

Drawing on drawing:

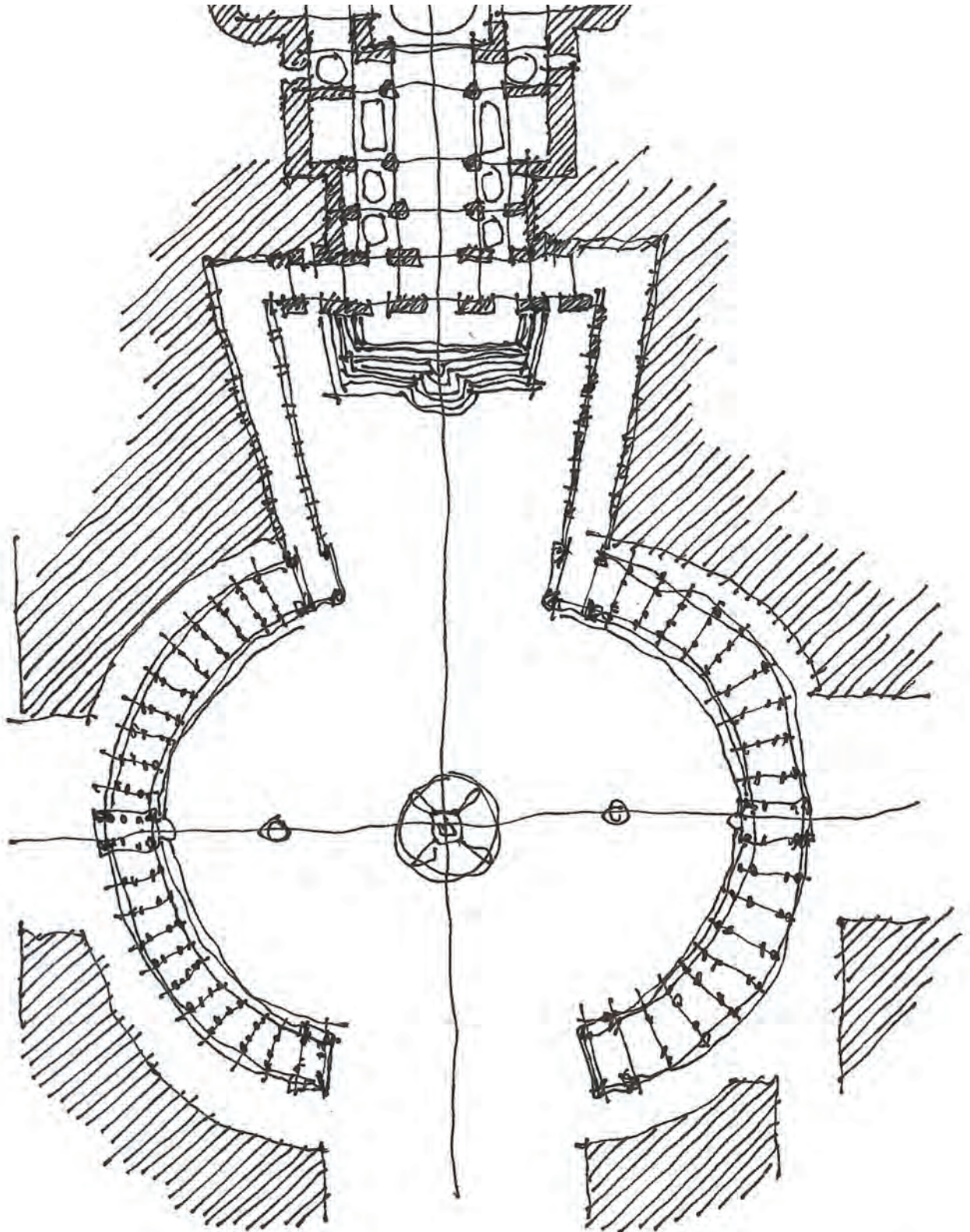
a grand tour through the cradle of Western architecture to reconnect with the power of the hand-drawn line on imagination and learning

Byera Hadley
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David Holm

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St Peter's Rome Italy



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Byera Hadley, born in 1872, was a distinguished architect responsible for the design and execution of a number of fine buildings in New South Wales.

He was dedicated to architectural education, both as a part-time teacher in architectural drawing at the Sydney Technical College, and culminating in his appointment in 1914 as Lecturer-in-Charge at the College's Department of Architecture. Under his guidance, the College became acknowledged as one of the finest schools of architecture in the British Empire.

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David Holm was awarded the Byera Hadley Travelling Scholarship in 2003.

Cover: St Peter's Rome from *Drawing Italy*.
Illustration by David Holm.

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This project aimed to explore the intangible connections between observing, drawing and an architect's imagination. It resulted in the publication of two illustrated works by the author: Drawing Italy and Drawing Paris.

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1

Introduction

The purpose of this scholarship is to explore and encourage the act and skill of drawing and its value to the architect. The origins and value of the 'Grand Tour' as undertaken by many generations of architects and artists seeking fresh inspiration by way of travel, pilgrimage and observation is defined, reviewed and assessed. The selection of Italy as the study focus is assessed, defining its value as a geographically compact crucible of Western Architecture representing many of the icons of architectural development since the 6th century BC.

This study analyses why, we as architects, draw; considering the analysis of precedent, the drawing of record and the communication of the imagined. Understanding the differences and connections between observing and imagining is fundamental to the architect's ability to communicate.

This research explores the connection between ideas and drawing and the expression of the imagined into communicable forms, defining the connections between observation and perception, ideas and drawing; key to understanding the psyche of the architect. Design, which, by another name is called drawing... is the font and body of painting, sculpture and architecture...the root of all sciences.¹

Informing the research is a series of interviews with seminal architects currently practicing in Sydney. These architects offer a diversity of opinion and experience on the value of drawing to an architect, as well as the connection between the observed and the imagined. Full transcripts of the interviews are included as an appendix.

Following the development of academic research, field verification occurred in Italy in October and November

2004. The purpose of this work was to analyse the long list of sites that could form the basis of future study tour packages. This has been distilled into a compact itinerary, developing into a valuable study tour agenda. A full itinerary, including abstracts and visuals of each building or built form visited, were assembled into a booklet that forms an appendix to my submitted Byera Hadley Travelling Scholarship report. Hopefully, this report may also stand alone as a reference for other architects travelling through Italy. As a benchmarking process, I have also explored other available study tours which offer similar curricular benefits. These are included in the appendix.

The establishment of a regular study tour of secular and non-secular Italian architecture would be the primary outcome of this scholarship. The tour format could be an accredited elective study within architecture and design faculties of NSW universities. It may also constitute professional development program or simply be taken as a 'stand alone' exercise by other interested parties. Such a program would support Byera Hadley's own view of the purpose for this scholarship: "...encouraging architectural studies for graduates and students through travel and overseas experience, and for the advancement of architecture..."

It is my belief that the skill of the architect to observe and analyse, imagine and communicate is fundamental to our success and community standing. An ability to draw, as a channel for expression and communication, has always been an essential part of the architect's skill set. This aim of this scholarship is to reinforce these skill sets.

1. Michelangelo, 1584, Michelangelo to Matisse: Drawing the Figure, AGNSW, 1999, p. 25

CHAPTER 1

THE GRAND TOUR

The idea of the pilgrimage dates from the ninth and tenth centuries. People would free themselves for an unspecified time from professional and family ties and set off for the Holy Land in order to visit one of the sites, often Jerusalem, which according to the Bible had connection with the life of Jesus. Once there, they would confess and declare all sins.

The pilgrimages, combined with the attempts to free the Holy Sites from the rule of the heathens, led ultimately to the crusades. John Mandeville describes his participation in a crusade (1356-57) in a form which was the first example of a travelogue in its own right, travel having hitherto been a theme of literature, an adventure which carried the plot in a number of different epic poems and novels.¹

Those who found a journey to the Holy Land too difficult, or a crusade too dangerous, looked for somewhere closer to home where they could show their willingness to repent, Rome for example, where the Pope as God's representative here on earth could grant absolution. The absolution business, as a symptom of the corruption in the Church, was one of the factors which triggered off the Reformation in the C16th, which was based on the humanistic criticism of the worldly power of the Church.

One could claim that the impulse to break out of the daily routine, casting off the chains of family-life and the need to earn a living, was sanctioned in a pilgrimage by the idea that in order to do penance for sins it was not sufficient just to truly regret having committed them or simply be repentant; some form of active repentance was required, some activity which required one's strength and commitment. Leaving the security of the home in this era was a virtually incalculable risk and travel was difficult and dangerous except for those who were travelling as personal messengers and envoys in the service of the nobility, therefore making use of the privileges of the nobility.

The fragmentary experiences of merchants and pilgrims, which were handed down, and the knowledge of the tracks they followed in their undertakings all facilitated the general mobility of the first people travelling for pleasure and educational purposes in the sixteenth century. The first travel guides and travelogues repeated more or less the structures of older instruction pamphlets written by merchants and pilgrims.

In 1536 the jurist Johann Fichard from Frankfurt was sent to Northern Italy to serve in the army of the German Kaiser and then travelled around the country and south to Naples. He was interested in art, primarily in the Greek and Roman monuments. He was probably not the first person to do this but he was the first to leave behind something approaching a coherent journal about his travels. After spending two years in Italy he returned to Frankfurt in 1538. His

¹ Sir John Mandeville, *Mandeville's Travels*, London, 1357(?). Malcolm Letts, *Sir John Mandeville: The Man and his Book*, Batchworth, London, 1949. Josephine Waters Bennett, *The Rediscovery of Sir John Mandeville*, Modern Language Association, New York, 1954. Donald Roy Howard, *Writers and Pilgrims: Medieval Pilgrimage Narratives and Their Posterity*, University of California Press, Berkeley, 1980. Christian K. Zacher, *Curiosity and Pilgrimage: The Literature of Discovery in Fourteenth Century England*, Johns Hopkins University Press, Baltimore, 1976.

writings were not published until three hundred years after his death in 1581 but copies of them were in circulation during his lifetime.²

The first guidebook to Italy, fifteen pages in its entirety, was published by a Frenchman, Jacques Signot in 1518. He lists the ten passes through the Alps from France to Italy and divides the guide into the different provinces.³

In 1563 the timetable of mail coaches by Giovanni da l'Herba, which included details of the places in the larger cities of Italy, was published.⁴

Whilst these works had only minor influences, the basis of all further publications of this kind was the *Descrizione di tutta l'Italia* by a Dominican monk from Bologna, Leandro Alberti, published in 1550.⁵

Travel as a form of education or even for its own sake, the "pleasure trip", was a result of the secularisation of the pilgrimage, itself a consequence of the revolution of ideas in Christian Europe sparked off by humanism, the Reformation and the Renaissance. Prior to this, the impulse had always been latent.

Thirst for education cannot be the sole explanation for the stream of travellers who poured into Italy from the sixteenth century onwards. It was linked to a general appetite, the irrefutable need to do something against general satiation with life, against the boredom, the whole syndrome of melancholy, which motivated above all the English and the French nobility and, to a lesser extent, the German nobility to go on what were known as gentlemen's tours.

Why Italy? Italy, it would seem, was the only European country which could provide all the justification needed for the new fashion of travel for its own sake. Here people could update their humanist education in its birthplace, and see the monuments of the Greeks and Romans with their own eyes. The variety of city states, and thus forms of government, was coincident with the colourful variety of urban configurations. Importantly also, Italy was the most developed, refined and civilised of all the countries on the continent.

Sons of noble families, but also young men from wealthy bourgeois circles, were given a teacher by their parents to accompany them on their gentleman's tour and help to organise and comment on the journey. The individual "tour", which was a kind of guided tour, during which a few stops would be made in France or sometimes in Germany before crossing the Alps, was an English invention and similarly mass tourism was also invented by the English, though not until the nineteenth century.

"The fact the young people travel in the care of a teacher or a reliable servant is something I highly approve of, but the young person in question must master the language... What has to be seen and carefully observed are royal courts... secular and religious courts... churches and monasteries and the monuments preserved in them; ramparts and fortifications... and

² Johannes C. Fichard (1512-1581) in Paul Krontorad, "Broadened Horizons: The Paradigm of Travel in Italy", in Nicolini, Pierluigi (ed.), *Lotus 68: The Eye of the Architect*, quarterly review, 1991.

³ Jacques Signot in Paul Krontorad, "Broadened Horizons: The Paradigm of Travel in Italy", in Nicolini, Pierluigi (ed.), *Lotus 68: The Eye of the Architect*, quarterly review, 1991.

⁴ Giovanni da l'Herba, 1563 in Paul Krontorad, "Broadened Horizons: The Paradigm of Travel in Italy", in Nicolini, Pierluigi (ed.), *Lotus 68: The Eye of the Architect*, quarterly review, 1991.

⁵ Leandro Albert (1479-1552(?)), *Descrizione di tutta l'Italia*, Giaccarelli, Bologna, 1550. *The Catholic Encyclopedia*, The Encyclopedia Press, 1914.

also harbours and wharfs; antiquities, ruins, libraries... treasure chambers full of jewels and state robes, museums for works of art and finally everything which is outstanding in a place..."

Francis Bacon⁶

The country which Giovanni Antonio Magini in a four-volume work published in 1620 called *Un compendio di tutta l'Europa, perché tutte le cose nell'altre provincie si ritrovano felicemente raccolte in lei*, which a century later was for Charles Thompson *The Great School of Music and Painting*, was to be reached then (as now) via the major passes over the Alps.⁷ For the French, Italy began after crossing Mont Cenis into Piedmont. For the Germans after the Brenner Pass, and for the English, depending on whether they had included a detour to Heidelberg or not, via either pass.

It was always important to visit Venice, a sight which satisfied a sense of the extraordinary rather than the desire for education; on the way to Rome it was important to visit Loreto. A longer stay in Rome was the done thing, even if it was connected with the risk of catching the fevers which came in from the Pontine Marshes. A visit to Naples offered the opportunity, not merely of getting to know the art and culture of the harbour town but also, of experiencing luxuriant vegetation, an "earthly Paradise," which in the case of the Phlegraean Fields with their sulphur springs also provided a taste of hell.⁸ Bologna was an important junction where the traveller had to choose between various different routes to Rome.

In the hierarchy of cities to be visited Florence, Milan and Genoa came next followed by Turin. Or in terms of the regions of Italy: Veneto, Emilia Romagna, Tuscany, Lombardy and possibly Liguria and Piedmont were the favourite provinces. Umbria, Apulia, Calabria and the islands of Sardinia and Corsica were virtually ignored. On the voyage to Malta the enterprising traveller would perhaps stop off in Sicily, but generally trips by sea were avoided, the most common means of transport being the mail coach.

Even in those days a passport was required at many of the border crossings and in Italy a certificate of currency that one did not have any contagious diseases. In the eighteenth century it was best to have two certificates: one testifying good health and the other testifying illness, because sick people who had a certificate to this effect were allowed to eat meat during Lent.

What was still an adventure in the sixteenth century, developed in the seventeenth and particularly in the "Golden Age of Travel" in the eighteenth century into more than merely a luxury, a cure for the "Acidic," the numbed senses; for painters and architects it was a professional must. English, Dutch and above all German painters had to perfect their skills in the place where the greatest art treasures originated. One of the reasons for this was that a large number of the nobility travelling in Italy had been such ardent collectors of works by the ateliers of painters and sculptors in the service of the Popes and the secular rulers of the principalities formed from the city states.

⁶ Sir Francis Bacon (1561 – 1626), *Essays of Francis Bacon or Counsels, Civil and Moral*, 1601 (specifically Essay XVIII "Of Travel")

⁷ Giovanni Antonio Magini, *Un compendio di tutta l'Europa, perché tutte le cose nell'altre provincie si ritrovano felicemente raccolte in lei*, Venice, 1620 (published posthumously by his son, Fabio Magini). Charles Thompson, *The travels of the late Charles Thompson, esq: containing his observations on France, Italy, Turke, and Europe, The holy land, Arabia, Egypt, and many other parts of the world*, J. Newbery and C Micklewright, London, 1744.

⁸ John Milton, *Paradise Lost*, Simmons, London, 1669. William Riley Parker, *Milton: A Biography*, 2 vols. 2nd edition revised Gordon Campbell, Clarendon Press, Oxford, 1996.

Until the nineteenth century there was no alternative to Italy for the “educazione sentimentale”, for the education of the senses. The printing of books and copper etchings ensured that the content of this Italian education could be disseminated and made accessible to others, however, there was no substitute for actually experiencing Italy at first hand and the flair of the country has in no way diminished.

From a purely documentary point of view (for instance as a record of surroundings and buildings that are inevitably subject to change or to the ravages of time), the landscape sketches and travel notes of an architect are worthy of attention. This is especially true when one is dealing with ages prior to the invention of photography, when the opportunities for travel were also very different from the present. Giovanni Battista Piranesi, today largely unknown as an architect, is famous for his views of Rome that depict an entire lost world.⁹

The travel sketches of architects are also valuable for what they tell us about their character and preferences, about the characteristics or the artistic personality of the people who made them. This is not a question of personal background, talent, or cultural inheritance, but also a reflection of their desire to change the world. Just as they present speculation of utopian features to the juries of competitions or to potential clients, in order to convince them of the validity of their projects, architects also convey their aesthetic ideals in sketches of the monuments that they have occasion to admire during their travels.

Le Corbusier [1887 – 1965]

‘I prefer drawing to talking. Drawing is faster allowing less room for lies’.

Le Corbusier (1961)¹⁰

Le Corbusier travelled through Italy in 1907 with Léon Perrin. During a stay in Vienna in 1907-08, Le Corbusier was particularly disturbed by his observation that the contemporary architecture of his own day seemed to have lost its *raison d’être*.

Writing from Cologne before leaving on his trip, Le Corbusier, faced with the triteness of the Modern he had seen and experienced in Germany wrote:

“Recently, you have evoked, majestically, the great attraction of the Latin and Classical light... In these months, my spirit is as open to the comprehension of the Classical genius as my dreams, which have carried me yonder obstinately. Isn’t it true that our entire epoch looks more than ever toward those blessed lands where glistening rectilinear marbles, vertical columns and parallel entablatures stand along the line of the sea? Now the chance has come; my dream becomes reality. To cap a life of study, I am planning a great trip...”

Le Corbusier letter to William Ritter (1911)¹¹

⁹ Luigi Ficacci, *Giovanni Battista Piranesi: Complete Etchings*, Benedikt Taschen Verlag, Cologne, 2000. John Wilton-Ely, *Giovanni Battista Piranesi: The Complete Etchings*, Alan Wofsy Fine Arts, San Francisco, 1994.

¹⁰ quoted in *Envisioning Architecture: Drawings from the Museum of Modern Art*, p68

¹¹ Ch. E. Jeanneret, *Letter to William Ritter*, Neubabelsberg, 1 March 1911, AFLC.

Le Corbusier's travel sketchbooks for the period 1910-1911 have survived and are now well preserved. These sketchbooks take the form of six notebooks or carnets. The carnets were conceived as instruments to "interrogate" history and force it to disclose the secrets of practice, craft, and forms. The fourth carnet is devoted to Pompeii, Naples, and Rome and covers the period October 5-20, 1911. The sixth carnet documents the last days of his journey from his arrival in Florence (October 26, 1911). Le Corbusier's notes begin with a detail of the paintings of Piero di Puccio in the Camposanto of Pisa and include the famous sketches of the Certosa of Ema in Florence. They conclude with additional notes on Pisan monuments.

What distinguished Le Corbusier's journey from those of his contemporaries at the Ecole and from the tradition of the Grand Tour was precisely his awareness of "being able to begin again". Time and again, this notion stands out in the pages of his notebook. The notes, the sketches, and the measurements were never ends in themselves, nor were they a part of the culture of the journey. They ceased being a "diary" and became design exploration and interrogation. To know how and why architecture is made is to design it repetitively. He viewed the camera with a suspicion suggested by the diffidence he reserved for "those who looked without seeing".

The peculiarities he discovered were noted as typological characteristics that conferred uniqueness on a place: the small size of certain constructions that wise design endowed with an effect of vast space, far vaster than they actually were; the unity and uniformity of materials; the confirmation of a simple geometry that governed architecture universally and led him to exclaim:

"I love geometric ratios, the square, the circle, and the proportions of a simple and distinctive harmony."

Le Corbusier was not merely interested in Rome, Florence and Pisa as cities but as places in history, in a history of which he felt himself a part. They were only accumulations of knowledge, texts to be interpreted. Within them there was no room for people or for curiosities other than forms and spaces, "and this was for me as if the veil of my temple had been torn apart".

Gunnar Asplund [1885 - 1945]

Gunnar Asplund's trip to the interior of Sweden in 1906 showed him to be an attentive observer of "popular" architecture rather than of the great and famous monuments of the past. His notebooks reveal an almost obsessive interest in any kind of metalwork connected with architecture and the sketch series abounds in railings, gratings, doors and decorative details.

Asplund arrived in Italy at the end of December 1913. The differences between the journey made by Asplund and the "Grand Tour" of the academic tradition are noteworthy. Asplund was already twenty-eight and had set up his own practice. It was no prize or grant that made the journey possible, but the earnings from his work, hence he had the freedom to choose his own itineraries and destinations. Asplund's "little" Grand Tour of the Mediterranean was confined essentially to Italy.

Asplund began making sketches on Italian architecture in Rome, where he stayed for about a month. During his first Roman sojourn, Asplund studied and drew some of the major monuments of the city including the Baths of Constantine, St Peter's Basilica, Castel Sant' Angelo and Santa Maria della Pace. He also visited many museums, including the Museo delle Terme.

Asplund left for Sicily, arriving in Palermo in February, then travelled on to Monreale, and on to Agrigento. He travelled from Agrigento to Castrogiovanni, Syracuse, Catania, Taormina and Cefalù. Asplund returned to Palermo in March to visit the Museo Nazionale before embarking to Tunis, where he stayed for a week. He went to Pompeii, Rome and Assisi, then Perugia, Siena, San Gimignano, finally reaching Florence in mid April. The three weeks he remained in Florence provided him with an opportunity to study the fine examples of the Tuscan Renaissance. He went onto Bologna then Ravenna and Venice. Towards the end of May 1914, after having seen Vicenza and Verona, he returned to Venice.

The most substantial account of Asplund's Italian trip is just over three hundred sheets of paper bearing drawings, sketches, annotations, figurative portraits and a wide variety of subjects. He brought back an enormous quantity of picture postcards from his journey, more than 800 in total, which constituted one of his major travelling expenses. The photographs and postcards reproduce the most celebrated monuments of Italy, along with the most renowned works of art, including both paintings and sculptures. Asplund's interests were not exclusively architectural. In both the collection of postcards and the drawings, the number of architectural subjects is matched by those relating to painting or sculpture.

The relationship between the travels and projects of Gunnar Asplund has been fundamental to an understanding of his architecture. It would be impossible to explain a great deal of his work without taking into consideration the journey to Italy that he made in these first months of 1914. The influence of places and monuments that he visited on the architecture that he was to produce in the future may include;

- influence of an entrance court in a Palermo palace on a similar solution adopted in one of his later projects for the Central Courts in Göteborg, Sweden
- origin of the ornamental motif in the grand entrance of the Sölvesborg Law Court in Sweden in a sketch made at Pompeii
- the "Way of the Cross" from Pompeii's street of tomb's figures included in a competition entry for a large southern cemetery in Stockholm

Other examples indicate general resemblances, influences and connections between Asplund's architecture and a model of the Mediterranean vernacular. What Asplund was looking for, in the course of his journey through Italy, was something that was to leave a permanent mark on him and his architecture and that went far beyond a question of "styles".

"... Tunis, this is the most amusing I have come across in the twenty-eight years of my existence! Not as a town of art, but for its outstanding gay and lively character... Above our heads a sky clear and deep the like of which I have never seen, such a tone in the colour that I am constantly imagining the sky as a vast blue-painted dome."¹²

For Asplund, the remains of Pompeii and Paestum, the ruins of Sicily, were inseparable from the landscape that surrounded them: They were no longer fragments of a broken unity, and did not require reconstruction or interpretation.

¹² As cited in Luca Ortelli, "Heading South: Asplund's Impressions", in Pierluigi Nicolini (ed.), *Lotus 68: The Eye of the Architect*, quarterly review, 1991, pp.23-34.

At Syracuse in February 1914 he noted that:

*"The Greek theatre is imposing in effect and size. The same fine gravity as the temples. The key to it all is the open space with the heavens above, all seats assembled around the stage, the plain and the sea. A simplicity of conception and great unity with the purpose and meaning binding all, to give it architectural fullness..."*¹³

Alvar Aalto [1898 - 1976]

The sketches of Alvar Aalto only partially correspond to this model of using travel sketches to record aesthetic ideals. In Aalto's sketches there is a dichotomy between two vocations, that of painting and that of his chosen career of architecture. For Aalto his travel sketches, like all those connected with his architectural projects, were not works of art to be conserved, and thus he scattered them around without much thought. Drawing for Aalto was merely the means to the end. An exploration tool to explore design.

Examining Aalto's travel sketches, one is immediately struck by the intense concentration on nature: its organic forms, its tendency toward a state of harmonious but complex equilibrium, and its fundamental link with the sense of orientation and capacity for structuring innate in human beings.

Aalto's methods of giving form to space move away from geometrical conceptions to a non-perspective manner as he was influenced by the revolution against central perspective that had taken place in modern painting.

Another aspect of Aalto's travel sketches worthy of consideration is his interest in the spontaneous design of towns and villages, especially in mountain areas. This tendency was noted by a number of architects travelling with Aalto. Architect Francisco de Asis Cabrero noted that Aalto's "attention was reserved for the constructions of our provincial towns, for their details, fabric, and three-dimensional forms".

"One is disconcerted by Aalto's complete lack of interest in any type of architecture that takes a different direction from his own. He does not care whether it is beautiful or ugly, modern or ancient, he simply does not see it... On the contrary he observes the details that might enrich his own plastic themes: an abstract shape marked out by the rays of the sun or the effect of a whitewashed wall in a barren rocky landscape."

Architect Miguel Fisac¹⁴

Whilst Aalto's drawings of record are less accurate than others, they are highly personal and commune an exploration of ideas. Aalto drew to explore his ideas and probe the reality of what he observed.

¹³ ibid

¹⁴ As cited in Göran Schildt, "The Travels of Alvar Aalto: Notebook Sketches", in Pierluigi Nicolin (ed.), *Lotus 68: The Eye of the Architect*, quarterly review, 1991, pp.35-48.

Louis I. Kahn [1901 - 1974]

The graphic art of Louis I. Kahn is much more than a collection of architectural drawings or the simple record of an architect's travels and designs. It is made up of objects that are intense works of art themselves because Kahn made them solely for themselves.

While they can never have been wholly divorced from his early career attempts to design architecture during the thirties and forties, it is obvious that he did not see them primarily as means towards architectural results until the latter part of that period. In fact, except toward the very end of their sequence, they have very little to do with Kahn's buildings. By the early fifties, when they finally achieve special architectural relevance and power, and prefigure the new, great architecture of Kahn's late maturity, they cease.

Kahn's travel sketches fall into three major groups, each marked by its own special material and techniques. The first group is of the late 1920s and continues with force throughout the 1930s. The sketches of this era consist of eminently pictorial material, scenes of landscape and architecture brushed in watercolours or smudged out in the broad strokes of Kahn's famous soft carpenter's pencils.

The second group of sketches appears directly after World War II and Kahn's motifs, materials and techniques herein have been strikingly altered. Shapes are focused on, mostly abstract and drawn in black and white with scratchy pen lines and flat inked planes. The last major group appears from 1950-51. The most dominant medium is now pastel and the subjects involve the primary historic architecture of Italy, Greece and Egypt.

The whole series from 1928 to 1955 is an instructive demonstration of the process of tradition, influence and invention at work in form. Groups one and three were both the result of trips in place and time back to the foundations of western art in the Mediterranean area; the first in 1928-29 and the final in 1950-51. During Kahn's first trip, the clear, light-edged planes in his studies of San Gimignano's towers, so central to his later work, and his Impressionist reaction to the reflections of Venice is not unusual but what is surprising is the Art Deco character of most of his drawn works.

It is obvious that Kahn, like many other American architects in the 1940s, felt the need to jettison his whole artistic past and start anew; similar to the thoughts of Le Corbusier. Kahn's drawings dramatically show how traumatic and, at least for a time, deeply destructive that act was for him. The most influential architects and critics of the entire world were telling him that everything he had done before was utterly worthless and that he was now required to achieve weightlessness and abstraction. He had to turn himself inside out and float.

A key break for Kahn came in 1950 when he was appointed a Fellow of the American Academy in Rome and was now able to travel around the Mediterranean once more with greater ease. These trips brought him back to an architecture of a more timeless kind. It took him from the urban squares of Italy to the columns in the landscape of Greece and to Egypt's pyramid groups. Now it was not the picturesque folk architecture, as on the first trip long before, but the big stuff, the heavies, that he focused on. Forms measured by light became Kahn's focus for observation and was the signature of his built work, especially in the latter part of his career.

It Italy his pastel of *Assisi* suggests a return to the broad strokes of the carpenter's pencil he had employed during the first trip, but he generally turned toward broader planes of colour defining strictly rectangular more urban zones. Kahn's *Rome* is a pastiche after De Chirico, but his pastels of Siena, though recalling the surrealist emptiness of De Chirico's dream squares, are more purely his own. The colour is aggressive and sometimes mournful; the Tuscan sheathing of green and white marble prefiguring some of his later architectural details, is adrift in dark piazzas. Blood-red shadow splashes Siena's yellow Campo like a flood of pigment from its own red bricks, while the towers stand in soft green evening light beyond.

In Venice the conventional Impressionism of the first trip becomes late Monet, as enormously scaled strokes of colour shape a visual reality suggestive of the original model but with a monumental structure.

For Kahn, the essential process of observation and drawing had culminated in 1951. This trip effectively broke the hold of International Style weightlessness and sanctioned the Kahn's exploitation of geometric abstraction, which he had also perceived as part of the International Style. That was the moment when the first monumental architects of the Mediterranean world broke through to him and set him on his way.

Alvaro Siza [1933 -]

The seminal, contemporary Portuguese architect uses drawing as a means of exploring design and the ideal contemplation in a foreign location.

No drawings give me as much pleasure as these: travel sketches.

Travelling is trial by fire, individually or collectively. Each of us leaves behind a bag full of stress, tedium, preoccupations and preconceptions.

Simultaneously, we lose a world of small comforts and the perverse attraction of routine.

Travellers, intimate or strangers, are divided into two types: admirable or insufferable.

A good friend truly suffers as the world is vast.

We may never again allow ourselves a repeat visit; he leaves nervous, strained, with his eyes popping out of their sockets.

I myself like to sacrifice many things, to see only that which attracts me immediately, to pass by chance: without a map and with an absurd sensation of the discoverer.

Is there anything grander than sitting in an esplanade, in Rome, at the end of the afternoon, experiencing anonymity and a drink of exquisite color – monuments and monuments to see while laziness advances softly?

Suddenly the pencil ... begins to fix images, faces in the foreground, faded profiles or luminous details, the hands which drew them. Lines, at first timid, rigid, lacking precision, later obstinately analytical, at moments vertiginously definitive, free until drunkenness; later tired and gradually irrelevant.

*In the space of an authentic journey, the eyes, and by means of them, the mind, gain unexpected capacities. We perceive in a non-mediated way. That which we learned reappears dissolved amongst the lines which we later draw.*¹⁵

Siza believed and pursued the idea that objects drawn will be stored and reworked in later design endeavours. This theory of recording and retention forms a cornerstone in the link between observation drawing and imagination.

The Australian Perspective

It would appear that a number of contemporary architects practising in Sydney Australia would agree with the benefits of the grand tour. The predominance of architecture degree courses in New South Wales and indeed Australia are double phased in their structure. Courses often start with a Bachelor of Science in the early years [say years 1 to 3 inclusive] and are then followed by a Bachelor of Architecture in the latter years [say 4 to 5] to achieve a full degree allowing subsequent professional registration. This split of courses is not required to be finished or taken consecutively and as such many students take the opportunity for at least a years break between degrees. This break has almost become a cultural right to find oneself and indeed establish whether the pursuit of architecture is in fact one for life commitment.

Ken Woolley the former Royal Australian Institute of Architects [RAIA] gold medallist and Byera Hadley scholar took this break over 18 months and included travel and 7 months of working in London. He notes that Arthur Baldwinson of the University of Sydney gave him a reference to meet Gordon Cullen of the Architecture Review in London primarily based on his drawing skills. This introduction led to a job so by default drawing was an entrée to overseas work and further experiences. Ross Bonthorne the principal architect of the Lend Lease Design group sees travel and study tours as a continued lifetime activity, always gathering and learning. Richard Francis – Jones former president of the NSW RAIA notes that only following these trips did he form a greater understanding of and a commitment to architecture as a professional endeavour. His earlier visits clearly held the biggest impacts with those subsequent still fulfilling more diverse experiences of invigoration and rejuvenation.

By way of contrast Desley Luscombe the current Dean of Architecture and Building at the University of Technology in Sydney recalls a certain antagonism towards the grand tour [of Italy] idea and was not initially keen to re-establish western hegemonies. She rather chose travel through Asia as a set of cultures more geographically relevant to Australia though less explored or understood. Philip Cox undertook a grand tour of Australia as a conscious alternative response to the European model. He believed that the 'cultural cringe' had impacted an incomplete knowledge of the Australian vernacular. The resultant output from these tours led to the production of three books. His tour of Australia was largely without plan and in response to a contemptuousness of the 17th Century European model. He eventually did do European study tours and benefited greatly from them though had a conscious aim to value that Australian tour as a primary endeavour.

¹⁵ Alvaro Siza, Boston (1988) as cited in Frampton, Kenneth, "Sketching: Alvaro Siza's Notes", in Nicolini, Pierluigi (ed.), *Lotus 68: The Eye of the Architect*, quarterly review, 1991, pp.86-87.

In either philosophical case the pursuit of travel for the Australian architect was agreed as a tangible means for to broaden horizons in terms of studying both built form and cultural diversity.

Value and Imprint

The recorded value of the grand tour by seminal international and Australian architects and the value of those observations on later imaginings may be readily correlated. On an international scale the work of Le Corbusier in abstracting the ancients into a Cubist inspired language for the modernist movement as articulated in his 1923 treatise *Vers une Architecture* is well defined. On an Australian parallel the broad body of work produced by Philip Cox during the 1960 – 1990 period in Australia reflected for the first time in this country an appreciation for and adaptation of the rudimentary utilitarian built forms of the Australian vernacular.

