensions of a man's body.]

[Proportion of open Galleries with Columns.] If the under most part of a Front (as many Palaces in *Padua* and other cities in *Italy*) is left open as the Gallery in the *Bedford-Piazza*; The Indisputable, best and truest proportion to be observed therein is; if according a Doric Order, the Height must be divided into twenty parts, one of those must be the Module; the distance between the two Pilasters are three Modules

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dels, the wideness of the Arch, half the length of the Column, which is set out in the middle of the Pilaster, one third part of a Module more then its half, which is to be generally observed in all the other orders; This is for Galleries with Columns without Pedestals; but Galleries, with these the Column must be divided into twenty five, and one third part which makes a Module; the breadth of the Pilaster must be five Modules, and the distance between the Pilasters ten Modules, the half of the height of the Arch, which will make that perfect shape as must satisfy all Judicious Eyes. *Item*, It must be remembered that the height of the Pedestal of the Doric must consist of five Modules and one third part: And as for Ornaments (as Embroidery or Lace on good

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good Stuff) they are as various as the occasions of the owners may require, or those things whereunto their Genius doth tend; if Warriors, Trophies; if men of Peace, Olive-branches; and all what does not frighten.

[Division of the Ionic order.] The *Ionic* Columns, their height must be of twenty two parts and a half; each Module being one of the twenty, must be divided in eighteen, because it stands so much higher, as distance (which the contracts the work) requires more height; since otherwise the third story of the Columns would shorten so much, which is the fundamental reason that

perspective must be observed by a good builder, and not yielded to the particular fancies of some of them.

The Architrave of such a Column

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lumn must consist in one, and one quarter Model of the eighteen, the Frieze of one and a half, the Cornice one and three-quarters, which being added together makes four Modules and an half, and the one quarter of the *Ionic* Column, the Base and Capital comprised.

In the making Galleries of this order (which being most slender and more tall) the breadth of the Pilasters must be three Modules, the Breadth of the Arch eight and a half, since the height must be seventeen Modules, which is twice the breadth; but if these Columns are set on Pedestals, then must the whole height of them be divided into twenty-eight parts and a half, allowing six Modules for the height of the Pedestal with its Ornaments, and so it will fall out, that as the breadth

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breadth of the Arch shall be eleven Modules, the height twenty-two, the breadth of the Pilasters four, and so a proportionable Body to the height of the Story, and the weight it is to bear; which is one of the main considerations of a good Builder; when to the contrary, Columns ill-proportioned and ill-placed, prove often a weakening to a Building, and seem as Organ pipes to stand in the Air for a show, as Cornices too broad, happen the sooner to decay; but to this order there ought to be one third part of a Module. [Ill-effect of two broad Cornices.]

To proceed on the form recommended to a good Clerk of the works, to call upon every workman of the Masons to see them perform according unto such exact patterns made in good Wainscot; [Which does not shrink.] The next is the

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the Corinthian, [Divisions of the Corinthian order.] which if without Pedestals, must be divided into twenty five Modules, and those into eighteen parts; the distance between the Columns four Modules, and two third parts of a Module; Because the Architrave about it may not bear too much, and that the Modules in the Cornices may be just over the middle of the Column.

But if Arches or Galleries [are] made of this Order; the distance between the Pilasters must be nine Modules, the height to the top of the Arch eighteen Modules, and the breadth of the Pilaster three Modules: Galleries with Pedestals must be divided in thirty-two equal parts, and one of them a Model; the distance between twelve and the height to the top twenty-five, one more then ordinary because

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because the height diminishes the proportion of its true height; so the Pedestal seven Modules, *etc.*

[Composite Order.] The Composite Order must be made of the same proportions of the Corinthian; all the difference between them is only in the members of the Head and Foot, as all Surveyors and Master Workmen shall find this to be most true; After they shall have compared all the best grounded Authors of the *Greeks* and *Romans*, and that here is not an *Iota* differing from them; for it is a Rule as certain, as that without the same, there cannot be a perfect building made, no more than a man could without good Orthography write true English; so as no man can have just cause to say, there is a new Rule prescribed unto them, since it

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it is the same which will be found in all true Books concerning that matter; It is the Rule of the Ancient Masters, whose Relics [are] to be seen throughout most places of *Italy*, makes many strangers that come there gape so wide, as that they need no Gags. Let them but look on the Columns of the Temple of Peace and the Pantheon in *Rome*, they shall see more men that gape after them then in other parts: Pipers and Potters to sit in Taverns, and they shall find in those lovers of Art an Humility, as hinders them to crack, and boast never to utter, *Well enough for the time.*

Most of the *Italians*, being of the humour of the old Carver [*Phidias*], who had engraved his own Name and Portraiture so deep in the Shield of *Pallas*, as it could never

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never have been removed out without defacing the figure; they work for a perpetual fame; which a good Clerk of the works is to recommend unto the Workmen committed to his charge.

[Concerning the Carpenters.] That the Carpenters be good husbands in the managing of the Builder his Timber, in the cutting of their Scantlings, their sparing to make double Mortises, which but weakens the Summers.

To lay no Girders, which are needless and hindersome to the boarding of a Room, no Summers to be laid, except the ends of them are either pitched or laid in Loam, to preserve them from rotting, as is done by the heat of Lime whereof Mortar is made; And therefore in *Italy, France, Germany*, and among the most Prudent and Solid Builders, the free

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free Masons put stone Cartouches in the top of the inside walls, which are bearers to the Summers, as such Cartouches are seen in diverse Churches, and some of them are Carved in Ornamental Figures.

[The manner of the Carpenter to lay his timber.] *Item*, The Clerk of the works must have care to see the Carpenters to cock the main Beams into the Lintels, to hold the wall the better, that they

pin down a plank (three inches thick) all along the top of the Summer, to hold fast the Brickwork, after the Brick is raised to the height of the Summer, and that the Joists be framed 2½ or three Inches under the top of the Summers; that for the boarding rooms smooth; the Carpenters lay Bridges overwhart the Joists, joined in the top of the Summers, that the Boarding be

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be with breaking Joints, which is the phrase of the Workmen, and is the manner of flooring of rooms of Note.

[Height of doors and windows.] That the door-cases (well-anchored into the wall) be made as high again as they are wide, and so must well-proportioned window-cases be, both for giving better light (which descends from above) and that the piers of Brick or Stone between them, will fail to be of a fit width to be a strengthening to the building.

Item, The Clerk of the works must be very careful not to suffer the Carpenters to lay any Timber under the Chimneys; since by the laying of Timber under them, many houses have been set on fire and burned to the ground.

He must see the Carpenters to observe

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[Scantlings for substantial Floors.] observe the Scantlings following, *viz.* (for substantial Floors of rooms thirty foot wide) Summers for the first ceiling eighteen and fourteen Inches, to be framed in such a proportion as may serve to make an *Italian* fret ceiling. The Lintels eight and ten Inches square, the Joists nine and three Inches; [Scantling for ceilings of rooms thirty foot wide.] The Summers of the second Floor fifteen and seventeen, to be beams of the Roof for the principal Rafters to stand on, and the like for the fret ceilings: The principal Rafters for the Roof to be at ten and eight at the lower end, nine and seven at the top; The Purloins for the Roof nine and eleven, single Rafters six and three Inches, and to be framed edge-ways, which Scantlings are fit for substantial Structures, but not usual

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sual in Lime and Hair Birdcage-like-Buildings; Moreover he must not only (as a true Clerk) with his Eyes follow the workmen's hands in the framing of their Work, and as before said, that no waste be made of the Timber, nor of the least Slab, nor of Brick, nor Brickbats, nor Stone; he must not suffer Brick carts to overturn the load of Bricks brought to the work, which is an insupportable abuse, but too often committed in the Country, whereby a world of good Bricks are reduced to morsels [*pieces*], [Abuse committed with the overturning the loads of Bricks.] and this by mere laziness of the Labourers, who (as better rationals in *London*) ought to take the bricks out of the Carts and pile them.

And as to a Building wherein diverse sorts of Materials are used, the care of the Clerk of the Works

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Works must be on all of them, as well as on the least (as I said before in the distribution of Nails) as on materials of weight, as Solder, wherewith an unconscionable Plumber can engross his Bill. The Clerk is to see Solder weighed and managed well, and in the attesting of Bills have a care not to pass his eyes slightly over them, least when a Plumber sets pounds of Candles used about his Solder, that trick prove as insupportable as that of one, who having played away a round sum of his Master's Stock in a Journey to the *East-Indies*, set in his Bill to have paid a hundred pound for Mustard.

He must likewise have a clear view of the Glass panes of the Glazier; suffer no Green panes of Glass to be mixed with the white panes. He

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He must with his Eyes follow the Measurer of the Work, his Rod, or Pole; so the line where with the Joiner's work is measured, that it be not let slide through the Measurer's fingers, since the Joiner's works has many goings in and out; and a *leger de main* may be prejudicial to the paymaster's purse.

It were likewise better to agree with Painters, to have their work rated on running measure, and on the straight, as the Carpenters's work who (being of an honest *Joseph's* profession) are as deserving to be well-paid as the Painters, who do but spend the sweat of Walnuts (to wit oil), the Carpenters that of their brows.

Finally the Clerk of the works, ought to be subject to the censure of the Surveyor, on the

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the point of all the materials which are brought in.

[Concerning the use of Timber.] And as for Noble men (or others) who have Timber of their own (and in whose grounds good clay for bricks is to be had), their best course is, to sell Timber (which they can spare, and intend to build with) some years before it must be put to the Carpenter's tools.

Likewise to manage the uffall [?], of the Timber. [Concerning foundations.] And as for the foundation of their building, it ought to be raised at first leaning height; and then to let it rest to settle, for if only brought level with the ground, it will prove but as a receptacle of the wet, that falls on it: and if but a foot high above ground, it will be pushed down again, but being leaning high, it will be preserved, and may be covered if

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if the month of *October* draw on when its fit Trowel-men should be dismissed until the next spring following.

