

RESEARCH ARTICLE

Philibert Delorme's Divine Proportions and the Composition of the *Premier Tome de l'Architecture*

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In his *Premier tome de l'architecture* (1567) — the first original, comprehensive architectural treatise written by a French author — Philibert Delorme (c. 1514–1570) claims to be the first to formulate a theory of divine proportions, which he describes as a set of rules recorded in the Old Testament as directly dictated by God to men for the construction of the Ark of Noah, the Ark of the Covenant, and the Temple and House of Solomon. Yet the author does not develop the theory of divine proportions in the *Premier tome* and postpones it instead to the second volume of his treatise. As a second volume was never published (and likely never written), Delorme readers are left with a handful of less-than-coherent references and illustrations of a theory that remains largely obscure. Yet the elements of theory of divine proportions contained in the *Premier tome* provide historians with an understanding of the genesis of the treatise itself, thus ultimately helping to raise broader questions about the book and its author. This paper shows how Delorme's divine proportions offer a key to understanding the conception and composition of his treatise as well as to the process of intellectual development of the author and the changes in the nature and scope of his written work.

Philibert Delorme's *Premier tome de l'architecture* (1567), the first original, comprehensive architectural treatise written by a French author, opens with a sobering critique of the author's own built oeuvre:

I honestly confess that the palaces, châteaux, churches and houses built so far according to my designs seem like nothing to me, even though they are appreciated by many and their proportions follow the art of the true architecture of men. These works seem like nothing to me when I compare them to the divine proportions that came from heaven and to those of the human body. So much so that if these works had to be built again, I would provide them with much more dignity and excellence than people find in them nowadays. (Delorme 1567: f. 4v)¹

Readers are thus confronted with a confession of architectural repentance of a particularly bewildering sort, for not only were, and are, Delorme's buildings regarded as masterpieces (it will suffice to mention the Château d'Anet and the Tuileries Palace), but Delorme himself is better known for the arrogance that earned him countless enemies at the court of King Henri II than for the unassuming modesty conveyed by this passage. Delorme's statement is also peculiar for the distinction it draws between

the proportional rules of 'the true architecture of men,' which he claims to have applied to all his works, and a higher, God-given set of rules — the *divine* proportions he would use instead if given a chance to redesign the same buildings.

Divine proportions, Delorme explains in the same foreword to the reader, are those recorded in the Old Testament as directly dictated by God to men for the construction of the Ark of Noah, the Ark of the Covenant, and the Temple and House of Solomon (f. 4v). The author also claims to be the first to formulate a theory of divine proportions when he declares his surprise that these 'have not been known, studied, nor put into practice neither by ancient nor modern architects' (f. 4v).² Then, much to the readers' disillusionment, Delorme announces that the *Premier tome* will contain no in-depth discussion of this groundbreaking theory. Instead, and as its title indicates, the *Premier tome* will be followed by a second volume dedicated to this matter (f. 3v–4).

Yet the *Second tome de l'architecture* never appeared. Delorme died in January 1570, a little more than two years after the *Premier tome* was published (in November 1567), leaving no trace of the theoretical works he announced as forthcoming or mentioned as future projects in the *Premier tome*.³ To this day, no manuscript has been associated with any of these projects, nor is there evidence that Delorme actually started working on any of them. Moreover, Delorme's theory of divine proportions cannot be inferred from his buildings, for not only have most of these since been destroyed but, as the architect's confession cited above warns us, none of them were designed

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according to those rules. Therefore, the only available source for Delorme's theory of divine proportions is the handful of references and illustrations found in the *Premier tome*.

While Delorme's theory of divine proportions remains largely obscure in the scant, less-than-coherent references contained in the *Premier tome* and in the absence of the *Second tome*, it is nonetheless central to the architect's theoretical work and our reading of it: first, because Delorme repeatedly says so, and therefore the theory of divine proportions can shed light on his ambitions as a theoretician; and second, because the way Delorme deals with proportions, both divine and non-divine, provides historians with an understanding of the genesis of the treatise itself, thus ultimately helping to raise broader questions about the treatise and its author. In this paper I will show how the theory of divine proportions offers a key to understanding the conception and composition of Delorme's *Architecture* as well as to the process of intellectual development of its author and the changes in the nature and scope of his written work.

Divine proportions in the *Premier tome*

The references to divine proportions in the *Premier tome* consist of twelve images (about six percent of the 205 woodcuts that illustrate the treatise) and three short passages in which Delorme provides the numerical keys for their interpretation. The images are divided into two sets: the first seven illustrate components of the orders (as in **figs. 1** and **7**); the remaining five illustrate the composition of elevations (as in **figs. 2, 3**, and **8**).⁴ The textual references include a passage in Book V where, discussing an Ionic entablature, Delorme states that divine proportions are based on the numbers 3, 6, and 7, their squares, and their multiples by 2, 3, and 6, which generate the sequence 3, 6, 7, 9, 12, 14, 18, 21, 36, 42, 49 (f. 168). In Book VIII, when discussing the composition of entrance façades, triumphal arches, and doors, he writes that all ratios should be 1:6, 1:7, and 1:10 and then adds that the numbers fundamental to his theory are 2, 3, 6, 7, and 10 (f. 233 and f. 235v).⁵ Nowhere does Delorme explain how these numbers are associated with the biblical buildings he has mentioned in the foreword, nor does he ever specify which numbers or ratios from the Old Testament he is referring to.

In his 1958 monograph on Philibert Delorme, Anthony Blunt identifies 1, 2, 3, 5, and 7 as the numbers provided by the Old Testament for the design of the buildings mentioned in the *Premier tome*, and suggests that these should be understood as a sequence of ratios of primes — 1:2, 2:3, 3:5, and 5:7 (Blunt 1958: 127–31). Blunt sees this sequence as consistent with the third one provided by Delorme, or 2, 3, 6, 7, and 10, as these numbers can be reduced to 1, 2, 3, 5, and 7. Disregarding the second of Delorme's series, or 1:6, 1:7, and 1:10 (probably because this series can be generated by the numbers provided in the third one), Blunt concludes that the architect was in fact working with only two series of divine numbers: 3, 6, 7, 9, 12, 14, 18, 21, 36, 42, 49, and 1, 2, 3, 5, and 7. Blunt