In both scenarios the rigour of observation and physical recording paved the way for the eventual latter manifestations of robust intellectual theories placed into practical realities.

WHY ITALY?

THE CRUCIBLE OF WESTERN ARCHITECTURE

Italy is arguably the most geographically compact crucible of western architecture available. Etruscan, Roman, Byzantine, Romanesque, Gothic, Renaissance, Mannerist, Baroque, Neoclassicism, Fascist, Modernist and contemporary architecture are all represented, sometimes iconically, within Italy.

Greek and Etruscan

The Greek and Etruscan period began in the 6th BC and encompasses the earliest existent structures in Italy. These built forms characterise the qualities of classic Greek architecture with strong and simple outlines, rigorous adherence to the principles of proportion, a total unity of horizontal and vertical elements and the extensive use of decoration to emphasise structure.

The architecture of this period was constructed primarily out of marble and was designed to the three orders of Ionic, Doric and Corinthian. All comprised an upright column upon a base, topped by a capital and an entablature of architrave, cornice and decorative frieze.

This Greek and Etruscan period encompassed a variety of building types including temples, open air theatres, [often set against hillsides in dramatic locations] city walls, gateways and tombs.

- | | |
|-------------------------|---|
| • temples | Paestum, Campania; Agrigento, Selinunte, Segesta and Syracuse, Sicily |
| • open air theatres | Syracusa and Taormina, Sicily
Volterra, Tuscany |
| • city walls / gateways | Volterra, Tuscany
Lucca, Tuscany
Perugia, Umbria |
| • tombs | Cerveteri and Tarquini, Lazio |

Roman

The Roman period was a period of development and adaptation from the Greek and Etruscan ages. This period of greatest development and ingenuity may be contained between the 3rd Century BC and the 3rd Century AD. As with most art forms, a preference was developed for order and function over beauty and aesthetics alone and functional building materials were predominant. Towns were laid out in regularly planned grid formats for the first time in recorded history, often for or to the models of military camps. Much of the built form was sanctioned on behalf of the various Emperors as an expression of the Roman might and ability. The architecture of the Roman period came to express the power and glory of the Roman Empire.

Whilst the Romans used the three Greek orders, with a preference for the Corinthian order, they also added two orders of their own with the development of the Tuscan and Composite styles. The column was relegated to secondary usage in favour of solid construction that incorporated

the rounded forms of arch and dome with a focus on the rigidity of end walls. The use of vaults was to become the Roman period's major contribution to architecture.

In addition, the use of an early form of concrete enabled the construction of much greater spans and hence higher structures than ever previously possible.

The most important ensembles of existing Roman architecture in the urban setting are the original seaports and residential towns. Within these, all the various elements of urbanity were found. The forum was the heart of the city, set as a square at the intersection of the two main streets, the Decumanus running east west and the Cardomanus running north south. Its various built forms comprised the focus of all main aspects of public life, both secular and non secular. Each forum contained temples, which initially followed the Greek models with imposing façades preceded by flights of stairs, with later designs evolving into the circular planning form.

The main public building was the basilica, used for meetings, markets and administration of the city. Thermae (public baths) were key examples of the formal recreational aspects of life in a Roman city. The theatres and amphitheatres of the Roman era were atmospheric, often elliptical, edifices of solid construction where massive outer walls housed inner tiered seating arenas.

- temples Tivoli, Lazio
Assisi, Umbria
- temples (circular) Pantheon, Rome Lazio
Temple of Vesta, Rome Lazio
- basilica Trajan and Maxentius Basilicas, Rome Lazio
- thermae Baths of Caracalla and Diocletian, Rome Lazio
- theatres/amphitheatres Coliseum, Rome Lazio
l'Arena Verona, Veneto
l'Amphitheatro Pompeii, Campania

Roman residences fall into three main categories; the domus, the villa and the insulae. The domus was a town dwelling symmetrically grouped around an atrium and peristyle courts. Villas were patrician country residences characterised by decorative porticos and colonnades oriented towards sun and shade aspects. Insulae were tenement type constructions that housed poorer Romans over several floors. The insulae were vaulted throughout and arranged in multiple levels, streets and squares.

- domus Pompeii, Campania
- villa Pompeii, Campania
- insulae Ostia Antica, Lazio

Other built forms include the cylindrical mausoleum and, as Roman law forbade burial inside the city walls, this led to the development of a built form that celebrated the dead.

The triumphal arch was also a Roman creation to celebrate the technology of the arch and various military victories. The Romans were famed for their engineering and hydraulic expertise and the utilitarian aqueduct and bridge designs utilised the arch technology to full extent to transport water into the towns.

- mausoleum Castella Sant' Angelo, Rome Lazio
- bridges Pons Fabricus, Rome Lazio

Christian and Byzantine Architecture

Early Christian and Byzantine architecture was rooted in the then clandestine practice of the Christian faith between the 5th Century and 10th Century. Due to religious persecution, initial Christian believers were forced to practice their religion in catacombs well away from the public gaze.

- catacombs Rome Lazio
 Naples, Campania
 Siracusa, Sicily

The eventual acknowledgement and legalisation of Christianity and its adoption by the Roman Empire saw the development of an architectural style that was based on secular imperial models. In general, churches adopted the forms of the basilica with stark exteriors pierced only by large windows and interiors displaying the move towards regular columns. Transepts were introduced into church planning in a conscious desire to emulate and symbolise the cross in plan formations.

- cross plan churches Santa Sabina and Santa Maria Maggiore, Rome, Lazio

The Byzantine's most distinctive architectural form was the dome. Under the Romans, this form rested on a circular base however the Byzantines, by the use of pendentive arches, were able to erect domes on square foundations.

- domed church Basilica San Vitale Ravenna, Emilio Romagna

The Basilica San Marco Venice, Veneto developed from this model. With domical planning, a Greek cross format and sumptuous mosaic decoration, the San Marco basilica is considered the supreme Byzantine monument.

Romanesque Architecture

Romanesque architecture emerged as Europe rose from the Dark Ages in the 10th and 11th Centuries. Key features of this style included a continual attachment to the basilica plan, cupolas raised on domes, the use of marble as a façade facing, the presence of ancillary baptisteries and campaniles, and the use of arches for both decorative and structural purposes.

The churches of the Lombardy Plain feature tall towers with projecting vaulted porches that rest on a decorated base. A circular (rose) window serves as the principle light source into the nave.

- vaulted church Il Duomo, Modena, Emilio Romagna

The Campo Dei Miracola Pisa in Tuscany offers the unique trio of duomo, campanile and baptistery in one setting, highlighting the unity of consistent façade materials and the surrounding open arcade galleries.

Idiosyncratic Romanesque styles were fostered using the mixture of mosaics and marble façade panelling.

- marble / mosaic facades San Miniato, Florence, Tuscany

Regional influences are to be seen in the exotic inclusions of Byzantine domes and mosaics mixing with Saracen horseshoe arches.

- regional influences Duomo Monreale and the Palazzo dei Normanni, Palermo, Sicily

Gothic Period

The Gothic period was architecturally focussed on light and verticality. The Gothic period in general grew out of France in the 12th Century to become the dominant architectural force in medieval Europe. The Italian Gothic ranged from the early 13th Century to the early 15th Century and was more restrained than its northern neighbour counterparts. The key architectural features of Italian Gothic included the pointed arch, the rib vault, flying buttresses and large tracery windows. These became dominant architectural features throughout medieval Europe.

The Italian Gothic has a more horizontal emphasis characterised by low rise buildings with timber rather than stone roofs. Italian Gothic façades were often decorative, with little or no connection to the interior structure, comprising marble, mosaics and frescoes.

- gothic facade San Francesco, Assisi, Umbria
il Duomo, Orvieto, Tuscany

The spread of plain early Gothic architecture in Italy is directly linked to the Cistercian order of monks. These churches placed an emphasis on preaching and many were focussed on holding large congregations thus influencing the larger interior spaces.

- large naves
- Santa Maria Novella, Florence Tuscany
Il Duomo, Siena, Tuscany

In the north of Italy, the Gothic style of architecture was expressed in the form of stone structures that placed their primary emphasis upon geometric pronouncement.

- stone structures Il Duomo, Milan, Lombardy

In military architecture, a number of imposing castles were built during the 13th Century. These castles combined Classic and Gothic elements.

- castle Castel Nuovo, Naples, Campania

Rising civic pride in the late 13th Century gave rise to a passion for town halls that were often crowned with towers.

- town halls
 - Palazzo Pubblico, Siena, Tuscany
 - Palazzo Vecchio, Florence, Tuscany

Renaissance Architecture

Renaissance architecture first emerged in Florence in the early 15th Century as a derivation of the classics. The vocabulary of the Renaissance was to spread throughout Europe and remain dominant for some four centuries.

The Renaissance period saw the history of architecture become the history of architects, with full time practitioners emerging for the first time. One of the key characteristics of these practitioners, and indeed the Renaissance itself, was the diversity of skills of the proponents. The integration of this diversity of skills was often rooted in the plastic arts of sculpture and painting and, with the infusion of mathematics and technical prowess, became the signature of the robust Renaissance style. In addition to the individual designers, the role of the patron or benefactor became parallel and paramount. The accumulation of wealth, often derived through mercantile means, saw individuals and families, rather than the church or state, rise for the first time as a source of community power with a ready desire for outward built form expression.

- Brunelleschi Il Duomo, Ospedale Degli Innocenti, Chiesa di San Lorenzo, Chiesa Santo Spirito and the Capella Pazzi, Florence, Tuscany

- Alberti Sant Andrea Mantua, Lombardy

Bramante's masterpiece is the Tempietto di San Pietro in Montorio Rome Lazio, which embodies the spirit of classic architecture blended harmoniously with the ideal Renaissance values of mathematics and proportion.

Andrea Palladio (1508 – 1580) became Italy's most erudite and influential architect due to his ability to meld features from all his predecessors into his own personal style. His style and work philosophies are copied to the present day and are referred to around the world. This is especially evident in the City of Vicenza. The Villa Rotunda, Vicenza, Veneto, saw the first use of a centralised plan in a secular building.

Michelangelo (1475 – 1564) took up architecture in his middle age and his approach towards architecture was a direct contrast to Alberti. He used plans as a rough guide only, and made

constant changes throughout the construction period, thus forming a role as the master builder. Whilst none of his major buildings was finished within his lifetime, his work demonstrated an original approach towards architecture closely linked to sculpture. He invented the giant order where columns and pilasters rise through two or more storeys.

- Michelangelo San Lorenzo, Palazzo Farnese and Biblioteca Laurenziana, Florence Tuscany;
Piazza del Campidoglio and (partial work within) St Pietro, Rome Lazio

After the death of Michelangelo, the most important architect in Rome was Il Vignola (1507 – 1573), who designed the Villa Giulia, Rome Lazio as a mixture of architectural delight mingled with highly structured landscape design.

This work was followed by Il Gesu, Rome Lazio, which was loosely based on Alberti's design of Il Duomo in Mantua. The Il Gesu design though, eliminated the aisles and used the nave pilasters and lighting effects to draw the eye to the height of the altar. Vignola's work at the end of the high Renaissance period and into Mannerism was a precursor to the emergence of the decorative and eclectic Baroque style.

Baroque

The Baroque is a distinctive and recognisable style, originating in Rome as a response to the wealth and self-confidence of the Counter Reformation movement in the mid to late 16th Century. Baroque architecture expressed the pomp, and played upon the mystery, of the propagated religious approach.

Architects were concerned with daring special effects, rendering visual movement and spatial ambiguity by the use of curvaceous lines and form, tricks of light and the overt decoration of painting and sculpture. All these special effects combined to offer other-worldliness to the non-secular Counter Reformation movement.

Gianlorenzo Bernini (1598 – 1680) took up architecture in mid life, having initially trained as a sculptor. His fusion of the arts was to become one of the cornerstones of Baroque architecture and urban planning, best seen in the forecourt of St Peter's Rome Lazio. This design of an oval planned double colonnade came to symbolise the all embrace of the church and incorporated complex plays of perspective and proportion.

- Bernini Chiesa Santi Andrea, Rome, Lazio
Forecourt, St Pietro, Rome, Lazio

Francesco Borromini (1599 – 1667), who was initially Bernini's assistant though later his bitter and declared rival, was a most daring and inventive architect. His attitude to decoration was very different to Bernini's in his belief that architecture was sculpture in its own right. Borromini treated entire wall surfaces plastically, favouring monochromacy rather than the use of colours.

Borromini showed a disregard for convention, creating stunning spatial designs based on complex series of shapes, resolving equilateral triangles into ovals and circles within the roof form geometrics.

- Borromini St Ivo e San Carlino Alle Quattro Fontane, Rome Lazio

Guarino Guarini (1624 – 1683) was a mathematician and architect, instrumental in the fusion of Gothic and Islamic styles and influenced by the work of Borromini. His mathematical ability fuelled the grand manner of the classics, featuring conical domes and spiralling roof forms.

- Guarini Capella Della Sacra Sidone, Turin Piedmont

Neoclassicism

Neoclassicism developed in the mid C18th as a conscious response to the overt Baroque sumptuousness. This period became a return to the most basic architectural forms of (Greek and Etruscan) classicism.

Giovanni Battista Piranesi (1720 – 1778) popularised the neoclassical approach in Rome. His inspired grand scale engravings of the city's ruins were widely circulated and his theoretical writings asserted the superiority of classical Rome over Greece.

- Piranesi Santa Maria del Priorate, Rome Lazio

Giuseppe Mengoni (1829 – 1877) created Italy's finest example of design in iron and glass, in the Galleria Vittorio Emanuele in Milan Lombardy. This was an original piece of urban planning that reinforced and symbolised Milan's position as the commercial hub of an emerging nation state.

Fascism and Modernism

Fascist and Modernist architecture emerged from a reaction to the limitations and constraints of the historical styles and dictums adopted by Neoclassicism.

Art Nouveau's sinewy forms, in their rejection of the classics in favour of a plastic sculptural design language, influenced European architecture at the beginning of the 20th Century. The Art Nouveau movement gave rise to the Futurist movement and with it Antonio Sant' Elia (1888 – 1916) who envisaged, albeit unrealised, the vibrant high rise metropolis of the future that would be dominated by frenetic activity and mass transport systems. The only example of Sant' Elia's, and indeed the Futurist's, work is the Monument to the Fallen in Como, Lombardy.

The period defining Fascist architecture formed under Mussolini's reign, when he directed massive building programs across the country. New towns were designed as prototypical communities for the new empire. Chief architect of the Fascist movement was Giuseppe Terragni (1904 – 1943) who founded the Gruppo 7, comprising Italy's seven most progressive interwar architects. This group forged the language of Fascist architecture to use new materials in a modern way, to capitalise on space and light where rational forms and lines were cleared of the decorations and elaborations of past styles. New towns such as Littorio, Lazio were designed as prototypical communities for the new empire.

Most notable of these was Mussolini ordering the construction of Esposizione Universale di Roma. This satellite city for an international exhibition to be held in 1942 on the outskirts of Rome contains a focus of Fascist architecture of the time. The overall layout was won via a design competition jointly by Quaroni, Muratori, Fariello and Moretti, who merged to develop their ideas. The outbreak of war saw that the competition plans were not realised. Key sites include;

Palazzo della Civiltà Italiana designed by Ernesto La Padula, Giovanni Guerimi and Mario Romano and the spiritual focus of the site on the western end of the main axis; Palazzo dei Ricerimenti e dei Congressi designed by Adalberto Libera between 1937-54. Regarded as one of the seminal buildings of the Modern era on the eastern end of the main axis; Palazzo dell'Ina e dell'Inf.p.s designed by Giovanni Muzio, Mario Paniconi and Giulio Pediconi between 1939-1943; and the Piazza Imperiale designed in the masterplan as the focus of the site.

After World War II, themes of memory, the relationship with history and the search for a new identity became the central concerns for Italian architecture. The Torre Velasca in Milan, Lombardy, by BPR architects, is an intellectual interpretation of the disappearing medieval city and supported the theory of continuity put forward by Bruno Zevi (1918 – 1999) and Ernesto Rogers (1909 – 1969).

In the 1960's and 70's, architectural theories were overshadowed by the work of individuals. Ignazio Gardella (1905 – 1999) rejected exhibitionism in favour of the value of materials and forms. Carlo Scarpa (1906 – 1978) was infused with a personal poeticism of refined materials, layers and planes defining spaces.

- Scarpa Tomb Brion, Treviso, Veneto
 Olivetti Showroom, Venice, Veneto
 Castel Vechhio, Verona, Veneto

Pier Luigi Nervi (1891 – 1979) was a structural engineer who popularised the use of sculptural reinforced concrete. His work was true to, and explored the plastic and elastic nature of, reinforced concrete and steel and, as such, has proved timeless.

- Nervi Termini Rome, Lazio

A more contemporary school of Aldo Rossi (1931–1997), Renzo Piano (1937–) and Massimiliano Fuskas (1944–) have taken Italian architecture to the world with a new approach towards human rationalism and technological exploration.

Precis

The attributes of public spaces, streets, built form and the patterns of human use, form the cornerstone of place making. These elements of urban design and architecture coupled with the evolution of structural, historical and spatial achievements are readily visible in the secular and non-secular architecture of Italy.

WHY DRAW? OBSERVING & IMAGINING

Exhibitions such as “Michelangelo to Matisse: Drawing the Figure”, Art Gallery of New South Wales 1999, showcase the extraordinary drawing skills of various generations. The Gallery Director, Mr Edmond Capon poetically summarised the significance of drawing in the exhibition’s foreword:

“Drawings are modest and intimate...this is no impediment to the breadth of their embrace or range of their creative horizons. Drawings are arguably the most revealing and spontaneous renderings of the human imagination... their immediacy defies the limitations of time...”

[Michelangelo]¹⁶

The value of drawing lies in the merger of the observed and the imagined. One not complete without, and is equally dependant upon, the other.

As a child I imagined architects as people who draw. Jorn Utzon, Leonardo da Vinci and Michelangelo all drew to explain their concepts.

*Design, which by another name is called drawing... is the font and body of painting, sculpture and architecture...the root of all sciences.*¹⁷

My primary attraction to becoming an architect was a love of drawing. As a practicing architect and educator I draw for two reasons. Firstly, I sketch and therefore analyse precedent, especially when I travel. To analyse and record precedent one must observe. Secondly I draw what I imagine to portray my thoughts and visions.

My drawing skills are self taught. I started without the freehand skills encouraged in art classes, but with the rigour of a tee square and drafting equipment, developing a passion for the precise measured drawings of the classics. Early attempts to sketch were fraught with a sense of inadequacy and frustration. Fortunately, I encountered the impressive drawings of mentor, and first employer, Graeme Hay of Rodd & Hay Architects in Newcastle, New South Wales. I began by tracing his easy style and, with practice, a confidence in proportion, smoothness and strength of line quality, replaced uncertainty. The weight and gravity held within the line work of Matisse and Picasso became exemplar standards to which I still aspire, copying drawings to practice curvature and proportion. Brett Whiteley’s draftsman ship demonstrated that individual line work can become a unique signature and Norman Lindsay’s assessment of drawing from either the fingers, wrist, elbow or shoulder connects the physics with the powers of observation.

Drawing requires careful observation of what is, and sometimes what is not, important. One can only draw if one is thinking about the subject at hand. This thinking leads directly to deep understanding.

¹⁶, 1584, Michelangelo to Matisse: Drawing the Figure, AGNSW, 1999, p. 25

¹⁷ op cit p.8

"everyone thinks they know what a lettuce looks like. Start to draw one and you realize the anomaly of having lived with lettuces all your life but never having seen one, never having seen the semi translucent leaves, never having noticed what makes a lettuce unique".¹⁸

and further,

"... we do a lot of looking through lenses, telescopes, televisions... our looking is perfected everyday but we see less and less".¹⁹

One can take numerous photographs of the Sydney Harbour Bridge; however drawing that familiar structure will lead to an indelible understanding of its building materials, proportion and context. The familiar is no longer 'taken for granted'.

The inspiration for this particular scholarship's program and focus owes its origin to Kevin Gallagher, architect and former academic at Sydney's University of Technology. During 1986, as an elective in the Bachelor of Architecture course, Kevin ran a 7-week Study Tour through Europe to observe first-hand seminal works of western architecture.

As a student, completing the second year of a six-year course, the timing of this program was profound and long lasting. The first hand experience was invaluable and triggered the development of powers of observation.

Viewing architectural photographs or drawings is useful in the study of built form. A two dimensional representation of architectural form, for example a colonnade, may be very informative. However, that understanding pales into insignificance compared with the first-hand experience and observation of Bologna's streetscape or Bernini's forecourt to St Peter's in Rome.

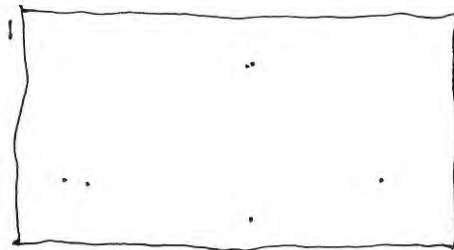
That 1986 UTS Study Tour ignited the participants' passion for architecture. The central reason for this positive response was the tangible nature of observing and analysing precedent first hand.

Analysing Precedent

The practice of observing and drawing precedent may follow a series of subliminal steps. The following procedural format defines the staged manner that the author will draw an observed object. Each step reinforces the sketch with further observation and a deeper sense of understanding.

Step 1 – Set out

A quick assessment is made of the form under study, in this case a Renaissance Palazzo set on an urban street corner in Bologna, Italy. This quick assessment confirms that the format for the perspective drawing will be a two point perspective using the human eye level of about 1.6m as the viewpoint. Having made these basic decisions, a



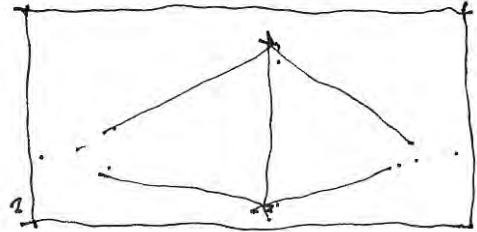
¹⁸ The Zen of Seeing: Seeing / Drawing as Meditation, Frederick Frank, Wildwood 1973

¹⁹ op cit

series of dots are then placed in order to frame the object by setting out the near corner base and top of building and the then left and right vanishing points as key indicators.²⁰

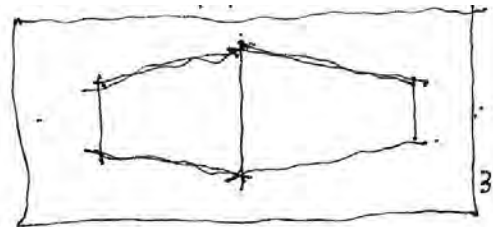
Step 2 – Guidelines

The next step is to confirm the near edge as the primary vertical form, thus providing the sketch with an immediate solidity and form. This initial indicator of form is supported by lines depicting the building envelope at the top and bottom of facade lines though also doubling as indicators or guides towards the perspective points.



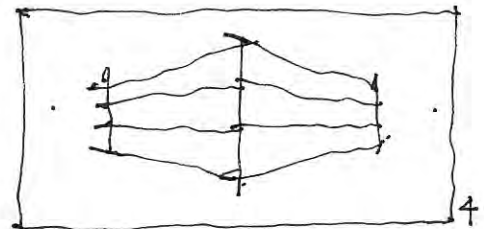
Step 3 – Form

This step confirms the actual form of the object under assessment. Lines are often doubled in order to achieve a sense of affirmation or indeed flexibility or subtle corrections. No lines are ever removed, they are only added. When some lines are slightly incorrect, the doubling or reverberative process can assist to correct any slight imperfections.



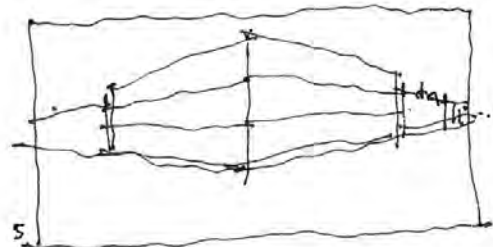
Step 4 – Composition

A move from form into composition now occurs, whereby the facade is dissected into layers of floors. This further reinforces the makeup of the building and strengthens the perspective rigour for the infill of later details. Immediately the drawing starts to take on immense detail depicting the built form.



Step 5 – Context

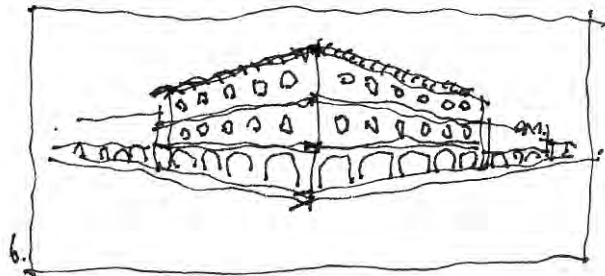
This step builds on the composition of the form and adds relevant surrounding context. This process usually has the effect of absorbing or including any of the set out or guidelines dots and lines used in the early stages of the sketch. Details of the context are inferred such as the building character or scale of adjacent elements.



²⁰ It is worth noting that the process of this decision making and the ability to draw in perspective is a learned task from the texts *Learning to Draw* and *Perspective* by Gill. These books look at basic perspective, rendering and more complex perspective techniques in a rudimentary step-by-step fashion. They would form core texts for any student in learning about perspective.

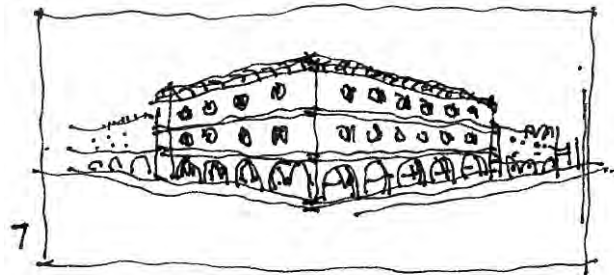
Step 6 – Content

This key phase in fills the primary content of the built form. Bays of façade planning are shown as well as the primary fenestration features and points. This phase defines the key features and messages of the sketch. In this case, the keys messages are solid built form with a colonnaded ground floor and small windows within wall fenestration to the piano nobile and a strong top cornice element.



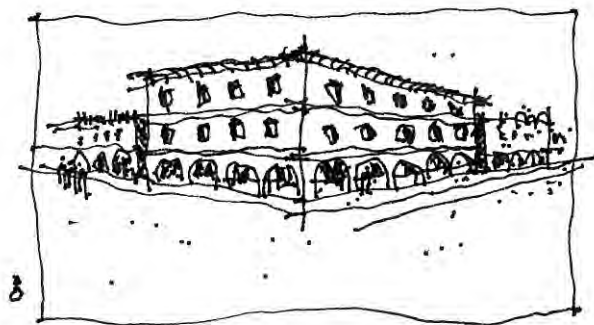
Step 7 – Depth

The sketch could survive as an idea at Step 6 though the final two steps add depth and filigree. In this next step, the form and idea is strengthened by the addition of depth creation devices showing the width and shade of the colonnade, the depth and form of the windows and adding depth into the context.



Step 8 – Filigree

This final step often features random elements of dots / dashes and quick strokes that perform a multitude of graphic tasks. All these tasks are focussed on adding filigree and a sense of life to the scene. People are included and the various dots and dashes have the effect of grounding and knitting the sketch into the page or 'scaena' rather than just floating on a white background, as is still largely the case up until this point.



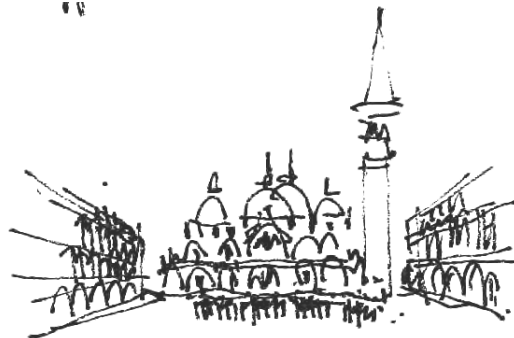
This stepped approach towards observation forms the basis of sketch compositions for a variety of sketches including both 2 and 1 point perspective formats.

Following are included a series of sketches that are drawn using differing time allowances. This exercise of time allowances further focuses the observation skills of the sketcher. In the cases employed, a series of sketches of the familiar Piazza San Marco Venezia are shown over 2-5 minutes, 60 seconds and 3 versions each of 10 seconds each.

The 2-5 minute sketch establishes the full steps as set down for Analysing Precedent. This format would be considered a full and complete rendition of the view under consideration.



As the time decreases to 60 seconds the format of the sketch becomes more of a summary. It is noted that the formality of the steps previously defined are less rigid.



60 seconds

The series of 10 second interpretations are summary vignettes. This summary vignette would combine many of the steps articulated into a series of the key visual points for expression. Often the most expressive as economy replaces accuracy and message replaces measurement.



Drawing the Imagined

The disciplined observation technique defined in Analysing Precedent is readily transferred into the creative facets of design.

To draw the imagined certainly requires a basis of technical knowledge however a sense of exploration coupled with a vision of the idea is also essential.

The seminal modernist Finnish architect Alvar Aalto refers to his drawings as follows:

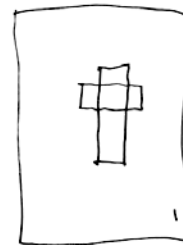
I begin to draw rather like abstract art. Led by my instincts I draw, not architectural syntheses but sometimes even childish compositions, and via this route I arrive at an abstract basis to the main concept.²¹

Drawing the imagined may follow a layering process, whereby the sketch is imbued with shorthand information essential to the idea.

Steps are as shown on the attached drawings of an imagined Italian Renaissance church. The church has a Latin cross plan format, central nave, side aisles embellished with small structural cloisters, centralised dome and side choirs set upon a small piazza of surrounding palazzo. My imagined church is similar to Brunelleschi's Chiesa di Santo Spirito, Firenze.

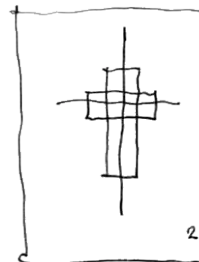
Step 1 – Construct

Establish the overall construct of the sketch. This is the framework around which the sketch will evolve and develop. In this case, the Latin Cross is the key message. The construct acts as a reference point for future movements covering all choices of infill and the addition of further information and detail.



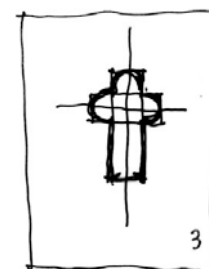
Step 2 – Message

This step sees the addition of supporting information that informs both the construct and message of the sketch. In this case, supporting information includes axial representations and the reinforcement of the Latin cross planning principles. The overt extension of this message reinforces, and in fact exaggerates, the message within the sketch. This particular message is of axuality, balance and centrality.



Step 3 – Reinforce

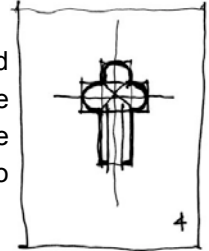
This step sees reinforcement of the overall structure of walls and an articulation of the varieties of plan shape within the construct. It is noted that, in this case, the inclusion of the semi circular apse and choirs are a deviation from the initial overall construct defined in Step 1. This deviation is not a negative as it is worked over and retains its form though now with further, more important, information of the form.



²¹ Alvar Aalto, 'The Trout and Mountain Stream', Sketches, MIT Press Cambridge, Massachusetts 1978, p.97

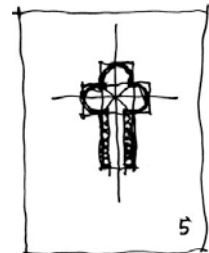
Step 4 – Embellish

The next step sees the basic form, in this case the plan, further embellished with information about the domical roof form and the layering of structure between the nave and the aisles. This embellishment further informs the use of layering and format of the idea. The viewer is now allowed to focus into various sections of the sketch, gaining layered data and articulating the idea.



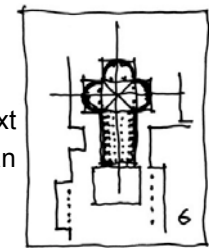
Step 5 – Inform

Additional information is added. In this case, columns between the aisles and nave are added as well as a cellular aisle structure. This information adds another level of detail that the cognoscenti will understand and interpret and the layman will merely accept and appreciate as relevant supportive filigree.



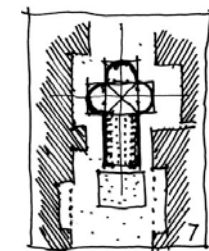
Step 6 – Context

In this step, various elements are added that ground the sketch into a context and setting. This information adds a scale and, in many cases, a setting to an otherwise abstract exercise.



Step 7 – Texture

Final rendering of the context to reveal solidity, textures and a sense of some reality, albeit in a plan format, are added to settle the sketch into a more lifelike familiar visual environment.



The drawing of the imagined makes it possible to conceive an idea or form. The idea may be created within the imagination though without the drawing it lacks a fundamental and tangible expression. The drawing is used to understand, explore, absorb and communicate. It serves as a chance to get an idea or information out onto a recordable medium (paper) as a means of visual processing and externalising the idea. Drawings of the imagined are more often scaleless, of inaccurate proportions though far more essential in content compared to those of observed or recorded objects.

To draw

Whether it be analysing precent or drawing the imagined it is an architect's skill to draw. Many architects will note that the ability and skill to draw remains their greatest communication attribute. The power of observation and the considered subsequent representation of that learning concurrently form the inspiration point, store house and primary currency of the articulate architect.

IDEAS & DRAWING... THE CONNECTION

Premise

Through the process of analysing precedent, the designer will observe by drawing. To communicate their imagination and ideas with a sense of immediacy, the designer will also draw. The ability to communicate the imagined is rooted in the learning process of observation by drawing.

Many architects have referred to drawing and its connection to the idea:

'The drawing is a lens revealing otherwise imperceptible aspects...a method for understanding how things can change and evolve not for crystallising a form in a definitive way but to demonstrate the possibilities of what it can become.'

Zaha Hadid, 1982²²

'An architectural drawing is a prospective unfolding of future possibilities...a recovery of a particular history to whose intentions it testifies and whose limits it always challenges. In any case a drawing is more a shadow of an object, more than a pile of lines.'

Daniel Libeskind, 1979²³

'Look at my sketch, there is everything in it'. 'My sketches are data, the contour lines of an instantaneous vision. In accordance with their architectural nature, their immediate appearance is that of a whole, and this is how they must be taken'.

Eric Mendelsohn, 1935²⁴

Australian architects seem to support these views.

"The tradition of architects sketching and recording while travelling, or working has long historic precedent, even for Australian architects"

Colin Griffiths, FRAIA²⁵

"We all gain from scribbling memories of special places and events."

