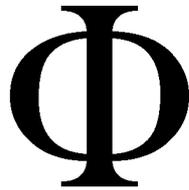


PERPETUAL PROPORTION

AN ANALYSIS OF PROPORTION IN CHURCH ARCHITECTURE

HISTORY AND THEORY STUDIES: FIRST YEAR, FIRST TERM ESSAY

SANDRA KAROLINA KOLACZ



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“Proportion is but a synonym for fitness”

Throughout the essay, the intention will be to compare and contrast, to juxtapose two buildings that immediately appear to be very much alike in their design, though upon closer inspection, under scrutiny of function, proportion, shape and form, inexplicably reveal hidden qualities that distinguish them. The most apparent distinction to be discussed is of course the centuries that set these two buildings apart; how have proportion and form in particular, developed through a period of three centuries? Why, in spite of various innovations and phases in architectural styles and doctrine, was the new church in nineteenth century South Kensington built to resemble Palladio's iconic San Giorgio Maggiore – perhaps the two are associated in other ways? Indeed, regardless of The Brompton Oratory's marginal and questionable site at the time of construction, instantly overshadowed by the positioning of San Giorgio opposite the Doge's palace, both are ever connected by the simple fact that one came before the other; that this first construction remains a success, and that the Oratory arguably owes its design to the façade experiments conducted hundreds of years prior. Also in question will be the concepts of proportion and perspective, how one influences the other subconsciously and why proportion is of paramount importance in Christian designs through the 'golden ratio'.

...

Proportion is but a synonym for fitness¹; a term interchangeable with beauty, proportion is an architecture of both fashion and isolation, ever-present and paramount in architectural faith. It exists as declared perfection in an imperfect form – established only in objects of unequal dimensions, as 'a square building has no proportion between length, width and height'². This scientific term paints and at once conceals a building with notions of apparent grandeur, a critical untruth that it may perhaps be associated with the Greek and ancient wonders of the past, a false declaration of self-importance, a parody of its own existence. It steals, disfigures and violates the archaic beauty of temples, pyramids, mausoleums. It is ironic, if not entirely tragic, that these universal patterns on the principle of layouts might render all architecture, at once, entirely common. Architecture too, true to invention and theory, must be exposed to and susceptible of evolution. How strange is it for an architect, or indeed a citizen of modern society, obsessed with observing the future, rely almost entirely on former glories and expired assumptions?

Architecture had been reduced to something of a science, 'little more than measurement'³ as soon as man learned to build beyond the immediate requirement for shelter, as an adjustment to a sedentary form of existence provoked permanent structures. Instinct had governed humanity through the process of basic constructions existing as monuments of gathered branches and collected rock – and it is entirely appropriate to associate these primitive structures as monuments - they represent an ideology spanning beyond their social history and serve as models of the architectural future. If we consider a mud hut, a product of a true 'architectural situation'⁴ - governed by the intrinsic need for shelter – we must also accept the mud hut to be a perfect model, or a standard as an original sample to be interpreted as a set of rules for construction. Likewise, examples of proportion in ancient structures have been used universally to describe something desirable, something that has noticeably improved upon and elaborated these supposedly basic dwellings, examples of architecture simultaneously long forgotten yet long replicated. In *Ten Books on Architecture*, Vitruvius too alludes to the primitive hut, 'origins of the past that authenticate the architecture of the present.. of its savage character'⁵ and Laugier still, relates it to all architecture constantly, rather than dwelling upon it in amusement as a 'purely evolutionary'⁶ process for humanity.

Fig 1. *Laugier's First Primitive Hut*

Proportion had been formerly indicative of, and directly correlated with, hierarchy – perhaps the most eminent patterns of ratio in measurements occur in the ancient temples of Greek and Roman past, illustrating a legacy of columns and arches: Roman basilicas intended for large gatherings, and myriad of buildings devoted to pleas of cultural significance so that distinguished civilisations might appear further advanced. However, somewhat disappointingly, 'the Romans,

1 Joseph Gwilt, *Encyclopedia for Architecture* (1842)

2 A.J. Bryan, *Architectural Proportion* (1880), page 6

3 Raymond, George Lansing, *Proportion and Harmony of the Line and Colour in Sculpture, Painting and Architecture; An Essay in Comparative Aesthetics* (1899), page 8