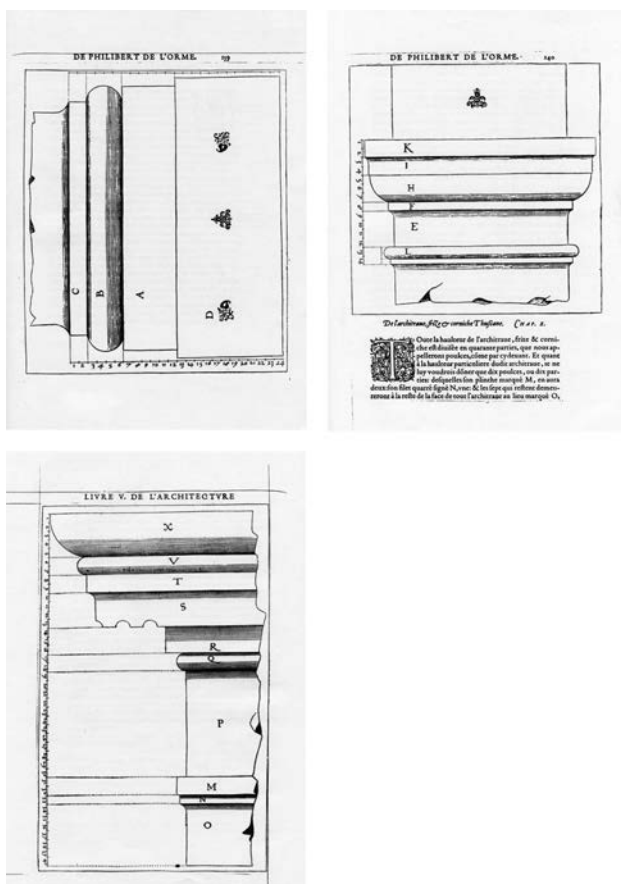


Fig. 1: Clockwise from above left: Doric base, capital, and entablature according to divine proportions. Delorme 1567: f. 139, 140, and 141v.

thinks of these two series as only 'slightly' conflicting with each other and proceeds to show that proportional ratios based on them could be found in several of the treatise's illustrations associated with divine proportions, such as the Doric base, capital, and entablature shown in f. 139–141v (**fig. 1**), the Composite elevation of f. 233v (**fig. 2**), and the church cross section of f. 235 (**fig. 3**).

The latter, for instance, is inscribed in a square the side of which is seven units, the nave width and height (at the vault springs) being in proportion of 5:7, and the vault on top having a radius of 1.5 units. The aisles are two units wide, their height at the vault springs (established at the intersection of lines MN and AC) is $\frac{7}{3}$ of a unit, which can be reduced to integers as a width-to-height proportion of 6:7, and their vaults have radii of one unit. Thus, Blunt concludes, the illustration contains ratios of 3:5 and 5:7 from the sequence 1, 2, 3, 5, 7, and ratios of 6:7 from the sequence 3, 6, 7, 9, 12, 14, 18, 21, 36, 42, and 49, as well as ratios of 1:2 and 2:3, which belong to both sequences. On the basis of similar observations, Blunt concludes that Delorme's proportional system is 'astonishingly simple' because 'everything is reduced to the simple relations of the first five prime numbers' (Blunt 1958: 132).

Blunt exaggerates both the simplicity and the consistency of Delorme's theory of divine proportions. While Delorme certainly succeeds in reducing his proportions

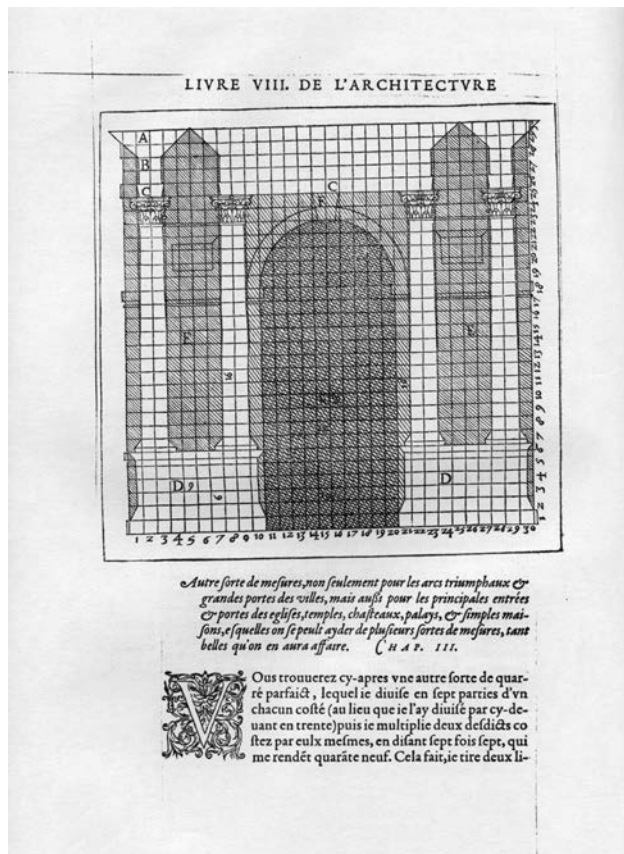


Fig. 2: Elevation according to divine proportions. Delorme 1567: f. 233v.

to simple ratios of integers, if not always prime numbers, and while his modular grids are very effective in conveying these ratios, his illustrations are far from consistent with the numeric sequences he provides in the text. Also, the two series identified by Blunt — 3, 6, 7, 9, 12, 14, 18, 21, 36, 42, 49 and 1, 2, 3, 5, 7 — are more than just 'slightly conflicting,' for, even reduced, the first series does not contain number 5. Finally, the abundance of divine numbers and ratios that Delorme provides, combined with the lack of instructions on how to apply them, leaves his readers at a loss to understand what distinguishes divine proportions from 'the proportions of men.' Of course, it also leaves them free to recognize virtually any of those numbers and ratios in virtually any of the treatise's illustrations.

What is more, the clarity that Blunt perceives when focusing on the passages dealing specifically with divine proportions is replaced by a fair amount of complexity, if not confusion, once the general issue of proportions is considered throughout the entire treatise. In fact, divine proportions overlap and, to some extent, compete in the *Premier tome* with a variety of other recommended principles and ratios, including the square root of two, the golden rule, harmonic proportions, proportions inferred from ancient buildings, and proportions found in authoritative texts, in particular those of Vitruvius and Pliny the Elder. In one instance Delorme even goes so far as to deny the validity of any general proportion theory, stating that 'the proportions, measures and ornaments of columns, as well as many other architectural matters, cannot be

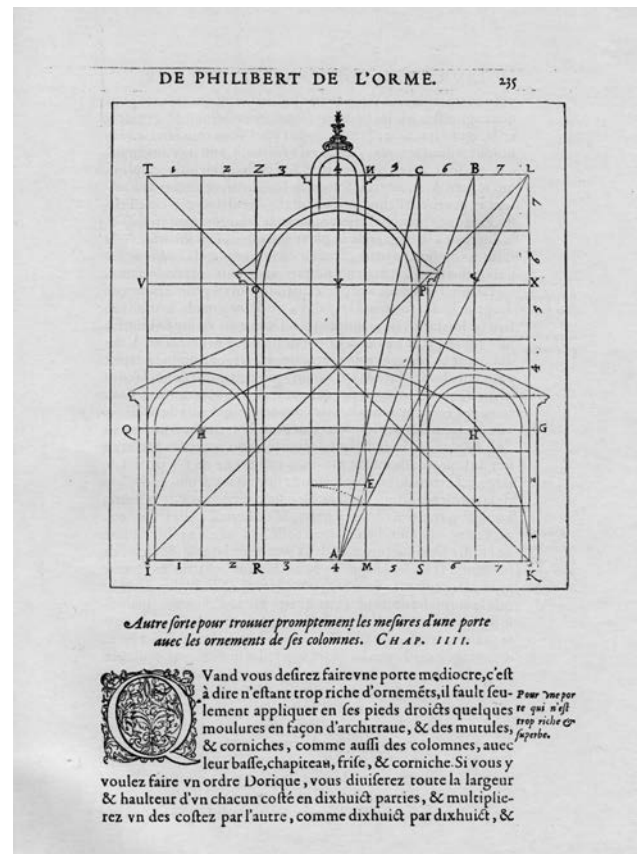


Fig. 3: Church cross section according to divine proportions. Delorme 1567: f. 235.

taught with general rules and theories — they can only be taught with practical examples' (f. 195).⁶

This complexity has led Jean-Marie Pérouse de Montclos to dismiss Delorme's theory of divine proportions as 'neither coherent nor original' and to archive the matter as altogether irrelevant to our understanding of the treatise.⁷ Of course, Pérouse de Montclos's statement is, like Blunt's, an exaggeration, albeit one that lies on the opposite side of the spectrum from Blunt's.