Chris Johnson²⁶

²² op cit, p212

²³ op cit, p208

²⁴ op cit, p88

²⁵ 1960 Byera Hadley scholar in correspondence to author dated 1 March 2003

²⁶ NSW Government Architect in correspondence to author dated 3 February 2003

In order to understand the process of observing and analysing precedent, it is valuable to assess the notions of perception. Three primary areas of research into human perception are worthy of note;

- the Transactionalist view of perception, emphasising interaction with the environment;
- the Ecological view of perception, based on the structure of the environment; and
- the Projective view, emphasising the role of pre-existent knowledge or data upon perception.

Transactionalist: Engaging the Visual World

Perceptual psychologists, in particular the Transactionalists, believe that touch and movement play key supportive roles for vision. They believe that all perception, most particularly vision, is learned through a process of interaction (transaction) with the environment. In their view a drawing student learns to see the world in perspective first by making lines converge to common vanishing points.

Vision by itself is insufficient to learn to draw. A focus on the purely visual aspects of drawing, at the expense of aesthetic and tactile foundation, might contribute to a subsequent inability to use drawing effectively as a design tool.

Architects and designers are faced with the challenge of designing something that does not yet exist. Where the work of a painter might legitimately remain focused on the reception and interpretation of sensation for the visual world, for example Impressionism, the work of the architect and designer is more often directed at the task of constructing something that does not yet exist.

Elements of drawing that are important may be defined;

- drawing that is natural
- drawing that is quick
- drawing that can communicate
- drawing that comes from a knowledge of the real physical world

Through closer observation and understanding of the real physical world, designers come to a closer understanding of the elements of design. The use of the natural and man-made world as a source for inspiration and order for design may be seen in Le Corbusier's modular system, which is based on the measure of the human body, and also the sketchbooks of Leonardo da Vinci, which alternate seamlessly between drawing assessments of real objects and proposals for visionary constructions.

Drawing ability may be seen to originate from three sources;

- in the intellect – the structure of the world (perspective) being understood
- in the hand – the hand and arm moving with coordination
- in conception – drawing imparting order to what is drawn.

Focus on the interaction with the immediate context and environment is a key issue for drawing. Drawing is above all an active and tactile process. The hand moves, marks are made on the

paper. The focus is more on the act itself, making marks and interacting with what is drawn, and less on what the viewer brings to the process or on the nature of what is drawn.

This relates to the Transactionalist view of perception, which emphasises the role of interaction with the environment as the basis of perception. Leading proponents of this point of view were Adelbert Ames and John Dewey.

This understanding of drawing is appropriate for the task that architects and designers ultimately confront. Architects and designers create objects that do not yet exist and, in the process, they make things. Appropriate to the task of making things, drawings are physical analogues for what is being represented. Drawing is itself an act of making and pictures should not be mere imitations of what is represented but real in themselves.

Vision provides information at a distance, allowing a useful detachment from life, at more than arm's length and out of harm's way. Vision may be considered a kind of surrogate sense, one step removed from real life.

There is ample cause to distrust the primacy of vision, if only because it is so easily deceived. Camouflage in warfare, *trompe l'oeil* in painting, and cinematic special effects are all examples of the relative ease with which the eye can be fooled.

The act of drawing is an act of making, rather than just viewing, and object. For the architect and designer faced with the task of designing something that does not yet exist, no other approach makes sense. If trained to draw only that which is already visible, how could they begin to draw when nothing is yet there to draw? What first marks could they make?

Ecological: Appearance of the Visual World

This approach focuses on the nature of what is being drawn in the three-dimensional world. Emphasis on building knowledge of the order of the visual world as it exists and understanding of drawing as a reasoned response to that order.

This relates to the early work of perceptual psychologist James J. Gibson, the originator of the *ecological* view of perception. Gibson began his work during the early stages of World War II. He was contracted by the US government to help in the development of what amounted to a forerunner of present-day flight simulators. Early in the war, many pilot trainees were crashing on their first flights. To better prepare them before putting them in the air, Gibson needed to gain a better understanding of the visual environment of flight.

Gibson proposed a new position with respect to visual perception, arguing that perception is based primarily on the structure of the environment. With respect to vision, he concluded that light enters our eyes in a state that is already ordered by the planes and surfaces from which it has been reflected. For Gibson, the sensory data of the world already possesses sufficient information that perceiving can proceed on that basis alone.

The ecological view does not discount the roles of predisposition or perceptual learning. By way of contrast, Gestalt psychology emphasises the role of predisposing laws or beliefs that may govern the perception of form. Transactional psychology emphasises the role of perceptual learning or interaction with the environment as the basis for perception.

Because it is central to his understanding that sensation is already ordered in itself, Gibson's work is particularly useful for architects and designers who must assume that prospect of a general order. Architects and designers design for the general public and, as such, they presume and pursue the possibility of a spatial order that works for the majority of viewers.

The central tenet of the ecological point of view is that sensation is in itself already ordered, is an absolutist argument. Its limitations notwithstanding, it is valuable precisely because it is free from relativist individual and cultural concerns. As he proposes it, Gibson's order is universal, applicable for everyone, everywhere.

Gibson found order in the visual textures of the material world. He came to believe that illumination is not the key issue for vision. Perception of surface and surface texture is. Gibson came to believe that we perceive surface through the visual textures of which materials are made.

Gibson uses the term "textural gradient" to describe this correspondence between the pattern of the visual field and the world outside, and he uses it to explain how we perceive common conditions such as frontal and longitudinal surfaces, edges and corners. He explains these on the basis of the signature textural gradient of each condition;

- frontal surfaces project uniform gradients
- longitudinal surfaces, such as floors and streets, project gradients that diminish with greater distance from the observer
- corners and edges project gradients that shift abruptly from the gradient in one orientation or distance to the gradient in another

Projective: When Order is Made

Consideration of what the artist brings to the process, where order originates in the conceptions the artist might apply to the task. Drawing is understood as a process of projecting order into the world. The environment is made to be seen in accordance with the laws of perspective, even when perspective may not seem to apply at all.

Projective imagery is the process of attaching meaning to something while perceiving it in error. Projective imagery was first studied in depth by Gestalt psychologists who emphasise the role of pre-existing schemata in perception as its central mechanism. Order is considered as originating with the viewer however the parallel should not be merely adopted as the argument that perspective is a schema with which viewers are born is clearly without base.

The assignment of meaning originates with the viewer and is directed at what is seen. The issue of perspective as an observable fact versus perspective as imposed construct is worthy of assessment.

Leon Battista Alberti (1404-1472) was the very model of a "Renaissance man". Mathematician, architectural theoretician, and architect, he wrote *Della Pittura*, which forms the first codification of perspective, in 1435. Alberti presented a general understanding of the underlying optics of perspective based on the view from an individual observer. To model perspective, he proposed something he called the "visual pyramid". Points on objects were projected through a picture plane to the viewer, thereby generating an image, which bore a measurable relationship to the

object in the picture. His construction served to unify for the first time the relationship between the objects in a scene, the picture plane and the viewer.

Alberti's work requires that we no longer think of objects in isolation, instead we must consider and draw objects as part of a larger spatial conception. We think of the continuous perspective space first and then place the objects in it, rather than the reverse order.

This approach places drawing as a process of imparting order to the objects that we see. We respond to what is already present in the object but, in final analysis, impose perspective order onto whatever we draw.

Louis I. Kahn (1901-1974) was an architect known for his command of composition in light. He wrote with great eloquence about the interrelatedness of light and the materiality of architecture. He described light and material as paired opposites:

"All material in nature, the mountains and the streams and the air and we, are made of Light which has been spent, and this crumpled mass called material casts a shadow, and the shadow belongs to Light."²⁷

He related sight to the primacy of touch:

"I thought then that the first feeling must have been touch. Our whole sense of procreation has to do with touch. From the desire to be beautifully in touch came eyesight. To see was only to touch more accurately. These forces within us are beautiful things that you can still feel even though they come from the most primordial, nonformed kind of existence.

From touch there is a striving to touch, not just touch, and from this developed what could be sight. When sight came, the first moment of sight was the realisation of beauty. I don't mean beautiful or very beautiful or extremely beautiful. Just simply beauty itself, which is stronger than any of the adjectives you might add to it. It is a total harmony you feel without knowing, without reservation, without criticism, without choice. It is a feeling of total harmony as if you were meeting your maker, the maker being that of nature, because nature is the maker of all that is made. You cannot design anything without nature helping you."²⁸

The Architects Way

Whilst the architect relies heavily on the ecological philosophy in delivering either an analysis of precedent or imagination to a populist and thereby understanding audience the reliance on the projective imagery within architecture remains primary. It may be argued that architecture and the subsequent diverse representations of built form are rooted in the retinal reliance and spatial conceptions first articulated by the C15th renaissance explorations. This retinal reliance and spatial conception provides the link between the projective and ecological philosophies that fundamentally govern the way we observe, the way we perceive and the way especially we as architects record or draw in a manner that is transmittable and legible to our desired audiences.

²⁷ Lobell, John, *Between Silence and Light: Spirit in the Architecture of Louis I. Kahn*, Shambhala Publications, Boulder, 1979, p.5.

²⁸ *ibid*

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APPENDICES

ARCHITECT INTERVIEWS

As a touchstone of this scholarship I have recorded a number of interviews with eminent Sydney based Australian architects who are skilled with drawing and have an educational insight. This process was aimed at testing the connectivity between the idea and drawing. The architects interviewed are Sydney-based, RAIA award winners, former academics and scholars, current practitioners, authors and active members of the NSW RAIA or NSW Architects Registration Board. The series of questions focused on the areas of:

- travel - its value to the (especially young) architect
- drawing - skills, desires and observations
- teaching - desire and value of teaching others to draw
- ideas and drawings - connections and linkages

Practitioners interviewed

Ross Bonthorne

- Principal Architect, Lend Lease Design Group
- RAIA Award winner
- Former Deputy Mayor, City of Sydney

Tony Caro

- Principal, Tony Caro Architecture
- Former academic, University of Technology, Sydney
- Former Byera Hadley scholar

Philip Cox

- Principal, Cox Richardson Architects
- Visiting internationally acclaimed academic
- RAIA Award winner

Richard Francis Jones

- Principal, FJMT Architects
- RAIA Award winner
- Former President, NSW RAIA

Beverly Garlick

- Principal, Beverly Garlick Architects
- Active RIAA Education committees
- Active academic

Colin Griffiths

- Principal, Colin Griffiths Architects
- Former academic, University of Technology, Sydney
- Former Byera Hadley scholar

Peter Ireland

- Principal, Allen Jack & Cottier Architects
- RIAA Award winner

Chris Johnson

- NSW Government Architect
- Author of numerous books and journals
- Visiting internationally acclaimed academic

Desley Luscombe

- Dean, University of Technology, Sydney, School of Design, Architecture and Building
- Author of numerous books and journals

Ken Maher

- Principal, Hassell Architects
- Visiting academic
- RIAA Award winner

Caroline Pidcock

- Principal, Caroline Pidcock Architects
- Former President, NSW RIAA
- Former academic

Alex Tzannes

- Principal, Alexander Tzannes & Associates
- RIAA Award winner
- Internationally acknowledged author / academic

Ken Woolley

- Principal, Ancher Mortlock & Woolley
- Author and exhibitor on the topic of drawing
- RIAA Award winner

Ross Bonthorne

Interview 17 March 2004

Did you undertake early career study tours and were they valuable?

Several and sees them as a continued lifetime activity, always gathering and learning.

Have you travelled through Italy?

Yes, many times

Presuming so, what aspects would you comment upon?

Yes many times and remains a regular visitor with a high degree of intimate knowledge. Recently visited Sicily and especially recommends Syracuse, Ragusa, and Agrigento. Also recommends Pienza in Tuscany. Interestingly would not visit Milan again, having been a previous multiple visitor. Noted also that whilst a first and discovery visit to Florence was essential any subsequent visits must be measured against the difficulties now associated with the density and tourism popularity of this city.

Why do you draw?

It is a chance to get the ideas or the information out onto paper. Sometimes uses writing as a similar process. Sees the activity as visual processing and externalizing.

Do you draw in different modes depending upon circumstance?

Formerly painted though the limitations of time require more ready mediums. Was trained in guache by Lloyd Rees and Roland Wakelin through university. Admired and was inspired by there collective positivity and continuity. Is thankful that art and history of art were taught as architectural subjects. Always impressed by the idea of an eye capturing an image. Often draws during meetings using the skill as a means of engaging people.

How did you come to drawing?

Recalls being part of an opportunity class at selective public school and often encouraged to draw as a form of expression. Representation in this arena was encouraged in differing mediums. Recalls the striking graphics of a collection of postage stamps from an early age including imagery and information of location, geography and context. Believes that images are connected to ideas at their very roots. Notes a younger generation with computer imagery and perhaps a loss of detailed resolution as a subsequence. Visual information is an assimilation of the idea or the image, and not necessarily limited to drawings. Believes in anti stylism or the "simpson – esque" style of drawings. Prefers the use of physical models or freehand drawings.

Do you need to maintain your skills?

Yes. Often frustrated when unable to draw for any time.

Do you endeavour to teach you staff, peers, to draw?

Yes. Believes drawing to be a key medium and constantly encourages its practice.

Do you believe that the idea is connected to the drawing?

Yes, though would expand this definition to include imagery as well as drawing methods.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

No. Drawing ability has enabled a level of communication and connection into the community at the most senior and influential levels.

Are you aware of any study tours that exist in a similar nature to that proposed?

Yes. The University of Technology in Sydney (UTS) had offered an architectural tour of California that was being taken by a colleague. Also Harvard offers courses into Bilbao Spain, Hong Kong and Singapore as regular architectural study tours, often with a specific project / assignment attached as the outcome goal.

Do you think that such a study tour is valuable to an architect?

Yes, without any doubt. Refers to the power of imagery and memory of visiting Le Corbusier's Chapel du Haut at Ronchamp France.

Would you suggest any further reading, references or contacts?

Noted that the Brett Whiteley Gallery in Sydney's Surry Hills runs art classes where students are encouraged to draw a certain object in a particular medium over say 60 seconds, then to draw the same object in a different medium over a different time. Such activities are valuable in the development and maintenance of skills. Also referred to Dimity Reed's study courses into Italy. Referred also to the teaching and writing of Rudolph Arnheim and Roberto Mungo articulating the transfer of ideas into images. Noted the various perceptual variations between western, eastern or indigenous expressions and compositions to be learnt and considered as a designer.

Tony Caro

Interview 3 June 2004

Did you undertake early career study tours and were they valuable?

Yes, extremely. Though first tour was not based around drawing. Initially obsessed with a Nikon camera and photography. Tour was not necessarily architectural, more about the travel experience. Focussed fundamentally on the classics and particularly French Gothic and Italian Renaissance art and architecture. Recalls lying on his back taking photos of church domes!

Have you travelled through Italy?

Yes

Presuming so, what aspects would you comment upon?

Cites and European interest are at the core of his personality. Believes that Italy is fundamentally relevant to architects and that the history of architecture is in turn fundamental to an architect. No one invents in design and precedent is the key. Finds himself gravitating back to Italy again and again. Believes that the heart of architectural culture is in Paris and the greatest treasure of architecture and arts is in Rome. When he visits Rome again in late 2004, he will go again to Borromini's San Carlo alle Quattro Fontane and again view the construction and geometrical delight of the ceiling. Renewing the knowledge.

Why do you draw?

Has always been a doodler. If doing nothing will pick up a pen and draw. Recalls a debate at university about a colleague not drawing unless you had ideas whereas he will draw constantly. Will often draw hatching, glasses on faces, often nonsense in content though believes it is a fortunate thing and a natural aptitude. Is very comfy with the skill of drawing. Holds the opinion that drawing is an essential skill for an architect. Notices how little other architects draw. Believes that an inability to draw ideas is common. Finds the drawing to be the most immediate process available with little barriers to expression. "I love drawing". Is about to start freehand art classes to enable better and more drawing.

Do you draw in different modes depending upon circumstance?

Draws what he sees. Draws his imagination. Finds it a therapeutic and meditative process. Will draw on the drawing board to produce work and also work in different mediums. Will use yellow trace for more resolved drawings, often seeking a more atmospheric mood. Hand drawn diagrams will often be used to post ration a design scheme, used as part of submission work and client interface process. Drawing comes from the ideas though sees it as a cyclical process of thinking and drawing. Drawing leads you to solutions. A vehicle to assist in thinking. Finds a comfort in drawing.

How did you come to drawing?

Does not recall being actively encouraged as a child. Though in later years recalls positive feedback on freehand illustration drawings.

Do you need to maintain your skills?

Draws all the time so, by default, yes. Does believe that practice is essential. The process must be maintained in order to do it well.

Do you endeavour to teach you staff, peers, to draw?

No, does not have the time. If they want to learn they can!

Do you believe that the idea is connected to the drawing?

It is a circular process. Drawing is the record though it is more than a record as it becomes part of the creative process.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

It is an important part and the main way to communicate. As a teacher working with students, saw that a good idea not communicated is a waste. Drawing is the testing of a good idea. Believes that ideas are linked to drawings and ideas, whilst personal, are given to others by drawing.

Are you aware of any study tours that exist in a similar nature to that proposed?

No.

Do you think that such a study tour is valuable to an architect?

Yes.

Would you suggest any further reading, references or contacts?

Could talk to Sydney architects Robin Dyke, Peter McGregor, Mark Gerrada, Richard Goodwin and John Aspinall to gain some differing visions.

Philip Cox

Interview 2 June 2004

Did you undertake early career study tours and were they valuable?

Undertook a grand tour of Australia as a conscious alternative response to the European model. Believed that the 'cultural cringe' had impacted an incomplete knowledge of the Australian vernacular. Resultant work led to the production of three books. Tour of Australia was somewhat without plan and in response to a contemptuousness of the 17th Century European model. Eventually did do European study tours and benefited greatly from them. Had a conscious aim to value that Australian tour as a primary endeavour.

Have you travelled through Italy?

Yes. Noted the work of Lloyd Rees, as a University of Sydney Architecture faculty tutor, whose sketches of Italy were captivating as a landscape place, a vernacular rather than a high style interpretation.

Presuming so, what aspects would you comment upon?

Travelling through Italy confirmed the works previously studied such as Norburg Schulz. Italy is a completely made landscape, the complete antithesis of Australia's unmade landscape.

Why do you draw?

There is no other way for an architect to communicate. Drawing is more effective than speaking as the words don't convey the issues. It is quick communication.

Do you draw in different modes depending upon circumstance?

Will use many mediums, felt pen, charcoal, watercolour, coloured pencils, oil crayons or pencils. The message is the important point and the medium will respond to a hierarchical approach, ranging from broad brush quick and instant messages to more considered watercolours. The media must allow spontaneity. Noted the 1980's graphics as having clever projection of spatial ideas both balanced and resolved especially in the work of Michael Graves and locally that of Daryl Jackson. Referenced this against the historical works almost in poster format of the art nouveau movement, Scottish architect Charles Rennie McIntosh and English artist and illustrator Aubrey Beardsley.

How did you come to drawing?

Has always drawn. Art was not a primary course of study though was an intuitive pastime / skill from an early age.

Do you need to maintain your skills?

Yes, constantly.

Do you endeavour to teach you staff, peers, to draw?

Passionate about teaching people and sharing the idea and value of drawing though appalled by the lack of understanding exhibited by younger architects at present. Drawing is an

absolutely vital and essential part of being an architect. Does not like the impersonality and lack of speed of computers, though acknowledges their importance and potential. Too slow compared to the immediacy of drawing. Will use montage or collage in unison with computer technology though the hand is the origin of communication format. The brain eye hand connectivity remains the essential ingredient of communication.

Do you believe that the idea is connected to the drawing?

Yes. It is a direct communication and a discovery of ideas with abstraction.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

No, drawing is an absolutely essential part of being an architect. People are amazed at the ability to sit down and translate discussion, ideals and goals into visual certainty, often with great speed and certainty. Computers are far too slow by comparison.

Are you aware of any study tours that exist in a similar nature to that proposed?

No, though believes that formal training in drawing at universities is lacking. The value of learning to draw still life or to sculpt or to carry out "5 minute exercises" trains the mind to focus and clarify communication. Training to think quickly about ideas, alternatives and lateral thinking is an invaluable tool. Noted the value of the quickly committed drawing defining a naivety though clarity in idea.

Do you think that such a study tour is valuable to an architect?

Invaluable. Believes that it is sad that current training in the classics of drawing is nonexistent as he would be less a person without it. Believes there are no such thing as a bad drawing, they are all good.

Would you suggest any further reading, references or contacts?

Mentioned Maitland Graves' text on observation, Gupill's text on color and drawing as both define the basics of perspective, vanishing points etc.

Richard Francis Jones

Interview 6 May 2004

Did you undertake early career study tours and were they valuable?

Yes, after studying undergraduate architecture at the University of Sydney. Worked part time in the UK thereafter and then undertook postgraduate studies at Columbia University in the USA. Trips within the USA were well researched in advance and focussed on the architecture of Frank Lloyd Wright. The trips were clearly valuable as, after studying for three years, a concerted effort was made to view architecture. Another value was the inevitable shake up of the perceived world experienced through travel and viewing. Only following these trips was a greater understanding of and a commitment to architecture as a profession made possible. The earlier visits clearly held the biggest impacts with those subsequent still fulfilling more diverse experiences of invigoration and rejuvenation.

Have you travelled through Italy?

Yes, though only limited in time.

Presuming so, what aspects would you comment upon?

Visited particular architects work within the north of Italy especially Guiseppe Terragni. Had unusually only spent limited time in Rome always considering it to be saved for a later visit. Noted colleague Romaldo Giurgola, who is from Rome and an aficionado of the city and especially the Renaissance.

Why do you draw?

Partly to communicate, though primarily to understand and explore possibilities. Developed a reaction against the "fetish-isation of 1980's drawing", where the drawings of Michael Graves and Aldo Rossi were almost seen as more important than the outcome. Has an aim not to (over) value the drawing, preferring to use it as a probing mechanic and as a means to an end. Believes in working and studying concepts by drawing.

Do you draw in different modes depending upon circumstance?

Yes, though primarily as an exploration in line work. Mostly three dimensional and thinking in terms of form rather than planning or two dimensional work.

How did you come to drawing?

Recalls drawing as a child and younger boy and enjoying it. Studied art at school, including drawing classes, though dropped it in favour of a science orientation. Also recalls making models of buildings, aeroplanes and cars as a child. Believes that drawing is a natural thing for a human being. Renewed drawing during architecture studies and observed the difference between drawing life / objects and expressing ideas. Referred also to the value of a recently taken writing course, noting that all people are expected to write to a certain level of competence whereas drawing is not, though should be, held in the same regard.

Do you need to maintain your skills?

Sees it as an ongoing activity with no conscious need for maintenance. Will often draw over perspectives to explore ideas though drawing is primarily used to explain project issues to peers or colleagues.

Do you endeavour to teach you staff, peers, to draw?

Personally not teaching oriented though does contemplate thinking about drawing compared to other mediums, such as the computer, and other descriptive means potentially available in the future. Noted a debate amongst authors who recommend writing by hand rather than with a word processor. Acknowledged the value of drawing in exercising both sides of the brain and believes in the directness of drawing as compared to the mechanics of the computer.

Do you believe that the idea is connected to the drawing?

Yes, a very strong connection as the drawing makes it possible to conceive the idea or form. Does not dispel the idea being created within the imagination, though without the drawing, it lacks a fundamental expression.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

Impossible to answer as drawing is such a natural and fundamental part of architecture. Considers it would be impossible to conceive without some form of new technology as drawing is at present too fundamental to the architect.

Are you aware of any study tours that exist in a similar nature to that proposed?

Referred to Tone Wheeler's travel tours at University of Sydney, though was not aware of study courses focussed on drawing.

Do you think that such a study tour is valuable to an architect?

Yes. Discussed the notion of familiarity (with ones own environment) though not seeing it, therefore underpinning the benefit of travel and observation. The focus on three dimensional observation and assessment is fundamentally important.

Would you suggest any further reading, references or contacts?

Suggested making contact with Romaldo Giurgola and would assist in this process.

Beverley Garlick

Interview 17 May 2004

Did you undertake early career study tours and were they valuable?

Not in the grand European tradition. Having studied in Melbourne, intended to move to Sydney for a while and then onto Europe. Still living and practicing in Sydney some 30 years later. Found that the environment surrounding the Vietnam war in the late 1960's / 70s in Sydney was too exciting to leave. Within this era became involved with photography, graphic design, poster production and involvement in (women's) magazines. The grand tour was substituted for a frenetic socio-political involvement. Asia became a later focus due primarily to the proliferation of Asian students in Australian universities and a desire to understand their design background and culture. Has latterly taken groups of students to Indonesia on study tours.

Have you travelled through Italy?

Yes, Italy was finally visited though travelling with a 4 year old son was a limiting, though defining, travel companion.

Presuming so, what aspects would you comment upon?

Primarily the impact of Ravenna/Byzantine architecture and Florence/Renaissance art and architecture coupled with the wealth of sculpture to be experienced.

Why do you draw?

Drawing is an immediate tool. You can draw with any implement as a process to put information down. Drawing allows a freedom as you can make a mistake, scribble and assemble ideas or bits of information. Came from a medical family background, though wanted to be a structural engineer. Returned to matriculation high school to study humanities / arts strands which in turn led towards undergraduate architectural training. Remembers being intimidated at first, though aimed to draw upon entry to university. Recalls an interest to draw, though without early skills. Admired Japanese wood cuts and the work of Fred Williams and desired and needed to express oneself. Somewhat torn between graphic design and architecture and was able to express the graphics through women's magazines and posters in the liberation era. Currently draws for work-based activities though will sometimes draw for relaxation, drawing grass or trees or clouds enjoying the analysis of light.

Do you draw in different modes depending upon circumstance?

Yes, handbags are always full of pencils, soft and hard. Believes that you cannot be bored when you have a pen and paper and, in fact, can't go anywhere without them.

How did you come to drawing?

It was a necessary means to communicate architecture. Recalls being jealous of those who could draw and sees the ability to write as an analogous process to the ability to draw.

Do you need to maintain your skills?

Draw all the time so by definition the maintenance is upheld. Will often work with paper and collage referring back to graphic skill set. Enjoys exploring different styles of presentation as a means of experimentation.

Do you endeavour to teach your staff, peers, to draw?

Yes, and it's hard work and getting harder. Drawing is not a skill often found in younger architects, it is not a natural process and can be a real impediment in the training and expression of ideas. Finds that younger architects are not "tracing over" older drawings in order to learn, so no trial or exploration in drawing is occurring.

Do you believe that the idea is connected to the drawing?

Yes, realising the idea is via the drawing. It is the jump from freehand to reality and represents the trial and testing process. Acknowledges the potential use and value of the computer though much development is required for it to keep up with the brain speed. Whilst an advocate of drawing, is keen to transfer the lateral thinking process to the computer at some stage of career development.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

Hard to imagine not drawing as an architect, retains a strong visual memory linked to drawing and it could be linked to the computer in time.

Are you aware of any study tours that exist in a similar nature to that proposed?

Yes. Desley Luscombe's program at the University of New South Wales. UNSW has also run a tour through India. Personally has run a tour through Indonesia via University of Technology, Sydney. Key focus was to validate and explore the cultural language of Asian students who were alien to the curriculum of western architectural history. This course was run as an assessable part of the elective program.

Do you think that such a study tour is valuable to an architect?

Yes, as it offers an intense and undisturbed focus of reading, observing and learning for the architect.

Would you suggest any further reading, references or contacts?

Notes Davina Jackson's commentary that computers will change forever the way architects work. Also refers to Professor Mark Burry's embracing of the computer as a design tool, with reference to the restorative and construction work currently being carried out at Antonio Gaudi's Sagrada Familia in Barcelona.

Colin Griffiths

Interview 2 June 2004

Did you undertake early career study tours and were they valuable?

Yes. Was the recipient of a Byera Hadley scholarship as a student and travelled through Europe for a couple of years working along the way, always noting, sketching and observing. Such trips reinforce the formal view of the architect taking space and forming ideas. Reinforces the training in compositional issues, selection of viewpoints and contemplation. Has never owned a camera as a conscious decision to always encourage drawing. Toured primarily through Italy, France, Scandinavia and Europe generally, although not always, with an architectural definition.

Have you travelled through Italy?

Yes.

Presuming so, what aspects would you comment upon?

Comments on Naples, Amalfi Coast noting intuitive recording not necessarily intellectualising. Travelled through Ravenna noting Chiesa San Vitale. Later trips have been just as valuable, to Italy and other destinations, based on a continuing process of observations linking to intellectualisation of the built form constructs, recalling recent trip to New Jersey observing 19th Century bridge constructions. Travel is about testing the subconscious and sketches with notes reinforce the looking and analysis. Carlo Scarpa's work is worth viewing in Italy around the Veneto region. Noted that Scarpa drew his way to design solutions, finding his way via the drawing, exploring scale and material constructs.

Why do you draw?

Is happy with a facility to draw. A technique that was learnt through draftsman ship connecting mind hand message and fluency. Was taught by architect Emil Sanderston to draw, keep drawing, exhaust the avenue, always encouraged to draw. Recalls Sanderston encouraging him to draw on the ferry, exhaust ducts and various forms, as the ferry was his means to and from work. Now draws small studies along the way, primarily of design issues pertaining to shadow, plane and layers to get to a point where final manual presentation drawings may be produced. The drawing becomes an encircling explorative process.

Do you draw in different modes depending upon circumstance?

Interested in the design ideals of De Still and the Le Corbusier modular espousing planar complexity, proportion and the connections between outside and inside. Drawing styles aim to reinforce these thoughts so a variety of colour pencil, charcoals and felt pens are used. A ready to hand approach is required with all early sketches.

How did you come to drawing?

Earliest memories are of drawing in kindergarten on blackboards. Recalls being singled out as one being able to draw. Could recall no other formal or formative influences. Recalls developing ideal compositions in high school, often romanticised cities that eventually became

built forms. Refers to Lloyd Rees' school of thinking that allowed and encouraged the idealisation of views to suit better compositional constructs. Sketches often form the essence of visits to sites and the spark for further design ideas.

Do you need to maintain your skills?

Still draw all the time. Refers to ongoing long term personal communications with daughter based overseas via regular drawing of sketches, musings and anecdotes.

Do you endeavour to teach you staff, peers, to draw?

Has a high degree of frustration with current staff, given their lack of knowledge and skills in drawing and expression. Does work with staff to get them to explore ideas via drawing and three dimensional analysis.

Do you believe that the idea is connected to the drawing?

The pencil can't design. The brain is the storehouse of ideas and will generate the images via the drawing. The drawing is a free process where logic is explored, issues of assemblage developed in parallel with ideas. Notes the importance of early ideas, site visits that will envision various forms, seminal issues all crystallised into early drawings. The need for a quick rapport or shorthand is essential in getting the ideas recorded. Will analyse the plans and photos of interesting buildings in order to under the designer's intent and will often draw or explore historic forms to do likewise. All part of the education process. Sees drawing as part of your life as an architect. It is how you get to your buildings. Noted Harry Sealer's eye for a good idea and how he would trust a drawing to then be developed into further ideas.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

No. Sees training as part of the design studies to become an architect. A fluency and confidence as can be shown in drawing is essential to expressing ideas. Training is different to education; the former being found, the latter being told.

Are you aware of any study tours that exist in a similar nature to that proposed?

No, sees study tours as base training for an architect.

Do you think that such a study tour is valuable to an architect?

Yes, as the idea is comprehensible in the drawing.

Would you suggest any further reading, references or contacts?

Believes that drawing will survive and evolve with the computer. Has no concept of how to design on a computer though assumes that it can / will happen. The drawing is the means to get to the built form.

Peter Ireland

Interview 17 March 2004

Did you undertake early career study tours and were they valuable?

Yes. After graduation travelled for a long period including working in southern Europe. Not necessarily with an architectural travel focus. Often disappointed with the architectural pilgrimage as the reality is not always the same as the populist image. Generally not in favour of modern architecture and finds that the presentation of reality or the image can be a falsity.

Have you travelled through Italy?

Yes.

Presuming so, what aspects would you comment upon?

Likens Italy as the complete antithesis of Australia. Where Australia is largely wild, Italy has no wildness. All areas are modified as "mans perception of God's hand". Always impressed by the volume of design work and the overall high quality of the built form. Enjoys the constant feeling of discovery. Design is an important element in society seen in the way people dress, the resolution of utilitarian details and seen as fundamental within everyday life.

Why do you draw?

To record places, incidents and little episodes of life. The resonance of events that may arouse all senses can be captured in the summary of a drawing. Drawing makes you sit, take some time and absorb. Through drawing you encounter add on experiences, observations and a depth of experience. It is important to allow time.

Do you draw in different modes depending upon circumstance?

Yes. Primarily in either watercolour pencils, pencils or felt tip pens. Has custom made a small waterproof fishing lure box into a travelling drawing box. The box includes cut down brushes, a small water bottle and a selection of critical water colours palettes. All housed in an old bag that in turn houses the various pads of watercolour paper.

How did you come to drawing?

Drawing was prevalent in the family circle. Started to draw at a young age and can recall being encouraged and commended. Felt that such encouragement supported further energy and time into the task.

Do you need to maintain your skills?

Yes. Recently found an old watercolour and feels that current skills would need some practice to retain the skill levels within. Believes in and supports the need for constant "exercise" of the practice.

Do you endeavour to teach you staff, peers, to draw?

Yes. Encourages people not to be too precious about any drawing. Drawing is to be encouraged. Assesses drawings from different angles and orientations in order to balance,

interpret and understand. Architects often elaborate built form from set viewpoints, drawings are a way to examine other aspects like the rear view of the Taj Mahan.

Do you believe that the idea is connected to the drawing?

Yes, believes in the concept of hand brain connection. Believes that the computer mouse does not connect in the same manner, perhaps one day it will but has not experienced or observed the incidence. Is absorbed by the process of thinking, seeing and drawing, a process within which hours can be "lost". Sees drawing as an aim to unlock problems by virtue of each drawing being slightly different, sometimes reductive others additive. Through this process something will click and the problem may be further absorbed, developed and solved, often deepening the parameters and depth of outcome.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

Drawing is an important facility in architecture. Believes that fundamentally the thought process is a drawn one.

Are you aware of any study tours that exist in a similar nature to that proposed?

No, only a number of people who have carried independent study tours including self over many years.

Do you think that such a study tour is valuable to an architect?

Yes, especially younger career architects.

Would you suggest any further reading, references or contacts?

Recalled an older book about drawing with the left hand or "other side" of the brain.