4 Michael H. Mitias, *Architecture and Civilization* (1999), page 71

5 Stephen Frith, *A Primitive Exchange: on rhetoric and architectural symbol*, essay, page 39
<<http://www.public.iastate.edu/~goodwin/eng350/vitruvius>> [accessed: 04/12/2012]

6 Hanno-Walker Kruft, *History of Architectural Theory*, page 152

rather than innovating, refined their [Greek] buildings and construction techniques... proportions that have been reinterpreted as renaissance... Georgian... and American colonial styles.'⁷ An imminent mathematical theory, coined the 'Golden Ratio' hastily arose as frail justification for the nature enclothing humanity, 'and there is man housed',⁸ having deciphered the blueprint of nature, he is perpetually equipped with a vast volume of ingredients required to create the perfect dwelling. If we are indeed to consider 'architecture as prosthesis'⁹, and the Golden Ratio had been greatly observed in nature, then perhaps a comparison of Biblical imagery, Adam adorned in a fig leaf, is not so much a juxtaposition alongside sentiments of the Golden Ratio patterned in architectural history, as it is an immediate and direct demonstration of the passive methodology on the application of proportion in architecture.

Fig 2. *Adam Adorned in Architecture*

It is inevitable then, given its persistent nature, that bare mention of an architecture student's intentions of writing an essay on the ideologies of classical architecture and ancient pasts confined to that particular geographical situation, might be met with reactionary listlessness. Too often have we fled to our ancestors, ribbed and intemperately ornamented with age, to approve our smooth façades; nevertheless, in spite of this organised crime, we continue to insult. Something about our psyche and an unrestrained understanding not of what architecture fundamentally is but consumed by what it should be¹⁰, constantly infests conversation with romantic gestures and unattainable desires. Man entangles himself within the pitiful riddle of awkwardly looking forward, yet hastily reverting to expired origins the instant the design is interrogated. This is the induction of the defect: we are so thrilled with the stature of the original examples of whatever concepts that we forget the evolution, the progress. *The first, the first, the first...*

The great parody of architecture lies in the perversion of endeavouring to 'imitate nature'.¹¹ 'Painting', Robin Evans argues, 'may have suffered vast idealization, distortion or transmogrification, but the subject... is held to exist prior to its representation. This is not true of architecture, which is bought into existence through drawing.'¹² 'To architect'¹³ denies all notions of an undisturbed truth. Architecture is a vessel for manipulation that settles in violent destruction. The act of architecture is grounded within the limited parameters of construction, of transforming sentiment to action to process, the absolute mutation from architecture to building realised upon built completion,¹⁴ as 'architecture is anything but the building.'¹⁵ Our profession, or our instincts (if instincts indeed depend on reason), are intrinsically associated with an action of gentle and compassionate expiry, manipulation and deceit, argued away and forced through the inconspicuous suggestion of proportion, disregarding the religious principles it ostensibly exemplifies: if a celestial presence had created all things and in them instilled the alluring 'Golden Ratio', it certainly did not create architecture. If all natural elements are initially perfect in their micro structures, is it not illogical to have this extensively reflected in the macro structure of a building? It is much like an element struggling to represent itself again, eventually rendered a false fabrication; wood desperate to imitate wood, stone struggling to simulate stone, brush assuming the role of brush – it is the material itself that is 'divine.'¹⁶

Like Vasari and Raffaello, Palladio considered 'everything that followed the fall of the Roman Empire... barbaric.'¹⁷ The Renaissance flattered itself with heroic notions of a revolution in architectural doctrine, that man would observe the earth through a kind of magnifying glass, avid on deciphering the enigma enveloped in surrounding environments - to truly appreciate rather than admit some 'preordained expression.'¹⁸ It witnessed 'a change in the attitude of Englishmen towards architecture; in place of a dumb acceptance of any architectural novelty there arose a desire among cultured men to inquire closely into the architecture of Italy *in situ*.'¹⁹ Society, and thus architecture alike, adjusted: humanity was now considered in the excellent image of God, once it had decided that it too is distinguished – a marked development from the former oppression of original sin and the nature of integral corruption at the epicentre of the Gothic period that had preceded it. Paradoxically, it was this moment that bound architecture further to the 'golden chain'²⁰ of proportion, as momentous windows (rectangular appeasement) permitted torrents of light to flood a volume,

7 Lorraine Farrelly, *The Fundamentals of Architecture* (2007), page 42

8 Author referencing Antoine Laugier; ('& voila l'homme loge') Hanno-Walker Krüft, *History of Architectural theory*, page 152