Item, to cause the foundation of the intended building to be generally laid, without leaving any touchings, since walls new begun on them will settle more unequally than those carried on in an entire range: [The best covering.] As for coverings of buildings, Lead is best for Churches, for who would Rob them but *Goths* and *Vandals*.

[Concerning blue slates.] Blue slates are most comely for a Nobleman's Palace; they are not as heavy as Tiles, nor do they not soon rot, nor gather an unpleasing moss; besides that when some of the slates are broke, the Slater mends them with little charge; a roof covered with them is of an equal colour, when

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when as red tiled roofs the least breaking of them makes great chargeable work for the Tiler, who often removes ten Tiles to lay two new ones in their place; and renders the Nobleman's roof, as a beggar's Coat.

[Concerning burning of Bricks.] As for burning of Bricks, if Noblemen care not to make a business [*Errata*: "Abisme"; 'an abyss' ?] in their Parks or grounds, they shall do well to cause the Clerk of the works to look well to the workers of the Clay, for if it be not well wrought, the bricks will never be good.

It is usual to pay five shillings *per* thousand, for the making and burning of Bricks, the Clay digging therein included; and all materials being provided to the brickmaker's hand.

But as for those who can have Bricks,

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Bricks from Brick-kilns near at hand. [Between burning and buying of bricks, but six shillings and eight pence difference, in twenty thousand.] And who love to keep their Park and grounds even and handsome, they may take notice that in the number of twenty Thousand of Bricks bought or made, there is not above six shillings and eight pence difference, *example*, There goes four loads of Sand, which (with the carriage) cost two shillings six pence. In Straw to the making of twenty Thousand of Bricks, above five shillings. The tools and bringing of water, five shillings, the digging of the Clay, ten shillings, charges for hedging, forty shillings; the preparing of the ground, five shillings, besides the making of a Kiln, which will consume for the making of twenty thousand of Bricks, fifteen loads of wood, and cost ten shillings the load. Of Bricks

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Bricks burned in a Clam (being burned with Sea-coales), there are at the least in twenty thousand, five thousand unfit for work, and though some Brick-layers pretend that Samel-Bricks are good enough to fill the Core of a wall, it is not so; Since most Samel Bricks are no better than dust; and what resistance dust can be, when weight is laid upon it, any rational man can judge by the several cracks in walls, whereof the Cores are hollow; and therefore the description of the foundations of the Temple, and the Palace of *Solomon* bears, that it was made with smooth hard stone. [The foundation of the Temple and Palace of *Solomon*.]

Many Brick makers are accustomed to dig the top spit (which is no better then dung) and to throw it with the other clay

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clay, and it is the cause that many Bricks are brickle, so as in few years houses are made with them moulder away like dirt. [An *Item* for those who do let out ground for buildings.]

To prevent the being overreached with bricks, they ought to be taken out of the clam by account from the Brick maker, who undertakes to make them in one's ground, he is to keep to himself those that are not fit for use.

[How to measure the Clay which has been dug.] The way for the Clerk of the works, to measure the quantity of Clay which hath been dug, is to measure the pit (out of which it has been taken) square, which is six foot square, six foot in length, three foot in breadth, and three foot in depth, which makes one thousand of Bricks.

Men dig clay for six pence the thousand,

Lime

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Lime dug in one's ground is commonly burned in a kiln, at four shillings *per* load, Lime bought cost four shillings a quarter, six pence a Bushel, forty shillings a load.

[Inconveniency of putting Chalk in walls, of Houses on springish ground.] Those that mind the making use of Chalk in their walls, must be contented (if the ground hath springs) with the green mould, which breaks through the whited walls indoors.

Walls about a Park or Court, may be filled with Chalk, which may be dug for eighteen pence *per* load, bought for two shillings and six pence the load.

[The number of Bricks in a square Rod] He that desires to know how many thousands of Brick, a Park wall, or that of the building of a House will require, can make his account on the description following, *viz.* A square Rod of a wall, two foot thick takes

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takes nine thousand of bricks, nine quarters of Lime to a Rod, nine Loads of sand, at fourteen pence *per* Load.

Some good Country Brick-layers do work at twenty seven shillings the Rod, the bricks not being rubbed.

[The Rate of Brick-layers then work.] Good *London* Brick layers will work the Rod for forty shillings, rubbed Bricks, the inside for thirty three shillings, arches comprised.

The fittest bigness of a good brick; is nine Inches and a half long, four and a half, and a half quarter broad, two Inches, a quarter and a half thick, which will raise a foot in the Mortar with four bricks.

As for Lime, the refining whereof (according unto the *Grecian* and *Roman* manner, is mentioned in the former printed

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ted discourse, of the three Principles of Magnificent Building) the general custom in *Europe*, is to burn it in kilns, which is a slow way. But if there were such a quantity of wood, as in the *Indies* there could be more lime burned in twenty four hours, than otherwise in a Month: [The manner of burning lime in *China*.] The burning of lime in *China* and in other parts of the *Indies*, being as follows, viz. They make a round Pile of great wood, leaving a cross hollow way through it from the bottom, almost to the top, which is raised to a height according to the Circle, there is proportionably so much Stone heaved thereon as it will hold, the fire is put in the Centre, and in the middle of every cross way, and as it burns makes an aperture at the top, and the stone burning by degrees falls still in

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in the middle of the pile, and of the Walks, which at last is covered with the Cinders of the burnt wood, and proves a most strong well burnt Lime; Which if it were mixed with *Holland* bricks (called Clinkart a yellow Brick as hard as flint) bought for twenty three shillings the thousand would make walls as durable as if of Marble, if not better.

[The best Paving in Stables.] Those Clinkarts are very fit for the Paving of Stables, and walks in a Court, for they lie very smooth and close.

*As for the choice of Master
Workmen.*

King Henry the Eighth showed a good precedent (when the Sergeant Plummer calling

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ling his workmen to cast in his presence a Leaden Medal which was given him: The King told him he would have no walking Master Workman.

Those therefore which are fit to be employed are working Masters, and not those who walk from one Building to another; since Journey-men will no more work well, than Soldiers fight without a fighting Captain; Feathers on a Captain's hat, nor compasses in master workmen's pockets do not the deed, nor will any Master workman deny to have had as much more done, and well, by bestirring their Hands and Tools in their workmen's presence than otherwise.

This doth not entrench on those who are undertaker's of Buildings, but insists only on the

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the necessity of sufficient Master Workmen, actually employed in every work.

[Master workmen bound to a precise time] The chosen Master workmen must be bound to a prefixed time for the performance of their undertaking, to observe exactly the Model and Moulds held forth to them by the chosen Surveyor, and to make good at their own cost what they do amiss.

[Master workmen to pay their own men.] They are to manage the paying of their own workmen, on such a Contract as they have made with the Proprietor of the Building; For the Master workmen must keep his workmen under a certain regular proportion of pay, to hinder them from spending their wages too fast, and from running to other works, as many (upon slight occasions) do.

[To shun reprehending of Master workmen openly.] It is also very necessary to shun the reprehending a Master Work-

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Workman of any oversight before his men, but rather privately; since it would be to him as prejudicial as a check to a Commander at the heads of his Troops.

As for the Builder and Proprietor.

It is best for the Builder to buy his own Materials, have his works done by the Rod or square.

Have in reserve (to make good payment) such a stock of his own as he can well spare; and against mistakes of workmen a stock of Patience.

Be a constant observer of the three chief Principles of Building; viz. *Solidity*, *Convenience* and fit *Ornament*: Never suffer

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suffer his workmen to begin to build before the Month of *March*, nor continue longer in the building of walls then until half *September*; remitting setting of walls until the next Spring afterward.

Observe the several Annotations in the former Printed *Discourse*, on the three chief Principles of Building: concerning the well-ordering both of Rooms of State and ordinary use and Stairs, the form of Offices and Stables; as also the contrivances and properties belonging to Gardens.

As for Prices.

Experience speaks that as times change, and occasions differ, prices may alter; Nor is that

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that which is best cheap, always the best profit, but Merchantable ware.

[Rates of Bricks.] Bricks in some parts are delivered at the work, for 16s. 8d. the thousand.

[Rate of Brick work.] Some will build a Rod 16½ Foot square, 1½ Bricks, all Materials comprised for 5 pound.

For the old Tiling at thirteen shillings four pence a square.

New Tiling at 1 pound five shillings a square, finding all Materials.

The straight Arches, at one shilling *per* foot.

The Flints, at four pence *per* foot.

The Cornices, one shilling *per* foot.

Slating with blue Slates, the workmen finding all, will cost seven pence *per* foot, the workmanship

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manship only will cost three pence *per* foot.

Twelve thousand Slates will make one square.

Slates will cost sixteen pence *per* thousand, delivered at *London*.

[Prices of Timber.] Good Oaken Timber is bought in some parts of the Country for thirty three shillings *per* Load consisting of fifty foot; in and about *London* for forty three shillings, forty four, forty five, forty seven and fifty at the Merchants Yard.

White Fir, twenty five, twenty six, twenty seven and sometimes twenty eight, according as the seasons be.

Yellow Fir (called Dram) being very good, forty five shillings the load, the names are these following, *Esterrund, Westbeelee, Longlound, Laurwat, Landifor,*

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for, Tonsberry, Holmstrand, Dram, Christina, Swinsound, Frederick-stadt, Helleroane, Moss, Drontom, Bergen and Stavenger.