Chris Johnson

Interview 15 April 2004

Did you undertake early career study tours and were they valuable?

Yes especially during the holiday periods whilst at university studying architecture by travelling and working in Papua New Guinea and Malaysia. Recalls being influenced by lecturers Roland Wakelin and Lloyd Rees. Continues to travel both for pleasure and business and continues to draw often setting interesting or unusual targets (50 drawings in a day in Paris).

Have you travelled through Italy?

Yes, on many occasions.

Presuming so, what aspects would you comment upon?

All round diversity of architecture and the respect with which design is held in the wider community.

Why do you draw?

To relax, absorb and enjoy. It is a means of relating to a place whereby you feel more a part of it by recording it. Often will not take a camera and explores the psychological connection whilst drawing and relaxing. Believes in the essence to crisply communicate via drawing.

Do you draw in different modes depending upon circumstance?

Yes, will either draw and leave or often will draw then revisit soon after with collage effects, often using found or salvaged medium to enhance the image and the recollection. Recalls using red paint purchased whilst in China to achieve some of the essence of that culture or wetting and "striping" a felt pen sketch of high speed trains drawn in Leipzig to accentuate movement. These various forms exercise ingenuity and are communicative on a number of levels. Will work with a client in a different medium potentially straight onto the notepad as a tool of conversation always aiming to explore ideas.

How did you come to drawing?

The prime trigger was the architecture course at the University of Sydney with Emanuel Raft as a tutor. Recalls the use of big pens, speed in execution and the use of large brown rolls of paper. Also studied art at school.

Do you need to maintain your skills?

Not as a particular skill set. Feels it is perhaps best not to think about it, preferring to use drawing as a means of exploration.

Do you endeavour to teach you staff, peers, to draw?

Not actively though is aware that people enjoy looking at drawings or watching the process unfold. Enjoys the idea of inspiring and encouraging others to draw.

Do you believe that the idea is connected to the drawing?

Yes, as drawings take on a life of their own. As such rarely photographs in preference to drawing and observing.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

Probably not as the ability to draw has contributed to three dimensional assessment, visual expression and the excitement of ideas.

Are you aware of any study tours that exist in a similar nature to that proposed?

Referred to Dimity Reed's travel courses as well as courses run by Tone Wheeler at the University of Sydney.

Do you think that such a study tour is valuable to an architect?

Yes, absolutely.

Would you suggest any further reading, references or contacts?

Recommends Beatrice Collamina, an American academic who writes on the media and the image connecting the visualisation and message to the idea.

Desley Luscombe

Interview 31 May 04

Did you undertake early career study tours and were they valuable?

Yes, through Asia primarily visiting Japan, though did not draw or consciously organise the architectural component of the journey. Probably linked with an intrigue about Buddhism. Travelled up through Bali, Singapore, Malaysia and then onto Japan. Different confrontational experiences within various cultures encountered.

Have you travelled through Italy?

Yes.

Presuming so, what aspects would you comment upon?

Recalls a certain antagonism towards the grand tour of Italy idea and was not initially keen to re-establish western hegemonies. Did eventually find pleasure in specific texts and research and started to find value for students and learning in concerning oneself with old architecture. Found the antiquities as an immediacy of history forcing a requirement to engage and enlighten an awareness. Was concerned that Australian architecture was Eurocentric following the Greek, Roman, French Gothic, Italian Renaissance, English Neoclassic route and not aware of nor focussed on the Asian influences at hand. Keenly aware of and interested in the socio / commercial / political issues that shape the built form over time. As such was keener to engage in the Asian influences currently shaping the Australian cultural idiom.

Why do you draw?

Technically adept at presentation drawings and has worked with husband (architect) doing this work. Drawing process defines elements of axuality, systems of order, often works post building on representational drawings of work to an architectural audience. Focussed on the representation of the message. Drawing seen as a separate system of communication in parallel to text and language. Believes that the 1980 /90's closed out the era of hand drawings and we are now well into the computer age. Referred to Mike Volleys' article "Brunelleschi to Cad: Cam" as a good reference. In the same way that perspective changed the way the 15th Century artist viewed drawing and architecture the computer will change architecture. Refer also Mark Burry's work at the Sagrada Familia in Barcelona embracing the computer as an integrated design aid. Believes that the computer is influencing "blobby" architecture and reconstituting the representation techniques of contemporary architecture. Notes the relationship between technology and representation obfuscating some things though not everything.

Do you draw in different modes depending upon circumstance?

Yes. With students will use the most immediate implements to express ideas. Currently exploring jewellery and particularly deconstruction as a creative pursuit.

How did you come to drawing?

Art was studied through school with an interest in the work of abstracts / surrealists. Studying architecture became the art component. Mentioned teachers such as Lorna Nemo, Bauhaus influence at the University of New South Wales. A draughtsman like artist who encouraged the mix of art and science. Encouraged an open approach and a graphic experience. Undertook Saturday art classes and university art classes including sculpture weaving and pottery. Interested in the study of the combined elements of light, shadow, form, dimension and geometry.

Do you need to maintain your skills?

Yes, though at present not a lot of drawing is undertaken given current work role.

Do you endeavour to teach you staff, peers, to draw?

Not at present though given the influences in graphic outcome expressed at University of New South Wales former role, the curriculum at University of Technology, Sydney could well change and evolve.

Do you believe that the idea is connected to the drawing?

Yes, it is connected, though perhaps tenuously. Architecture is the transformation of ideas into built objects and, as such, a passage beyond the realisation of only single person. Drawing is the key communication language that is sufficient to share with people.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

No.

Are you aware of any study tours that exist in a similar nature to that proposed?

Yes. Own course to Italy via University of New South Wales. Also University of New South Wales course to India, China and Japan. Students were often naïve though they were guided through a sequence of architectural experiences as part of these courses.

Do you think that such a study tour is valuable to an architect?

Yes. The main outcome is a dedication to architecture. Believes that current educative role came out of parental influences of builder / teacher and as such was comfy with a learning environment. Believes that drawing will survive as an expression of physical fabric. Always. It is an iterative process. It is about truth over falsity. It can encompass political engagement and define the impact of built from over and above the process. Believes that social values influence the craft and, in turn, the design profession.

Would you suggest any further reading, references or contacts?

Yes. Referred to Edward Robbins, John Tahara, Mark Wrigley, Hal Foster's "Writing Worlds", "Downcast Eyes", "History of Knowledge" and "Theories of Avant Grade", as a mixture of relevant authors and texts.

Ken Maher

Interview 4 June 2004

Did you undertake early career study tours and were they valuable?

Not early career though more so mid career. Studied at University of New South Wales and graduated gaining a government cadetship so immediate travel was not undertaken or possible. As a young graduate gained second prize in the design of the Pompidou Centre in Paris. After cadetship gained a partnership into a small practice though left it in mid career to travel. Travelled overland from Kathmandu to London where architectural work was undertaken. As a mid career trip a more mature approach and broader perspective was applied to viewing the work of Frank Lloyd Wright and Le Corbusier whilst travelling. Has always seen architecture as linked to the landscape, given formal training also as a landscape architect, and is always concerned with place. Cities of Rajasthan India and Isfahan noted as places where city experiences encompass urbanity, landscape and urbanism.

Have you travelled through Italy?

Yes.

Presuming so, what aspects would you comment upon?

The lessons to be learnt. A wealth of seminal individual buildings though an attraction toward the collective such as the Sienese landscapes, the overall cities of Florence and Rome. Studied Alberti as a student and was absorbed by the mixture of mathematics and creativity. Enjoys the view on heritage focussed on loose fit and a confidence to keep only the best and most relevant. Enjoys the hill towns, the layering of time where the past is overlaid and an individual body of work can exist amongst the whole.

Why do you draw?

Absorbing and understanding in an unmeasured manner. To understand. A mode of expression and thinking, better than a photograph and significantly different. Will sometimes draw, sometimes photograph. Notes the value of drawing and observing, taking the time to absorb whereas photography is an instant image. Interpreting through a process of drawing, taking on lessons of time and history. As an architect clarifying often diagrammatic messages exploratory, expressive, convey information and broader ideas by working and talking.

Do you draw in different modes depending upon circumstance?

Uses a felt pen and notebook. As part of a collective collaborative practice will draw in many formats often very mobile and with many differing people and formats. Will occasionally use a parallel rule to draw. No computer drawing skills as a generational outcome. A mix of media is employed in the office where the computer is adding and where key people can use both computer and a variety of media and expression skills including drawings. Drawing is a core skill though is stimulated by the use and possibility of computers. Believes in a need for tactility in design, and a making of physical ideas, outcomes, experiential responses and tangible craft like elements and that it is difficult to achieve these without the skill of drawing. Endorsing the hand eye feeling. "My world is connected to the 15th Century Italian view on drawing and

expression". More stimulated and interested by physical and visual stimuli rather than a potential virtual world. Expresses concerns over collage [computer] providing virtual experiences, providing imagery over real and tangible products. Prefers thinking or assembled products over virtual visual experiences. Architecture is interpretive, tactile, tangible, experiential and drawing is a key aspect in making of this. Computers have ability though at present a lack of craft dimension, intellect, materiality in the traditional sense. Referred to the work of Nicholas Legoponti where computer applications may be used for direct drawing, and noted the growing use of analytical predictive environmental tools as a positive and valuable trend. Notes though that drawing on a tablet offers no texture or intensity of experience to match that of drawing.

How did you come to drawing?

Lived in the country and had no surrounding or tertiary influence of drawing. As a kid you drew. Did not study art at school. Always interested in drawing. Kept drawing, though away from school. Architecture course reinforced drawings skills at University of New South Wales and the course had a strong arts program. Recalls being influenced by architect Bill Lucas, a strong thinker. History of architecture study encouraged drawing as a "learnt trade". History of architecture experienced through drawing experience.

Do you need to maintain your skills?

By default, yes. Sometimes wished he drew more, for discipline and delight, for travel and work.

Do you endeavour to teach you staff, peers, to draw?

Encourage people to draw and express. In the workplace an interaction rather than mentorship takes place. Now less in the role of encountering fresh graduates though more in tune with more senior professional interface. Regular teaching at University of Sydney / University of New South Wales provides an avenue to teach and drawing can be, and often is, a central part of that.

Do you believe that the idea is connected to the drawing?

Drawing informs the thinking. Expressing. Drawing is part of the path to an outcome. Thinking in both abstract and concrete uses drawings to fully understand, clarify and strip back. Notes the use of architectural diagrams for conceptual and abstract idea expression. Drawing is a part of the idea.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

No. "Like playing piano with your hands tied behind your back". Noted the French architect Jean Nouvel though who does not ever draw though expresses his ideas verbally.

Are you aware of any study tours that exist in a similar nature to that proposed?

No.

Do you think that such a study tour is valuable to an architect?

Absolutely.

Would you suggest any further reading, references or contacts?

Expression and ability to draw adds value to a connectivity of drawings. Take clients through the process in an analytical and expressive manner from concept to descriptive, gaining support along the way. Drawing is a captivating and communicative understanding. Diagrammatic ideas drawing and explaining thoughts.

Caroline Pidcock

Interview 20 May 2004

Did you undertake early career study tours and were they valuable?

Between 3rd and 4th years at University of Sydney travelled overseas as part of the year out program. Travelled through Italy (Rome, Florence, Venice, Perugia, Assisi, Montepulciano) on an arts based tour run out of Melbourne. Tour was taken by a general range of people though other architects were present.

Have you travelled through Italy?

Yes.

Presuming so, what aspects would you comment upon?

The delight of wandering, walking, sitting looking, photographing coupled with talking, feeling the rhythms and taking time to look as a method of examination.

Why do you draw?

Primarily for work, to explore and start conceptual ideas. Concept ideas emerge in diagrammatic form. Uses drawings to talk around during presentations and values the expression in drawings. "There are many ideas within each line."

Do you draw in different modes depending upon circumstance?

Primarily with a felt pen or a small pen on scraps of paper focussed always on immediacy.

How did you come to drawing?

When a small child recalls being intensely interested in drawing. Did not do any art at school though did do a Julian Ashton drawing course on own volition. Always loved to do a drawing. In choosing a career it was between chemical engineering, psychology and architecture and architecture won out due to the art component. Found the first year very confronting because of the lack of drawing and thus communication skills. The grand tour enabled an understanding of what architecture was all about. Further study at University of Sydney allowed creative drawing approach and undertook further life drawing classes at University of Sydney.

Do you need to maintain your skills?

Considers herself to be fast at ideas and sketch thinking process though can get out of practice on analytical drawings.

Do you endeavour to teach you staff, peers, to draw?

Doesn't happen though encourages people to draw and indeed talk as you draw supporting conversations around drawing.

Do you believe that the idea is connected to the drawing?

Yes and has observed a new generation with a blend of drawing and computer skills and aptitudes. Can't rule out that the idea is imagination based though the drawing is an easy tool of communication. Enjoys the process of photography as recollection / record.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

Don't know how I would have expressed my ideas. "Drawing is a lovely thing to do". Noted the analogy with writing and the process of writing and expressing creative writing ideas.

Are you aware of any study tours that exist in a similar nature to that proposed?

Noted "Australians Travelling Abroad" (course attended as mentioned was run by these people). Art Gallery of New South Wales runs art appreciation courses throughout Europe.

Do you think that such a study tour is valuable to an architect?

Yes, did not realise how fabulous buildings could be, great streets, townscapes and sense of place only able to be experienced first hand.

Would you suggest any further reading, references or contacts?

The value of a creative writing course as analogous to the ability to draw and express.

Alexander Tzannes

Interview 19 March 2004

Did you undertake early career study tours and were they valuable?

Yes, on a number of occasions. Travelled as a young child with his family though first independent trip focussed on architecture was in 1973 as a fourth year out student at University of Sydney. Travelled through Denmark, the United Kingdom and France. In 1978 a further tour was undertaken to include the USA, Italy, France, Spain and was very much focussed on architecture. Felt compelled to travel via a sense of inadequacy or an illiteracy of knowledge. Was struck by Louis Kahn's work displaying a quality of light that could not be captured without visiting the work and indeed endeavouring to record the experiences. Recalls beginning to understand the value of drawing.

Have you travelled through Italy?

Yes

Presuming so, what aspects would you comment upon?

Recalls a revelation upon visiting Italy, only reinforced by repeated trips. Everything that is done is done with design in mind. Referred to Boro mini's design quality and the sense of capable designers and urbanists operating in a highly refined cultural atmosphere.

Why do you draw?

"I draw because it helps me to understand, to explore, and to relax." Postcards are sent to friends or colleagues along travels and relaxation is found in drawing. The value of drawing has been learnt.

Do you draw in different modes depending upon circumstance?

Yes and considers the various modes and mediums a mess. An A6 diary is a work tool to contain all manner of data, minutes, drawings, records of conversation. A daily tool. A written diary is kept. A watercolour folio is kept. A black and white postcard book is kept and used to keep in contact with people whilst travelling. Finally a large drawing folio is kept. All documents are considered open and ready for constant use. On a travel trip a variety of all or a limited few of these will be thoughtfully packed. Various medium of artline pens, pelican pens, pen and ink or a "Planet" white gold nib pen are used. Notes that much of the drawing is a pursuit of tonal qualities rather than line so Siena browns and blacks are used as watercolour tones. A pursuit of light and shade is targeted within drawings, exploring textures, materials and form rather than line.

How did you come to drawing?

Took art at school and eventually trained at university by Lloyd Rees. Did exhibit artworks at an earlier age and was noted with a Biennale selection for artworks. Recalled that meeting the artist Imants Tillers assured him that he was not an artist and that architecture was his appropriate forte. Believes that his life drawing skills were ok though had to learn perspective

technique. Recalls that during 4th year architecture a conscious decision to keep an architectural notebook coincided with the conclusive decision to become an architect.

Do you need to maintain your skills?

The types of drawings used must be appropriate for the context. Believes that he paints badly and has a goal to improve this. Notes the use of light pencils to set up watercolours and feels that the messier the format the better as everything comes together. Noted ambidextrous skills and is often found drawing left handed and writing with the right, pen in both hands often.

Do you endeavour to teach you staff, peers, to draw?

Yes, believes that it is good to have the motor skill and those who do draw are encouraged.

Do you believe that the idea is connected to the drawing?

Yes, believes that the import of drawing is critical on the sense of design.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

Absolutely not. Only when drawn do we understand how to make scale and composition. The fluidity of three dimension objects linked to the design ideas has come from sketch book records and drawings. The ability to process information in a logical manner, to elevate, to understand sections and to define built form all gained emergence out of the drawing.

Are you aware of any study tours that exist in a similar nature to that proposed?

Aware that alma mater Columbia runs undergraduate course to Paris and Rome. Noted that during his masters at Columbia that he felt completely under skilled compared to peers regarding their sketch book portfolios. This was not only in the drawn work but also in the places that had been visited in order to draw and observe. This sense of inadequacy led to a drive to travel and in turn improve the drawing skill set.

Do you think that such a study tour is valuable to an architect?

Yes, in order to understand excellence in architecture, enjoy the time and define a value system.

Would you suggest any further reading, references or contacts?

Noted Walter Burley Griffin / Marion Mahoney's description of Canberra, their ideal city in words particularly the hierarchy and lucidity of the text as an ancillary graphic medium. Commented also on the diaries of Mathew Flinders.

Ken Woolley

Interview 3 June 2004

Did you undertake early career study tours and were they valuable?

Yes, as a former Byera Hadley scholar he travelled through Europe studying “durability and weathering”. This topic readily enabled a study of both new and old European architecture. Pursued a battle for acceptance of Modernism and the new (then) Modern era of architecture. Over 18 months of travel included 7 months of working. Noted that Arthur Baldwinson of University of Sydney gave him a reference to meet Gordon Cullen of the Architecture Review primarily based on his drawing skills. This introduction led to a job so by default drawing was an entrée to overseas work and further experiences.

Have you travelled through Italy?

Yes.

Presuming so, what aspects would you comment upon?

A most important place. The history of architecture encompassed. Visited twice during the initial trip and many times since. An old copy of Bydecker supported the trip as did Kidder Smith's book *Italy Builds* which noted many seminal modernist buildings. Sees drawing as being linked to Europe and its influence on western culture. Architectural education has suffered a loss of focus on European cultural traditions and the interest in history is somewhat neglected at present.

Why do you draw?

(During interview Ken was constantly carrying and playing with a soft lead broad diameter clutch pencil.) Background was drawing and was biased towards drawing. Believes that drawing is closely related to writing as a creative pursuit with both thought processes focussed on communication. Architecture is technically based creative process. Sees drawings as the embellishing of buildings. The creative process is about the getting and expression of ideas. Likes the analogy of music and architecture where they both involve prescription. Drawing is not the building but enables the process and a music score is a similar prescription. The difference is time where architecture is more permanent, music more temporal. Notations in music conventions are similar to architectural conventions for drawings. Drawing is for communication to a builder about what is to be built. Noted also that notebooks of composers are now sought as the fodder leading into the great compositions. Drawings are often unconsciously recorded and developed and again the analogy to a writer may be made where the writer is communicable and self referential in expression.

Do you draw in different modes depending upon circumstance?

Yes. Firstly small A5 notebooks are used with fine line pens, usually not in the office and mostly as home. These are used for staff and colleagues to develop ideas from base drawings. Regrets not doing more drawings and sketches in younger years. Started to record the work and thought process about 30 years ago. Another mode is that of pencil on A4 bond paper used mainly in the office. Even office letters are produced this way. A light weight of bond

paper is used so that drawings can be overlayed to develop ideas. Many of these drawings are used on projects and then logged into job files whilst in the office. Will also use butter paper overlays though finds this decreasing with the advent of computer screens rather than drawing boards. Is often loath to work over a plot as you are never sure how recent or accurate it is. This forms part of the separation from the idea or development that computers can cause. Travel sketches are produced on notebooks, A4 art paper with a fatter Pentel pen so that areas of black can be in filled. Noted influence of architect / cartoonist on linework and composition.

How did you come to drawing?

Mother was an amateur artist producing pencil, pen drawings, watercolours and was fascinated by and encouraged to draw. Cannot remember not drawing. Father was a printer and as such a graphic orderly type of person. Recalls art classes at East Sydney Tech and doing art classes as a 10 year old on Saturday mornings. Lloyd Rees was a seminal tutor in architecture at university, where he taught art history, though was an inspirational model with a good manner, good training, and sublime technical skills very much as a stream of consciousness. The technical stream of training supported design.

Do you need to maintain your skills?

No, it is a constant process. Getting looser as time goes by and freer in form and expression. Enjoys now taking risks in drawing. Believes that observation is about communicating your view, a simplification process with codes of implication and presence created by drawing.

Do you endeavour to teach you staff, peers, to draw?

No. most peers get exposed via the working process. The office has imposed some standards to embrace the computer skill sets and technical requirements.

Do you believe that the idea is connected to the drawing?

The idea is communicated via the drawing. There is no other way to communicate the idea. An oral account can be quite significant though a drawing is an implied shorthand. All lead to the prescription of the building.

Would you have achieved as much as an architect if you had not applied yourself to drawing?

"Don't think I'd see it that way". Can't separate life into drawing form. Plenty of architects are successful by other means apart from drawing. Believes that building is about space and structure and a drawing is a way to get there and find those solutions. Drawing is often the indication of a good architect. Regrets the lack of true training that exists in architectural education now. Believes that both training and education are required for an architect's experience.

Are you aware of any study tours that exist in a similar nature to that proposed?

No.

Do you think that such a study tour is valuable to an architect?

I think so. During the traditional break in a two step degree such a tour is well encouraged.

Would you suggest any further reading, references or contacts?

Is aware of the older view of drawing and as such has established that the office is entirely CADD from schematic design onwards noting some good and bad issues within this approach. Notes that CADD needs a full scale model at its core and the change that must be experienced between working on a scaled drawing versus working on a full scale computer screen and this will change the thought processes of design and three dimensional thinking. Likens the change to the difference between digital and analogue. Believes that the days of producing hand drawings in an office are over and notes the issues of perception difference between manual drawing and CADD representation.

Recalls doing architectural renderings for other architects as a young student architect. Demonstrated his work with a couple of small sketchbooks showing fine quality small drawings that covered broad topics, scales and issues.

CURRENT COURSES

The following is a non exhaustive outline of current courses available that are of an architectural nature and demonstrate that the idea of a group study tour is robust and may be achieved with ongoing tangible outcomes.

2005 USA Study Tour

"Revitalisation and Redevelopment: New Tools for Transforming Communities"

The University of Sydney Faculty of Architecture / Professor Ed Blakely

"The City Assembled: European Investigation Program"

Australian Studying Abroad / The University of Melbourne

2004 Cambodian Study Tour

The University of Sydney Faculty of Architecture / Peter Armstrong

2005 European Tour of Architecture

RMIT / Professor Dimity Reed

2003 Italian Study Tour [now ceased]

The University of New South Wales / Desley Luscombe

2003 European Study Tour

The Royal Academy Copenhagen School of Architecture

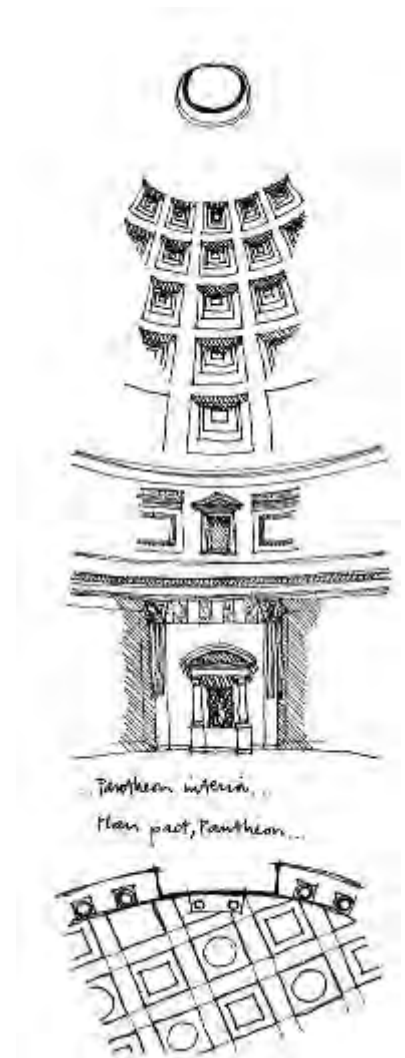
In addition to these programs such as that established by the American Foundation for students of architecture at American Universities to live and study in Rome Italy represent an ongoing in country means of studying diverse built forms and cultures.

DRAWING ITALY

The attached booklet is an assembled record of this author's sketch book analysis of precedent of the seminal architecture of Italy observed between the 28th September and the 25th November 2004 as background information for the 2003 NSW Byera Hadley Registered Architects scholarship aims.

"DRAWING ITALY"

...a guide



David Holm

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Why Italy?

Italy is arguably the most geographically compact crucible of western architecture available. Etruscan, Roman, Byzantine, Romanesque, Gothic, Renaissance, Mannerist, Baroque, Neoclassicism, Fascist, Modernist and contemporary architecture are all represented, sometimes iconically, within Italy.

Greek and Etruscan

The Greek and Etruscan period began in the 6th BC and encompasses the earliest existent structures in Italy. These built forms characterise the qualities of classic Greek architecture with strong and simple outlines, rigorous adherence to the principles of proportion, a total unity of horizontal and vertical elements and the extensive use of decoration to emphasise structure.

The architecture of this period was constructed primarily out of marble and was designed to the three orders of Ionic, Doric and Corinthian. All comprised an upright column upon a base, topped by a capital and an entablature of architrave, cornice and decorative frieze.

This Greek and Etruscan period encompassed a variety of building types including temples, open air theatres, [often set against hillsides in dramatic locations] city walls, gateways and tombs.

- temples Paestum, Campania; Agrigento, Selinunte, Segesta and Syracuse, Sicily
- open air theatres Syracuse and Taormina, Sicily
Volterra, Tuscany
- city walls / gateways Volterra, Tuscany
Lucca, Tuscany
Perugia, Umbria
- tombs Cerveteri and Tarquini, Lazio

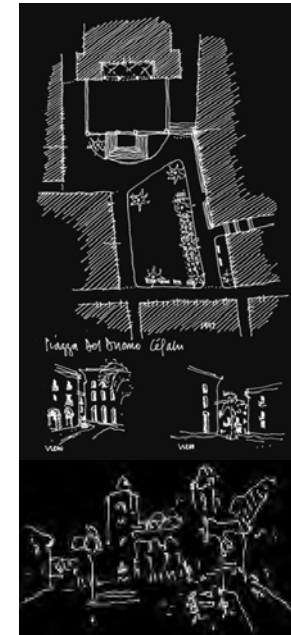
Roman

The Roman era was a period of development and adaptation from the Greek and Etruscan ages. This period of greatest development and ingenuity may be contained between the 3rd Century BC and the 3rd Century. As with most art forms, a preference was developed for order and function over beauty and

Piazza del Duomo Cefalu

NORMAN

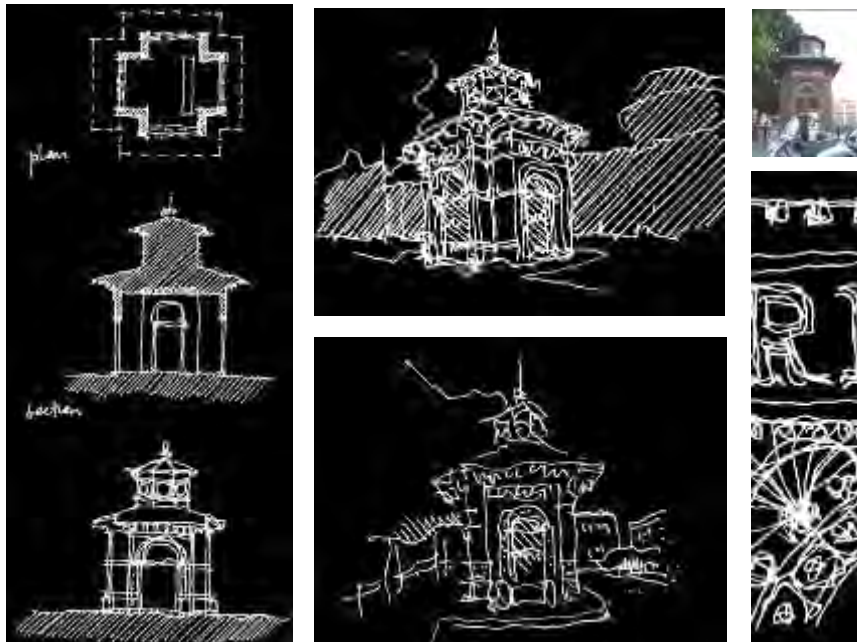
The northern Sicilian town of Cefalu was originally a fishing village occupied by the Arabs prior to the 10th. The dramatically sloping Piazza del Duomo is dominated by the Arab Norman Cattedrale constructed under instruction from Roger II in the late 12th century. The distinctive twin towers of the cattedrale are further given backdrop by La Rocca. This natural outcrop is the dominant feature overlooking the town and forming a distant edge to the piazza enclosure. The piazza is fed by the central commercial spine of Corso Ruggero. More recently the town was used as the urban setting for the 1990's film "Cinema Paradiso".



Chiosco Ribando, Palermo

ART NOUVEAU

Three sets of kiosks were designed in various styles by the noted Palermitan architect Ernesto Basile. The first in 1894 in the Piazza Teatro Massimo features a focus on calligraphy and metalwork. The second in 1897 in Piazza Verdi features colonial design influences. The third, completed in 1916, in Piazza Castelnuovo features a focus on intricate lines and composition. The kiosks are used for a variety of commercial uses.



aesthetics alone and functional building materials were predominant. Towns were laid out in regularly planned grid formats for the first time in recorded history, often for or to the models of military camps. Much of the built form was sanctioned on behalf of the various Emperors as an expression of the Roman might and ability. The architecture of the Roman period came to express the power and glory of the Roman Empire.

Whilst the Romans used the three Greek orders, with a preference for the Corinthian order, they also added two orders of their own with the development of the Tuscan and Composite styles. The column was relegated to secondary usage in favour of solid construction that incorporated the rounded forms of arch and dome with a focus on the rigidity of end walls. The use of vaults was to become the Roman period's major contribution to architecture.

In addition, the use of an early form of concrete enabled the construction of much greater spans and hence higher structures than ever previously possible.

The most important ensembles of existing Roman architecture in the urban setting are the original seaports and residential towns. Within these, all the various elements of urbanity were found. The forum was the heart of the city, set as a square at the intersection of the two main streets, the Decumanus running east west and the Cardomanus running north south. Its various built forms comprised the focus of all main aspects of public life, both secular and non secular. Each forum contained temples, which initially followed the Greek models with imposing façades preceded by flights of stairs, with later designs evolving into the circular planning form.

The main public building was the basilica, used for meetings, markets and administration of the city. Thermae (public baths) were key examples of the formal recreational aspects of life in a Roman city. The theatres and amphitheatres of the Roman era were atmospheric, often elliptical, edifices of solid construction where massive outer walls housed inner tiered seating arenas.

- temples Tivoli, Lazio
Assisi, Umbria
- temples (circular) Pantheon, Rome Lazio
Temple of Vesta, Rome Lazio
- basilica Trajan and Maxentius Basilicas, Rome Lazio
- thermae Baths of Caracalla and Diocletian, Rome Lazio

- theatres/amphitheatres Coliseum, Rome Lazio
 l'Arena Verona, Veneto
 l'amphitheatro Pompeii Campania

Roman residences fall into three main categories; the domus, the villa and the insulae. The domus was a town dwelling symmetrically grouped around an atrium and peristyle courts. Villas were patrician country residences characterised by decorative porticos and colonnades oriented towards sun and shade aspects. Insulae were tenement type constructions that housed poorer Romans over several floors. The insulae were vaulted throughout and arranged in multiple levels, streets and squares.

- domus Pompeii, Campania
- villa Pompeii, Campania
- insulae Ostia Antica, Lazio

Other built forms include the cylindrical mausoleum and, as Roman law forbade burial inside the city walls, this led to the development of a built form that celebrated the dead.

The triumphal arch was also a Roman creation to celebrate the technology of the arch and various military victories. The Romans were famed for their engineering and hydraulic expertise and the utilitarian aqueduct and bridge designs utilised the arch technology to full extent to transport water into the towns.

- mausoleum Castela Sant Angelo, Rome Lazio
- bridges Pons Fabricus, Rome Lazio

Christian and Byzantine Architecture

Early Christian and Byzantine architecture was rooted in the then clandestine practice of the Christian faith between the 5th Century and 10th Century. Due to religious persecution, initial Christian believers were forced to practice their religion in catacombs well away from the public gaze.

- catacombs Rome, Lazio
 Naples, Campania
 Siracusa, Sicily

The eventual acknowledgement and legalisation of Christianity and its adoption by the Roman Empire saw the development of an architectural style that was

Monreale Cattedrale, Palermo

Located atop the ridge within the town of Monreale on the outskirts of Palermo this cathedral was sanctioned by William II, and represented heavenly visions and biblical themes. The cathedral was designed in the Norman, Arab and Byzantine styles in the late C12th.

The cathedral is primarily noted for its interior mosaics, executed by Venetian mosaicists and considered some of the best from the Italian Middle Ages. The scenes depict various Old Testament images.

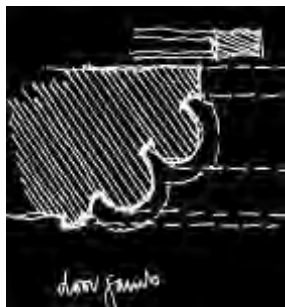


Grand Hotel Villa Igea, Palermo

NEOCLASSIC

Situated on Salita Belmonte all' Acquisanta on the northern coast outside Palermo and designed by the renowned Palermitan architect Ernesto Basile between 1899 and 1904.

The villa and its landscaped environs are adjacent to and integrated with the water's edge. The villa is focused on the architectural capacity to integrate the design, furnishings and lighting to create the sense of an intimate house.



based on secular imperial models. In general, churches adopted the forms of the basilica with stark exteriors pierced only by large windows and interiors displaying the move towards regular columns. Transepts were introduced into church planning in a conscious desire to emulate and symbolise the cross in plan formations.

- cross plan churches Santa Sabina and Santa Maria Maggiore, Rome, Lazio

The Byzantine's most distinctive architectural form was the dome. Under the Romans, this form rested on a circular base however the Byzantines, by the use of pendentive arches, were able to erect domes on square foundations.

- domed church Basilica San Vitale Ravenna, Emilio Romagna

The Basilica San Marco Venice, Veneto developed from this model. With domical planning, a Greek cross format and sumptuous mosaic decoration, the San Marco basilica is considered the supreme Byzantine monument.