9 Mark Wigley, *Prosthetic Theory: The Disciplining of Architecture* (1991), page 7

10 Shereen Doummar, *History and Theory Studies Seminar Session*, (09/10/2012)

11 K. Michael Hays, *Architecture Theory Since 1968* (1998), page 194

12 Robin Evans, *Translations from Drawing to Building*' (1986), page 165

13 Doug Patt, <<http://mitpress.mit.edu/books/how-architect>>, [accessed: 01/12/2012]

14 Robin Evans, *Translations from Drawing to Building*' (1986)

15 Brett Steele, *History and Theory Studies Lecture*, (16/10/2012)

16 Thorsten Klooster and Heike Klussman, *Surfaces, Membrances and Boundaries*, BLOCK magazine, page 18

17 Antonio De Vecchi, *Architecture in San Giorgio*, <<http://www.doge.it/sgiorgio/archin1.htm>> [accessed: 26/11/2012]

18 Hanno-Walker Krüft, *History of Architectural Theory*, page 152

19 William Halfpenny, *Practical Architecture, or, a Sure Guide to the True Working According to the Rule of That Science* (1724), preface

20 William Halfpenny, *Practical Architecture, or, a Sure Guide to the True Working According to the Rule of That Science* (1724),

at once introducing a dimension of calculated shadows, and establishing theories on how a body might endure these stains, void of relevance or meaning. Palladio, human and responsive to influence, developed what would become the familiar 'Palladian window'; he used for arcades a series of round-headed openings carried on colonnettes and flanked by slender openings on either side'²¹ an analogy of harmony, pleasure in the rule of three. Palladio's window compositions were 'almost a trademark in his early career,'²² designs he had interpreted from the 'thermal baths of Agrippa, Nero, Caracalla, and Diocletian',²³ structures that used the staple arches and columns in their arrangements extensively. The independent study of Roman monuments was not, however, his only influence.²⁴ Palladio was equally interested in the writings of Alberti, who declared that one should 'take first from the mathematicians'²⁵ even in engagements of art and architecture, but particularly Vitruvius, a Roman architect and author of the treatise *De Architectura Libri Decem* in which he maintained the codification of the human anatomy, expressing that these translated proportions should be sustained in the structures of temples – 'do you not know that your body is a temple?'²⁶

Fig. 3 *A Body as a Temple*

The irony originates in the fact that Palladio's Christian churches were built precisely like Pagan temples.

San Giorgio Maggiore is situated opposite the Doge's palace on the historically glorious island of San Giorgio, signifying its inherent importance – the church too is approximated as a palace of sorts in a conflict to mirror the authentic account from across the river. It sports a fatuous dome with a diameter of 40 feet,²⁷ an architectural fad popularised in the Renaissance period due to connotations of a Roman senate which could be further justified with suggestions of unity or heavenly notions. The ceiling is free of ornamentation, an anomalous property - so as to not conceal the composition of the form - and naked vaults highlight lines of symmetry exposing the associated proportions, admired without decorated distraction in much the same way exposed wooden beams are desirable to the modern eye – they provide an insight into the construction process and the skeleton of the enclosure without abruptly interacting with it. San Giorgio Maggiore adopts the form of a Latin Cross, demonstrating symmetry through the golden mean as the ratio of the vertical counterpart to the horizontal can be attributed to the Greek letter Phi, Φ , or the mathematical constant of 1.618.²⁸ Unless proportion serves a specific function like in the example of Jeremy Bentham's Panopticon²⁹ prison design that had been optimised for purposes of surveillance, and for columns and arches to be used to increase or enable the potential span of a given structure, they are entirely criminal, it is an 'ornament disease',³⁰ despite vigorous action to defend the employment of a looming proportion, it is not to be mistaken for a flaccid lack of ornamentation as the extreme focus on symmetry it is an aesthetic in itself and operates in architectural discourse as a moderate sub-movement.