The prices of the Deals are uncertain, for according to the goodness, so they are in price; for in all these places, there are both bad and good which generally are sold from four pound *per Cent.* to six pound *per Cent.* if ordinary length; long Deals which are about fourteen or fifteen foot long, are from seven pound *per Cent.* to twelve pound *per Cent.*

*An Estimate of Scantlings
and Prices.*

OF Oaken Girders fifteen Inches one way and eleven the

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the other, two pound ten shillings.

Oaken Girders thirteen Inches one way and eleven the other, two pound two shillings.

Joists seven Inches one way and three the other a square, two pound two shillings.

Fir Girders fourteen Inches one way and nine the other, one pound eighteen shillings.

Fir Girders twelve Inches one way and nine the other, Joists six Inches one way and three the other at a square, one pound sixteen shillings.

Oak Roofing raising pieces eight Inches one way, six the other; Purloins nine Inches one way and seven the other, one pound fifteen shillings.

Principal Rafters nine and six at one end, eight inches and five inches the other, small Rafters three

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three inches and four inches at a square, *ibid.*

Of the same Scantlings of fir, at one pound nine shillings.

Oaken Carcass, ground plates nine inches one way, seven inches the other; Story Posts backwards nine inches one way and six inches the other prick posts. Interdices and Braces seven inches and five inches, quarters two and four, the other second story posts eight inches one way and six the other, prick post seven inches one way, five the other, interdices and braces six inches one way and four inches; third and half Story Posts to be seven inches one way, five the other, Interdices or braces five one way and four the other, quarters two and three at a square,

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square, one pound fifteen shillings.

The same Scantlings of fir, one pound nine shillings.

Partitions at a square, eighteen shillings.

Ceiling Joists on Cellaring, ten shillings.

Oaken Windows with a double Rabbet and with an edge on the one side as a light, three shillings six pence.

Ivory doors glued and Battened at nine shillings.

Joiners's Work.

FOR Columns all under twelve inches at sixpence an inch, upon the Diameter of the Column.

From twelve to fifteen inches at nine pence an inch, upon the Diameter

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Diameter of the Column.

From fifteen to eighteen inches at twelve pence an inch, upon the Diameter of the Column.

All Balusters at one penny an Inch upon the Diameter of the Baluster.

If the Balusters be two inches over, it is two shillings a dozen.

Three inches over, is three shillings *per* dozen, and so to six shillings a dozen.

Heads and Pendils four inches Diameter, at four pence a head, six inches Diameter six pence a head.

Balls twelve inches Diameter, at two shillings six pence apiece.

Balls eighteen inches Diameter, at three shillings apiece.

This work hath been done cheaper by some which do not very

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very well understand the Trade.

Item, Manger, Rack and planking of a Stable is eight shillings per foot in length, the ordinary five shillings.

Carvers's Work.

The upper work cut with leaves at six pence *per* foot.

The wave with Lace under it at one penny *per* foot.

Small Beads with round ones and long ones at one penny, and a half penny a foot, the edges and anchors at four pence *per* foot, the lower Wave with leaves at four pence the foot.

The round Frieze eight inches deep cut with leaves at one shilling eight pence *per* foot.

The Wave on the Architrave cut with leaves, at seven pence *per*

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per foot; Beads in the Fascia, cut at round, at two pence a foot.

The single galace five inches and a half broad, twelve pence *per* foot.

The upper Wave cut with Leaves at six pence *per* foot.

Great beads round and long together two pence half penny *per* foot, the Edges and Anchors at four pence *per* foot.

The Dentils at three pence *per* foot, the lower leaves with flowers, at four pence *per* foot.

The Frieze six inches and half deep, and cut with Capitals, at nine pence the foot.

Flowers for the Cross-work in the galace in these quoins, a foot over and seven inches deep cut with Leaves and Beads at eight shillings *per* piece, the workmanship only. The

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The Capitals of the Pillars for the Stairs coming out of the Lodgings into Saint *James* Park, cost twelve shillings *per* piece, the Carving.

The Cartouches of the flat form cost two shillings six pence apiece.

Concerning a Roof.

A Roof being forty foot long and twenty foot wide, the Principal Rafters ten and seven inches, Purloins the same, Plates the same, small Rafters four and five inches, will take six Load twenty-six foot of Timber; one square thereof will be twenty-seven foot.

A Roof being as above said in length and with the principal Rafters being eight and six inches, the

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the Purloins the same, the Plates the same, the small Rafters, four and three inches; the Collar beams eight and three inches, ten foot long, will spend four load twenty-eight foot of Timber, one square nineteen foot.

A Roof being as above said, the Principal Rafters being seven and five inches, the Plates the same, the Purloins the same; Small Rafters four inches and three inches, the Collar beams seven and three inches ten foot long, will require three Loads twenty four foot Timber, one square fourteen and a half foot of Timber.

A Roof being as above said, the Principal Rafters six and four inches, the Purloins the same, the Plates the same; small Rafters three inches, Collar beams

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beams seven and three inches, ten foot long, will be two loads and a half of Timber; one square is ten foot and three-quarters of Timber.

Partitions.

The principal Timber six and seven inches, quarters four and two, one square will be twenty foot and a half of Timber with door posts.

The Principal Timber five and six inches, quarters four and two, will be nineteen foot and a half of Timber.

The Principal Timber five and four inches, quarters four and two, one square will be thirteen foot Timber.

The Principal Timber four and three inches, quarter three and

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and two, one square will be ten foot Timber.

Floors.

A Floor being forty foot long, twenty foot wide, the Summers fourteen and twelve inches, the Joists three and twelve inches, will be five load of Timber; one square is thirty one foot and half of Timber.

A Floor as above said, Summer thirteen and eleven inches, Joist three and Eleven inches; one square will be thirty foot Timber.

A Floor as above said, Summers twelve and ten inches, Joists three and ten inches; one square will be twenty-nine foot Timber.

A Floor as above said, Summers

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mers eleven and nine inches, Joists three and nine inches; one square will be twenty-five foot of Timber.

A Floor as above said, Summers eight and nine inches, Joists six and three inches, Joists six and three inches; one square will be fifteen and half foot of Timber.

Architrave door-cases, the Post eight foot high, four foot wide, the post being nine and seven inches, is twelve foot of Timber.

Architrave door cases, the Post seven foot high, three foot and a half wide, the Post being nine and seven Inches, is twelve foot of Timber.

Architrave door cases, the Post seven foot high, three foot wide, the Post being six and seven Inches head and soyle [sill; *soglia*], the

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the same is seven foot of Timber.

Architrave door cases, the Post seven foot high, three foot wide, the Post being six and five Inches head and soyle, the same is five foot of Timber.

These particulars are to be understood, as if the building were to be measured after it is framed.

So that this is no just rule for the quantity of Timber, by reason there is a great deal of waste in the sawing, and bringing of the Timber to a square, but the larger the Timber, the less waste there will be; and the nearer to these proportions.

In this work, there must be an allowance for the waste of the Timber, for the benefit of the Carpenter, in case the Timber

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ber be his, if not, to the Proprietor of the building.

Girth measure of the Timber is the best for the buyer, because there is more in the circular measure than in the square; this is used in the Country, in *London* not, the Timber being squared before it be brought to *London*.

The Plasterers's Work.

ONE hundred of Lathes will cover six yards of ceiling, and lathing is worth six pence the yard, one hundred of Lime will lay ten or twelve hundred of Lathes.

Plaster of *Paris*, the workman finding all, is worth one shilling a yard, upon brickwork it

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it is worth sixteen pence, or eighteen pence the yard.

Rough cast upon Lathe being very well done, is worth eighteen pence the yard, upon brickwork it will be done very well for twelve pence, or ten pence the yard.

Rough cast upon Lathe-work, the owner finding all, is worth eight pence a yard.

Upon Brick-work or Stone, is worth six pence a yard.

To Lathe and lay with Lime and hair, the owner finding all the stuff, it will be done for two pence a yard.

Plastering upon Lathe, ten pence a yard, some have done it for eight, and nine pence the yard.

Plastering upon Brick-work at four pence a yard, and some for three pence a yard. White-

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White-washing and stopping, at three pence a yard.

Plastering of Lime upon hard lathe is worth two pence the yard, some have done it for six pence a yard, and two pence rendering with Coat of Lime and hair on it.

Greenwich plastering, to be lathed and laid with Lime and hair, and a Coat of fine plaster, the ceilings and Partitionings at one shilling two pence a yard, in Town, one shilling five pence.

A Cornice with two faces, all of it two foot deep, at two shillings six pence a yard, running measure; a Cornice at the foot of an Arch, ceiling done with Lime and hair, eleven Inches deep, at one shilling nine pence the yard.

Architrave, Frieze, and Cornice of three foot, three Inches deep;

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deep, done for three shillings two pence a yard, running Measure.

*Plasterers's work in Fret
ceilings.*

A Fret Ceiling as at *Somerset* House, in the Privy-Chamber, and in the Drawing Chamber, done with square Ovals around; with a Cornice around about the rooms, the Fret having a double gola in the bottom, and a Cornice on the side, six Inches deep, and all the members enriched according to the moulds therewith measured flat in square yards, without girding the work with a Line, is worth six shillings the yard square.

Whiting and Stopping of fret Ceilings,

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ceilings at two pence a yard, whiting and stopping of old plain walls and ceilings at one penny a yard, whiting of new walls at three pence farthing a square.

The workmanship only in Lathe and Lathing, three pence the yard, rendering two pence a yard.

A Frieze made with foulding two foot deep, at five shillings a foot running measure.

Fret ceilings the moulding, six Inches deep and full of work, with enrichments in the moulding and fouldage in angles and squares, the workmanship only at five shillings a yard, measured flat.

One Ton of Plaster of *Paris* will lay twenty nine yards of Lathe-work, three quarters of an Inch thick, one Ton will lay as much again upon Brick-work. Walls

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Walls done in fair black for a Tennis-Court, at one penny a yard, the workman finding all.