Romanesque Architecture

Romanesque architecture emerged as Europe rose from the Dark Ages in the 10th and 11th Centuries. Key features of this style included a continual attachment to the basilica plan, cupolas raised on domes, the use of marble as a façade facing, the presence of ancillary baptisteries and campaniles, and the use of arches for both decorative and structural purposes.

The churches of the Lombardy Plain feature tall towers with projecting vaulted porches that rest on a decorated base. A circular (rose) window serves as the principle light source into the nave.

- vaulted church Il Duomo, Modena, Emilio Romagna

The Campo Dei Miracola Pisa in Tuscany offers the unique trio of duomo, campanile and baptistry in one setting, highlighting the unity of consistent façade materials and the surrounding open arcade galleries.

Idiosyncratic Romanesque styles were fostered using the mixture of mosaics and marble façade panelling.

- marble / mosaic facades San Miniato, Florence, Tuscany

Regional influences are to be seen in the exotic inclusions of Byzantine domes and mosaics mixing with Saracen horseshoe arches.

- regional influences Duomo Monreale and the Palazzo dei Normanni, Palermo, Sicily

Gothic Period

The Gothic period was architecturally focussed on light and verticality. The Gothic period in general grew out of France in the 12th Century to become the dominant architectural force in medieval Europe. The Italian Gothic ranged from the early 13th Century to the early 15th Century and was more restrained than its northern neighbour counterparts. The key architectural features of Italian Gothic included the pointed arch, the rib vault, flying buttresses and large tracery windows. These became dominant architectural features throughout medieval Europe.

The Italian Gothic has a more horizontal emphasis characterised by low rise buildings with timber rather than stone roofs. Italian Gothic façades were often decorative, with little or no connection to the interior structure, comprising marble, mosaics and frescoes.

- gothic facade San Francesco, Assisi, Umbria
Il Duomo, Orvieto, Tuscany

The spread of plain early Gothic architecture in Italy is directly linked to the Cistercian order of monks. These churches placed an emphasis on preaching and many were focussed on holding large congregations thus influencing the larger interior spaces.

- large naves Santa Maria Novella, Florence Tuscany
Il Duomo, Siena, Tuscany

In the north of Italy, the Gothic style of architecture was expressed in the form of stone structures that placed their primary emphasis upon geometric pronouncement.

- stone structures Il Duomo, Milan, Lombardy

In military architecture, a number of imposing castles were built during the 13th Century. These castles combined Classic and Gothic elements.

- castle Castel Nuovo, Naples, Campania

Rising civic pride in the late 13th Century gave rise to a passion for town halls that were often crowned with towers.

Quattro Canti, Palermo

BAROQUE

This intersection within the oldest part of the city is known locally as il Teatro.

The perfect circle of 17th Spanish Baroque curvilinear façades is the ancient Roman centre of the city and the intersection of the Cardo and Decumanus. Each façade features a fountain and the intersection marks the junction of the four key areas of the city; Capo, la Kalsa, Vucciria and Albergheria.



Piazza Castelnuevo / Piazza Ruggero Settimo, Palermo

NEOCLASSIC

This combined piazza sits at the end of the Via Maqueda / Via Ruggero Settimo, the original Roman Cardomanus. From here towards the north is the Via della Libertà and the beginning of the modern city. Via della Libertà is a wider boulevard, with tree lined central aisles, surrounded by late C19th apartment blocks. The piazza stands as the major junction between the old central section of the city and the newer more spacious northern sectors planned by the Spanish in the C18th.



- town halls

Palazzo Pubblico, Siena, Tuscany
Palazzo Vecchio, Florence, Tuscany

Renaissance Architecture

Renaissance architecture first emerged in Florence in the early 15th Century as a derivation of the classics. The vocabulary of the Renaissance was to spread throughout Europe and remain dominant for some four centuries.

The Renaissance period saw the history of architecture become the history of architects, with full time practitioners emerging for the first time. One of the key characteristics of these practitioners, and indeed the Renaissance itself, was the diversity of skills of the proponents. The integration of this diversity of skills was often rooted in the plastic arts of sculpture and painting and, with the infusion of mathematics and technical prowess, became the signature of the robust Renaissance style. In addition to the individual designers, the role of the patron or benefactor became parallel and paramount. The accumulation of wealth, often derived through mercantile means, saw individuals and families, rather than the church or state, rise for the first time as a source of community power with a ready desire for outward built form expression.

Filippo Brunelleschi (1377 -1446) was one of the leading lights in this era, moving away from his classic training as a sculptor to focus on building practices and the classics. Best exemplified by Florentine works, Brunelleschi's work fuses Roman construction techniques, such as herringbone brickwork, with contemporary invention in the form of unique construction hoisting machinery.

- Brunelleschi

Il Duomo, Ospedale Degli Innocenti, Chiesa di San Lorenzo, Chiesa Santo Spirito and the Capella Pazzi, Florence, Tuscany

Leon Battista Alberti (1404 –1472), a contemporary of Brunelleschi, was a writer and theorist whose work was aesthetically manifest in triumphal arches and pediment temple fronts. Alberti's work analysed and articulated the theory of harmonic proportions with the adoption of certain ratios of measurement within a body of built work.

- Alberti

Sant Andrea Mantua Lombardy

Bernardo Rossellino (1409 – 1464) was the architect of Pienza, Tuscany, which was initially foreseen as a utopian papal town planning scheme.

The high, or later, Renaissance period was triggered by Donato Bramante (1444 – 1514), who began his working life in Milan. Like many architects of his era he would move from his initial base often following or finding new mentors or benefactors to allocate work and support theoretical and built form development.

Bramante's masterpiece is the Tempietto di San Pietro in Montorio Rome Lazio, which embodies the spirit of classic architecture blended harmoniously with the ideal Renaissance values of mathematics and proportion.

- Bramante Santa Maria Presso San Satiro and
Santa Maria Della Grazie Milan, Lombardy;
Tempietto di San Pietro in Montorio Rome Lazio

Andrea Palladio (1508 – 1580) became Italy's most erudite and influential architect due to his ability to meld features from all his predecessors into his own personal style. His style and work philosophies are copied to the present day and are referred to around the world. This is especially evident in the City of Vicenza. The Villa Rotunda, Vicenza, Veneto, saw the first use of a centralised plan in a secular building.

Mannerism

Bramante's position as the leading architect in Rome was taken over by Raphael (1483 – 1520), who's finest architectural work is the Chigi Chapel in the Church of Santa Maria del Popolo in Rome, Lazio. The key feature of this church was the idealised, centralised temple originally conceived in his painting "The Marriage of the Virgin".

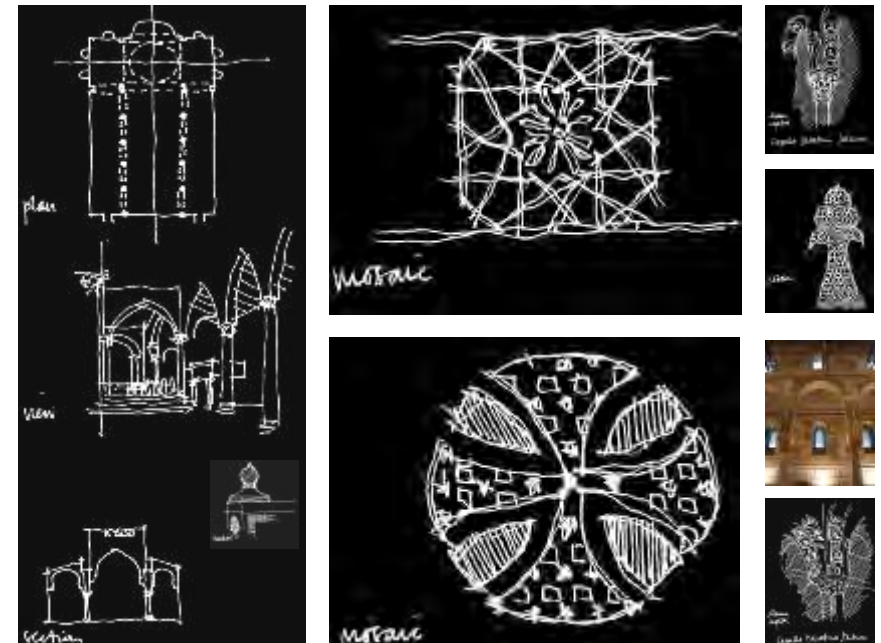
Raphael's pupil Giulio Romano (1499 – 1546) operated in Mantua, where he actively rejected the Renaissance ideals of perfect harmony and balance in classical architecture thus manifesting the beginning of the Mannerist style. This knowing departure from the rules and constraints of the classics, and especially the Renaissance, is best exemplified in the optical gymnastics of the Palazzo Te in Mantua, Lombardy.

Michelangelo (1475 – 1564) took up architecture in his middle age and his approach towards architecture was a direct contrast to Alberti. He used plans as a rough guide only, and made constant changes throughout the construction period, thus forming a role as the master builder. Whilst none of his major buildings was finished within his lifetime, his work demonstrated an original

Capella Palatina, Palermo

NORMAN

Located within the Palazzo Reale and designed for Roger II in 1130. As the richest Norman king in Christendom, Roger II aimed to indulge his passion for Arab arts and culture. Internal mosaics within the church depict scenes from the Old Testament, and Palermo's role in various conquests including the Crusades. The chapel features a side entry onto a central nave and side aisles, all focused towards a raised altar. The altar is covered by a central dome.

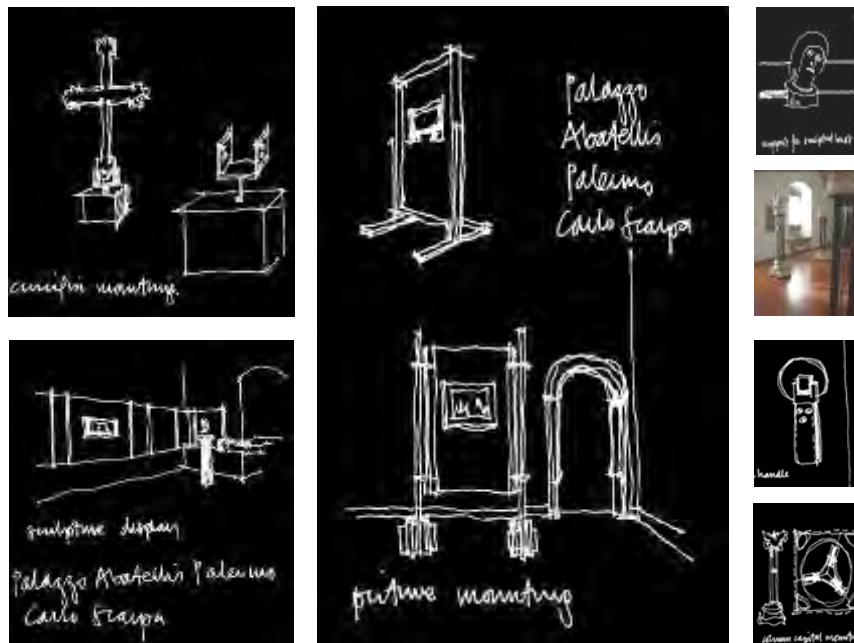


Palazzo Abatellis, Palermo

MODERN

This palazzo was originally built in the C13th, though was substantially refurbished to a design by Carlo Scarpa in 1954. Located in via Alloro in the La Kalsa district of Palermo, it is now used as the Galleria Regionale di Palermo. The design of the refurbishment highlights the careful restoration, preservation and demonstration of the historic features of the palazzo.

New supports and framing installation are designed by Scarpa to highlight the abstract and elemental qualities of both the displayed object and the selected construction materials.



approach towards architecture closely linked to sculpture. He invented the giant order where columns and pilasters rise through two or more storeys.

- Michelangelo San Lorenzo, Palazzo Farnese and Biblioteca Laurenziana Florence Tuscany; Piazza del Campidoglio and (partial work within) St Peter's Rome Lazio

After the death of Michelangelo, the most important architect in Rome was Il Vignola (1507 – 1573), who designed the Villa Giulia Rome Lazio as a mixture of architectural delight mingled with highly structured landscape design.

This work was followed by Il Gesu Rome, Lazio, which was loosely based on Alberti's design of Il Duomo in Mantua. The Il Gesu design though eliminated the aisles and used the nave pilasters and lighting effects to draw the eye to the height of the altar. Vignola's work at the end of the high Renaissance period and into Mannerism was a precursor to the emergence of the decorative and eclectic Baroque style.

Baroque

The Baroque is a distinctive and recognisable style, originating in Rome as a response to the wealth and self-confidence of the Counter Reformation movement in the mid to late 16th Century. Baroque architecture expressed the pomp, and played upon the mystery, of the propagated religious approach.

Architects were concerned with daring special effects, rendering visual movement and spatial ambiguity by the use of curvaceous lines and form, tricks of light and the overt decoration of painting and sculpture. All these special effects combined to offer other-worldliness to the non-secular Counter Reformation movement.

Gianlorenzo Bernini (1598 – 1680) took up architecture in mid life, having initially trained as a sculptor. His fusion of the arts was to become one of the cornerstones of Baroque architecture and urban planning, best seen in the forecourt of St Peter's Rome Lazio. This design of an oval planned double colonnade came to symbolise the all embrace of the church and incorporated complex plays of perspective and proportion.

- Bernini Chiesa Santa Andrea, Rome, Lazio
Forecourt, St Peters, Rome, Lazio

Francesco Borromini (1599 – 1667), who was initially Bernini's assistant though later his bitter and declared rival, was a most daring and inventive architect. His attitude to decoration was very different to Bernini's in his belief that architecture was sculpture in its own right. Borromini treated entire wall surfaces plastically, favouring the monochromatic rather than polychromatic use of colours.

Borromini showed a disregard for convention, creating stunning spatial designs based on complex series of shapes, resolving equilateral triangles into ovals and circles within the roof form geometrics.

- Borromini St Ivo and San Carlino Alle Quattro Fontane, Rome, Lazio

Guarino Guarini (1624 – 1683) was a mathematician and architect, instrumental in the fusion of Gothic and Islamic styles and influenced by the work of Borromini. His mathematical ability fuelled the grand manner of the classics, featuring conical domes and spiralling roof forms.

- Guarini Capella Della Sacra Sidone Turin, Piedmont

Neoclassicism

Neoclassicism developed in the mid C18th as a conscious response to the overt Baroque sumptuousness. This period became a return to the most basic architectural forms of (Greek and Etruscan) classicism.

Giovanni Battista Piranesi (1720 – 1778) popularised the Neoclassical approach in Rome. His inspired grand scale engravings of the city's ruins were widely circulated and his theoretical writings asserted the superiority of classical Rome over Greece.

- Piranesi Santa Maria del Priorato Rome Lazio

Giuseppe Mengoni (1829 – 1877) created Italy's finest example of design in iron and glass, in the Galleria Vittorio Emanuele in Milan Lombardy. This was an original piece of urban planning that reinforced and symbolised Milan's position as the commercial hub of an emerging nation state.

Fascism and Modernism

Fascist and Modernist architecture emerged from a reaction to the limitations and constraints of the historical styles and dictums adopted by Neoclassicism.

Valley of the Temples, Agrigento

ETRUSCAN

The City of Akragas was founded in 581BC. The 5 temples that occupy the valley (actually a ridge along the original town walls) to the south of the original acropolis are;

- Tempio di Ercole – (Temple of Hercules) built in the 6th Century BC, the oldest of the structures with 9 of the original columns now re-erected
- Tempio della Concordia – (Temple of Concord) from 430BC this temple has survived due to its conversion in the 6th century AD to a Christian Church
- Tempio di Giunone – stands as the highest temple on a ridge and the patches of red visible on the stone are from the sack of Akragas in 406BC
- Tempio di Giove – the largest Doric temple ever known, never completed and including 8m high telamone columns bearing the temples weight; and
- Tempio dei Dioscuri – originally from the 5th century BC though reconstructed in the 19th century.



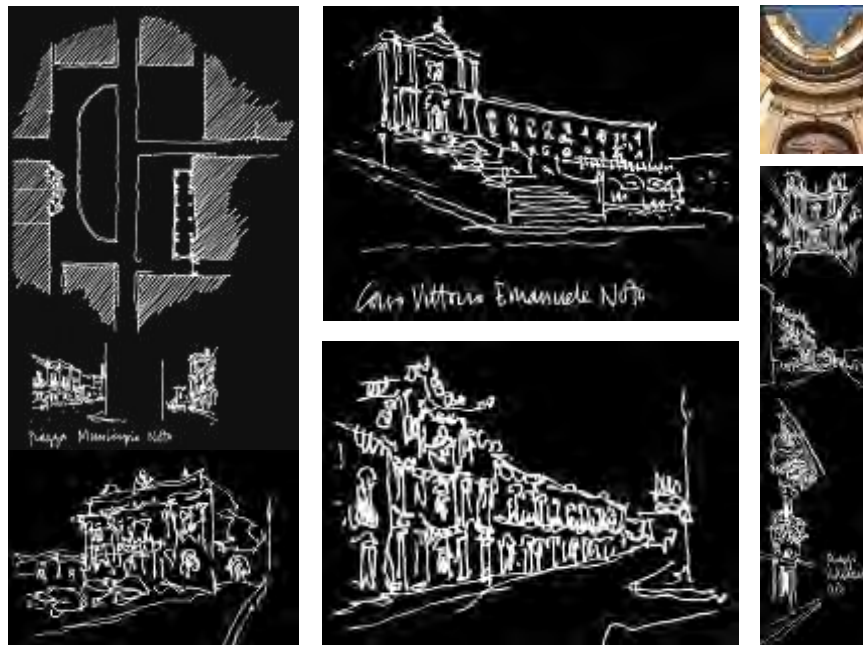
Urban plan, Noto / Avolo

BAROQUE

Noto was flattened by an earthquake in 1693 and rebuilt in the Baroque style by the noble families of the city. Mostly designed by Rosario Gagliardi and Vincenzo Sinatra, the city is now a UNESCO World Heritage site. The city's main buildings are organised along the Corso Vittorio Emmanuelle and focused around Piazza Municipio. The consistent visual imagery of the city's architecture is made through the Baroque detailing and the use of the soft golden toned tufa stone.

Adjacent is the town of Avolo, designed in 1693 by the Sicilian architect, Fra Angelo Italia, also following the earthquake.

Modelled as an opportunity to realise an ideal gridded city, Noto is planned on a hexagonal grid with 5 squares organized in a cross, the largest in the centre and the others as terminal features of the arms. The symmetry is reinforced by the paired rhythm of the six town churches located bilaterally to the main axis.



Art Nouveau's sinewy forms, in their rejection of the classics in favour of a plastic sculptural design language, influenced European architecture at the beginning of the 20th Century. The Art Nouveau movement gave rise to the Futurist movement and with it Antonio Sant'Elia (1888 – 1916) who envisaged, albeit unrealised, the vibrant high rise metropolis of the future that would be dominated by frenetic activity and mass transport systems. The only example of Sant'Elia's, and indeed the Futurist's, work is the Monument to the Fallen in Como, Lombardy.

The period defining Fascist architecture formed under Mussolini's reign, when he directed massive building programs across the country. New towns were designed as prototypical communities for the new empire. Chief architect of the Fascist movement was Giuseppe Terragni (1904 – 1943) who founded the Gruppo 7, comprising Italy's seven most progressive interwar architects. This group forged the language of Fascist architecture to use new materials in a modern way, to capitalise on space and light where rational forms and lines were cleared of the decorations and elaborations of past styles. New towns such as Littorio, Lazio were designed as prototypical communities for the new empire.

After World War II, themes of memory, the relationship with history and the search for a new identity became the central concerns for Italian architecture. The Torre Velasca in Milan, Lombardy, by BPR architects, is an intellectual interpretation of the disappearing medieval city and supported the theory of continuity put forward by Bruno Zevi (1918 – 1999) and Ernesto Rogers (1909 – 1969).

In the 1960's and 70's, architectural theories were overshadowed by the work of individuals. Ignazio Gardella (1905 – 1999) rejected exhibitionism in favour of the value of materials and forms. Carlo Scarpa (1906 – 1978) was infused with a personal poeticism of refined materials, layers and planes defining spaces.

- Scarpa Tomb Brion, Treviso, Veneto
Olivetti Showroom, Venice, Veneto
Castelvecchio, Verona, Veneto

Pier Luigi Nervi (1891 – 1979) was a structural engineer who popularised the use of sculptural reinforced concrete. His work was true to, and explored the plastic and elastic nature of, reinforced concrete and, as such, has proved timeless.

- Nervi Termini Rome, Lazio

A more contemporary school of Aldo Rossi (1931–1997), Renzo Piano (1937–) and Massimiliano Fuksas (1944–) have taken Italian architecture to the world with a new approach towards human rationalism and technological exploration.

Precis

The attributes of public spaces, streets, built form and the patterns of human use, form the cornerstone of place making. These elements of urban design and architecture coupled with the evolution of structural, historical and spatial achievements are readily visible in the secular and non-secular architecture of Italy.

Piazza del Duomo, Syracuse

VARIOUS

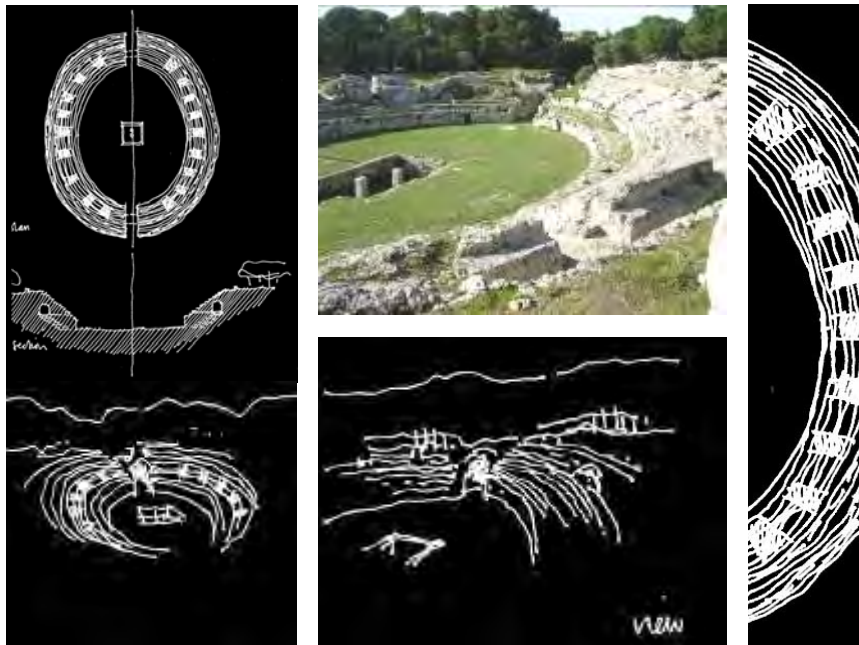
This piazza is the primary focus of secular and non-secular activities in the city. The organic, slightly ovoid, rectilinear plan shape of the piazza is further enhanced by its sloping surface towards the south. This slope accentuates the primacy of the Palazzo Comunale and the Cathedral. The piazza is fed by numerous narrow streets from the surrounding area of Ortigia.



Anfiteatro Romano, Syracuse

ROMAN

This amphitheatre was constructed by the Romans in the C2nd and integrated into the natural topography of the site. It was used for gladiatorial combat and horse racing. The elliptical shape is accessed at ground level at the four cardinals and the seating is fully accessed at the upper level by a covered walkway.



Tuscany

Tuscany is best known for its exemplary architecture, the finest collections of seminal artworks, distinctive countryside and some of Italy's finest fresh food and produce. It was from Tuscany in the 15th and 16th centuries that the Renaissance movement originated and spread its influence. The works of Tuscans, Michelangelo, Leonardo da Vinci, Brunelleschi and others are relevant to artists and architects throughout history and to this day. Similarly, Dante, Petrarca and Boccaccio set the form for the unified Italian language in their writings.

Tuscany's primary drawcards are the historic, artistic, architectural and urban splendours of Florence, Siena, Pisa, Lucca and Arezzo, and the landscapes featuring seminal hill towns of Montepulciano, San Gimignano, Volterra and Pienza.

Teatro Greco (theatre), Syracuse

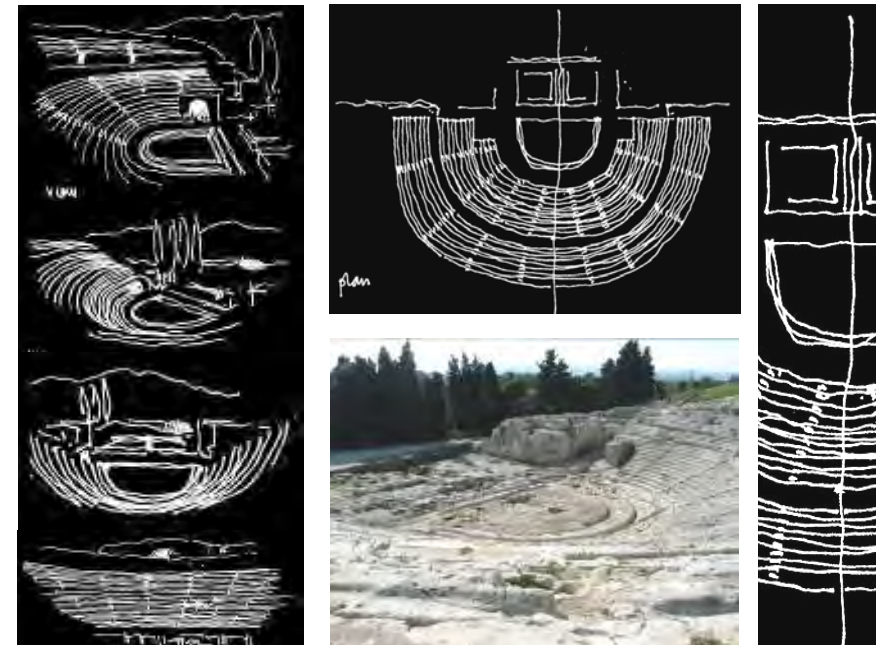
ETRUSCAN

This 5th century theatre could house 16,000 people and was carved into the natural rock of the limestone hill. It was, and still is, used for popular assemblies and staging plays.

Nicias said to the Athenian soldiers on the beach at Syracuse;

*"you are yourselves the town, wherever you choose to settle...
it is the men that make the city, not the walls and ships without them"*

[Spiro Kostof : "The City Shaped" p 36]



Teatro Greco (theatre), Taormina

ROMAN

Spectacularly constructed against the natural contours of Taormina's Monte Tauro in the third century BC this is the second largest theatre in Sicily (after Syracuse). It is subsequently one of the most dramatically sited in the world with the semicircular seating plan focused around the western stage and complex set construction.



Hilltown urban, Montepulciano

ROMANESQUE / RENAISSANCE

The highest of Tuscan hills town at 600m above sea level. Montepulciano is set atop a narrow ridge of volcanic rock overlooking the Valdichiana countryside.

Most of the main architectural elements are located around the central Piazza Grande, which functions as the main focus of the town's secular and non-secular life.

- Palazzo Cantucci – used as a cantina
- Duomo – from the c16th with a plain unfinished façade and interior sculptures by Michelozzo
- Palazzo Comunale – C13th gothic mansion to which Michelozzo added a C15th tower still functions as the town hall
- Palazzo Tarugi – an innovative building attributed to Giacomo da Vignola with a public loggia cut through one corner; and the
- Colonna del Marzocco – erected within the Piazza Saronarola in 1511 to confirm the city's allegiance to Florence

Others include Sangallo's main gate of the city (the Porta al Prato) and the Chiesa di san Biagio from 1518 (again to Sangallo's design featuring two western campaniles).



Hilltown urban, Pienza

RENAISSANCE

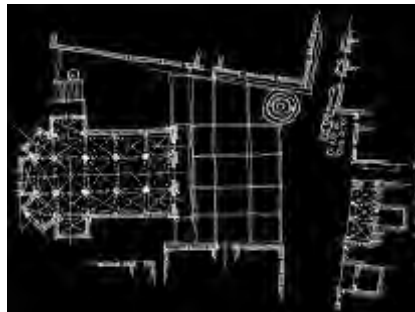
This Renaissance hill town was decreed by Pope Pius II in 1459 as a utopian new town. The current population of 2,500 belies its originally perceived importance as a model town under the influence of Florentine architect Bernardo Rossellino between the short period between 1459 to 1462.

Key sites are all grouped around Piazza Pio II, Rossellino's centrepiece, which deliberately juxtaposes civic and religious buildings, namely il Duomo and the Palazzo Pubblico to balance the influences of church and state. Other sites of note are:

- Piazza di Spagna, set behind the Palazzo Pubblico
- Porta al Prato to the east and Porta al Ciglio to the west; and
- Corso Rossellino, the main thoroughfare with its ever changing organic and spatial environments

The city is unchanged since the C16th and represents one of the first examples of Renaissance town planning since the Roman era.

Zeffirelli filmed much of the movie 'Romeo and Juliet' here in the 1960's.



Piazza IX Aprile, Taormina

MEDIEVAL

Located along Corso Umberto I, the Piazza IX Aprile is a three sided piazza set within the hillside topography of Taormina. Taormina is set on a terrace of Monte Tauro and the open edge of the piazza has views to the sea and Mt Etna. The town was set out in the medieval era as the capital of Byzantine Sicily. The piazza is focused on the Rococo Chiesa San Guiseppe and the austere Chiesa San Agostino.



Sicily

Set between mainland Italy and Tunisia within the Mediterranean Sea, Sicily is home to a turbulent history of maritime geography and changing politics. With influences from all quarters, Sicily is a cultural fusion of centuries of varied occupation.

Architecture of Hellenic Greece mixed with Arab craftsmanship, Norman austerity and Spanish Baroque, is found throughout Sicily.

Travellers over centuries like Goethe and Byron have found that

"to see Italy without seeing Sicily is not to have seen Italy at all!"

Il Campo, Siena

RENAISSANCE

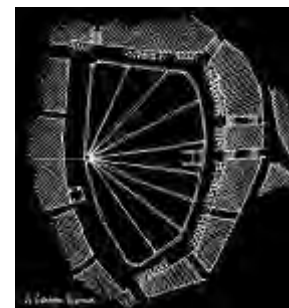
The spiritual and physical heart of the city of Siena probably laid out on the site of the Roman forum, by the Council of Nine (men of the middle or merchant class) in the C14th and famously home to the twice annual ritual of the "Palio" horse race.

The square is divided into 9 sectors to reflect each council. The site was chosen as it was the intersection of the terzi or thirds of the city, still visible within the primary street patterns adjacent of Bianchi di Sopra, Bianchi di Sotto and via di Citta.

The council fathers noted in 1392;

"It redounds to the beauty of the city of Siena and to the satisfaction of almost all people of the same city that any edifices that are to be made anew anywhere along the public thoroughfares proceed in line with the existent buildings and one building shall not stand out beyond another, but they shall be disposed and arranged equally so as to be of greatest beauty for the city".

At the top of the piazza is the Fonte Gaia design by Jacopo Della Quercia in the C15th and fed by a 500 year old aquaduct.



Palazzo Pubblico, Siena

GOTHIC

Also known as the Palazzo Communale, it is one of the purest examples of Italian gothic architecture. Its spatial dominance is in contrast to its siting at the lowest point of Il Campo.

The building was completed in the mid C13th and crowned by the Torre del Mangia bell tower.

The three part window arrangement was considered by the council as the benchmark to be matched for fenestrations around Il Campo's facades, particularly the lower level Sienese Gothic arcade.



Tempio de Cerere, Paestum

ETRUSCAN

Paestum was founded by Greeks in the 6th century BC and originally known as Poseidonia. The elements of the Roman town are evident, organised around the two main streets, the Cardo and Decumanus, the Roman Forum and amphitheatre and theatre. Three temples remain, designed in the Doric and Ionic style or orders;

- the Temple of Neptune – from 450BC and the largest of the three temples with internal walls largely intact
- the Basilica of Hera – built in 550BC is the most complete and oldest surviving temple and was dedicated to the goddess Hera; and
- the Temple of Ceres – built in the 6th BC

The city was also originally ringed by a Roman wall.

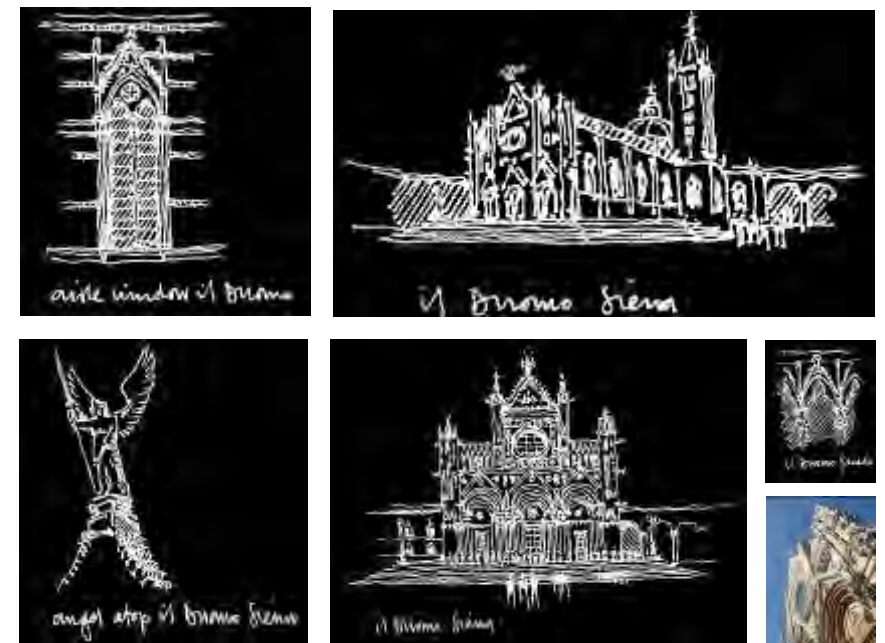


Il Duomo, Siena

GOTHIC

One of Italy's seminal Gothic churches constructions was commenced in 1196 and largely completed by 1215. The façade was completed to a design by Giovanni Pisano in 1284. The façade features white, green and red polychromatic marble. Amongst the façade decoration are numerous projecting gargoyles depicting various animals and mythical figures. Internally the inlaid marble floor is adorned with 56 panels depicting biblical and historical events.

Adjacent is the Libreria Piccolomini (Pope Pius II), commissioned by Pope Pius III in 1503 to house the books of the Papal order. The walls of the library are covered in vivid frescoes by Bernadino Pinturicchio depicting the life of Piccolomini.