The Renaissance architects, having studied classicism thoroughly, utilised plainer proportions based on the theories of 'harmonic ratios'³¹ observed by the renowned Greek mathematician, Pythagoras, who proposed that the universe was dependent on and composed of a sequence of numbers [1, 2, 3, 4, 8, 9, 27] derived from harmonious relationships³² in music. Consequently, circles and squares that adhered to these principles became frequent presence in Renaissance design, under the pretence that a circle might be 'the most perfect structure and the sphere the most perfect solid',³³ which was to be later manifested in the trivial form of a dome. It can be, as history continues to prove, an excruciating task to lessen the grip on an all-encompassing proportion but one must, when contemplating a question of architectural arrangements, acknowledge a figure of haphazard. We must distinguish the notion of inspiration from nature, having observed it honestly, and the forceful degradation of all environment to a science, no longer resembling texture, colour, form or function but serving only as restriction to be applied upon the birth of design - "it exists, it therefore is constructed in a very specific way"³⁴

page 3

21 University of Rochester Library Bulletin, *Volume III* (1953), Number 3, <<http://www.lib.rochester.edu/index.cfm?PAGE=3415>>

22 Wikipedia, *Palladian Architecture*, <http://en.wikipedia.org/wiki/Palladian_architecture> [accessed: 01/12/2012]

23 Antonio De Vecchi, *Architecture in San Giorgio*, <http://www.doge.it/sgiorgio/archin2.htm> [accessed 26/11/2012]

24 University of Rochester Library Bulletin, *Volume III* (1953), Number 3, <<http://www.lib.rochester.edu/index.cfm?PAGE=3415>> [accessed: 06/12/2012]

25 Leone Battista Alberti, *On Painting*, editor John Richard Spencer (1956), page 43

26 The Bible Societies, Collins, *Rainbow Good News Bible*, 1 Corinthians 6:19-20

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28 <<http://www.goldennumber.net/theology/>>, [accessed: 06/12/2012]

29 Michel Foucault, *Discipline & Punish, Panopticism* (1975),

<<http://foucault.info/documents/disciplineAndPunish/foucault.disciplineAndPunish.panOpticism.html>> [accessed: 07/12/2012]

30 Adolf Loos, *Ornament and Crime* (1908), page 20

31 Renaissance Architecture, (*Part II*) <<http://explorable.com/renaissance-architecture-2.html>> [accessed: 06/12/2012]

32 David Clayton, *Harmonious Proportion and Ratio* (2009), <http://www.secondspring.co.uk/articles/Clayton_Harmonious-Proportion-and-Ratio.pdf> [accessed: 04/12/2012]

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34 Architects, *On Understanding the Principles of Design and Nature* (Infinite Future and Indefinite Past)

The fathers of the London Oratory held a competition in 1877 to determine the most suitable church design at a site in South Kensington, listing but two requirements: the style was to be 'that of the Italian Renaissance', to emulate the architectural customs prevalent throughout the history of their founding brother, Saint Philip Neri, 'and the sanctuary, at least sixty feet deep, was to be the most important part of the church... especially the altar and tabernacle should stand out as visibly the great object of the whole church.'³⁵ The two designs most favoured by the Oratory fathers were remarkably similar to each other and to the church of San Giorgio Maggiore – it appears that 'Italian Renaissance' for them, and many alike at the time, had immediately summoned connotations of a particular building in Venice, apparently the all-embracing pinnacle of Renaissance church design. But this is not surprising: 'it was due to the energies of the cultured amateurs who devoted time and money for the extension of archaeological research'³⁶ that sparked the revival of the Palladian style. Inigo Jones is universally known as one of the first British architects to have found a model in Palladio and together with Lord Burlington, they fostered a revival of the Palladian ideal to architecture through an extensive collection of drawings by Palladio and the antique; a direct consequence of which would be the gradual transformation of the British landscape into a collection of antiques itself. The introduction of Palladian principles to British architecture were so imposing that that almost every modern structure is plagued with his influence. The Brompton Oratory, inconspicuous in its device is striking in its resemblance to Palladio's San Giorgio Maggiore.