Glaserie

THE best French Glass wrought with good lead, well-simmoned, is worth sixteen pence a foot.

The best English Glass wrought with an Arch well-leaded, and simmoned at seven pence a foot.

Ordinary Glass for quarries at five pence half penny a foot.

Painters's-work.

FOR a fair Stone-colour in oil upon windows and doors at twelve pence a yard, For

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For a Timber colour in oil, on doors and windows, at ten pence a yard.

Wainscot put into Walnut red colour, in distemper at six pence a yard.

Painters's work of ordinary lights of windows in oil, at six pence a yard.

To lay a fair white colour in oil, on Cornice of Timber, and on Stairs, and Rails and Balusters, fourteen pence a yard.

The laying over a Wall, white in oil, twelve pence a yard.

Painting of the fairest green, that can be in distemper, and varnished is one shilling a yard.

Frames seven Inches and a half broad gilded, the ground a Timber colour cost three pence farthing, for one Inch broad, and a foot in length. Other

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Other rich carved frames, painted and gilded, the gold fifteen Inches broad, the ground a fair white colour cost five shillings a foot.

Painting in white and gold, upon flat moulding, and set off with shading, like carving one Inch broad, and a foot long is worth four pence, or five pence a foot.

Painting the outside of ordinary windows, is at three pence a light, and some at two pence a light.

Door-case and doors at two shillings apiece, the outside only.

Gilding for workmanship of the gold, at twenty shillings a hundred.

Nota, The Painters are to colour over their windows thrice.

Smiths

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Smiths's work.

Iron Bars, Hinges, Bolts, Staples, great Hooks, are worth three half pence the pound weight, Cross garners four or five pence the pound weight.

Iron Casements about two foot high, three shillings six pence apiece, and others according to their bigness.

Concerning the Plumber.

Every Foot of new lead square, is worth thirteen or fourteen shillings the yard, besides solder at nine or ten pence the pound.

In exchange of old lead for sheets

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sheets new run, is allowed three shillings in every hundred weight for waste.

Every square foot of lead run thin, to serve for gutters; weighs commonly six or seven pound, if old eight or nine.

Leaden gutters are at twenty shillings the hundred.

The Mason's work.

For the Base called gross-table, at the bottom of a building, seven pence *per* foot.

For an Architrave of eight Inches to a window, eight pence *per* foot.

For a Frieze to that Architrave, six pence *per* foot.

For the Cornice (being about ten Inches thick), one shilling two pence *per* foot. For

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For the Pilaster to the same Architrave, seven Inches thick, six pence *per* foot.

For scrolls to the said windows, six shillings apiece.

For scrolls and leaves of second story windows, six shillings *per* window.

For the Capitol, to the stools of those windows, twelve pence *per* foot.

For the quoins six pence *per* foot Ashlar measure.

For Balconies with Rail and Baluster to the above said windows four pound *per* Balcony, being four foot high and ten foot about.

For rail and baluster on the top of a building, nine shillings *per* yard.

For Architrave to doors, one shilling six pence *per* foot.

For cleansing and setting again

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gain old work, as window stuff, gross-table, water table, cornice, quoins, and Ashlar, four pence *per* foot one with another.

For new cleansing an old front, and piecing the mouldings where it is broken, four pence *per* foot.

Paving of *Portland* stone, eight pence *per* foot.

White and black marble pavement a foot square, costs at *London* two shillings six pence laid.

To be carried and laid in the Country, three shillings six pence.

The Namur-stone grey and white, the same price.

The Rans five shillings, mixed with white.

The Rans and Purple, six shillings.

The

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The prices in Holland.

White Marble pavement the foot, three shillings; the black, eighteen pence.

The black and white or red and white Marble polished, five shillings.

Black glazed *Holland* pan tiles, six pound the thousand; sometimes five pound, and four pound ten shillings.

Cassy rough pavement, at three pence half penny the yard workmanship, with materials twelve pence, though the paviours will exact sixteen pence.

Pavement with Pebble-stone, fifteen and eighteen pence the yard, square.

Paving tiles six Inches, eight, ten, and twelve, from six shillings to twenty the hundred.
As

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As for the paving of Courts, to prevent the overgrowing of grass, and the charge of too often weeding. It would not be amiss to lay chalk or lime under the paving, and to do the same in gardens under gravel walks,

This is only a rate for the ordinary way of paving allowed by Act of Parliament, for which price, but very slight work hath been furnished; until such time as Mr. *Le Coeur* (having undertaken the Commissioners paving works) hath contrived such a plenty in stone, which hitherto was so scarce that by consequence he hath since rendered the work more plausible at the very same rate. But there is another way yet far more substantial which the same under-

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undertakers, and society have industriously invented; whereby they are not only able to make a most substantial good pavement; but are likewise capable by that same certain new invention to maintain it durable for twenty-one years long, in reparation at a yearly small rate, but must of necessity cost them much more then sixteen pence once, for all at the first paving.

If materials could be had at lower rates then the aforementioned. It would be as well done to seek for such materials, as to look to the goodness of them. So in the choice of the Workmen for on those who can work best.

To complete these matters, I shall note what is most necessary.

First,

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First, That what contributes more to the fatal ends of many good Mothers's Son, is ill-Building Paper-like walls, Cobweb-like windows, doors made fast as with Pack-thread, purposely to tempt men who through extreme want are become weary of a languishing life, and to whose fatal end, ill-Builders are in a manner accessory.

Let not the *Hollanders*, *German*, nor any other Northern Nation Vaunt of their scarcity of thieves (nor those of *Delft* in *Holland*; who when the Town Mason had desired them to choose a day to visit the public Gallows which he had made, said that they would serve for them and their Posterity) but attribute the same scarcity to that defence they are wont to make against Thieves; but that defence consists not in a super-

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superfluous care of putting locks and bolts upon doors or wooden shutters to windows, nor iron bars in them that will serve turn, except those locks, bolts, shutting windows, and bars are made and set on as they ought to be.

The *Hollanders*, their [*Errata*: “wooden”] wooden shutters are double-deal boarded wainscot-like-framed inside with Battens, fluted outside as the body of a Doric Column; that the rain beating on them, may the better run down and carry away the dust which may be gathered on them, and that they may not rot so soon as they would, otherwise if they were garnished outside with battens; they paint them also in strong oil colour thrice over to resist the weather the better; the Carpenters do frame them so exactly

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exactly to the width and height of the stone casement of the window, as that a knife could scarcely be thrust between them; they are not hung with cross garnets; because such are easily taken off, nor are the broad shoulders of an iron hook the only thing that can hinder thieves to loosen such a window, nor iron bars; Thieves having a way to remove iron bars without breaking them, or making half so much noise as on a wooden bar.

The iron hinges ought to be framed between the two deal boards, whereof the shutting window is made, and the head of the hinge is to be so well-fitted in the stone, as that no access can be had to it, the bolts within straight or crooked, must have a shutter at its tail. Now

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Now if a Builder will not be at the charge of such shutters without doors, they must then have wooden or iron bars to secure those within.

Doors may be secured not only by a wooden or iron bar, but by a strong chain hung at the one end in an iron ring, at the other end in a like ring, both united with a strong Padlock, then any Porter may open a gate or door six inches less or more to receive a Packet in the night when it so happens.

Nor do provident builders rivet locks only at the one side, for that a thief indoors in correspondence with one outdoors, makes that single riveting of no use as to security, rivets to locks must be interlaced with rivets between the double board, nor should the key hole of an outside

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side door of a house be left uncovered in the night, for if through the negligence of him that is the keeper of the gate, neither bolts, nor bars are remembered; Why? A pick-lock may soon open such a door or gate. It is an easy contrivance to have a bolt with a large head that shall cover the key-hole of a door or gate, to make fast from without to the inside, and so secure the

lock; and if the key of that bolt is brought at night to the owner of the Palace, none can run out a' gadding or drinking.

And so much may suffice for the securing of doors and windows, only this more. That there ought to be an iron plate of the width of the door, and four foot high walled in within, so fastened on both sides as

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as that no violence from without can make a breach, since in diverse places, Rouges have taken up the causey or pavement before a door, and then with facility loosened the bricks under the threshold to make a passage into the House.

But as for thieves who do untile houses, such may be kept out, if the ceiling be boarded or made up of plates of tin, or arched with brick as is practised in the Banks of *Loane*, which in other parts are erected for the relief of the Necessitous.

Furthermore, in reference to the main of the contents of a former Printed Discourse, concerning the three first Principles of Magnificent Building; As the well-choosing of a fit place for a Building, is a Capital point, to set it right, and the giving a fit extent

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extent to the Court, so the making to it a Porch ought to be well considered; For as a Porch serves to a Hall, to distribute Alms to the Poor; a Porch proves often cumbersome, being the receptacle of foul creatures, who as soon gotten into a Court make it their rendezvous; Nor is a Porch so convenient to the Palace of a Prince, whose Person must be attended by a great retinue, and no man to stand in his passage; But if a Porch be affected, let it then be a vast *Portico*, as that of *Solomon's* House was, and that he Built for *Pharaoh's* Daughter.

Now as for the placing a Gate or Door to enter into the Hall of a Palace; None will deny but that Greatness and Convenience being co-joint fits best. The entrance into a Hall is not so

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so proper in the middle as at the end, when the ground plot is yet to choose and to be ordered; But if there be a constraint, which is most prejudicious to a Building, the entrance must be set as much towards the end as possibly can be, to set the Chimney well, and the main staircase in so fit a place, as that it may not be subject to a like fatal accident as happened to *William* Prince of *Orange* at *Delft*, when he was shot by one who stood behind a Column, opposite to the Stairs of that Prince his House.