Hilltown urban, San Gimignano

ROMANESQUE

This town is distinguished by its 13 remaining medieval towers. Originally numbering 76, each symbolizing the power and wealth of the various farm based families.

From the C11th prosperity came with the town's position on the Lombardy to Rome pilgrimage route and from the complimentary trade in wine and saffron.

The key built forms are set out along one of the great ridge road / public square combinations in the world (via San Giovanni and via San Matteo connecting the southern gate Porta San Giovanni to the northern gate Porta San Matteo and the main public spaces along the way);

- Piazza Della Cisterna – named after the 1273 fountain encapsulated in its centre
- Piazza Del Duomo, adjoining the Piazza Della Cisterna, upon which stands the Duomo or Collegiata (one of the most frescoed churches in Tuscany with painting cycles set off by the Pisan / Romanesque arcades of black and white striped interior marble)
- Palazzo Publica – with a C13th courtyard and a loggia noted for historic public proclamations; and
- La' Rocca – built in 1393 to reinforce and preserve Florentine control over the town.

The town in its entirety is dedicated as a World Heritage site



Various, Pompeii

ROMAN

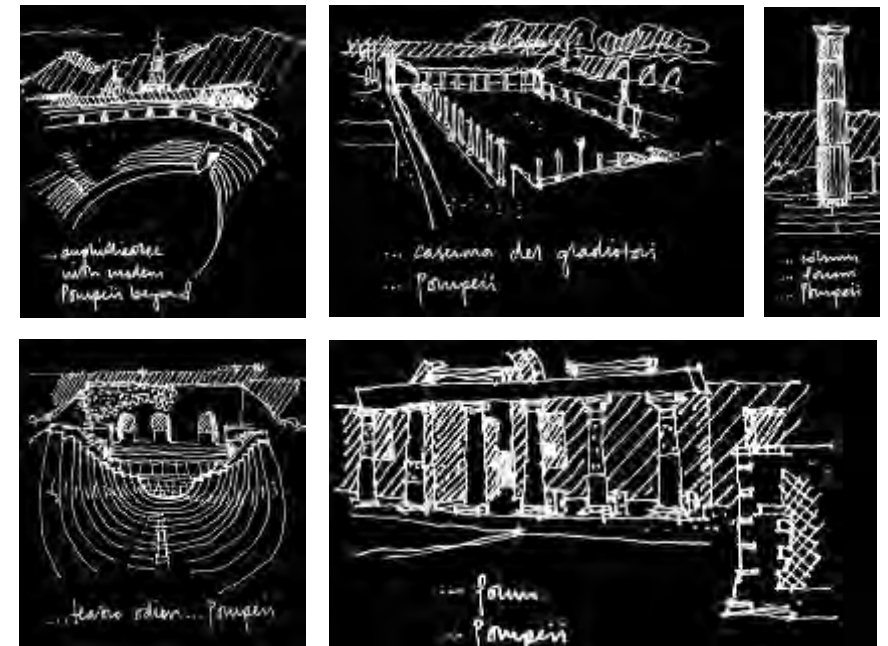
Pliny the younger wrote of Pompeii after the eruption of Mount Vesuvius in 79ad noting

"a town surrounded by a wall with towers and 8 gates"

At the time of the eruption, 20,000 people lived in Pompeii. The town was rediscovered in 1600 however excavations began only in 1748, continuing until the present, defining more than anywhere else Roman life at the time of Christ.

Key sites include;

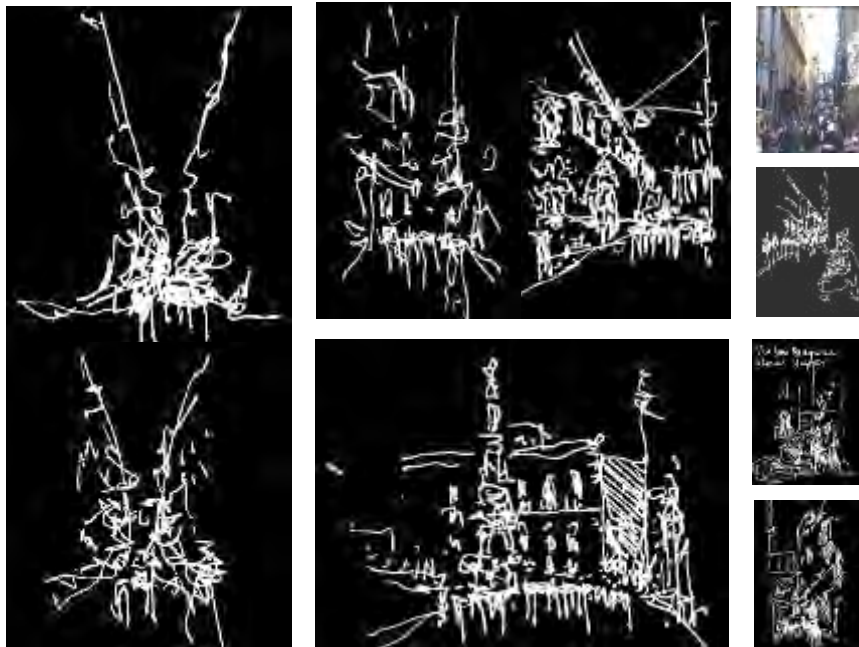
- Casa dei Vettii – a courtyard garden in the colonnaded peristyle of the house, focused around a central pool
- Casa di Farni
- Forum – the ancient marketplace, and
- Amphitheatre – constructed out of local stonework and set within the natural landscape able to hold 5,000 people.



Via San Biagio dei Librai / Roman Decumanus, Naples

VARIOUS

The current Via San Biagio dei Librai follows the ancient route of the Roman Decumanus. Running east west, the street was set out in the C6th. Of note is that both the set out and the width of the street have been maintained over the ensuing centuries. What exists now is one of the primary streets of the city including palazzo, churches and a continual marketplace along its busy thoroughfare.



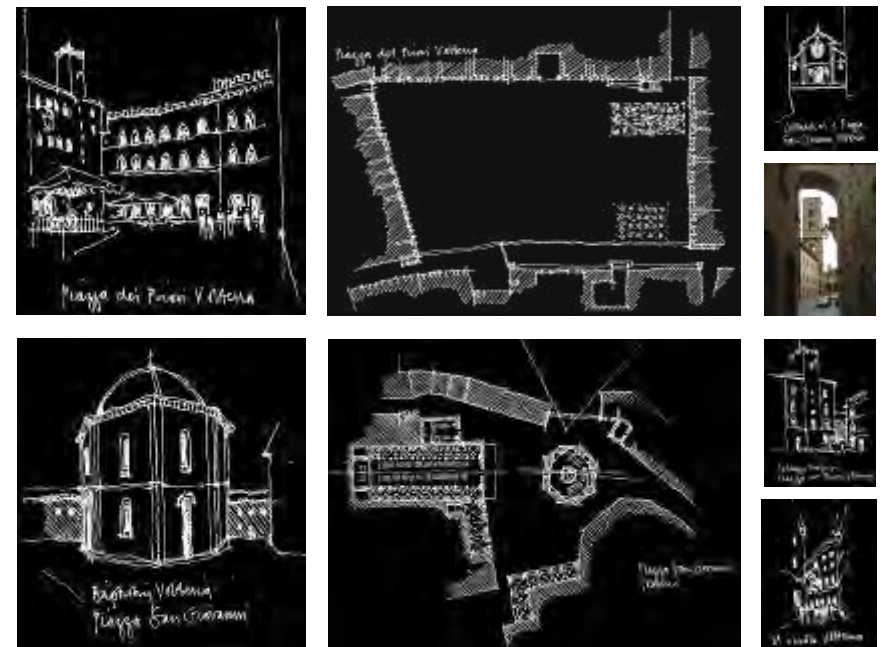
Hilltown Urban, Volterra

ETRUSCAN

This original Etruscan settlement was known as Velathri and was an important trading centre with the Tuscan farming regions. Long periods of conflict with Florence commenced during the Romanesque and Renaissance periods and ended with the Medici domain triumphing in the late 1400s.

Situated on a rocky outcrop, the medieval ramparts dominate the countryside. Four main gates orient the city within the walls, all focused on the central Piazza dei Priori. The piazza is surrounded by the Palazzo dei Priori, Palazzo Pretorio, and the adjacent, irregularly shaped Piazza San Giovanni featuring the C12th cathedral and the C13th baptistery.

The Teatro Romano and adjacent Roman sites are located on the edge of the town. Much of the theatre is still intact, enabling a full conception of the space.



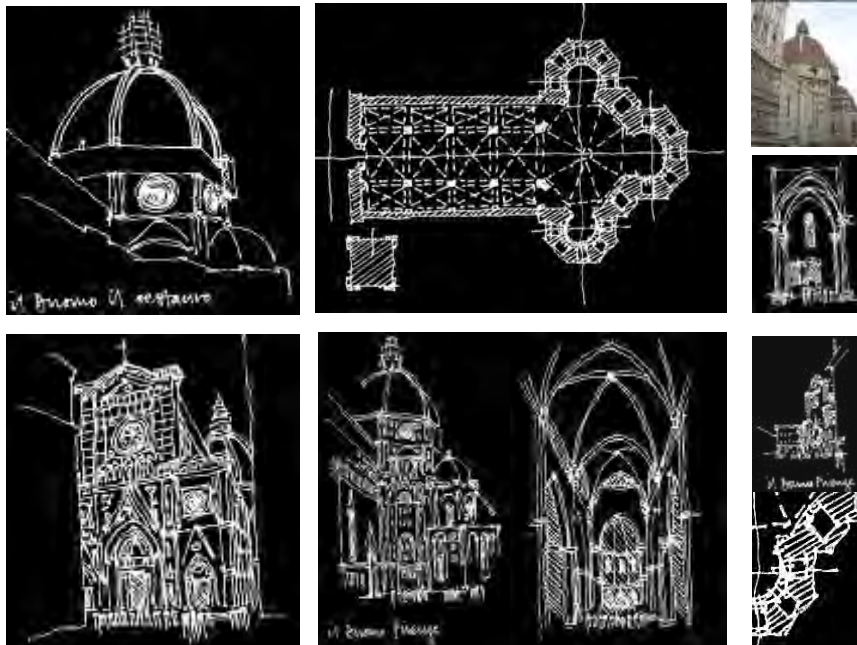
Il Duomo / Santa Maria del Fiore, Florence

RENAISSANCE

The original design by Arnolfo di Cambio, was commenced in 1294 and consecrated in 1436. The project was halted for a time due to the Black Death in 1348.

The Dome was designed by Brunelleschi in 1450, as the winner of a design competition, and achieved through a unique timber supporting structure with herringboned patterned brickwork laid in cantilevered rings, relying on the use of a climbing lateral support system.

The interior is decorated with frescoes by Vasari. The dome's interior is 155m long and 90m high and is based around 4 large bays with aisles half the width of the nave bay, all leading towards the octagonal base beneath Brunelleschi's dome.



Galleria Umberto I, Naples

NEOCLASSIC

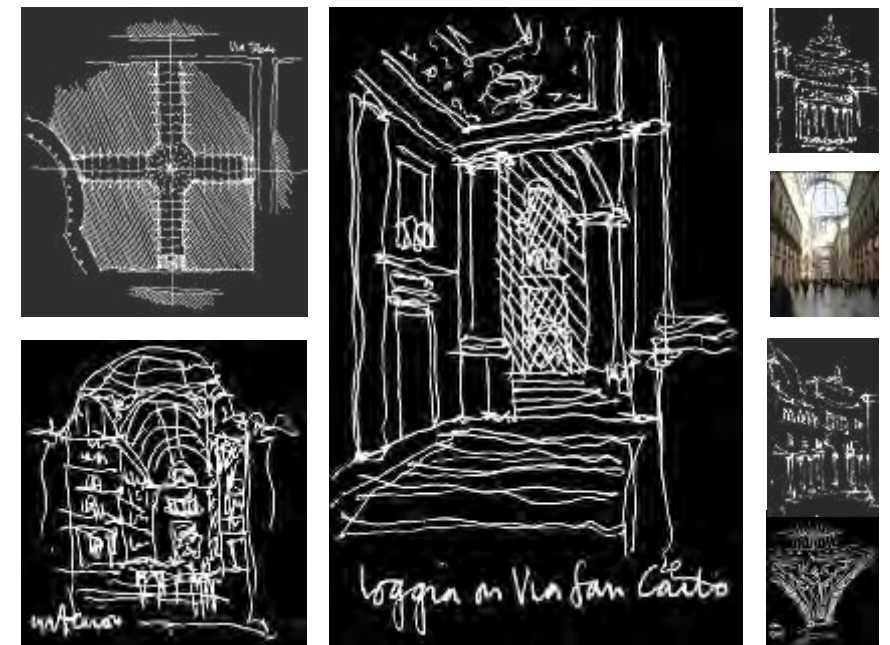
Built in 1890, this elegant arcade was modelled on Milan's Galleria Emanuele.

It has operated continuously as a public thoroughfare connecting main vistas and providing internalised retail spaces.

It is emblematic of its era in the innovative use of steel and glass as a product of and representing the ingenuity of the industrial revolution.

Each of the four street connections is resolved individually. A portico as a large shopfront addresses the primary Via Toledo. A curved plan loggia raised on steps addressing the Via San Carlo opposite the opera house. A scissor stair configuration addressing substantial level changes to the east entry and an at grade portal to the small scaled via to the north.

The interior flooring features decorative mosaics depicting maritime themes towards the centre of the galleria, moving towards simpler geometric patterns in each of the four arcades.



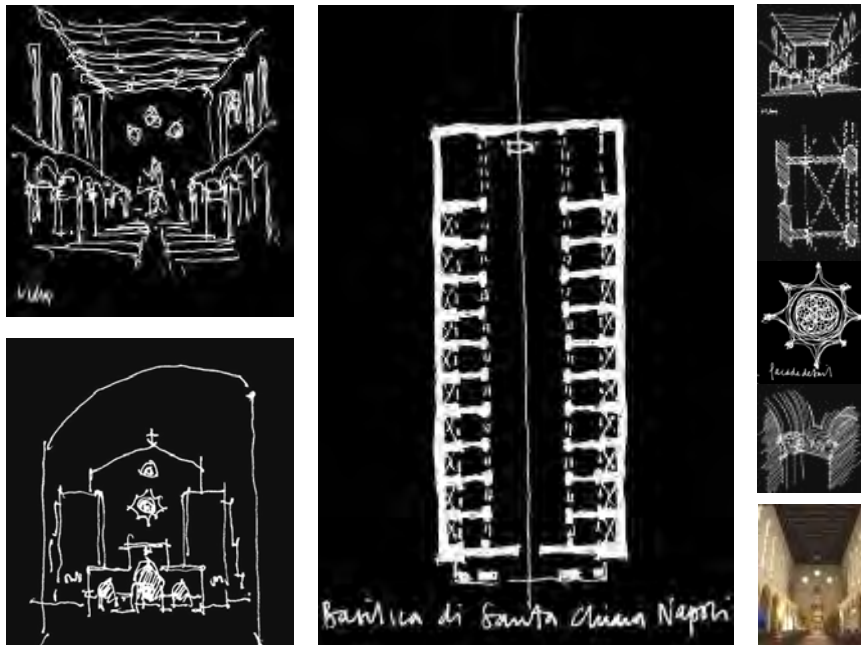
Basilica di Santa Chiara, Naples

RENAISSANCE

Built in 1328 in the Provençal Gothic style, the church and adjacent convent incorporate an original Roman wall. The site is located on the Roman Decumanus, the current Via San Biagio dei Librai, and immediately adjacent the Piazza del Gesu Nuovo.

The church takes a basilica form though is unique in that the aisles straddle the interior and exterior of the nave form. These aisles are at times connected or separated as chapels, providing focus and structural stability to the higher basilica form. The church was heavily bombed during World War II and has since undergone roof reconstruction.

Adjacent the church are cloisters associated with the convent, noted for their decorative mosaics.



Baptistry, Florence

RENAISSANCE

At its origins, one of the oldest buildings in Florence, dating from the 6th and dedicated to St John the Baptist.

The octagonal plan form is decorated with green and white marble facades and is famed for its three sets of bronze doors, designed by Lorenzo Ghiberti and Pisano. The bas reliefs depict scenes from the Old Testament. The mosaic interiors date from the 13th.



Campanile, Florence

RENAISSANCE

Located adjacent the Duomo and designed by Giotto in 1334, though completed after his death by Andrea Pisano and Francesco Talenti.

The lower façade is studded with bas reliefs sculptures by Pisano depicting the Creation of Man and the Arts and Industries.

The campanile creates a spatial counterpoint both to Il Duomo and within the space of the Piazza del Duomo.



Castel dell'Ovo, Naples

ROMANESQUE

This fortress was built in the C12th by the Normans to defend the maritime coastline of Naples. The name is based on the whimsical notion that it was built over an egg placed here by Virgil in Roman times, believing that if the egg breaks Naples will fall. The castle is noteworthy as it stands as a seaside fortification against potential intrusion. As is typical, the form is built out of the organic seabed base, using local stones, thus forming a homogenous earthen structure.



Campania

The primary region of Italy's south, Campania is a mix of dramatic coast and remote mountain wilderness. All of this is focussed around the "Mezzogiorno" metropolis of Naples in the shadows of Mount Vesuvius.

Etruscan relics are to be found at Paestum though Roman life is encapsulated at Pompeii and Herculaneum following Vesuvius' eruption in AD79.

Palazzo Vecchio, Florence

RENAISSANCE

The palazzo was designed by Arnolfo di Cambio in 1299 as the central seat of Signoria, the highest level of Florentine government in existence at the time. It eventually became the palace of Cosimo Medici in the C16th.

Medici commissioned Vasari to later reorganize the interior into a series of uniquely conceived rooms. The central internal courtyard is designed by Michelozzo.

It is crowned by the Torre d'Arnolfo, a primary vertical landmark of the city of Renaissance architecture.



Palazzo Medici, Florence

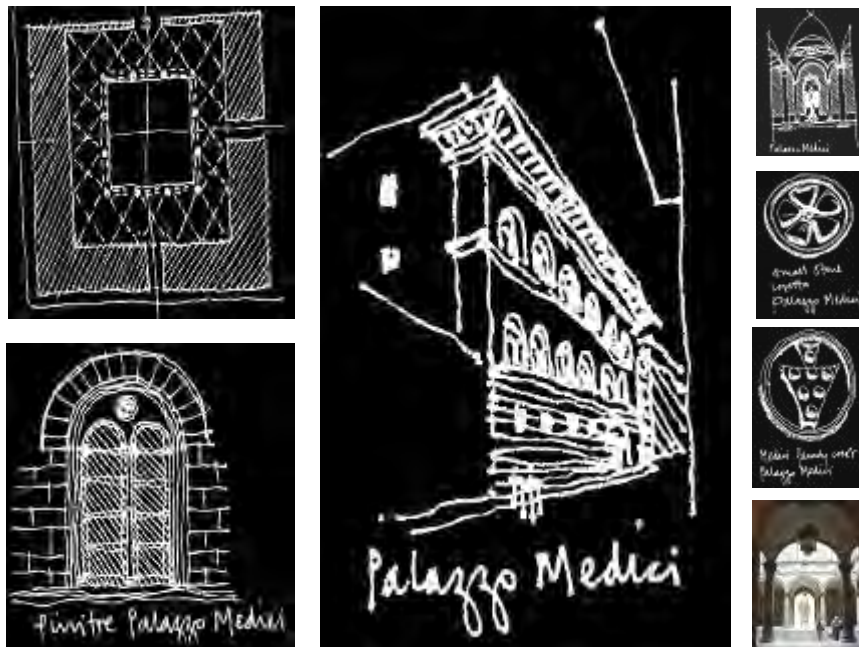
RENAISSANCE

The palazzo was designed by Michelozzi, one of Brunelleschi's students, between 1444 and 1446 for the Medici family as their principle residence.

This three storey palazzo design embodies the principles of symmetry and mathematical arrangement. The only subsequent exterior modification is the infilling of the open arches with windows designed by Michelangelo in the early C16th.

The central courtyard is similarly derived using mathematical proportion systems and the language of the classics.

The cornice atop the rusticated façade was designed to a classical entablature and related mathematically to the height of the entire palace.



Various, Ostia Antica

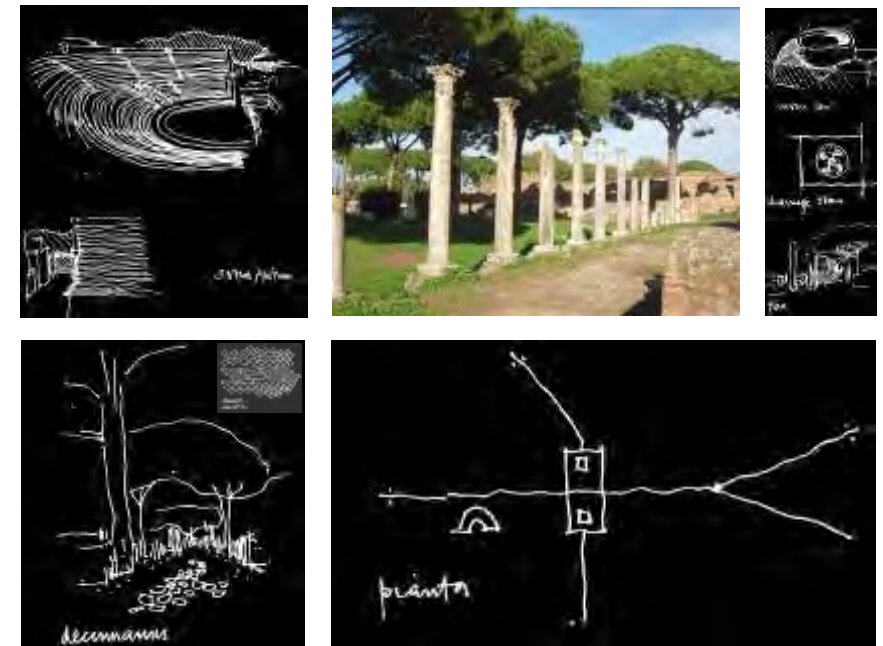
ROMAN

Ostia Antica is one of the finest ancient Roman sites, marking the original coastline and port of Rome. Situated on the mouth of the Tiber River, it was founded in the C4th BC and was a strategic centre of defence and trade.

Many sites are visible including;

- the main street, Decumanus Maximus – running between the Porta Marina and the Porta Roma
- the baths of Neptune – featuring original mosaics of Neptune and Aphrodite
- the Roman theatre – built by Agrippa housing 3,000 people; and
- the Piazzale delle Corporazioni – the remains of shops and trading offices where each distinguished themselves with mosaics depicting their wares

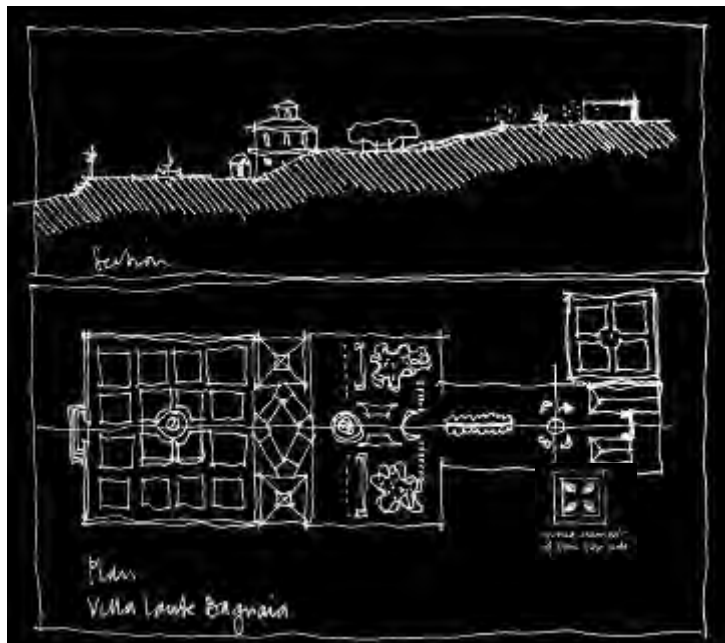
It was populated by merchants, sailors and slaves, and serves as a contrast to the ruins of Pompeii, populated by wealthy Romans.



Villa Lante [gardens], Bagnaia

RENAISSANCE

The C16th Villa Lante completely dominates the small town of Bagnaia near Viterbo. The gardens were designed by Vignola for Cardinal Gambara in 1566 and are considered to be his masterpiece and one of the supreme creations of late Renaissance / Mannerist garden art. The arrangement of the section through the site is the key spatial organising factor so that the whole garden could be viewed from the lower entry point. The creation of two slopes between the three main flat terraces meant that the viewer's gaze was directed to the top at all times. The journey to the top though is an exploration of Mannerist devices and the harmonic use of water and landscape that then evolves onto the boschetto / wild garden. The "villa" itself is two villas, built 20 years apart, though both conform to the landscape masterplan. The gardens feature five zones, depicting the progress of a river from its source to the sea. The water elements are earthen, emerging in the wilderness and transforming down the slope by the rationality of man's influence.



Palazzo Pitti, Florence

RENAISSANCE

Begun by Brunelleschi in 1458 for the Pitti family, it was later completed by Ammannati and purchased by the Medici family, who added many and various C16th extensions. The palazzo is strategically connected by the Corridoio Vasariano (by Vasari) across the Ponte Vecchio and the River Arno, through the Uffizi to the Palazzo Vecchio.



Capelle Medicee, Florence

RENAISSANCE / MANNERIST

Designed by Michelangelo in 1520, within the compound of the Basilica San Lorenzo, and located off Piazza Madonna degli Aldobrandini. The chapel is the principal burial place of the Medici rulers.

The conception of the building is that of an extension of sculpture. The façades of the interior are all mathematically composed around geometrics of the square and circle. The complete composition is focused on highlighting the various sculptures and the sculptural quality of the space.



Basilica di Santa Maria Maggiore, Roma

VARIOUS

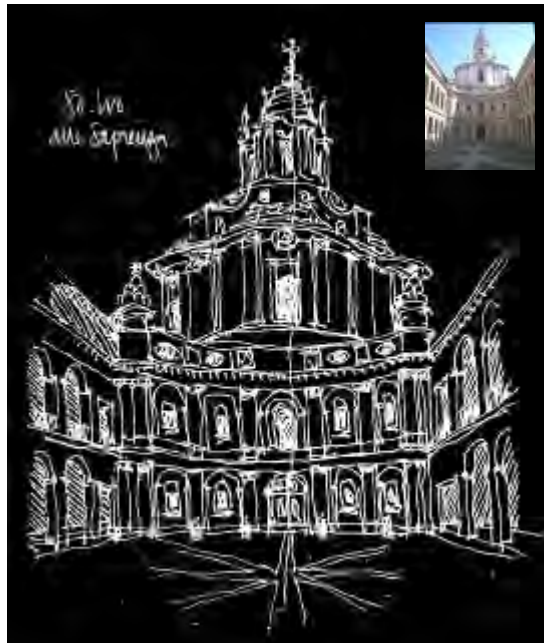
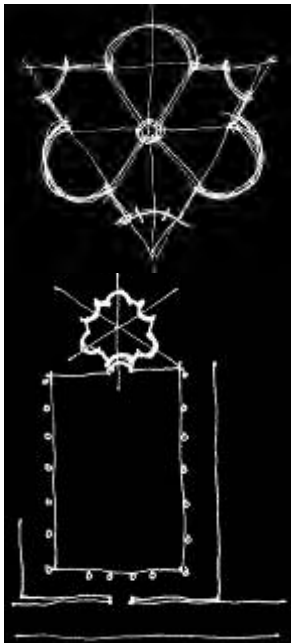
One of Rome's four patriarchal basilicas and is one of the seven churches of pilgrimage within Rome. It was built on the Esquiline Hill in the 5th century. The main façade is an 18th-century addition (by Ferdinando Fuga 1741-43), the interior baroque and the bell tower Romanesque. Despite this mixture, the basilican form of a spacious interior, a nave and two aisles remains intact, somewhat uniquely as testament to its type and a place of worship. The designs of the nave columns are based in Vitruvian classical mathematical principles as are the nave proportions.



St Ivo allo Sapienza, Roma

BAROQUE

Designed by Borromini in 1642, this church represents one of the high points in the high Baroque style and indeed Borromini's oeuvre. The church is given prelude by a cloistered forecourt centring the attention on the spiralling dome above the church. The interior is stark in comparison to other Baroque churches due to its monochrome simplicity and lack of decoration. The plan form is a complex resolution of equilateral triangles and semicircles, all combining into the spiralling ceiling dome above.



Palazzo Strozzi, Florence

RENAISSANCE

One of the largest palazzo designed in the late C15th by Benedetto da Maiano. A rounded rusticated façade 'pietra forte' and a cornice was added in the early C16th by Il Cronaca. The interior features a grand courtyard based on classic proportions.



Ponte Vecchio, Florence

ROMANESQUE

There has been a bridge lined with shops in this location since Roman times. This present structure was built in 1345, originally housing butchers, tanneries and fishmongers.

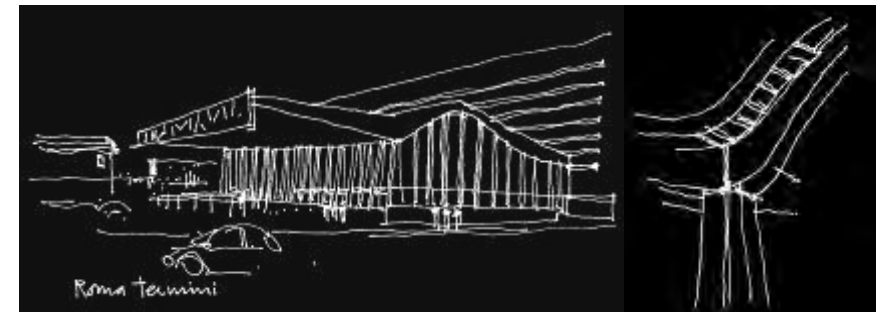
The enclosed passage above is the Corridoio Vasariano, built in 1565 to allow the Medici's to walk from the Palazzo Pitti to the Palazzo Vecchio, across the River Arno through the Uffizi, and in isolation from the general populous below.



Centro Termini, Roma

MODERN

Rome's central rail terminus was designed by Pier Luigi Nervi in 1965. Typical of Nervi's style, the expressed organic use of sculptural reinforced concrete is prevalent. The undulating linear form of the roof and ceiling reinforces the flow of traffic for the passengers. All minor spaces and many subsequent additions are organised as free standing design objects under the primary roof space.



Piazza di Santa Maria in Trastevere, Roma

VARIOUS

This piazza is the heart and core of the Trastevere area of Rome. It is dominated with the church Santa Maria in Trastevere, which is believed to be the oldest place of worship in Rome dedicated to the Virgin Mary with a history dating back to and depicted by the C4th and C12th mosaics.

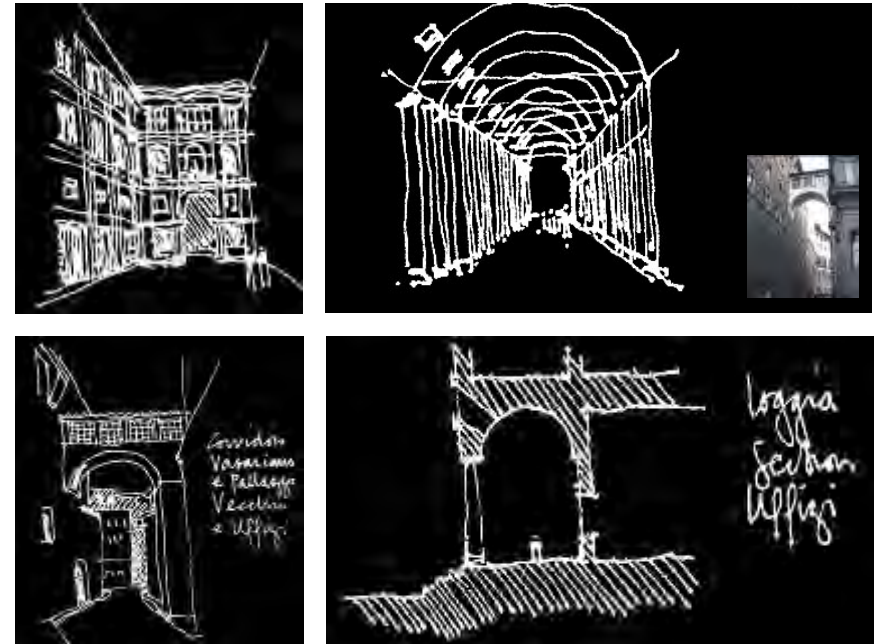


Uffizi / Corridoio Vasariano, Florence

RENAISSANCE

Designed by Vasari between 1560 and 1574 for Cosimo I, and located between Piazza dei Signoria, Palazzo Vecchio and the River Arno.

The loggia along the Piazza della Uffizi is used to dramatic spatial effect including the clerestory lighting of the space integrated into the façade design as a window focus.

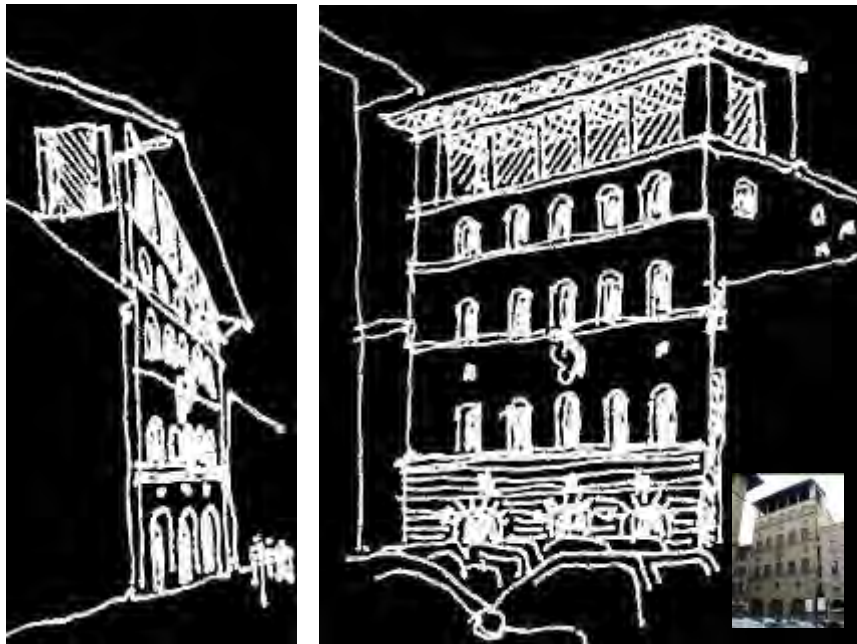


Palazzo Davanzati, Florence

RENAISSANCE

Located within Piazza Davanzati on via Porta Rossa, this palazzo was designed in the late C14th from a classical language. The large ground floor of the palazzo housed shops and warehouses with the upper floors used as living quarters.