The composition of the *Premier tome*

Analyses of the *Premier tome* have thus far been based on the rather anachronistic assumption that the text went to press the way a scholarly book would nowadays — that is, ideally, after the author has made sure, among other things, that its content is coherent. Yet, as cultural historians and historians of the book have shown, there are substantial differences in the way books have been conceived, produced, and read across time and cultures.⁸ Delorme acquired new knowledge and developed new ideas while writing but, differently from what we might expect, did not remove the traces of that learning and thinking process from his final text, or at least not all of them. The elements of proportion theory or theories in the *Premier tome* provide readers with valuable insight into its author's intellectual journey from what can be described as an initially rough grasp of theoretical matters detectable in some sections of the treatise to the sophisticated ideas found in other sections. The key to this journey is

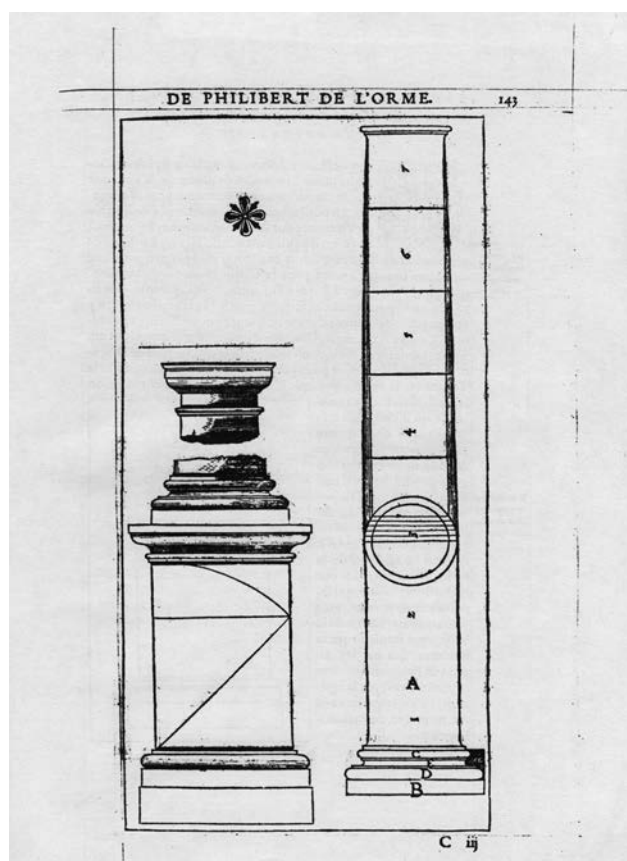


Fig. 4: The Doric order. Delorme 1567: f. 143.

found *not* in the passages on proportions that are consistent with one another, on which both Blunt and Pérouse de Montclos have focused, but in the internal contradictions of the text and in the conflicting statements about proportion theory.

One of the most notable of these inconsistencies is found in Book V, which is dedicated to the Tuscan, Doric, and Ionic orders, between the prologue and the main body of the text. In the prologue Delorme states that his source on the different types of orders and their relative proportions is Pliny the Elder (f. 130v).⁹ This is a peculiar statement, especially given that Delorme is writing in the 1560s, a time when a number of new, far more specialized texts on architecture and the orders had been published and the texts of Vitruvius and Alberti had been edited, illustrated, and translated into several languages. Vitruvius's *De architectura* was available in the illustrated editions of Cesariano (1521) and Barbaro (1556), as well as in the French translation by Jean Martin (1547). Cosimo Bartoli had illustrated the Italian edition of Leon Battista Alberti's *De re aedificatoria* in 1550, and Jean Martin had translated it into French in 1553. Sebastiano Serlio's Book IV on the orders had been published several times in France since the early 1540s, as had Diego de Sagredo's *Medidas del Romano* (first translated into French in 1536), and Vignola's *Regola* and Jean Bullant's *Reigle* had come out in 1562 and 1564 respectively.¹⁰ Delorme's reference to Pliny becomes more baffling as he expands on it, writing that ancient architects had identified four orders of



Fig. 5: The Doric pedestal according to Vitruvius. Delorme 1567: f. 143v.

columns — Doric, Tuscan, Ionic, and Corinthian — and that their proportions grew from the shortest, the Doric, with a diameter-to-height ratio of 1:6, to the Tuscan, with a ratio of 1:7, to the slenderest Ionic and Corinthian, with equal ratios of 1:9. No expert of classical architecture in Delorme's time would have agreed with this statement and, after the publication of Serlio's Book IV and its iconic plate of the five orders, even amateurs were aware that ancient architects had used not four but five orders, including the Roman Composite, and that, given the same diameter, the shortest column was the Tuscan, not the Doric (Serlio 1537: f. 6). Unquestionably, the prologue to Book V betrays the author's limited knowledge of theoretical sources, both ancient and modern, on the orders.

Yet when Delorme begins to describe the orders in detail, in Chapter IV of the same book, he mentions not four but five orders, adopts Serlio's canon for both their proportions and sequence, and cites Vitruvius profusely as his source, showing a much greater familiarity with the relevant literature on classical orders.¹¹ In fact, with the exception of the prologue, Book V of the *Premier tome* is sophisticated with regard to both the theory of architectural orders and the clear, systematic way in which Delorme organizes and illustrates his material. In the discussion of the Doric order, for instance, he first describes and illustrates the components of the order and their characteristics (as in fig. 4); then he provides the proportions of each component according to Vitruvius (such as for the pedestal in fig. 5); and finally he offers a number

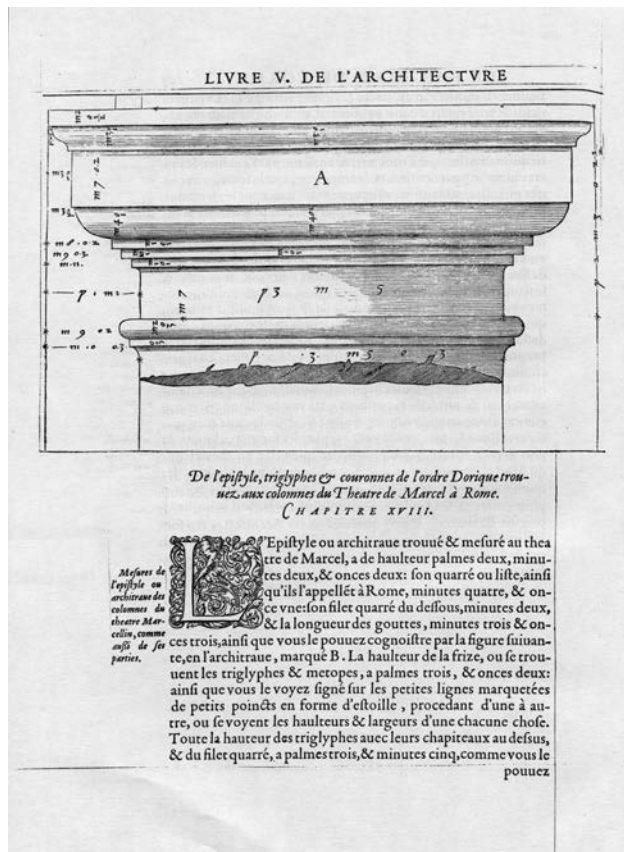


Fig. 6: The Doric capital of the theatre of Marcellus. Delorme 1567: f. 148v.

of examples from antiquity (e.g., the capital taken from the Theatre of Marcellus in **fig. 6**).