The rise, width and depth of steps shall not need to be repeated, since they have been described, and reasons alleged for their dimension, mentioned both in the former Printed and in this discourse; nor shall repetitions be necessary concerning the

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the reason, why the first Floor of a building should not lie level with the ground; The first for Health; the second for neatness, since any floor level with the ground receives more dirt from abroad; the third for greatness, which appears more by an ascent; the fourth for the Vaulting of Cellars or any other Offices; and the fifth to have the floors more dry; Only I shall insert this story of one in Authority, *Who passing by a Town wherein the People generally did not live out the thirtieth year, of their Age, caused all the back of their Houses to be made the Front, and the windows which were forward to be made up, to free them from that infectious Air that did shorten their Lives, which had its effect accordingly;* and it is therefore I do so much insist on the point

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point of placing a Building where good Air is, and that neither chimneys nor doors may be so placed as to serve for the attracting of infectious Air, which kills more than the sword or the Seas overturns Ships.

To take my leave of all Builders, I must conclude with what follows.

First that when they shall be pleased, to take a Posey out of the former Printed Discourse, and join it, to what may please them, out of this, they will find, that both hit the main mark, to wit, *Solidity, Convenience, and Ornament*, altogether to be observed in true Building. That all what is represented is for their profit and satisfaction, that the manner and phrase of the first discourse, was to that end intermixed with recreative passages, that the

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the Reader should not be tired with the Mechanics, their Phrases, and proper Names of their several Trades, through some of them are accustomed to scoff at those whose language is polished; as if a Person of Eminent Quality, Born to the Highest Concernment of a State, should have learned their words, and have spent therein part of his precious time. And therefore I have now offered; to write, in such workman-like terms, as may serve for a Clerk of the works to speak unto them.

Secondly, That all owners of Buildings, shall do well to make choice of such a person for their Clerk as the Master workmen will endure, which they will not, if he be a Master workman, whom they will not only suspect to have a design to undermine and

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and supplant them, but obey not, pretending to know more themselves; Nor is it fit that there should be such a controuler over a Master workman, as a workman: The same is to be observed with a Surveyor to prevent all quarrels and contests: for as every Cook commends his own Sauce; more than one Cook to a dish will spoil it, there cannot be two suns in the Firmament, one General over another; nay two Cocks among Hens.

In a word, an Owner must trust, or never make choice of Trustees; For if otherwise, let him be certain that his purse will be incessantly abused.

Thirdly, Let all Owners be prepared to *Repent*, whether they Build or not, for it is likewise the fate of many that Marry or Marry not.

Let both the one and the other lay

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lay as in a Scale their several Charges, Vexations, Cares, Labours and Pleasure; they will find this to be true; *viz.* If they build they must be at great present disbursements, vexed with as many over-sights (as Printer setters will commit faults, as appears by the Errata at the end of books) And to be overreached in bargains concerning their Materials, as also in work done by the great or day.

If they Build not, they are subject to the inconveniencies of Houses built according unto the fancies of the Owners, and when they shall cast up the sums of money spent in the rent (besides many chargeable alterations), they shall find that they might have built a better and more fit habitation for them and their posterity; So will it be with men that Marry or Marry not.

The

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The first will have had cause to exercise the Virtue of Patience, and if he be a high *German* (especially a Swab) such as have wives, that believe their husbands doth not love them, except they be beaten, Why? They will be practitioners in the mortification of their own flesh and bones; for let women say what they will, they are bone and flesh of man, and not the head, though some of them would wear the Bonnet and the Britches to boot; Well the husband (after all his pains and Vexations), if he can turn all things to the best, will have (as the *Italian* says) a sound *gusto*, he will have observed the *French* saying; *Lietes doits, a l'herbe que tu cognois*, and by a mixture of good blood (sprung from a clear spring) settle his name to posterity.

If

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If he marry not, O how many dangerous encounters for him both in body and soul!

And how can such a one contest the Divine decree; That it is not good for man to be alone?

Paradise would have been but a Wilderness without a Woman; Nor can trees speak a word of comfort to a good man when stretched forth in his cold bed, tired of the Labours of a dark Winter day, and let such a one, at the end of the year cast up his bill, he will find to have spent more in presents of consideration about another man's one; and if he be a Tradesman in Potting, Gadding, Codlings, Pudding-pies and Bear-baiting, (with ranting creatures), than if he had been married; therefore if men must Repent, let them have somewhat that is called *meum*

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meum without offence for their Repentance.

Now if these two sorts of men, the one will resolve on the affirmative, delight to spend money on choice Materials, as in particular to imitate *Solomon*, in the procuring of precious Wood; they may take notice (if they please) that store of precious Wood can be had for the boarding of Princely Palaces, both for Colour, Aromatic smell and Durance; to make square framed Panels (more rich then those which are seen at *Paris* in the Cabinets of the Palace called *Orleans*) which precious Woods are to be had in several parts in the *West-Indies*, some whereof are as red as the fairest *Vermilion* some yellow as Gold, hard as Marble; besides rare *Madera*, and other variously figured, as the Right

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Right Honourable the Lord *Willouby* of *Param* well knows, what extent of Land about *Surrenam* is beset with speckled wood, and is not above six weeks sail from *England*, where ships full of lading, may be had besides large Timber eighty foot high, straight, without a knot [at *Abscoa.*]; and at no other cost but felling and lading, more advantageous then to pay for Fir from *Norway*; besides a very gainful return of *Ambergris* and vendible commodities in exchange of Iron Tools, Scissors, Knives, old Linen and trifles.

To conclude, *May all Builders both of Palaces and of particular Habitations have a good success and possess them in Peace and Prosperity.*

May also all Surveyors, Masterwork-

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workmen, Journey men and Labourers behave themselves so as they ought.

Take well this former Counsel and Advice, give no admittance to Pride, the Enemy of all Learning; Whereof a King was such a Lover, as that when near the hour of his leaving the World He saw one advance more then others to him within the Curtain of his Bed, he asked, Whether he could learn him anything that was Good.

FINIS.

Nota, The first discourse concerning *Solidity, Convenience and Ornament*; is to be had at Mr. *T. Heath's* within *Lud-gate* at the golden *Globe*.

[unpag. = 111]

Errata's in the Treatise.

In Page 6. line 11. read with, for *which*. p.
7. l. 10. Rasat, r. *Rabbat*. p. 15. l. 5. in, r. *is*.
p. 51 l. 11. abisness r. *Abisme*. p. 55. l. 14. fit-
ted, r. *filled*. p. 94. l. 9. their, r. *wooden*.



1. Portrait of the author, Balthazar Gerbier from his *Brief Discourse* (London 1662), facing the frontispiece. Around the oval portrait, framed by palm branches: «SE CONFIE / HEVREUX QVI EN DIEV» [«*Se confie heureux qui en dieu*» : *Psaumes*, 84, 12/13]. On the medal over Gerbier's breast : «C.R. [= Carolus Rex]». Below: «*Balthazar' Gerbius, / Eques Auratus. b. d. / A.º 1653.*». Above: Gerbier's coat-of-arms, Chevron with three bundles or sheaves of corn (wheat) – *gerbée*, *gerbe* (*de blé*): bundle or sheaf of corn (wheat).



2. Portrait of Balthazar Gerbier, Paulus Pontius after Anton van Dyck, engraved 1634. “D. Balthazar Gerberius Eques Auratus primus post renovationem. / Foederis cum Hispaniarum Rege anno 1630. a Potentissimo / et Serenissimo Carolo Magnæ Britanniae Franciæ et / Hyberniae Rege, Bruxellas Prolegatus / A:º 1631 / Anton. van Dijck pinxit / Paul. Pontius sculpsit.”; above: “Ætatis suæ 42 / A:º 1634”; on folded paper held by Gerbier: “Vivat / memoria / Buckinga: / mii”.



3. Portrait of Balthazar Gerbier, Paulus Pontius after van Dyck, the first state of the engraving of 1634.

Counsel and Advise
TO ALL
Builders;

For the Choice of their
Surveyours, Clarke of their Works,
Bricklayers, Masons, Carpenters, and
other Work-men therein concerned.

AS ALSO,
In respect of their Works, Materials
and Rates thereof.

Together with several *Epistles* to
Eminent Persons, who may be
Concerned in *Building.*

Written by Sir *Balthazar Gerbier,*
Douvil, Knight.

London, Printed by Thomas Mabb, dwelling on
St. Pauls-Wharff neer the Thames, 1663.

A Brief
DISCOURSE
Concerning the
Three chief Principles
O F
Magnificent Building.

VIZ. { Solidity,
Conveniency,
and
Ornament.

By Sr *Balthazar Gerbier D'onvilly* Knight.

L O N D O N,
Printed in the Year 1662.

THE
CONTENTS
OF THIS
MANUAL.

2 **A** Repetition of the
summary contents of
a former printed Discourse,
concerning the three chief
Principles of Magnificent
Building, to wit, Solidity,
Conveniency, and Ornament.

3 The choise of a Surveyor,
how to try him, and what his
duty is?

4 The choise of a good
Clark

*Clark of the works, and what
he is to do?*

*5 The duty of all Master
Workmen,*

*6 The several proportions
of the five Orders.*

*7 Particulars to be mind-
ed by all Builders.*

*8 Rates and Prises of Ma-
terials, and of the several
works belonging to Building.*

*9 That those who Build,
or Build not, will (as those
who marry, or marry not,)
have just cause to Repent.*

Counsel



Council and Advise
TO ALL
BUILDERS.

*For the Choice of their Surveyors;
Clarks of their Works, Bricklay-
ers, Masons, Carpenters, and o-
ther Workmen therein concer-
ned.*



Little Manual which
I formerly set forth
(concerning the
three chief Prin-
ciples of magnifi-
cent Building, viz. *Solidity, Con-
veniency and Ornament*) doth in
the first place note the incongru-
ities committed by many under-
takers of Buildings, who (both
B within

8. *Counsel and Advise*, page 1, incipit: "Council and Advise TO ALL **BUILDERS**.
For the Choice of their Surveyors; Clarks of their Works, Bricklayers, Masons, Carpenters,
and other Workmen therein concerned. (...)".