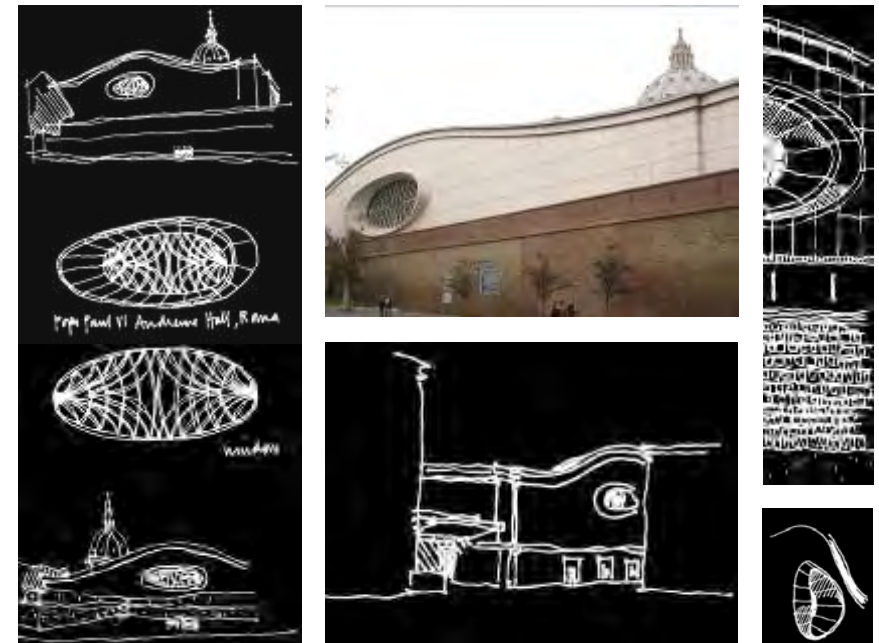
The façade comprises 5 storeys, each diminishing in height as they ascend, with the upper storey being an open loggia format. This reduction in ascending height has the effect of an exaggerated perspective, increasing the palazzo's apparent height. The interior is focussed around a central courtyard.



Pope Paul VI Audience Hall, Roma

MODERN

Located along the Piazzale Petriano within the Vatican City and designed by Pier Luigi Nervi between 1964 and 1971. The hall has a capacity of 15,000 people and is a unique blend of acoustics, participator vision and structural efficiency. The trapezoidal plan unites with the innovative use of an exposed reinforced concrete structure to create a contemporary design within the largely historical Vatican City context.



Villa Farnese, Roma

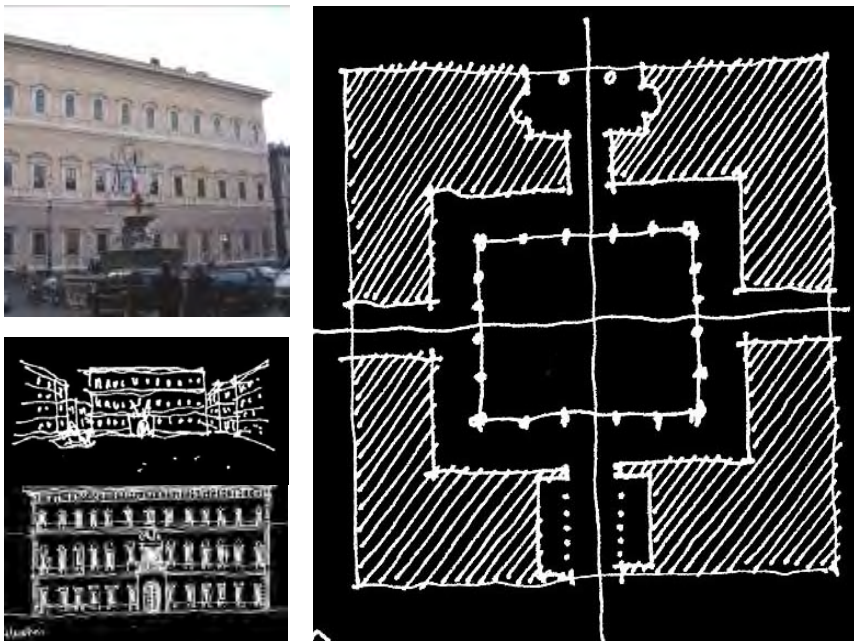
RENAISSANCE

One of the most important palazzo built in Rome, it was designed by Antonio da Sangallo the Younger in 1534. The work was commissioned by Cardinal Farnese, later Pope Paul III, and is located on the Piazza Farnese adjacent the Tiber.

The design and construction was carried out until Sangallo's death in 1546, after which it was completed by Michelangelo. Indeed Michelangelo won the design competition for the cornice, excised from the main project, and is responsible for much of the third level of the interior courtyard.

Given Sangallo's Florentine base, the exterior façade gains texture by unstriated quoins and the tabernacle style of windows set in plain walls of masonry.

The building has for many years functioned as the French Embassy in Rome.



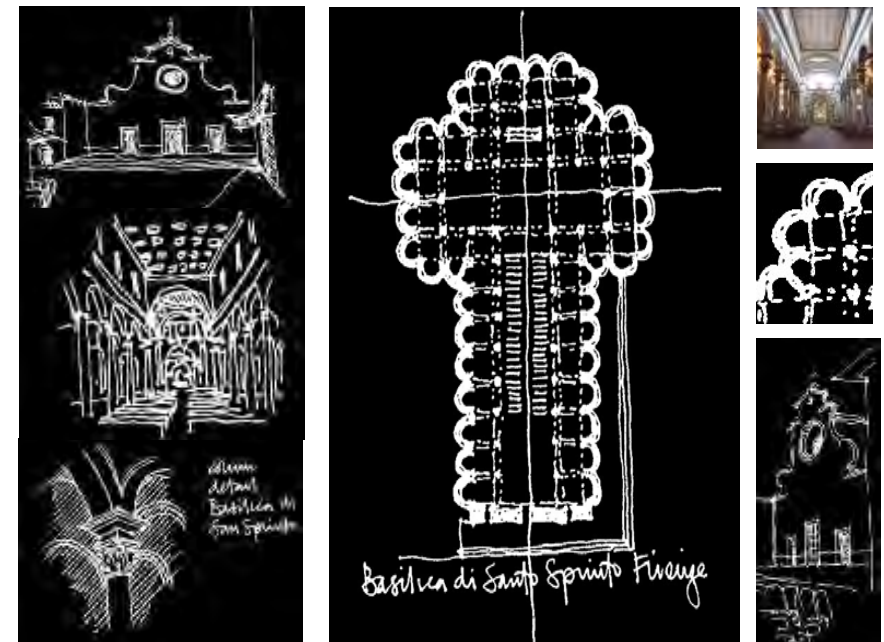
Chiesa di Santo Spirito, Florence

RENAISSANCE

Located on Piazza Santo Spirito and designed by Brunelleschi in 1434 (one of his last projects) and finished in 1482. It was later described by Bernini as the most beautiful church in the world.

The plan features a Latin cross configuration with a unique curved outer wall diaphragm system, providing 38 semicircular side altars surrounding the central nave and aisle.

The ceiling of the nave features a painted trompe l'œil coffered effect.

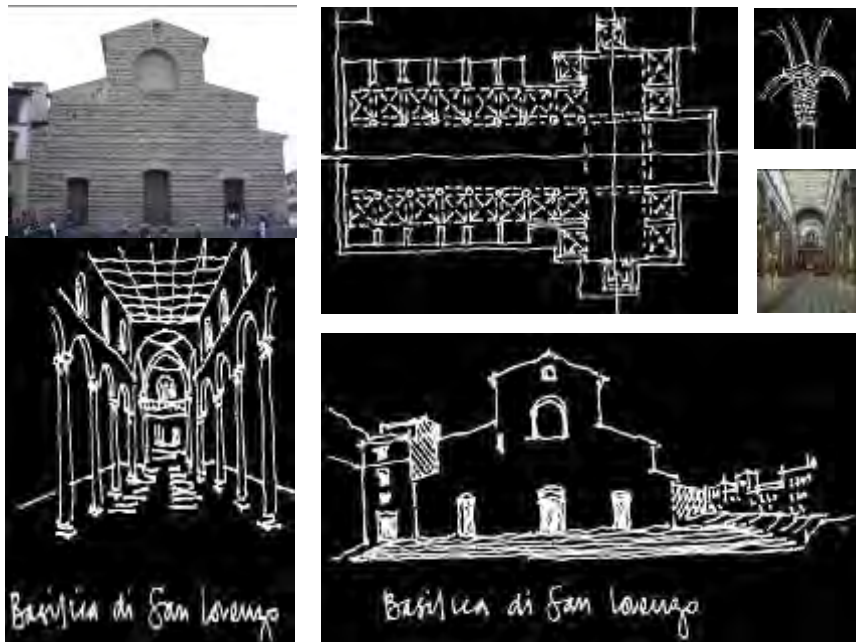


Basilica di San Lorenzo, Florence

RENAISSANCE

The basilica was constructed from 1419 to 1446 to Brunelleschi's design as the parish church of the Medici family. It is claimed to be the oldest church in Florence and was the city cathedral for three centuries.

Located on the Piazza San Lorenzo, the design is based on a mathematically derived, large Latin cross and planned around a square nave crossing supported by a smaller square choir and smaller square chapels. The two bronze pulpits are designed by Donatello.

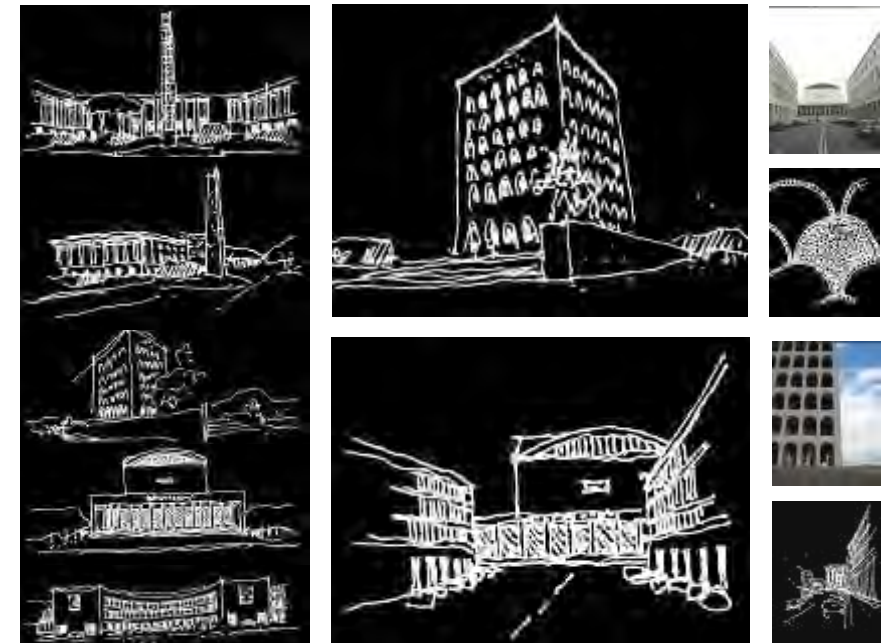


Esposizione Universale di Roma, Roma

FASCIST

Mussolini ordered the construction of this satellite city for an international exhibition to be held in 1942. The site contains a focus of Fascist architecture of the time. The overall layout was won via a design competition jointly by Quaroni, Muratori, Fariello and Moretti, who merged to develop their ideas. The outbreak of war saw that the competition plans were not realised. Key sites include;

- Palazzo della Civiltà Italiana designed by Ernesto La Padula, Giovanni Guerini and Mario Romano, the spiritual focus of the site on the western end of the main axis
- Palazzo dei Ricevimenti e dei Congressi designed by Adalberto Libera between 1937-54. Regarded as one of the seminal buildings of the Modern era on the eastern end of the main axis.
- Palazzo dell'Ina e dell'Inps designed by Giovanni Muzio, Mario Paniconi and Giulio Pediconi between 1939-1943; and the
- Piazza Imperiale designed in the masterplan as the focus of the site.

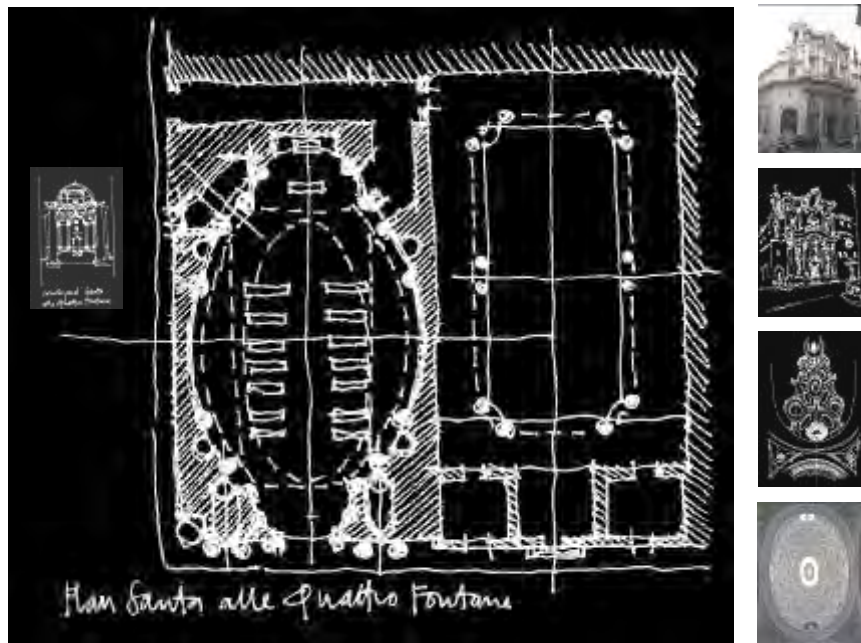


Chiesa di San allo Quattro Fontane, Roma

BAROQUE

This was the first church designed by Borromini in Rome in 1641. The plan form and subsequent resolution into ceilings and roof form represent the accomplishment of complexities tackled and achieved by Baroque architecture and indeed Borromini. The elliptical form is reduced in its skyward thrust by a series of distorted cross forms, distorted hexagons and lozenge shapes to form the three dimensional ceiling form.

The adjacent cloister was designed at the same time and features numerous devices exploring the spatial form and creating "movamento" with the space

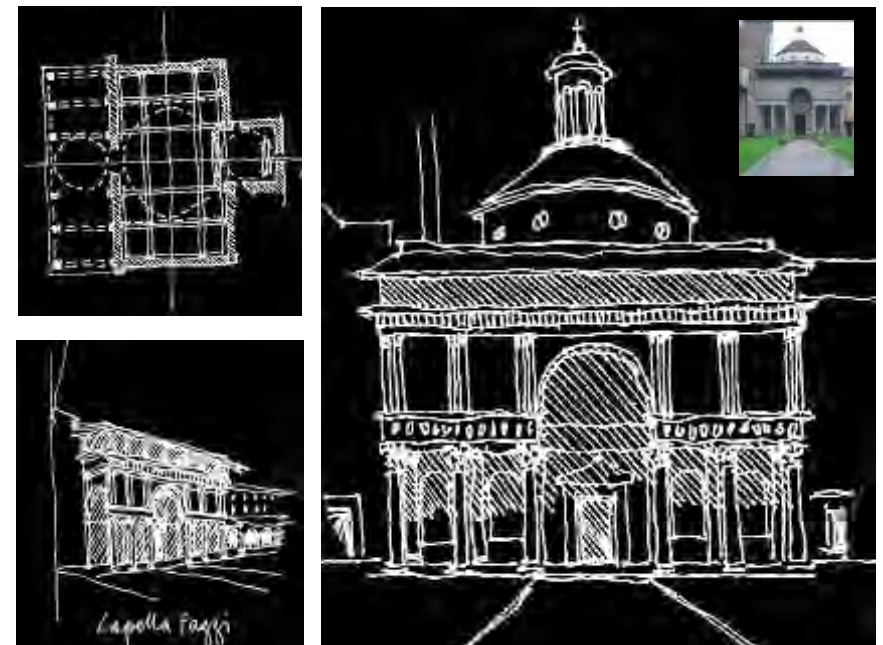


Capella dei Pazzi, Florence

RENAISSANCE

Designed by Brunelleschi in the 1430's, the building is based around a domed central square with one side opened to a small choir.

The interior space is geometrically balanced by the external vestibule, with its harmonious lines and restrained terracotta decoration. It is considered to be one of the finest creations of Renaissance architecture.



Palazzo Rucellai, Florence

RENAISSANCE

Designed by Alberti in 1450, this is the first palazzo to apply the classical orders to the design of a façade composition. As such the building has an antique air and a degree of textures and layers within the façade.

The façade design is based on (alternating) mathematical rhythms and features a base of Tuscan pilasters. The piano nobile is a rich Corinthian style completed by the lighter Corinthian top floor. The façade composition is unfinished as can be made out on the incomplete right end of the building.



Chiesa di S. Andrea, Roma

BAROQUE

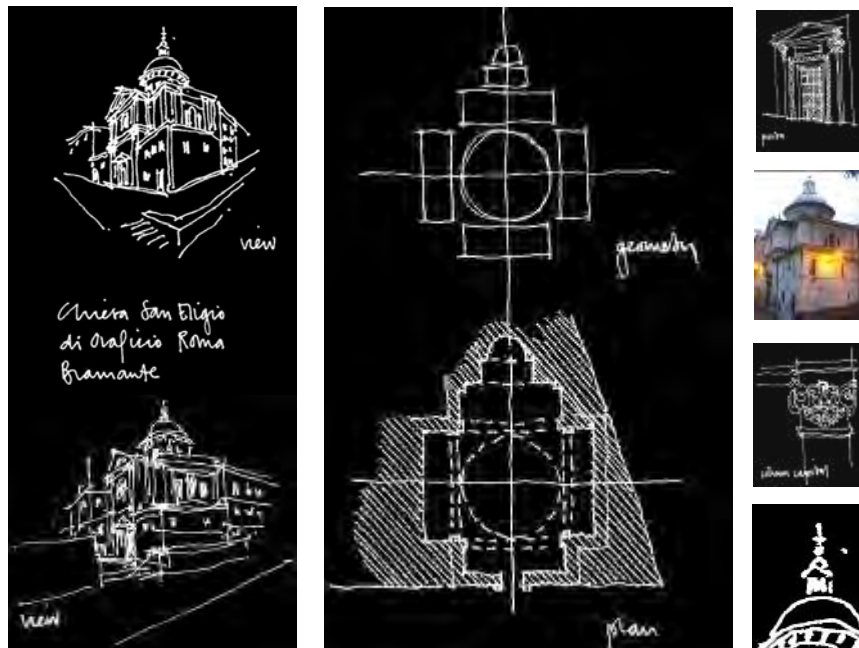
Considered to be one of Bernini's career masterpieces the church is focused on an elliptical plan compressed upon entry with a series of surrounding chapels. The plan is intended to move the occupant around the spatial experience at all times, thus blurring the conception of Christ as the central focus. The street façade is given theatrical width by the use of the entry forecourt design.



Chiesa San Eligio degli Orefici, Roma

RENAISSANCE

Located on the Lungotevere dei Tebaldi alongside the Tiber, the design is attributed to Raphael and Bramante together in 1509. It was built for the Guild of Goldsmiths and is based on the Greek cross planning format. The compact site has driven a compressed planning and façade solution that demonstrates Bramante's experimentalism and design skills.



Chiesa di San Miniato al Monte, Florence

ROMANESQUE

Regarded as one of the finest examples of Tuscan Romanesque architecture in Italy this church is located on a steep hill in the Oltrarno district, off Piazzale Michelangelo, the church was commenced in 1090.

The final façade was added years later and is based on an antique derivative. The columns, arches and pediments are, in this case, further accentuated by the contrast of façade colours and materials.

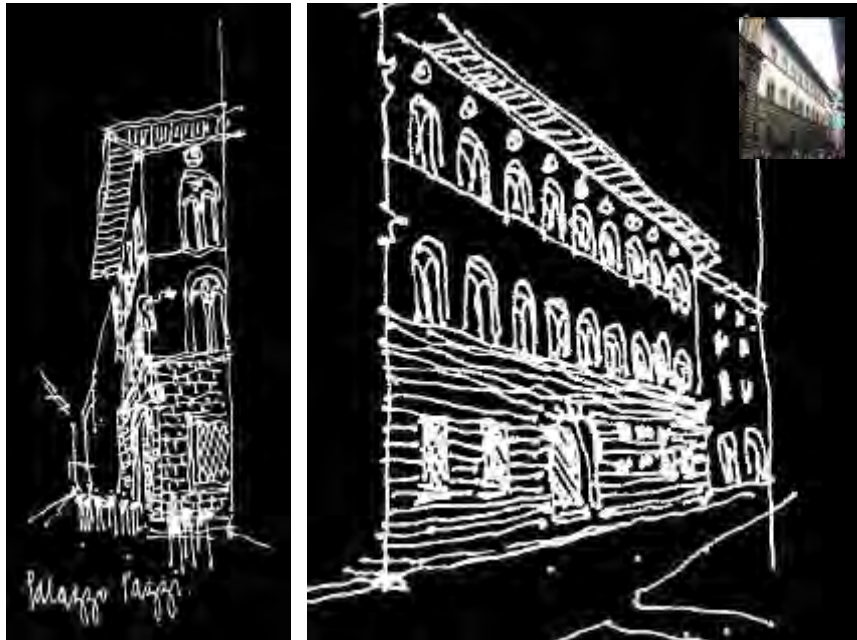


Palazzo Pazzi, Florence

RENAISSANCE

This palazzo was completed between 1462 and 1470 and is attributed to Brunelleschi or indeed his school of influence.

The palazzo features a rugged earthen base though with an upper two floors more associated with the then trend towards smoothness and planar features. The building also features an interior courtyard.



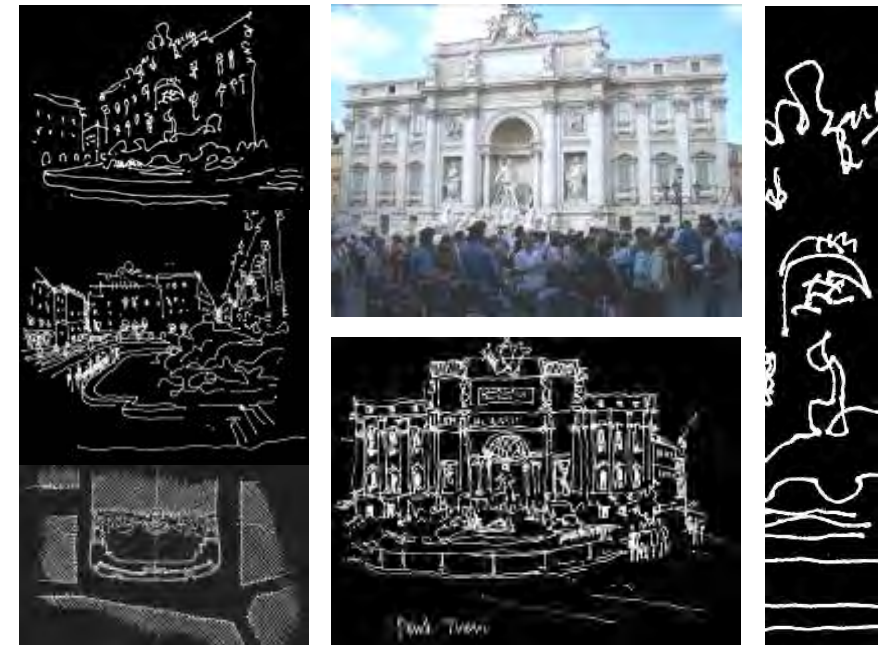
Font Trevi, Roma

BAROQUE

This high baroque construct dominates the adjacent piazza and was designed by Nicola Salvi in 1732.

With water supplied out of an original aqueduct, the name originates from the tri via, the three roads that converge at the fountain. The fountain design represents the, at times, wild and docile moods of the sea.

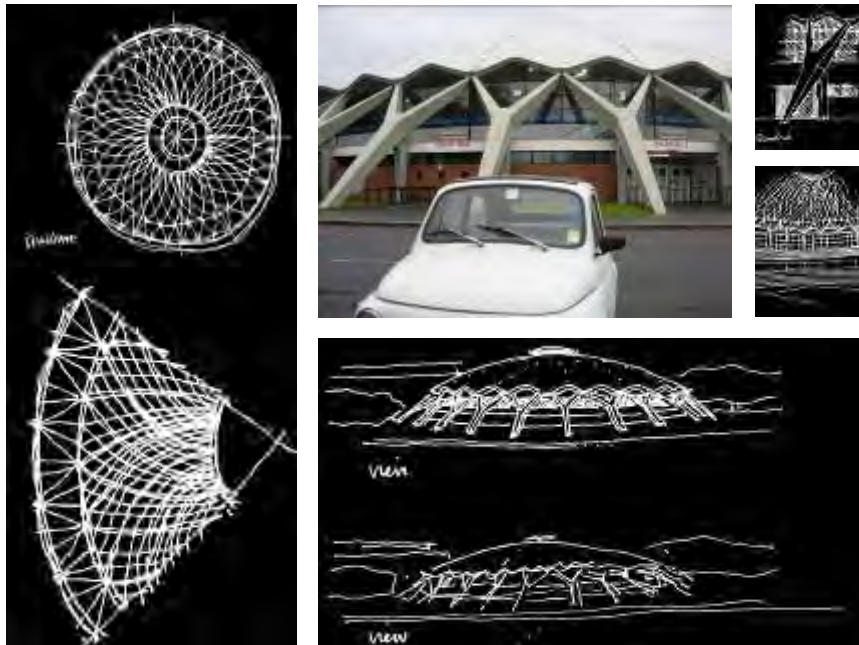
Fellini's 1960s movie "La Dolce Vita" featured the fountain as a focus as did Marcello Mastroianni's "Three Coins in the Fountain".



Palazzetto dello Sport, Roma

MODERNIST

Located on the Piazza Appollodoro and designed by Pier Luigi Nervi for the 1960 Rome Summer Olympics. The domed structure is an icon of the Modernist design era and features the innovative use of exposed reinforced concrete. The plan format comprises 36 radial sectors that unite in an organic form as the spherical roof structure.

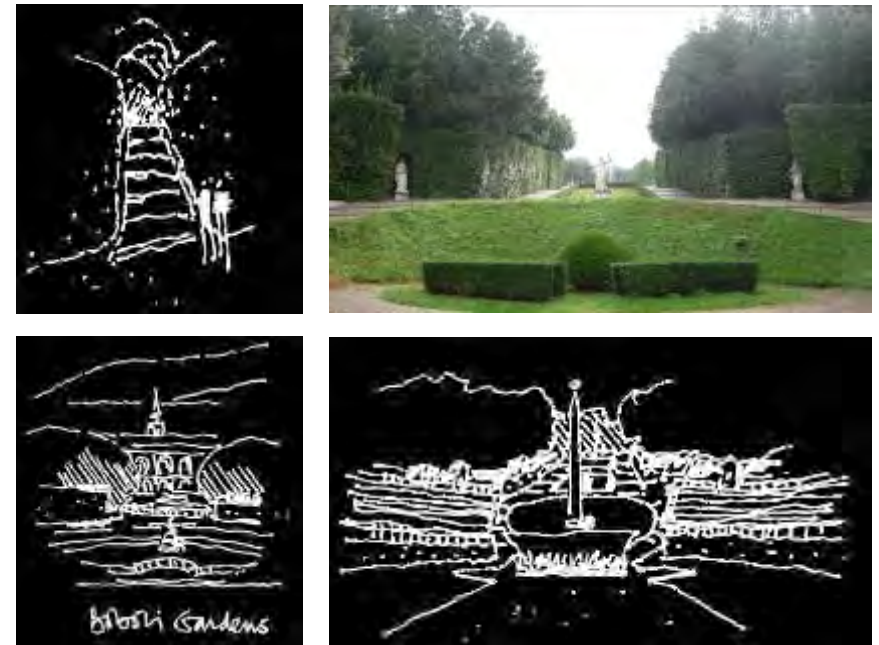


Boboli Gardens, Florence

RENAISSANCE / MANNERIST

The design was determined in response to and in an endeavour to maximise the effect of the natural lie of the land. The design was carried out by Triboli in the early 1500s and finished thereafter by Ammannati. It features sculptures by Baccio and is focused around a central amphitheatre.

Axial design is employed along the long alley focused on the fountain of Neptune and the steeply undulating lateral avenue towards the wild garden. The various areas of the garden complex are of complex geometries and forms, often conceived unto themselves, and paradoxically designed in the Mannerist style.

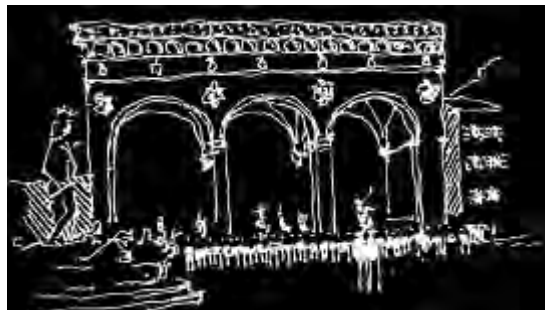


Piazza della Signoria, Florence

ROMANESQUE / RENAISSANCE

This public space represents the hub of the city's secular life and has done so for many centuries. It is the original site of the ancient Roman forum.

The piazza is dominated by the Palazzo Vecchio and features Ammannati's Fountain of Neptune sculpture as well as a copy of Michelangelo's David. The Loggia dei Signoria faces the piazza and was built in the 15th as a platform for public address. It has since become a sculpture hall housing, amongst others, Giambologna's Rape of the Sabine Women.



Il Gesu, Roma

MANNERIST

The great Jesuit church is set upon the Piazza del Gesu. It was consecrated in 1584 and is the work of Tristiani and Giovanni de Rosis. The church was a prototype for the large congregational churches that were built around Rome as a result of the Counter Reformation. The single broad nave and short transept was ideally suited for large congregational preaching.

The fresco trompe l'oeil in the ceiling is carved to the ultimate extreme spreading over architectural features to complete an illusionary three dimensional spatial effect.



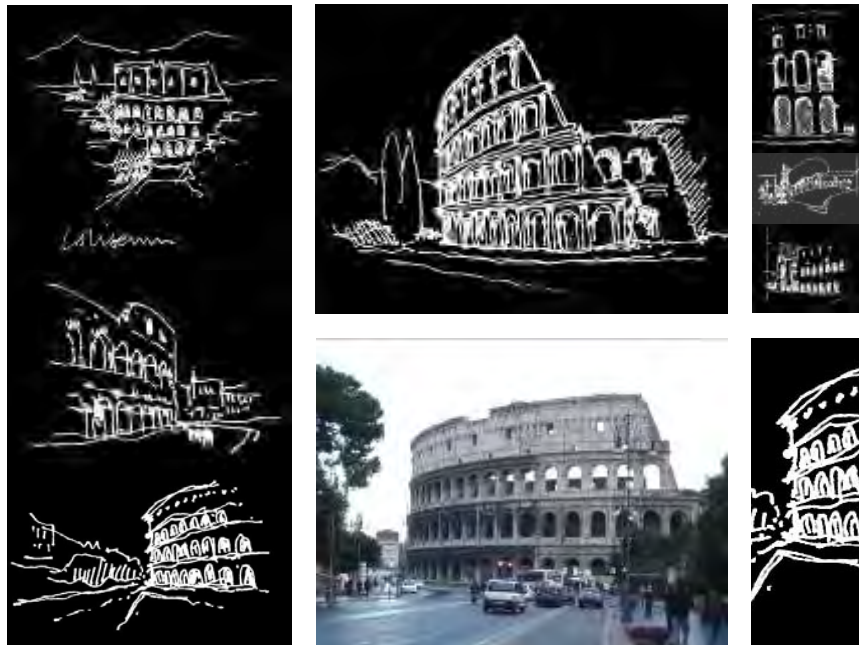
Colosseum, Roma

ROMAN

Started by Vespasian in 72AD, in the grounds of Nero's private Domus Area, and originally known as the Flavian Amphitheatre. The structure could hold 50,000 spectators, often viewing gladiatorial games featuring live animals. The outer façade is composed of three levels of arches articulated by Ionic columns. Originally the façade was travertine covered and the 80 entrance portals allowed spectators to be seated or exit within minutes.

Lord Byron wrote;

"Arches on arches! As it were that Rome, collecting the chief trophies of her line, would build up all her triumphs in one dome, her colosseum stands..."



Basilica di Santa Maria Novella, Florence

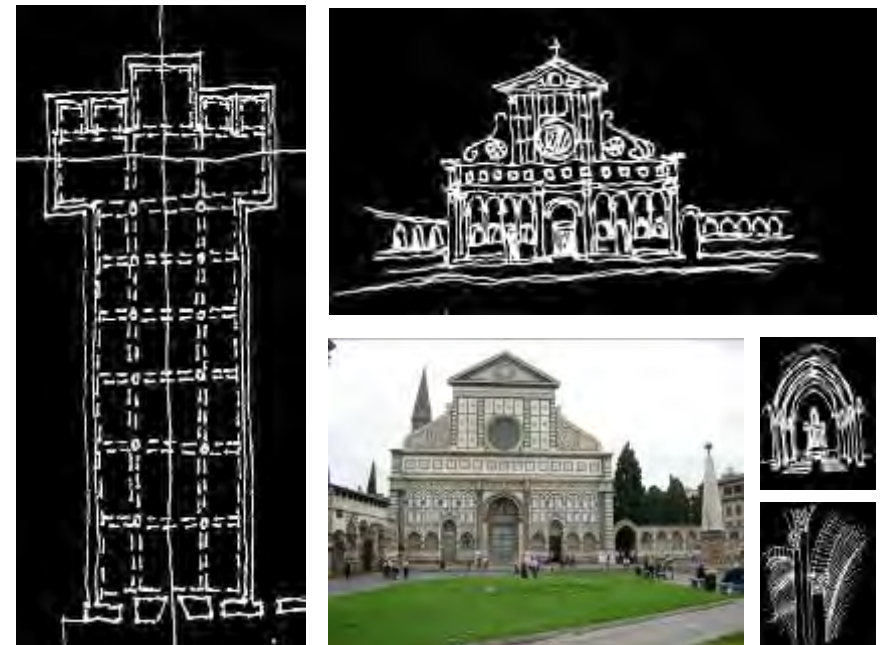
ROMANESQUE / GOTHIC

The basilica was commenced in 1246 as a base for the Dominican order, located off the Piazza Santa Maria Novella. The nave was begun in 1279 and the main doorway designed by Alberti around 1470. The façade is influenced by Alberti's pursuit of mathematical harmony using the repetitive square form to ground the composition.