Book V is also the first in which Delorme discusses and illustrates divine proportions, which he juxtaposes to those proportions found in ancient buildings and those recommended by Vitruvius, as in the example of the Doric pedestal (**fig. 7**). The author also uses divine proportions to appropriate elements of theory from various sources without acknowledging them — as is the case with the base and the capital of the Tuscan order (**fig. 1**), the proportions of which Delorme takes from Serlio but presents as 'divine.'¹² In doing so he shows little honesty, perhaps (although citing one's sources was not standard practice in sixteenth-century scholarship), but also a level of familiarity with theoretical sources that is incompatible with the awkward passage on Pliny from the prologue.¹³

There is a significant intellectual gap between the prologue to Book V and the body of Book V — a gap that saw Delorme progress from being a practitioner capable of employing the classical orders, to a scholar capable of writing a sophisticated theory of the orders. A gap, also, that saw the theory of divine proportions come into play in Delorme's theoretical discourse. And Delorme not only acknowledges this gap — writing in the errata of the *Premier tome* that 'the discussion of the orders provided [in the prologue to Book V] follows Pliny, as I have written there. The orders according to Pliny, though, are not good... as I explain later in the same book' — but also locates it in time by stating, in the passage from the foreword to



Fig. 7: The Doric pedestal according to divine proportions. Delorme 1567: f. 144.

the reader quoted at the beginning of this essay, that none of his buildings were designed according to divine proportions (f. 285v).¹⁴ Since these buildings include the Tuileries, designed in 1564, both the theory of divine proportions and the main body of Book V (following the prologue), which discusses that theory, must date after 1564.

Evidently, the time spent preparing Book V was crucial to Delorme's theoretical formation. It is thus reasonable to expect the books following Book V to show a similar level of theoretical sophistication and to contain further discussions of divine proportions. Yet this is not the case: not all books from VI to IX contain discussion of divine proportions, nor are they all as well organized and informed as Book V. Passages about and illustrations of divine proportions are found in Book VII on the Composite order (as in **fig. 8**) and in Book VIII on façades, triumphal arches, and doors (as in **figs. 2** and **3**), but there is nothing about divine proportions in Book VI, on the Corinthian order, and only a passing mention in Book IX, on fireplaces and chimneys.¹⁵ While it is possible that Delorme regarded the latter as topics unsuited to divine proportions, it is surprising that he does not mention divine proportions in his discussion of the Corinthian order, which, as a result, stands out in the treatise as the only order to which he does not apply his theory.

This is not the only inconsistency between Book VI and the other books on the orders; in Book VI, Delorme is also less systematic in presenting his material. Instead of offering his readers parallel examples of architectural

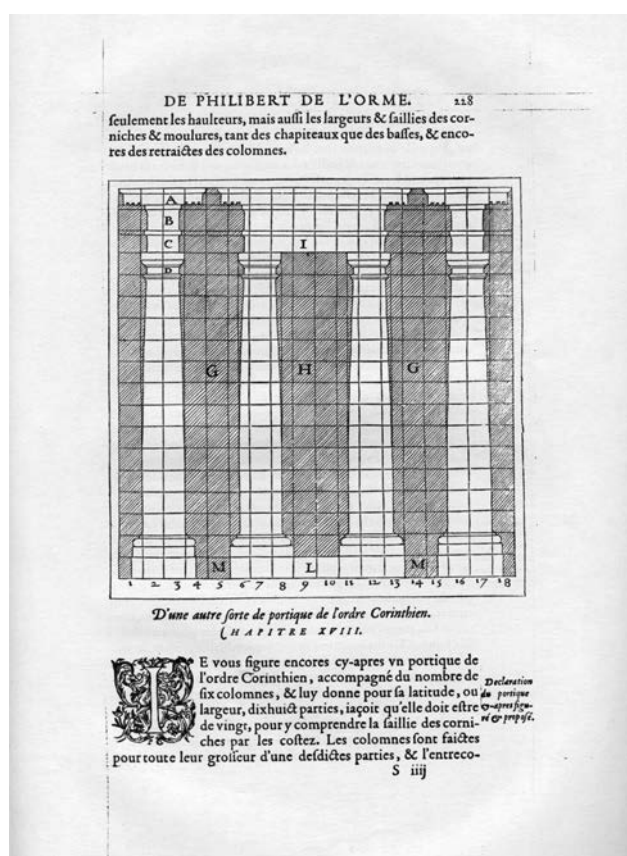


Fig. 8: Elevation of the Tuscan order according to divine proportions. Delorme 1567: f. 228.

components according to Vitruvius, his own theory, and antiquity (as he does in Book V), in Book VI Delorme lets antiquity speak for itself. After a brief introduction on the origins of the Corinthian order, the book is entirely dedicated to ancient monuments and ruins, as are 23 of its 27 illustrations (that is, eighty five percent). The book is less a theoretical essay than it is a collection of *exempla*. It is not surprising, then, to find in Book VI the above-quoted passage questioning the validity of any general theory of proportions: in that passage Delorme states that the proportions of columns can be taught only through practical examples, and that is precisely what he offers his readers in this book.¹⁶ Book VI also appears to be the least learned of the books dedicated to the orders, measured in terms of citation of sources on architectural theory. Their respective lengths taken into account, Book VI contains less than half the citations contained in Book VII and less than a third of those contained in Book V.¹⁷ In terms of design and visual organization of material, Book VI is also significantly less systematic than both Book VIII and Book IX, in which Delorme borrows Serlio's and Vignola's compelling juxtaposition of full-page illustrations and texts (as in **fig. 9**).

These inconsistencies suggest that Book VI was written before Book V, Book VII, and Book VIII — all of which deal with divine proportions and must date after 1564. It is clear that the composition of Book V and the year 1564 mark a moment of significant change in Delorme's approach to theory. Yet we cannot appreciate the impact of that change over the entire treatise because we do

not know which books were written before Book V and which after.