9. Portrait of Inigo Jones, English architect and designer of court masques (1573-1652), engraving by Robert van Voerst, 243 x 176 mm, after Anton van Dyck. *Insc.*: "CELEBERRIMVS VIR INIGO IONES PRÆFECTVS ARCHITECTVRÆ MAGNÆ BRITTANIÆ REGIS ETC."



10. Portrait of Inigo Jones, by William Hogarth, 1757-1758, oil on canvas, 1134 x 915 mm, with frame. London, National Maritime Museum. Commissioned by Sir Edward Littleton, MP, in 1757, the painting was made by Hogarth after the print by van Voerst and a red-chalk drawing by van Dyck now at Chatsworth.



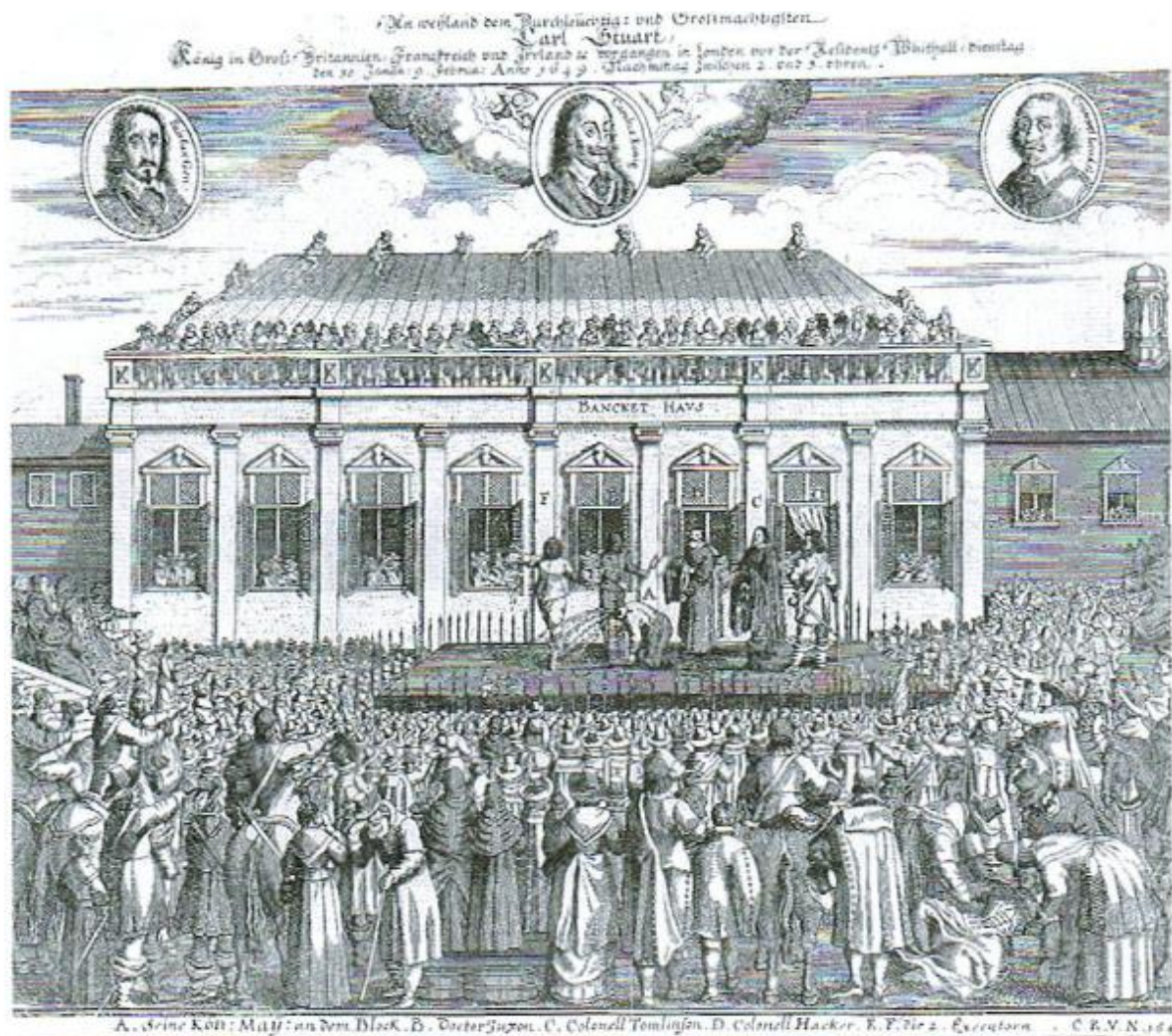
11. Portrait of James I, engraving published by Edward Pierson, 1619, 559 x 410 mm. The print survives in one example, and it dates from the time of Gerbier's arrival at the English court. "*Joseph Browne excud.*" The portrait is based on a prototype by Mathias van Somer painted in 1618. *Insc.*: "IACOBVS DEI GRATIA ANGLIÆ SCOTIÆ FRANCIE & HIBERNIÆ REX FIDEI DEFENSOR."



12. Peter Paul Rubens, *Sketch for an Equestrian Portrait of George Villiers, Duke of Buckingham*, oil on panel, 466 x 517 mm; Kimbell Art Museum, Fort Worth, Texas.



13. Daniel Mytens, *Portrait of Charles I*, 1631.



14. *The Execution of King Charles I of England*, a contemporary German print. This is not a 'photographic' document of the event, but a visual reaction to the event. It shows three different scenes. Gerbier's destiny was closely linked to this central event of the Stuart dynasty.



15. Peter Paul Rubens, *The Family of Balthazar Gerbier* (Deborah Kip and her Children), Washington, National Gallery of Art, oil on canvas, 166 x 178 cm, 1629-1630 (detail).



16. Antwerp, Rubenshuis, Garden Gate, 1620s.



17. London, York House Water-Gate; now London, Victoria Embankment Gardens (river side view).



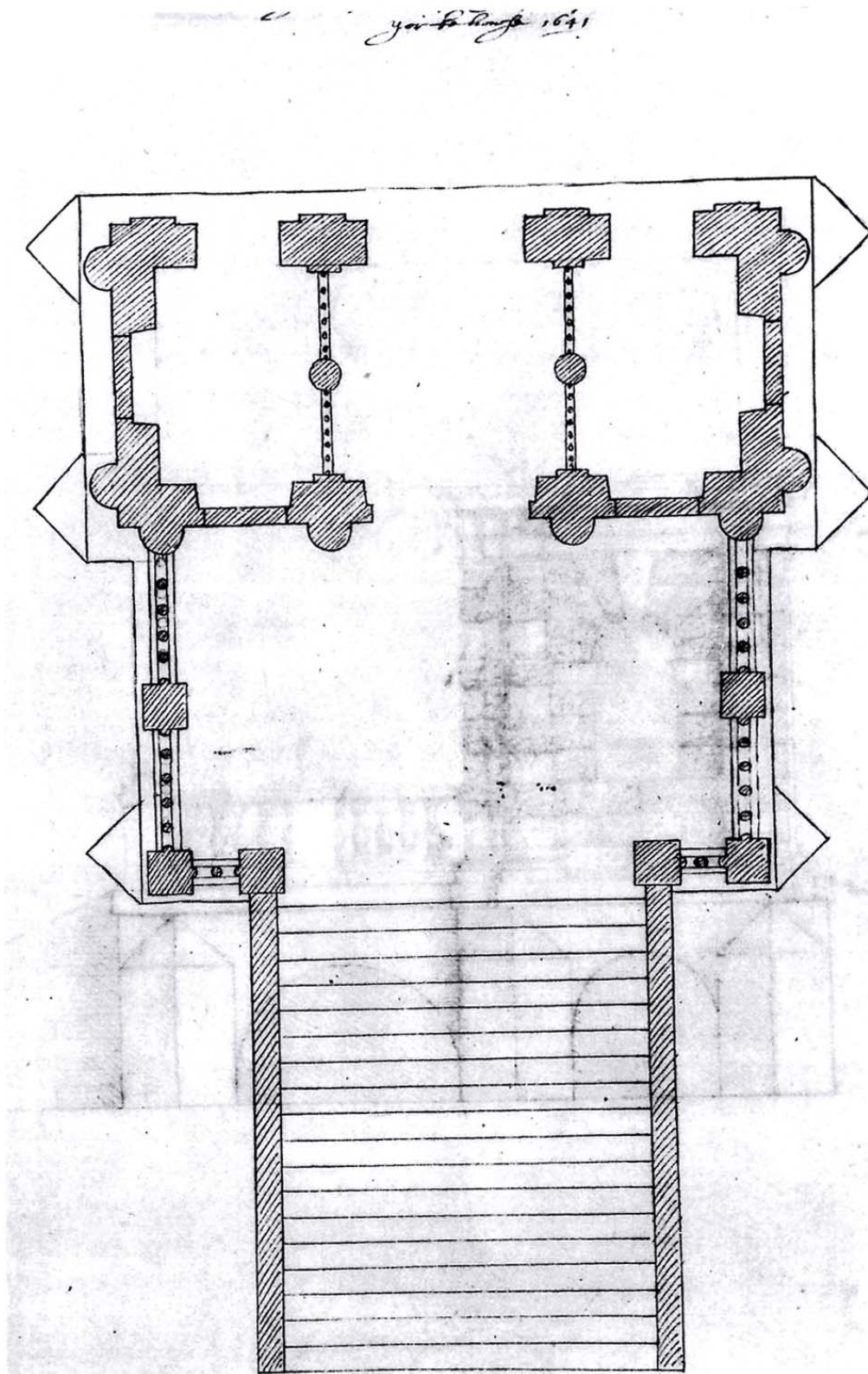
18. London, York House Water-Gate; now London, Victoria Embankment Gardens (street side view, from Watergate Walk).