Fig 4. *A Comparison of the Façades of Palladio's San Giorgio Maggiore and Gribble's Brompton Oratory*

It is evident that Gribble had taken many inspirations from San Giorgio Maggiore, Palladio's 'most prestigious ecclesiastical project'³⁷: the tripartite arrangements, boast shameful resemblance and a sinful self-indulgence: unlikely proportions, disproportionate windows, exaggerated – particularly in San Giorgio – high order and geometry, the monumentality of columns and raised bases, like a giant in heels. A laboriously carved showpiece façade, (Palladio's persistence in the application of antique influence to architectural design) is composed of two intertwined temple pediments, a suggestion wealth and culture fatigued by the familiar, decrepit Romanesque vessel. But beyond this impression exists a grand nave intended to urge visitors into the centre of the church which, like the mausoleums it had been long modelled on, served as a congregation space and exists as stark contrast to the darker, isolated aisles immediately encasing it. The system enabled a circulation which focused heavily on drawing visitors towards the front of the church, where the dome is present in both San Giorgio and the Brompton Oratory. There are subtle differences relating to localised climate between the designs; South Kensington, crippled by the grey, English blanket, experiences significantly less sunlight than Venice and thus windows are introduced within the façade where there are none in San Giorgio Maggiore – it is perhaps for this reason that Andrea Palladio's windows are renowned: the passage of light in an otherwise indistinct aisle contributed to the elegance of the innate symmetry intrinsic to his architecture. Despite Palladio's menacing success, 'described as perhaps one of the most famous among the architects of the renaissance'³⁸ he had also met an eminent degree of criticism, most notably, John Ruskin regarded, 'to my mind a very corrupt form of architecture and very ugly, half Greek Temple-ish and half anything else you like, the inside heavy and unimpressive..'³⁹

A nonsense architecture of perpetual proportion, or indeed, a nonsense formula, for proportion does not belong to architecture and it does not belong to science at such basic understanding. What is the use in a routine of observation and declaration? If this were the true practice of architecture it would be realised in a single pocket book and the title 'architect' would be applied to any person in possession of the pocket book – the architecture school, a building, would be confined to the feeble walls of this pocket book.⁴⁰ Revisit preconceived notions on the materiality of proportions and compare them - properly - to the human body as Vitruvius had intended; it is like examining the genetic structures of citizens to determine compatibility, when the most natural route, the shortest route, would mean to grasp an outstretched hand and introduce yourself. We need to steady ourselves from the pull of convention, the omnipresent proportion, the nowhere architecture; as architects we are instilled with the obligation to constantly question, to ask ourselves. 'Let us suppose that a valid conception of an ideal building is possible, is it relevant to the construction of architectural works

35 F.H.W. Sheppard, *Survey of London: volume 41: Brompton* (1983), <<http://www.british-history.ac.uk/report.aspx?compid=50008>>, [accessed: 07/12/2012]

36 Sir Albert Edward Richardson, *Monumental Classic Architecture in Great Britain and Ireland* (1914), page 1

37 RIBA, *Palladio and Britain* (2011), <<http://www.architecture.com/LibraryDrawingsAndPhotographs/Palladio/AndreaPalladio/PalladiosBuildings/PalladiosChurches/SanGiorgioMaggiore.aspx>>, [accessed: 26/11/2012]

38 Ultimate Italy, *Andrea Palladio*, <<http://www.ultimateitaly.com/culture-antropology/andrea-palladio.html>>, [accessed: 07/12/2012]

39 The Churches of Venice, *Comment made by John Ruskin*, <<http://www.churchesofvenice.co.uk/giudecca.htm#sangiorgmagg>>, [accessed: 01/12/2012]

40 Ema Hana, *History and Theory Studies Seminar Session*, (09/10/2012)

that reveal the essence of building and consequently human dwelling?'⁴¹ Proportion, after all, is not so synonymous with beauty that the two should be interchangeable. It exists as a scientific word, expressing the relationship between two objects and not their relationship with man; we cannot be attracted to proportion, only the direct effects of proportion – this is why we can associate it, particularly in architecture, with the unnatural.¹

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Fig. 1

Image of Laugier's first primitive hut

<<http://www.andfestival.org.uk/mobilepublic/caravans/artists-residency/>>

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Fig. 2

Lucas Cranach the Elder (c.1472–1553), *'Adam and Eve'* (1526). Oil on panel, 117 x 80.5 cm, Courtauld Gallery, London

With a golden rectangle overlaid source: <<http://photos.tonebytone.com/GoldenRatio.php?>

[accessed: 07/12/2012]

Fig. 3

Photo of a body as a temple

<<http://www.bellamumma.com/2012/07/10-ways-to-love-your-body.html>>

[accessed: 07/12/2012]

Fig. 4

Photo of the Brompton Oratory from the Brompton Oratory Church website

<http://www.bromptonoratory.com/Oratory_Home.html>

[accessed: 07/12/2012]

Photo of San Giorgio Maggiore by Nicholas Zembashi (given to me for the project)