Most probably, Delorme started writing after the death of Henri II (July 1559), when he lost his position as surveyor of the royal works. His first treatise, *Nouvelles inventions pour bien bastir et à petits fraiz*, was published in 1561, which suggests that work on the *Premier tome* must have been carried out between 1561 and 1567. Delorme confirms this hypothesis in the prologue to Book IX, where he mentions 'the effort and the fatigue sustained during *six subsequent years* and more, for both the conception and the design of the illustrations of the present work and their demonstrations and explanations' (f. 259; my emphasis).¹⁸ Delorme scholars have assumed that the treatise was written in the order in which the books are numbered. However, internal evidence shows not only that Delorme worked on different books at different times but also that he reworked parts of certain books at different moments. Book I, for instance, was written at a time when Delorme still thought he would include the *Nouvelles inventions* in the *Premier tome* as a final section on carpentry, an idea that he later abandoned (Delorme 1567: f. 29v).¹⁹ Yet, in chapters VII and VIII of the same book, the author mentions the ongoing construction works at the Château of Saint-Maur and at the Tuileries Palace (f. 17 and f. 20). These references, meant to flatter Catherine de' Medici to whom the treatise was dedicated, can only be additions inserted shortly before the treatise went to press.²⁰

Contradictory statements on proportions, or conflicting theories of proportions, provide evidence about the order in which the *Premier tome* was written because they are isolated from each other — that is, the relevant inconsistencies are never found within the same book. Divine proportions are discussed only in Books V, VII, and VIII and they are announced, along with the second volume of the treatise, in the dedication to Catherine de' Medici, in the foreword to the reader, in Book IX, and in the conclusion to the treatise, all of which were written shortly before the treatise went to press; there is no mention of them anywhere else in the text.²¹ Books III and IV, meanwhile, contain no references to proportions, divine or not. Statements conflicting with the theory of divine proportions — or with theory *tout court* — are found only in Books I, II, and VI. In Book I, which deals with the role of the architect, his relation with the patron, and the choice of site for building, Delorme writes that, throughout the treatise, he will use illustrations of the buildings he has designed in order to show how 'to proceed without fault in the composition, ornaments, and measures of architecture' (Delorme 1567: f. 7v).²² This statement stands in stark contradiction to the passage from the foreword to the reader, cited at the beginning of this paper, in which Delorme declares that, given the possibility, he would redesign all of his buildings according to divine proportions. In Book II, which is dedicated to the construction of foundations, Delorme cites the golden rule and the square root of two as proportional rules, among others, and Book VI on the Corinthian order contains the above-mentioned statement questioning the validity of general proportion

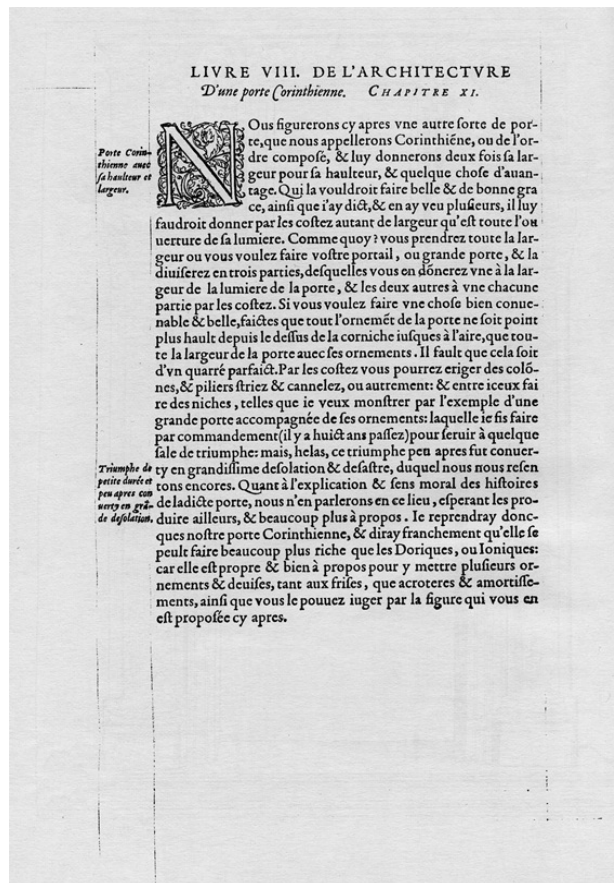
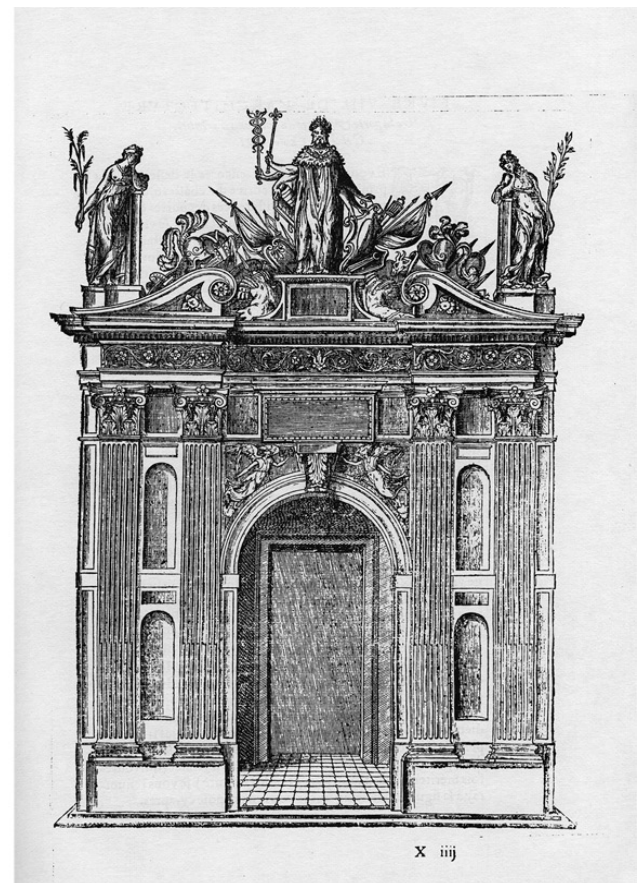


Fig. 9: Corinthian door. Delorme 1567: f. 245v–46.



theories (Delorme 1567: f. 31v).²³ Books I and II also share with Book VI a comparatively low number of references to theoretical sources, both ancient and modern, even though their respective topics (the role of the architect and the construction of foundations) had been treated extensively by previous authors.²⁴

The inconsistencies analyzed here provide a more complex picture of Delorme's book than allowed thus far. In particular, they show that the *Premier tome* is not just the first half of an incomplete treatise, but is also a book composed of two distinct sections marked by stark contrasts and most probably separated, in their conception and writing, by a considerable amount of time: a first section in which the author shows a limited acquaintance with textual sources and a rather tentative approach to theory, namely, Books I and II, the prologue to Book V, and Book VI; and a second section in which he shows an advanced mastery of the same material, namely, Books V, VII, and VIII. Most likely, Delorme started working with the material he was most familiar with – the profession of the architect (Book I), the basics of geometry and construction (Book II), stereotomy and vaulting (Books III and IV) – and then moved on to the orders, starting with the Corinthian order in Book VI, at which point he realized that there was a significant difference between making architecture, which of course he knew very well how to do, and writing a theory of architecture, which he was only partially prepared to do. However, by the time he approached the main body of Book V, and all of Books VII and VIII – that is, after 1564 – the skillful practitioner had also become a

sophisticated theoretician. His statements about proportion theory are the clearest (though not the only) marker of this decisive transformation.