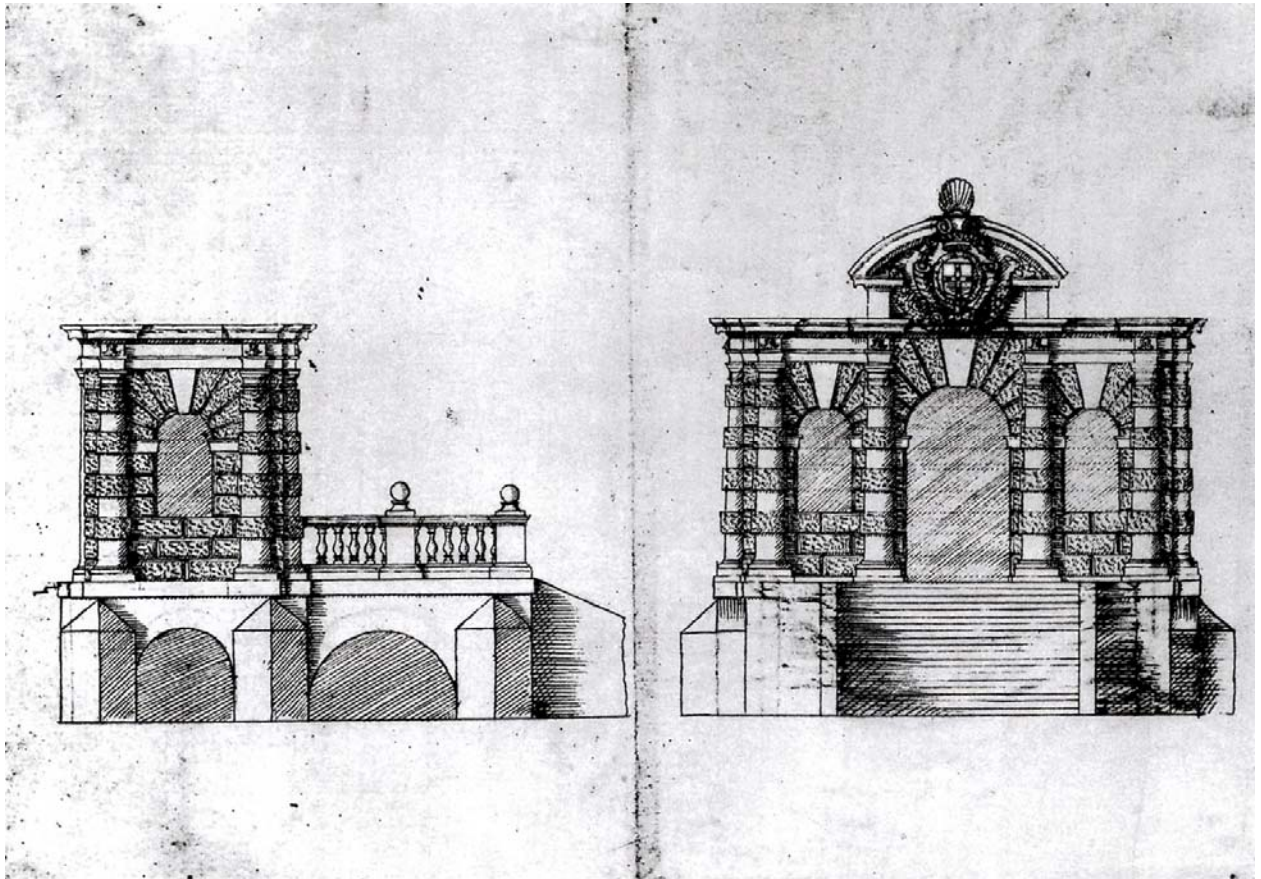
19. *York House Water-Gate and the Adelphi from the River by Moonlight*, circa 1850, by Henry Pether (British, active 1826-1865), London, Museum of London, oil on canvas.



20. 'La grotte du Luxembourg', now *Fontaine de Médicis*, engraving, after Jacques-François Blondel, *Architecture française*, Paris 1752-1756 (numerous images of the *Fontaine de Médicis* may be found online).



21. John Webb, drawing; London, Royal Institute of British Architects: "Ground plat & upright of ye water gate / Yorke House 1641"; Plan.



22. John Webb, drawing; London, Royal Institute of British Architects: "*Ground plat & upright of ye water gate / Yorke House 1641*"; Front elevation and side elevation.

EXCURSUS

AUTOBIOGRAPHY AND TOPICALITY IN GERBIER'S TREATISES: THE AUTHORSHIP OF THE YORK-HOUSE WATER-GATE, JONES OR GERBIER?

Sir John Summerson, in his highly respected *Architecture in Britain 1530 to 1830*, London-Melbourne-Baltimore: Penguin Books, 1953 (a volume of Nikolaus Pevsner's 'Pelican History of Art'), wrote of "Sir Balthazar Gerbier, a curious character whose career threads grotesquely through the events of the seventeenth century up to the Restoration and beyond." And Summerson continues, referring, in 1953, to the York House Water-Gate, now moved back from the River Thames in the Victoria Embankment Gardens:

"It is very nearly certain that Gerbier designed the York Water-Gate (now in Embankment Gardens) as part of his work at York House for the Duke of Buckingham, in 1626-7. Usually attributed to [Inigo] Jones, on the strength of a drawing by [John] Webb at the Royal Institute of British Architects, and certainly executed by Nicholas Stone, the Water-Gate is a direct but rather feeble imitation of the *Fontaine de Médicis* at the Luxembourg in Paris (c. 1624) [note 7]. It is exceptional as being of direct Parisian inspiration, and important because the great respect paid to it (as a work of Jones!) in the eighteenth century" (p. 85).

Summerson's annotation [note 7] reads:

"The main reasons for this attribution are the fact that Gerbier is known to have been in charge of York House, the resemblance of the water-gate to the *Fontaine de Médicis*, which Jones never saw and Gerbier will have seen in 1625, and the resemblance of the design to an indisputable drawing by Gerbier in the Bodleian (Plate 50 B)."

Summerson illustrates the Water-Gate on Plate 50 A. [*Summerson's book saw many editions, and page and plate numbers vary.*]

In a catalogue of RIBA drawings published by the distinguished English architectural historian, John Harris, in 1972 (*Inigo Jones and John Webb*, Farnborough, Hants: Gregg International Publishers), in a commentary to the measured drawing by Webb after the Water-Gate of 1641, one reads an almost point-by-point refutation of what Summerson has written.

"The York Water Gate was built 1626-27 for the Duke of Buckingham. This plan and elevation, drawn by Webb in 1641, is obviously a measured drawing. Long attributed to Jones, the gate has in recent years been ascribed by scholars to Balthasar Gerbier. Comparisons have been made between the gate and Gerbier's designs for gates at Hampstead Marshall. The Hampstead designs, however, were drawn as late as circa 1660 and are lifted almost directly from Francini's *Livre d'architecture* (1631; 2nd ed. 1640), whose engravings, admittedly after 1626, can supply many of the elements of the York Gate. A source with the *Fontaine de Médicis* is not necessary. This is not to imply that Jones designed the York Gate. It is, however, by no means certain that Gerbier did."

Harris continues his tacit refutation of an ascription to Gerbier, by suggesting that Webb was likely to have copied a work by Jones, as he did in other and similar drawings, and, by implication, unlikely to have copied a work by Gerbier. One may or may not find such argu-

ments persuasive, and Harris writes, “These facts do not disprove Gerbier’s authorship.” Nevertheless, this is the clear tendency of Harris’s argument: “They caution a hasty attribution.” (cf. John Harris and Gordon Higgott, *Inigo Jones, Complete Architectural Drawings*, London: A. Zwemmer Ltd., 1989).

Indeed Harris’s association of Gerbier with Alessandro Francini’s designs links Gerbier to an Italianate tendency in France in the first decades of the seventeenth century. Francini (after 1571-1648) was a Florentine water engineer and architect, who came to France around 1598, with his brother, Tommaso, who worked at the Palais du Luxembourg (1612-1623); see Alexandre Francine “*Florentin, Ingenieur ordinaire du Roy*”, *Livre d’architecture* (...), Paris: chez Melchior Tavernier, 1631, with designs similar to the *Fontaine de Médicis*.

Much later, in the 1991 edition of Summerson’s *Architecture in Britain*, the attribution to Gerbier does not appear, although it does appear in intervening editions. Summerson died a year after his wife and after a long illness in 1992. It is written that he withdrew his attribution to Gerbier, possibly in deference to Harris and his opinion. Harris’s arguments for Jones are circumstantial, and they are not supported by positive parallels to Jones’s architectural works. Indeed, as Harris writes, Jones did work for Buckingham in 1622-23, but not as late as 1624, and Harris is mistaken in placing Gerbier’s work at York House nearer Buckingham’s death in 1628, for recently published documents show Gerbier residing at York House, with a thirty-one-year lease, in 1619, a fact that destabilizes Harris’s structure of circumstantial considerations.

Other commentators have expressed opinions on the question, although without great conviction, and some have opted for not clearly thought out compromise solutions, which may primarily reflect indecision.