The conception of the *Architecture*

The change in Delorme's approach to sources and organization of material and, ultimately, in his ability to compose a coherent theory of architecture, was accompanied by significant change in how the author conceived of his book. Historians have not given much thought to this matter, generally assuming that the *Premier tome* had always been intended as the first part of a treatise in two volumes. Pérouse de Montclos, for instance, writes that the discussion and illustration of divine proportions was intended exclusively for the *Second tome* and that the reason they appear in the *Premier* is that 'the closer Delorme was to finishing [the *Premier tome*], the closer he felt to his own death' – in other words, that in anticipation of dying soon and not being able to complete his work, Delorme changed the plan of his first volume by inserting some of the material he had already prepared for the second one (Pérouse de Montclos 1988: 8).

Yet when the *Premier tome* came out, Delorme was a little over fifty years old and, aside from a comment on his diminished sight, nothing in his writings points to poor health or a life-threatening condition. The illness that ultimately caused his death became debilitating only in the fall of 1569, when he had to be replaced by Jean Bullant in directing the works at the Tuileries Palace. Thus, nothing validates the hypothesis that Delorme changed his plans

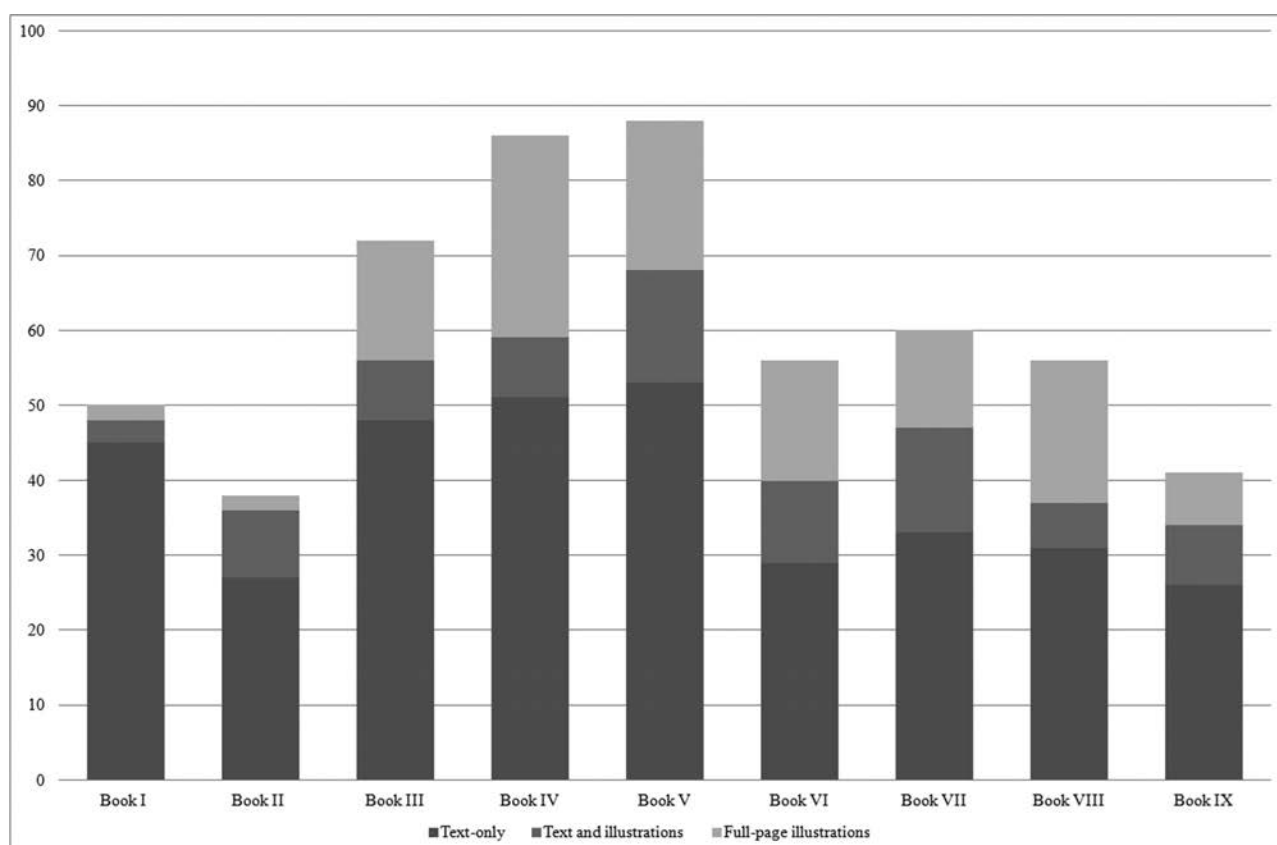


Fig. 10: Author, Distribution of text and illustrations in Delorme 1567; the y-axis numbers represent pages.

for the *Premier tome* because he knew he would not see the publication of the *Second tome*. In fact, the opposite seems to be true: the project of a second volume developed only during the writing of the first one.

As it stands, the *Premier tome* is not a manifestly incomplete treatise of architecture. The distribution of material throughout the nine books is balanced with regard to the number of pages and number of illustrations (**fig. 10**), and the organization of content follows a clear and original logic that sees Delorme constructing the treatise the same way one would construct a building: Book I introduces the architect, the patron, and other professional figures participating in the venture, and discusses the choice of site and orientation of the building; Book II deals with the construction of foundations and the geometrical and design tools necessary to trace them; Books III and IV focus on stone masonry – walls and their openings, vaults, and staircases – and stereotomy, the art of cutting three-dimensional solids into particular shapes in order to build those masonries; Books V, VI, and VII deal with the orders and the decorative aspects of architecture; Book VIII is about the composition of façades and monumental entrances and doors; and Book IX deals with fireplaces and chimneys. The *Premier tome* is constructed much like an actual building that grows from ground to roof before the eyes of its reader.

Delorme's 1561 treatise, *Nouvelles inventions pour bien bastir et à petits fraiz*, dedicated to the carpentry of ceilings and roofs, was the logical complement to such a building, so it is not surprising that Delorme initially thought

to republish the *Nouvelles inventions* at the end of the *Premier tome*, as he announced he would in Book I (and as his editors did from the seventeenth through nineteenth centuries).²⁵ In Books VIII and IX the author specifies that, before abandoning this idea altogether, he had considered 'revising [the *Nouvelles inventions*], adding a third book and new illustrations,' and using this new version of his first treatise as the final section of the *Premier tome* (f. 231v and f. 259v).²⁶ This remark shows that Delorme had significant second thoughts about the final content of the *Premier tome* – even with regard to material that had already been published – while he was writing it.

The author's references to the *Second tome* all lead to similar conclusions: not only was Delorme undecided about the content of both the first and second volumes, but the idea itself of a second volume only came to him during the drafting of the first one. Mentions of the forthcoming *Second tome* are found in several books of the *Premier*, but not all of them. Aside from the dedication to Catherine de' Medici, the foreword to the reader, and the conclusion to the treatise (all of which were written shortly before the book went to press), only Books V, VII, VIII, and IX refer to the content of the *Second tome*, whereas Books I, II, III, IV, and VI make no mention of it. If Delorme had planned from the beginning to write a treatise in two volumes, then the only reasonable explanation for him not to refer to the *Second tome* in five out of nine books of the *Premier tome* would be that he saw the content of those five books as having little or nothing to do with it. Yet the topics listed by Delorme as intended to be

fully developed in the *Second tome* – including the theory of divine proportions, an essay on perspective, models of religious and residential buildings, and illustrations of his own work – are not as foreign to the material covered in those five books as this hypothesis implies.²⁷ For example, Delorme could have anticipated divine proportions when writing about the Corinthian order in Book VI (indeed, as discussed above, it is rather surprising that he did not) and, similarly, it would have been appropriate for him to have announced an essay on perspective when writing about stereotomy in Books III and IV (stereotomy being a technique relating to two-dimensional representation of complex three-dimensional objects). As for architectural models and the architect's own work, these topics could have fit into any of the books, as the *Premier tome* is, in essence, a treatise conceived around the practical, personal experience of its author. Indeed, Delorme would go on to correct these missed references in the errata at the end of the volume: for a Book III passage on baths, in which he had promised a further development 'below,' he notes, '[I]nstead of *below*, read *in the Second tome*' (my emphasis); he likewise uses the errata to postpone to 'the Second tome of our Architecture' illustrations of the columns of Villers-Cotterêts (which he had intended to provide in Book V) and an essay on perspective (announced in Book VI for 'the end of [his] work,' f. 285v).

Most likely, the reason references to a second volume of the *Architecture* are not included in Books I, II, III, IV, or VI is that when Delorme was writing them the *Second tome* had not yet been conceived. In other words, it was not until halfway through its composition that the *Premier tome* ceased to be a stand-alone treatise and became the first volume of a larger project.

All available evidence suggests that this change took place when Delorme developed the theory of divine proportions. As discussed above, the theory of divine proportions must date after the design of the Tuileries Palace in 1564, and Delorme only elaborates on it in the second half of the *Premier tome* (Books V, VII, and VIII). The same must be true for the project of the *Second tome*, which Delorme likewise often mentions in the second half of the treatise but never in the first half (Books I, II, III, and IV). Also – and again as in the case of the theory of divine proportions – the key moment in this change of plan from a single- to a two-volume treatise seems to have taken place after the completion of Book VI, which carries no references to the *Second tome*, and during the preparation of Book V, which, of all the books that refer to the *Second tome*, is the only one that appears in the errata for an incertitude, or second thought, about content.²⁸

The theory of divine proportions and the *Second tome de l'architecture* were born at the same time, after 1564. Yet their relation to one another is not a simple causal one – that is, the *Second tome* was not conceived *in order to* contain the theory of divine proportions. Rather, both *tomes* originated from an intellectual turn in the *Premier tome*, a work that Delorme began to understand as a larger and substantially more ambitious project than he had originally planned.

Conclusion

If historians are still struggling to understand what role proportions and proportion theory have played in the practice of architecture (beyond that of providing convenient, easy-to-memorize relations between some of the components of a building), in the case of Philibert Delorme we are at a loss. The handful of textual references and illustrations contained in his *Premier tome* are just too few, too inconsistent, and too obscure to provide a solid basis for either restitution or interpretation of his theory of divine proportions.

Yet, since the theory of divine proportions was developed (if incompletely) during, rather than before, the composition of the *Premier tome*, it offers extraordinary insights into the treatise, in which it leaves numerous traces of Delorme's own learning process and of the changes in the nature and scope of his work. Attending to divine proportions thus allows a new, more complex reading of a treatise that both Blunt and Pérouse de Montclos have so far construed as an intellectual monolith – an object unaltered, from its conception to its publication, by the process of its own making. Analysis of the inconsistencies in the references to proportion theory as well as in the choice of authoritative sources that Delorme left in his text show that, to the contrary, the *Premier tome* grew and changed as an organism during its production, following the intellectual development of its author. What began as a stand-alone book on architecture became along the way a more theoretically engaged work that reacted to and participated in the broader discourse on architecture and architectural theory of its time, and then, in the eyes of its author, became the first half of a much more ambitious project.

Notes

¹ 'Quant à moi, je confesse librement et franchement que les palais, châteaux, églises et maisons que j'ai par mon ordonnance fait construire jusques à présent, et sont par la grâce de Dieu prisées et louées des hommes, ne me semblent rien (jaçoit que les proportions y soient gardées, selon l'art de la vraie Architecture des hommes) quand je les confère et compasse avec les Divines Proportions venues du Ciel (ainsi que nous avons dit) et celles qui sont au corps de l'homme. De sorte que si lesdits édifices étaient à réédifier, je leur donnerais bien autre excellence et dignité, que celle que les hommes y trouvent aujourd'hui.' Philibert Delorme's *Premier tome de l'architecture* (1567) is available online from *Architectura: Architecture, Textes et Images* at <http://architectura.cesr.univ-tours.fr/Traite/Images/Les1653Index.asp>.

² 'Je ne me puis assez merveiller comme tant de divines mesures et proportions n'ont été connues, observées, et pratiquées par les anciens, ou par aucun des modernes.'

³ Among them, a book on machines (f. 47v), one on harbors (f. 49), a new edition of Vitruvius's treatise (f. 179v), a book on ancient doors (f. 237v), and one on ironware and door and window frames (f. 249).

⁴ See f. 139, 140, 141v, 144, 167v, 168v, and 211v for the components of the orders and f. 228, 230, 233v, 235, and 236 for the composition of elevations. According to Jean-Marie Pérouse de Montclos, the illustrations found in f. 157v, 158, 159, 160, 177, and 275 are also associated with divine proportions (Pérouse de Montclos 1988: 18 and notes 71–74) even though Delorme does not explicitly say so.

⁵ 'Ces nombres et divisions de dix, de sept, et de six,' and 'Vous vous souviendrez des nombres dont je vous ay advertis cy-devant, à fin de vous en ayder, qui sont deux, trois, six, sept, et dix.'

⁶ 'Ainsi est-il des proportions, mesures et ornements des colonnes, et de beaucoup d'autres choses de l'architecture, qui ne se pourront jamais entendre pour en donner préceptes et règles générales, ains plutôt par exemples manuels, afin de s'en savoir servir à tous propos.'

⁷ Pérouse de Montclos dedicates very short passages to divine proportions in both his commentary for the modern edition of the *Premier tome* (Pérouse de Montclos 1988: 18–19) and his monograph on the architect (Pérouse de Montclos 2000: 180–83). The citation is from the latter, at 180.

⁸ On the history of reading and the history of the book, see especially Grafton (1997) and Johns (1998).