We are left with the question, ‘Jones or Gerbier?’, or someone else. Summerson’s “a rather feeble imitation of the *Fontaine de Médicis* at the Palais du Luxembourg in Paris (c. 1624)” (here illustrated) perhaps underestimates the Water-Gate. In its original setting, as testified to by a painting of circa 1850 (*York Water Gate and the Adelphi from the River by Moonlight*, Museum of London, by Henry Pether; here illustrated), shows clearly its connection with the shoreline and banks of the Thames River, perhaps suggesting a link to a source in a water fountain. Summerson’s identification of the *Fontaine de Marie de Médicis* as the source of inspiration for the Water-Gate is, *pace* Harris, visually persuasive, especially as a new work commissioned by the Queen of France and in light of its novelty for Britain and indeed compelling in light of the patron’s presence in Paris at the French court in 1625, in the company of Gerbier, and where they both met Rubens. The comparison between the Medici Fountain and the Water-Gate is one which may be doubted on the basis of single-motif comparisons, but the general outlines are strikingly similar and show an almost baroque tendency not consonant with Jones’s more conservative and retrospective architecture. Webb’s drawings (here illustrated) give the full structure of the gate, which survives as a much reduced fragment, without its fortress-like foundations, without its balustered terrace, and without its broad, magnificent flight of stairs down to the river. The rear, street-side face of the gate, devoid of rustication, is more planar in conception, and it appears conceived in an entirely different mode, plain, tectonic, and strong. Are there further parallels in the architectural conceptions of Jones or Gerbier? And are there further circumstantial considerations that have been over-looked? Summerson’s attribution to Gerbier may have been prompted by his reading of Gerbier’s treatises, but he does not mention this consideration. The two little books, nevertheless, contain a number of relevant indications, which in their totality appear to be indicative. The resemblances between the *Fontaine de Médicis*, the York House Gate, and even the Garden Portico

of the Rubenshuis in Antwerp, dating from perhaps the early 1620s (see Jeffrey Muller, in: Kristin Lohse Belkin and Fiona Healy, *A House of Art, Rubens as Collector*, 2004) are notable.

Both of Gerbier's treatises, and especially his *Brief Discourse*, contain a rather marked autobiographical tendency and many topical references to persons, events, and things of the present time or of the recent past. The author does not attempt to hide himself behind his text, in a neutral, distant authorial presence. Instead many statements and even veiled references reflect Gerbier's own actions, experiences, and views. Some of these elements are tendentious to the extent that they aim to foster ends that Gerbier himself wished to attain. Some examples from the *Brief Discourse* may illustrate this circumstance. The dedication to King Charles II (fol. A 2 *recto*) casts a favourable light on Gerbier himself, suggesting his presumed acceptance in royal circles, as does his pretension to the office of royal Master of the Ceremonies and his claim that the office of Surveyor General was intended for him after the death of Inigo Jones, thus underlining Gerbier's significance and status in the land. He also signs himself as "Gerbier D'ouvilly *Knight*", a further claim to status and distinction. So, too, his presence at foreign courts as the representative of the English King (p. 9), or his vaunted familiarity with King James "of blessed memory" (p. 13), his knowledge of the "palaces of Sovereign Princes" (pp. 28 ff.), or the marble Stable in Turin (*i.e.*, in Chambéry) of "Prince *Thomas of Savoy* (son to the Great [Carlo] *Emanuel of Savoy*)", for which Gerbier appears possessed of first-hand knowledge (pp. 31-32).

There are very numerous references to far-away and exotic places, to, for example, the West Indies, and the Americas, and to Indians, indirectly calling attention to Gerbier's presence and ventures there, about which he published on other occasions. And there are many other references to foreign parts, which confer a cosmopolitan aura to his persona: exoticism, urbanity, cleverness, knowledgeability, familiarity with the grandees of the world. Gerber refers to the "vapours of Gascony wines", and in his youth he had worked, with his brother, in Gascony.

Further Gerbier is critical of rival architects such as John Webb ("rediculous ornaments", *CA.*, p. 14) and, particularly, Inigo Jones, whom he sometimes criticized, disingenuously asserting that he has not criticized, but suggesting that Jones is lacking in sophistication and judgement (pp. 40-42; cf. pp. 14, and possibly 27f.).

Gerbier explicitly and implicitly proposes his services to the King, to Parliament, and to other potential builders: to the King, for "your Royal Palace" to be set at "the side of Saints *James's Park*" (*D.*, fol. A 4 *recto*); to Parliament, for a project to have the streets of London made clean, and to widen some streets, and for a project "to Build a Sumptuous Gate at Temple-Barr" (fol. [A 5] *recto*), and another for the "levelling of the valley at Fleet-Street and Cheapside". For these projects, he has printed papers and submitted drawings. He alludes to "Triumphall Arches erected in the City of London", presumably for the entry of Charles II and made to Gerbier's designs (*D.*, p. 42).

But the theme that seems to obsess Gerbier is Buckingham and York House – the period of Gerbier's greatest successes –, and, further, he manifests a mild fixation on gates and their design, which begins with his proposal for making a "Sumptuous Gate at Temple-Barr", just mentioned, for which he has already sent a drawing to the King and is prepared to submit drawings to Parliament on a moment's notice. There are references to the Portico or Water-Gate at the River", that is, to the York House Gate (*D.*, p. 28), and references to gates, with coaches and carts (*CA.*, p. 19), to "Garding-gates" (*CA.*, Introduction), which technically is

what the York-Gate was, to porters or Keepers of the Gates (CA., pp. 96-97). From at least 1619, Gerbier resided at York House, next to the gatehouse. He mentions the “Cain and Abel in the York-House garden” – Giovanni Bologna’s Samson and the Philistine, now in the London Victoria and Albert Museum – neglecting to say that it was he, Gerbier, who obtained it for Buckingham (D., p. 15). He mentions a Room not more than thirty-five foot square – “close to the Gate of York-House – praised by King James, where there could be displayed, indeed enacted scenographies as great as those in the great Banqueting House. He criticises severely the early make-shift renovations of York House (D., pp. 27 ff.), and here Jones, who had worked for the Duke and for his wife’s family (with whom he had not a few connections), may have played a rôle. Gerbier criticises, too, the lack of a “Model for a Solid Building” in this phase and building on moorish ground, and he further contrasts this early provisional renovation and rebuilding of York House (“as a Toadestoole groweth in a night”) with the “Portico or Water-Gate at the Riverside”, built of solid stone, and thus an example of “good building” (D., p. 28). This may be a tacit endorsement of Gerbier’s work at York-House, and an attempt to set a pre-decessor there in a poor light. In his *A Manifestation*, London: Printed for the Author, 1651, p. 8, Gerbier writes: “Now as for my skill in Arts and Sciences, and particularly in Architecture, those I imployed in the contriving of some of the Duke of Buckingham’s Houses, and in the adorning of them.” The designing of a gate is a congenial task for a designer of ‘scenes’, as Gerbier was.

With reference to the two large heraldic lions that crown the sides of the York House Water-Gate, it is perhaps relevant that Gerbier specifically mentions lions as supporters, “either of weight, or of Arms in Herauldry” (CA., p. 14). Heraldry was one of Gerbier’s many special interests from an early date. No single one of these many references proves anything, but through their number and insistence, it is clear that the York House Water-Gate was at the forefront of Gerbier’s mind. Certainly had it been a work of Jones it would have at some point been drawn into the pattern of rivalry and denigration that characterizes all of Gerbier’s comments about Jones’s work. In any event, the spreading of armorial elements across the architecture of the gate is notable: not only the amplified central display of the arms of the Villers in the cartouche of the river front, surrounded by the garter and beneath a ducal coronet, but the charge from the shield, an escallop or shell, is used as a large and prominent ornament in several places. On the land side of the gate are the arms of Villers impaling those of his wife, Katherine Manners, a daughter of the Earl of Rutland. Other shields and cartouches bear an anchor, signifying Villers’s office as Lord High Admiral of England. The frieze of the arch on the land front of the gate is carved with the motto “Fedei Coticulas Crux”. Heraldic ‘blow-ups’ are omnipresent in Gerbier’s drawing for a gateway, “The Great Peeres at Hamstead Marshall”, which he made for Hampstead Marshall, Berks, around 1660, the two piers also bearing inscriptions in their friezes (Summerson, pl. 50 B).

Inigo Jones’s designs for gates seem stalled well within the sixteenth-century, with forms of rustication that do not advance greatly beyond Vignola. The York House Water-Gate does not fit into this pattern. Two designs for a Tuscan carriage gateway (RIBA, Jones and Webb 14 and 16; 1622-1623, “for Hatton House”) might be thought to resemble aspects of the York House gate, but they remain Serlian in inspiration and manifest Jones’s sense for ordered design, with refined detail and rationalized proportions, which seems absent in the Water-Gate.

In Giles Worsley’s posthumous *Inigo Jones and the European Classicist Tradition* (New Haven-London 2007), the author writes: “Jones is sometimes cited as the author of the Water-gate at York House in 1626, but the attribution is uncertain and it could well have been the work of Nicholas Stone” (p. 76, and note 20: “Colvin, *Biographical Dictionary*, pp. 397, 561, 931”). Colvin writes: “The authorship of this striking rusticated gateway is uncertain (...) and

a case has been made for Inigo Jones (by John Harris in *Country Life*, 2 November 1989), but a contemporary drawing with variant features in the Soane Museum (Fauntleroy Pennant III, fol. 64) is in the hand of neither, and Charles [= John] Stoakes may have been right in claiming that his uncle Nicholas Stone (*q.v.*) both “desined and built” the gate (*Walpole Society*, vol. 7, 1918-1919, p. 137). Stoakes’s ascriptions are not invariably correct. While Nicholas Stone (1587-1647) is well-known as a sculptor and was active as a master mason, his artistic physiognomy as a architect is less than clear.

A Note concerning 'Gerbier III.'

The forty dedicatory "epistles" affixed by Gerbier to the issues of Counsel and Advise will be treated in a subsequent number of FONTES. These letters are addressed to English and international notables who were potential patrons of building, and they thus afford a not insignificant cross-section of the 'public' for architecture in the 1660s.