⁹ 'Je trouve audit Plin certaines mesures, ordre et dénombrements de colonnes que je ne veux ici omettre. Quant aux colonnes, dit il, tant plus elles sont mises épaisses, tant plus elles semblent grosses. Les anciens architectes les ont divisées en quatre ordres et quatre sortes. Le premier est de celles qui sont aussi grosses au pied que la sixième partie de leur hauteur porte, et sont appelées doriques. Le second est de celles qui ont la neuvième partie de leur hauteur en la grosseur de leurs pieds, nommées ioniques. Le troisième est de celles qui ont la septième partie, ainsi que dessus, appelées toscanes. Le quatrième ordre est des corinthiennes qui ont la même proportion que les ioniques, toutefois avec quelque différence, car le chapiteau des corinthiennes est aussi haut qu'elles sont grosses par le bas.'

¹⁰ Cesariano (1521), Barbaro (1556), Bartoli (1550), Martin (1553), Serlio (1542, 1545, and 1550), Sagredo ([1536], 1539, 1542, 1550, and 1555), Vignola (1562), and Bullant (1564).

¹¹ In Book V are found 12 citations of Pliny, all of which are concentrated in the prologue and in chapters I and II. Starting with chapter III, only Alberti, Dürer, and Vitruvius are cited as sources, the latter for a total of 34 occurrences.

¹² Cf. Delorme 1567: f. 137v–40 and Serlio 1537: f. 6v–7.

¹³ For practices of citation, see Grafton 1998.

¹⁴ '[au] f. 130 p. 2 [f. 130v], vous noterez que le discours de la division des colonnes que nous y proposons est selon Plin, ainsi que nous avertissons audit lieu. Mais l'ordre dudit Plin n'est bien, car le premier ordre (ainsi que nous le décrivons aux chapitres ensuivants) est de la colonne toscane, qui a de grosseur par le pied la sixième partie de sa hauteur. Le second est de la dorique, qui en doit avoir la septième. Le troisième est de la ionique, qui

en a la huitième; et le quatrième ordre est de la corinthienne, qui doit être de huit parties et demie, et quelquefois de neuf, selon les hauteurs et lieux où on les veut appliquer, ainsi que nous le déduisons en après.'

¹⁵ Cf. Pérouse de Montclos (cited in note 4), who believes the Corinthian pedestal shown in f. 177 to be designed according to divine proportions even though Delorme never states so.

¹⁶ Cited in note 6.

¹⁷ Book V, which is 88 pages in length, contains a total of 48 citations for an average of one occurrence every 1.8 pages; Book VII, 60 pages in length, contains 22 citations, averaging one every 2.7 pages; and Book VI, 56 pages in length, contains only 10 citations, averaging one every 5.6 pages. The contrast between Book VI and Book VII is even starker if one considers that Vitruvius discussed the Corinthian order in his treatise but did not mention the Composite, and that it would be therefore reasonable to expect Delorme's Book VI on the Corinthian to have more, rather than fewer, citations from ancient literature than Book VII on the Composite.

¹⁸ '[...]la peine et fatigue que j'ai soutenu l'espace de six ans continuels, et plus, tant pour l'invention et portraits des figures du présent œuvre, que pour leurs démonstrations et explications...'

¹⁹ 'Touchant les bois pour la charpenterie et menuiserie[...] je vous renverrai à ce que nous en avons écrit et enseigné, au premier et second chapitres du livre que nous avons fait imprimer naguère, de la *Nouvelle invention pour bien bâtir et à petits frais* (lequel pour la continuation du présent œuvre vous trouverez sur la fin).' In the note to the reader at the end of the *Premier tome* (f. 285) Delorme explains that he could not do so: 'Lesquels livres [de *Nouvelles inventions*] jaçoit que j'aie promis vouloir insérer à la fin de ce présent tome, je n'ai eu toutefois le loisir de ce faire, et y pouvoir vaquer.'

²⁰ Among several other examples of revisions to the text are the unnumbered chapters called 'avertissements' or 'digressions' included between two subsequently numbered chapters that appear in Books V (between Chapters XXIII and XXIV and between Chapters XXVII and XXVIII), VI (between Chapters VIII and IX), and IX (between Chapters X and XI).

²¹ The dedication to Catherine de' Medici is dated 25 November 1567, and the foreword to the reader and the conclusion, which contain numerous references to the production and printing of the *Premier tome* and of its illustrations, must date shortly before that. As to Book IX, Delorme states in its prologue that he had initially intended for the *Premier tome* to contain only eight books but then was prompted by friends to add the ninth one ('J'avais délibéré de donner fin à ce premier tome et volume d'architecture, au huitième livre précédent, après y avoir ajouté quelque chose pour les cheminées et leurs ornements, mais plusieurs de mes amis ne l'ont trouvé bon, et m'ont instamment sollicité de faire encore un neuvième livre pour la façon des cheminées, et de leurs manteaux, ouvertures, tuyaux[...]' f. 259), thus suggesting that this was the

last he wrote. Citations of specific passages of books I, III, and IV (f. 269v, 273, 277, and 278v) found in Book IX confirm that these books were ready for the press at the time Delorme was writing the ninth one.

²² '[...]je me suis bien voulu ingérer, pour le grand désir que j'ai de faire profit au bien public et signamment à ma patrie, de mettre par écrit ce que j'ai connu de l'architecture, tant par livres que par l'expérience que j'en ai eue en divers lieux, et aussi par diverses œuvres que j'ai fait faire et conduites en mon temps. Lesquelles (Dieu aidant) j'alléguerai ci-après avec leurs façons, ornements et mesures, ainsi que les choses viendront à propos.'

²³ 'Mais je voudrais que non seulement [l'architecte] sût les quatre parties vulgaires d'arithmétique, qui sont ajouter, soustraire, multiplier et diviser, ains aussi la règle de proportion, autrement dite la règle de trois ou bien la règle dorée, pour les grandes commodités qu'elle apporte; davantage je voudrais aussi que notre architecte fût prompt à entendre les nombres rouds, appelés des mathématiciens fractions, avec les racines cubes et carrées.' See note 6 for the passage from Book VI.

²⁴ One occurrence every 3.6 pages for Book I, and one every 9.5 pages for Book II. Cf. above, note 17.

²⁵ See note 19.

²⁶ 'Il me semble rester maintenant à vous écrire comme l'on doit appliquer lesdites colonnes aux grands portaux[...] et ayant satisfait à tout cela, vous parler (pour la perfection des bâtiments) des poutres, planchers, et couvertures, ainsi que déjà vous en pouvez avoir vu quelque chose en notre nouvelle invention de charpenterie,' and 'je ferais fin à ce premier tome et volume d'architecture, comme ayant conduit nos bâtiments, depuis les fondements jusques aux couvertures, desquelles, comme aussi de la charpenterie, pour autant que j'avais fait imprimer deux livres, il y a environ six ans, sous une nouvelle façon et invention, je ne délibérais ici parler, ni moins accompagner le présent œuvre des livres susdits, jusques à ce que je les eusse revus, et augmentés d'un livre et figures.'

²⁷ For the content of the *Second tome*, see f. 133v, 150, 168, 212v, 218v, 221, 234v, 255, 262v, and 285v.

²⁸ See note 27.

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How to cite this article: Galletti, S 2014 Philibert Delorme's Divine Proportions and the Composition of the *Premier Tome de l'Architecture*. *Architectural Histories*, 2(1): 12, pp. 1–11, DOI: <http://dx.doi.org/10.5334/ah.bh>

Published: 20 June 2014

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