The design represents a compromise between the high French gothic period and the classic Italian Renaissance heritage.

The distance between the nave columns diminishes with proximity to the altar, a device making the nave appear longer than is the reality.

The Gothic interior features Masaccio's fresco of the Trinity, completed in 1428 and one of the first artworks to utilise perspective.

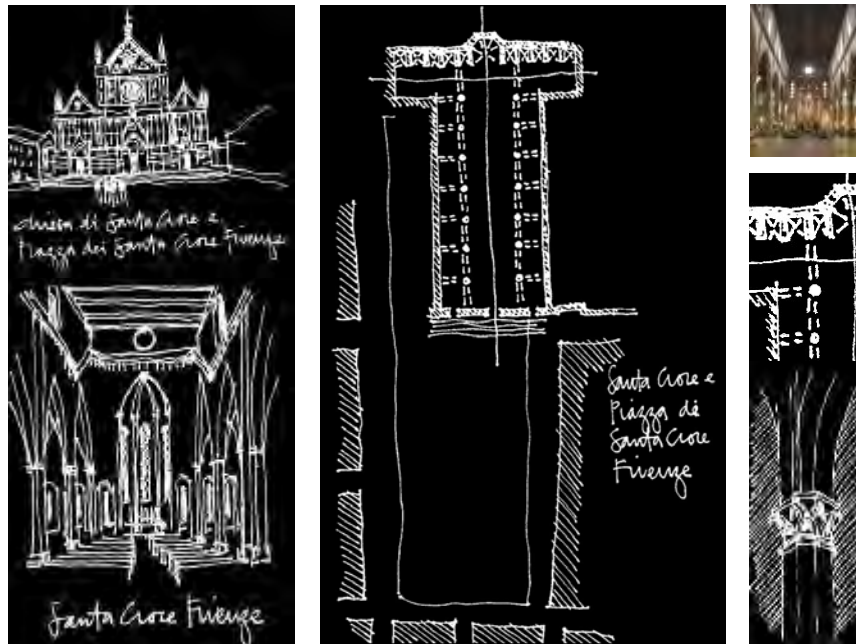


Basilica di Santa Croce, Florence

RENAISSANCE

This Franciscan church is located on Piazza di Santa Croce and was begun in 1294 to a design by Arnolfo di Cambio, though the façade and campanile are C19th in execution. The interior features three naves of a grand scale with austere finishing.

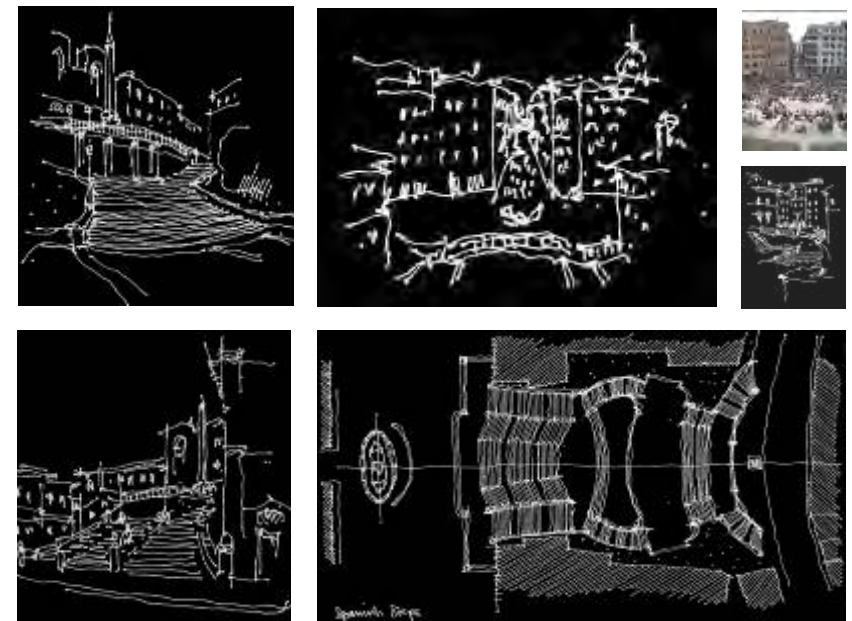
The interior contains the tombs of Michelangelo, Machiavelli and Galileo.



Spanish Steps, Roma

RENAISSANCE

Named after the nearby Spanish embassy, the staircase was built in 1725 and leads from the Piazza di Spagna up to the French church Trinita dei Monti. At the base of the steps is the sculpture Barcaccia by Pietro Bernini. The site serves as one of Rome's most popular outdoor rooms, a renowned and legible meeting and dwelling place.



Piazza dei Cavalieri di Malta, Rome

NEOCLASSICAL

Located in the Aventino district, it was designed by the engraver Piranesi in the late C18th. The piazza features obelisks and trophies of arms replicating antiquity and is formed within a landscape setting. The western façade features the famous view through the keyhole to the door leading towards the dome of St Peters framed by trees. Within the compound to the west is the church Santa Maria del Priorati, also designed by Piranesi.

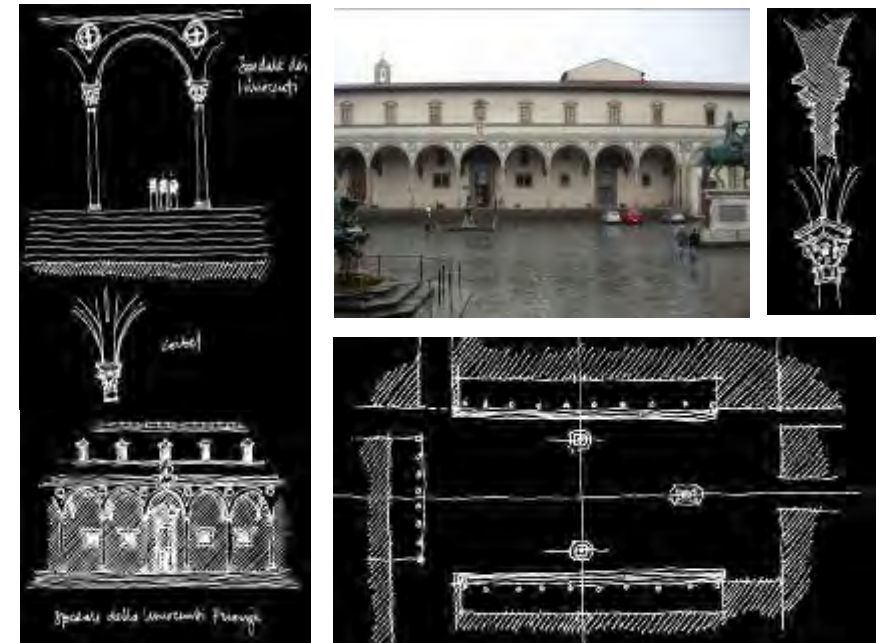


Spedale Degli Innocenti, Florence

RENAISSANCE

Located of the Piazza della SS Annunziata and built between 1419 and 1424 to Brunelleschi's design of the external façade and loggia.

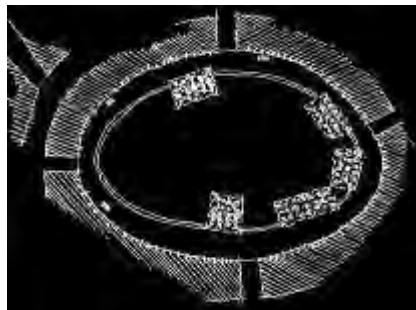
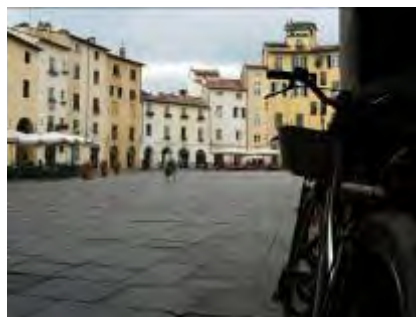
The design is rooted in a Tuscan Romanesque style with classical references of round arches, vaults consisting of small domes mounted on the external columns, and wall corbels.



Piazza Anfiteatro, Lucca

ROMANESQUE

Built on the foundations of the Roman Amphitheatre, some of whose arches and columns may still be discerned. The resultant oval shaped piazza is somewhat unique when coupled with the uneven heights of the surrounding perimeter buildings. The continuity of the space is further enhanced by the varietal yellow / white ochres of the façade colouring.

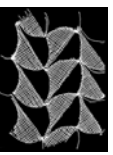
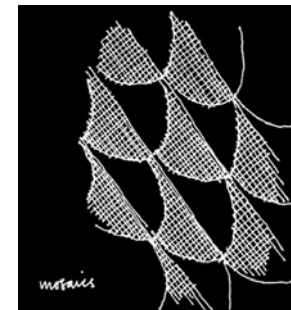


Terme Caracalla, Rome

ROMAN

Begun by Septimius Severus in 206 and inaugurated by his son, Caracalla, in 207, the baths were supplied by natural aquaducts. Able to accommodate 1,600 bathers at a time, the often luxurious design reflected the materials and wealth of the era. The bath played an enormous part of daily Roman life and the process of bathing was often a complex and formal process given expression by the architecture.

The two main forms with the baths are the *thermae*, a bathing area, and the *palaestra* or exercise zones.



Campo dei Fiori, Roma

VARIOUS

A vibrant square focussed on the daily fruit and vegetable markets and a key historic and social focus within the centre of Rome. Curiously the piazza was a place of public execution during the Inquisition.

At present it is one of the clearest examples of mixed use functions and the 24 hour life of an Italian public space.

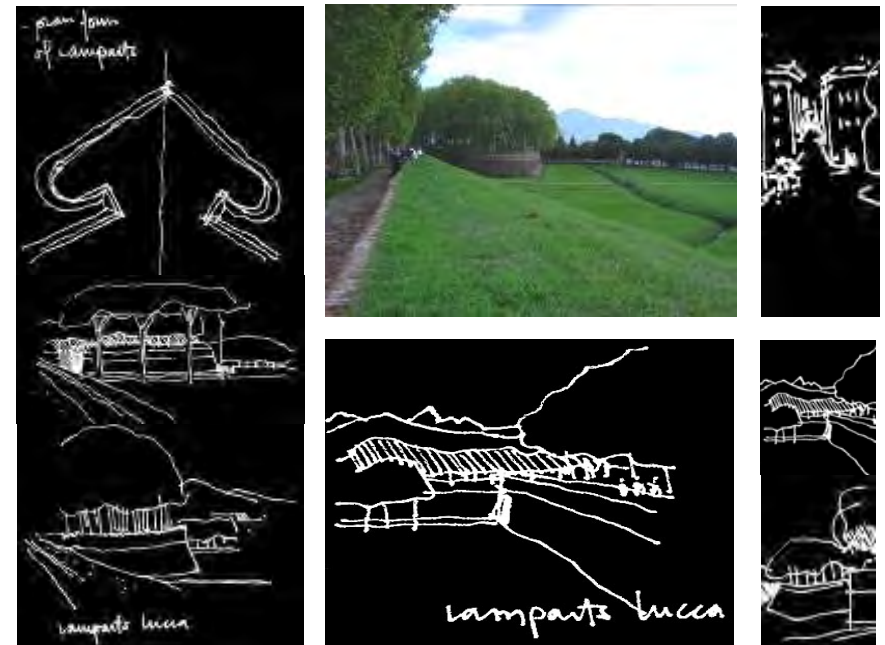
During the course of each day the morning markets give way to a variety of daily eating establishments that in turn evolve into evening entertainment venues. All surrounded by a variety of working and living environments.



City Walls, Lucca

RENAISSANCE

Lucca's town walls date from the Renaissance period and were originally conceived as the complete design device to ward off neighbouring threats to the city. Due to Lucca's position over history as a peaceful town, including over 500 years as an independent republic, the walls have remained untested and, in turn, intact.

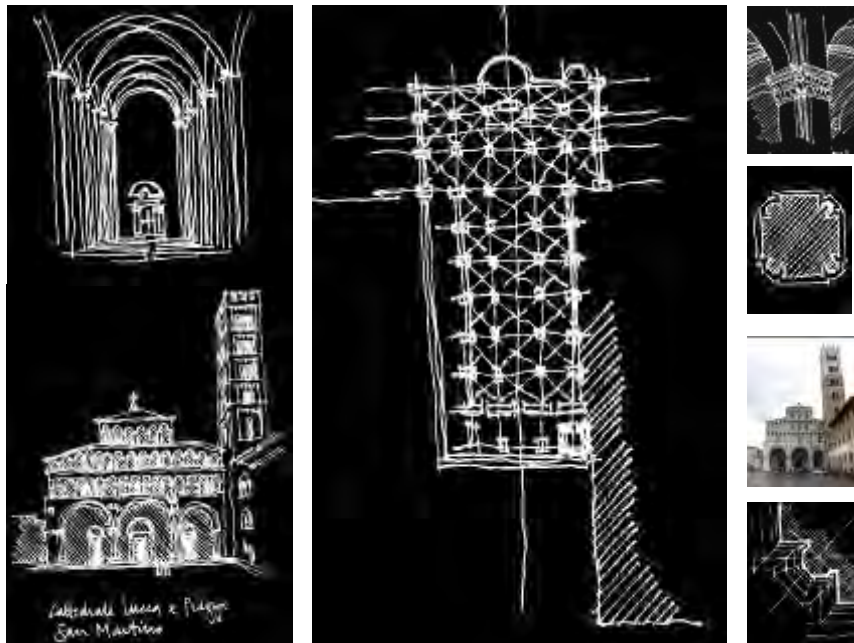


San Michele in Foro, Lucca

ROMANESQUE

San Michele is one of the most ornate and complete Pisan Romanesque church facades in Italy. Originally constructed between the C11th and C14th, the decoration features pagan figures and is crowned by St Michele.

Aspects of Pisan Romanesque include blind arcading, extensive sculptural decoration and the stepped arcade on the gable front as well as the use of polychromatic local stonework. The interior is typically Romanesque based on square plan formats and semicircular arches.



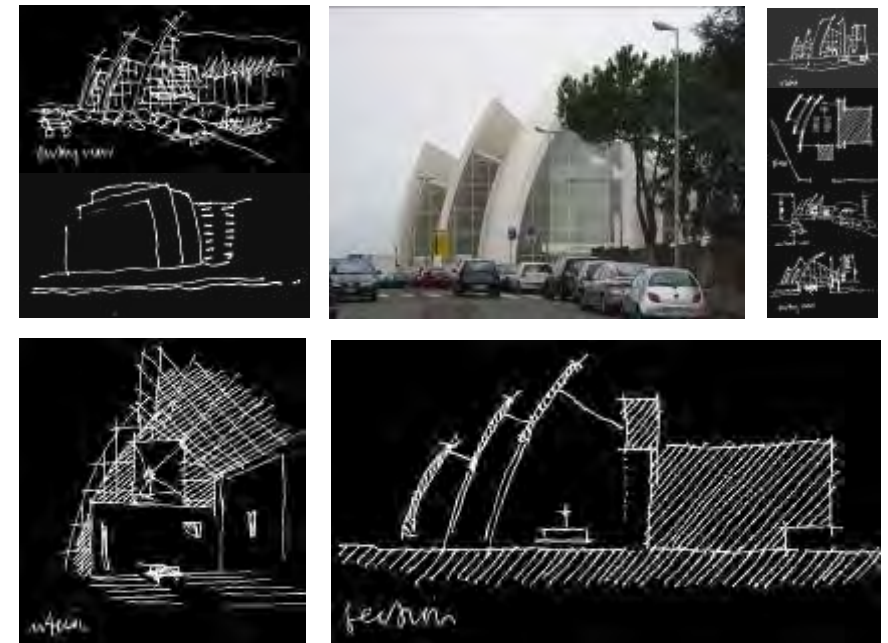
Dives in Misericordia, Roma

CONTEMPORARY

Located in suburban Rome and designed by American architect Richard Meier to coincide with Jubilee 2000. In the architect's words, "the circle is used to represent perfection, the dome of the heavens. The square represents the earth, the floor elements and the rational intellect".

Both the plan and section are driven by a combination of circular, spherical and rectilinear elements. The spherical solid shells shield the sun out of the church.

The uniform white exterior façade panel colouring contrasts with the rich light coloured timbers of the interior.

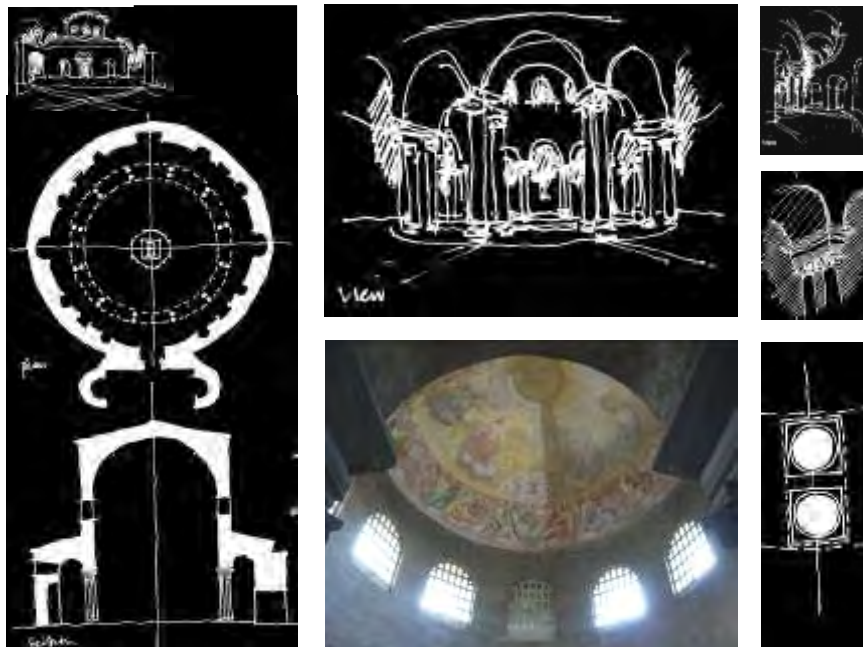


Mausolea di Santa Costanza, Roma

BYZANTINE

This church was originally the tomb of Princess Constantia, dating from the C4th, and was later transformed into a baptistery. Consecrated in 1254 and dedicated to Santa Costanza, the interior features mosaics among the earliest of their kind to survive.

The circular plan form with outer colonnade is reminiscent of other Byzantine churches and as such is somewhat unique within Rome. The circle is divided into twelve approximately equal sectors to resolve the domed structure above.



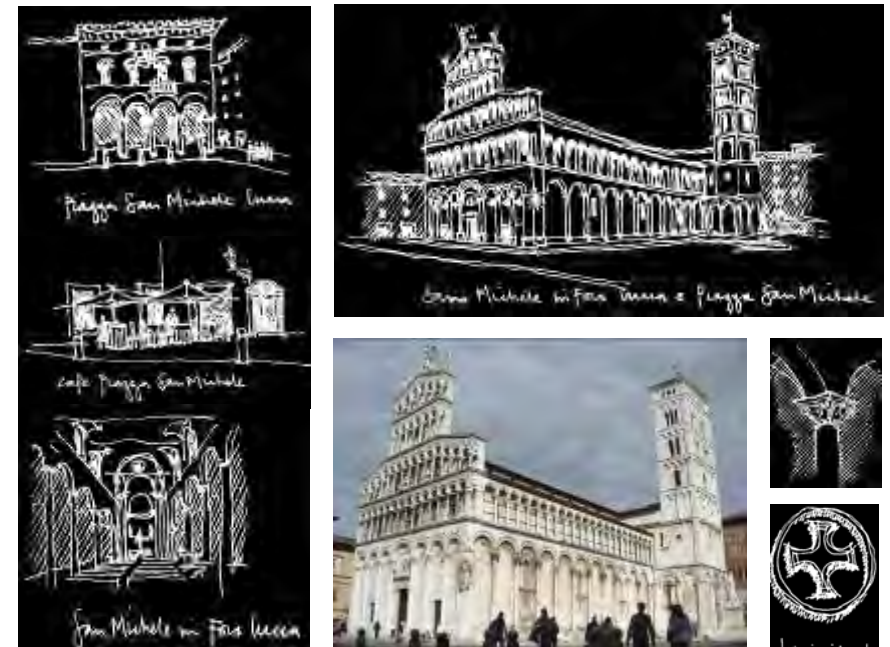
Cattedrale San Martino, Lucca

ROMANESQUE

The town's Cattedrale is located on the Piazza San Martino and was begun in 1070 with its campanile serving as a defensive tower.

The asymmetrical façade was composed in the Pisan Romanesque style during the C13th, featuring decorative columns, loggias and the atrium all designed by the architect Guidetto da Como, with façade carvings by Nicola Pisano.

The interior is gothic from the C15th and features the venerated Volto Santo or Face of Christ, the focus of an annual Christian pilgrimage.



Campo di Miracola, Pisa

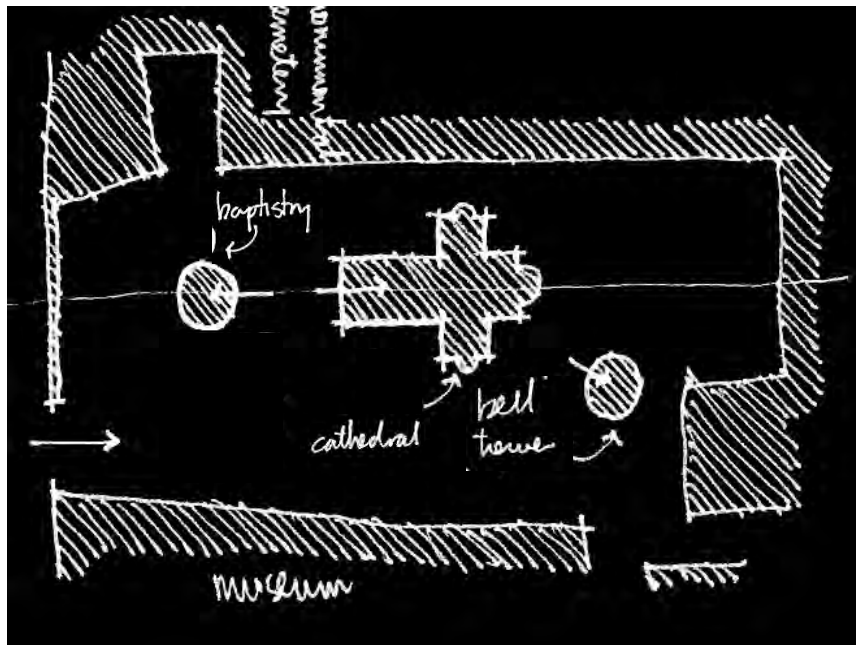
ROMANESQUE

The Campo is a lawn filled square featuring the Cathedral, Baptistry and Torre Pendente, all of which were financed by the Pisan looting of the Arabs in Sicily.

The Cathedral was begun in 1064 and was a model for Romanesque churches throughout Italy. Its external cladding of green and cream marble was characteristic of what was to become Pisan Romanesque architecture.

The Baptistry was started in 1153 by Diostisalvi and features a lower level of Pisan Romanesque influence, though the upper levels and dome were completed in the Gothic style.

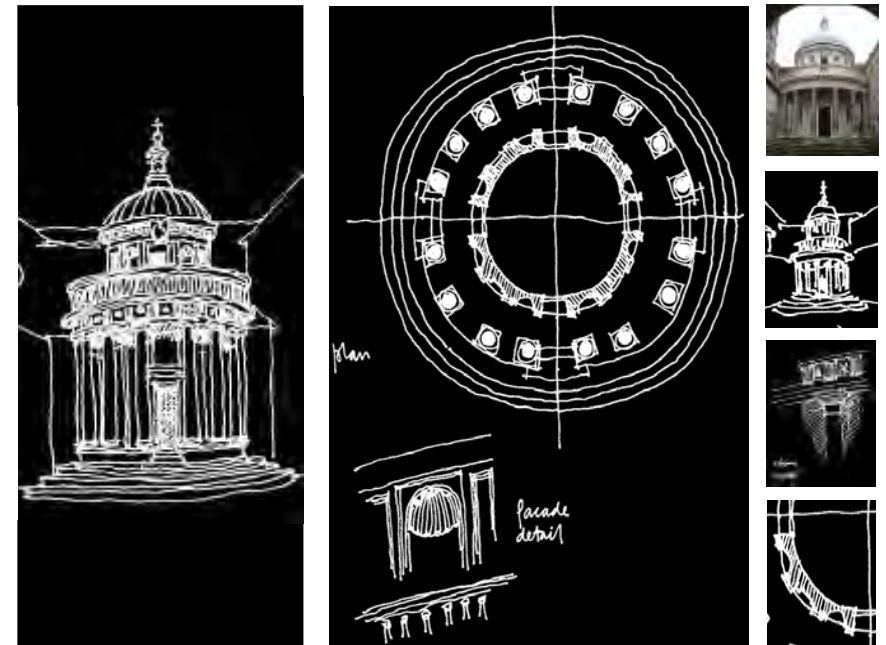
The Torre Pendente, or Leaning Tower, was designed by Bonanno Pisano and was starting to tilt even during construction. Recent engineering attempts to arrest the continued lean appear to be successful.



Il Tempietto, Roma

RENAISSANCE

Set within the courtyard of St Pietro in Montorio high above the Trastevere area and designed by Bramante in 1502. The small temple was originally intended to encompass the entire remodelling of the courtyard. It is seen as one of the purest mathematical constructs of its era. The temple is located on the precise spot of the martyrdom of St Peter, "inter duas metas", and was built for Ferdinand and Isabella of Spain. The circular plan form, the martyrium rather than the basilica type, recognised the C16th pursuit of commemorative monuments to compliment the congregational basilicas. The plan consists of two concentric cylinders, the low and wide peristyle and the tall and narrow cella. The width of the peristyle is equal to the height of the cella excluding the dome. The dome is hemispherical internally and externally and is therefore proportioned to the height of the cella. The building embodies Bramante's view that good contemporary architecture grew out of good ancient architecture in the same way that Christianity had grown out of the ancient world.



Santa Maria della Pace, Roma

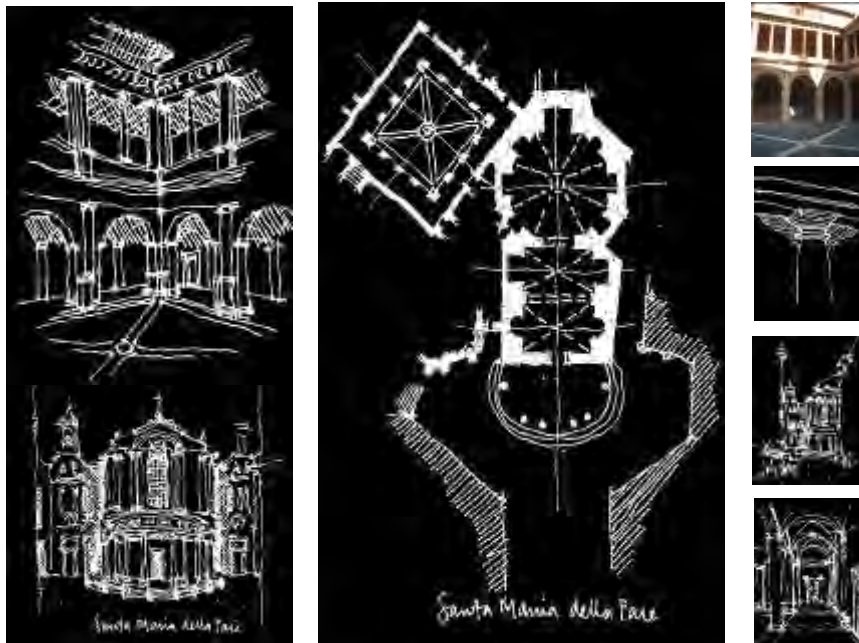
RENAISSANCE

The church is set within the Piazza della Santa Maria della Pace, just adjacent the Piazza Navona. Set onto the piazza, the façade takes the form of a theatre set to encompass the complete northern end of the piazza.

The plan of the church features an octagonal nave and rectilinear aisle. The square plan cloister was designed by Bramante in 1504 and is noted for its two storeyed façade composition of arches and pilasters.

The upper storey configuration breaks the rules of solid on solid and void on void by placing the pilaster on the centre, or upper part, of the lower arches.

Bramante achieved compositional balance in this cloister by the use of proportion, scale and perspective.



Romanesque Town, Arezzo

ROMANESQUE

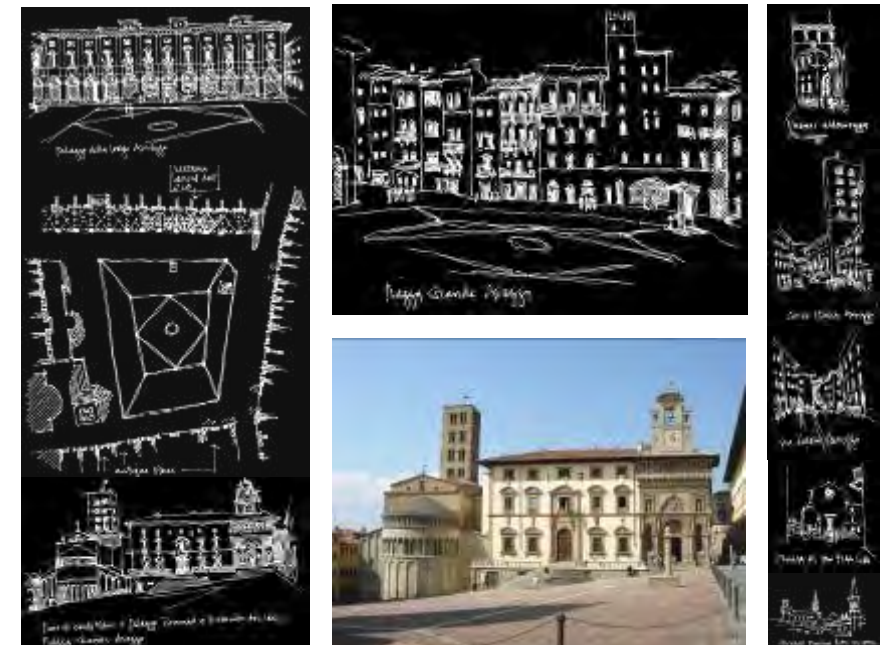
Set within the former Etruscan and Roman city, Arezzo became a prosperous independent republic in the middle ages. Piazza Grande represents the main public space of the city and is fronted by:

- Pieve di Santa Maria – the C12th Romanesque church has an arcaded façade, more associated with that of western Tuscan influence, and unusually presents its front to the small laneway rather than the adjacent Piazza Grande.
- Palazzo della Fraternita dei Laici – designed in 1375 in Gothic / Renaissance style, featuring a bas relief of Madonna and Child by Bernardo Rossellino. The bell tower was added in 1550 by the Arezzo native Giorgio Vasari
- Palazzo Tribunale – based again on Vasari's design; and
- Palazzo della Lodge – designed by Vasari in 1573.

In addition, other buildings of note are:

- Chiesa Di San Domenico fronting the Piazza Di San Domenico,
- Chiesa Di San Francesco; and
- Chiesa Badia Delle Santa Flora e Lucilla by Vasari.

Further, Roberto Benigni filmed the popular movie 'Life is Beautiful' here in the late 1990's.



Liguria

Liguria is part of the northwest corner of Italy, dominated by the coast and set against a mountainous backdrop. The coast is dotted with medieval towns, though is geographically dominated by the historic and majestic seaport of Genoa. This port once formed a key trade route to the rest of the world. The coast also functions as a major tourist attraction, especially the Cinque Terre and Portofino, forming the eastern sector of the Italian Riviera.

Basilica di San Pietro, Roma

RENAISSANCE

Pope Nicholas V chose architects, including Leon Battista Alberti, to design the basilica in the mid C15th. Pope Julius II employed Donato Bramante to design the new basilica, based on a Greek cross plan with a central dome and four smaller surrounding domes.

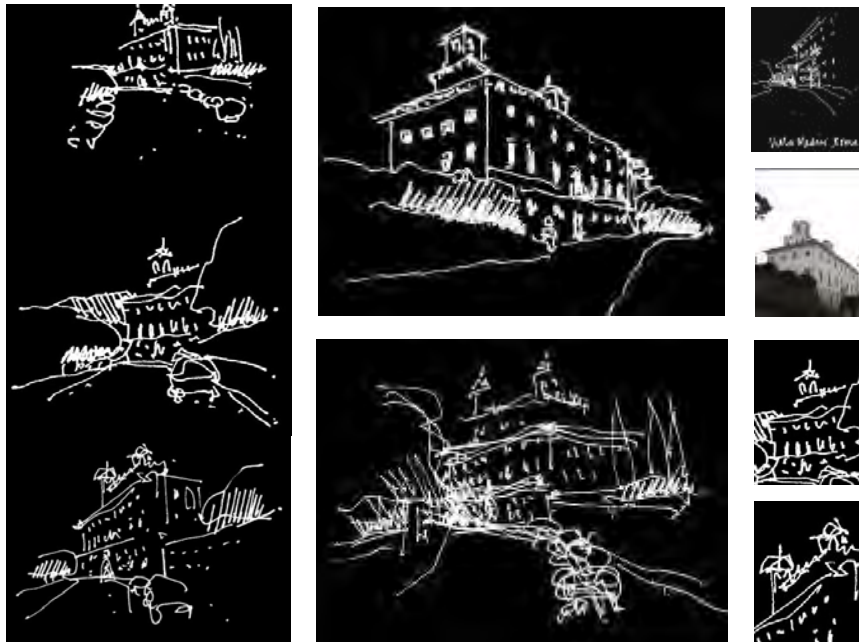
Other contributors to designs within the basilica include Raphael, Antonio da Sangallo, Michelangelo and Giacomo della Porta. Michelangelo took over the design of the dome in 1547. After Michelangelo's death, Maderno expanded Bramante's Greek cross into a Latin cross format. The forecourt Piazza San Pietro was designed by Bernini in the late C17th as a place for the world's Christians to gather upon pilgrimage. The forecourt is surrounded by two semicircular colonnades set apart to form an elliptical space. Each colonnade is four columns deep, creating a simple loggia surrounding the forecourt.



Villa Medici, Roma

RENAISSANCE

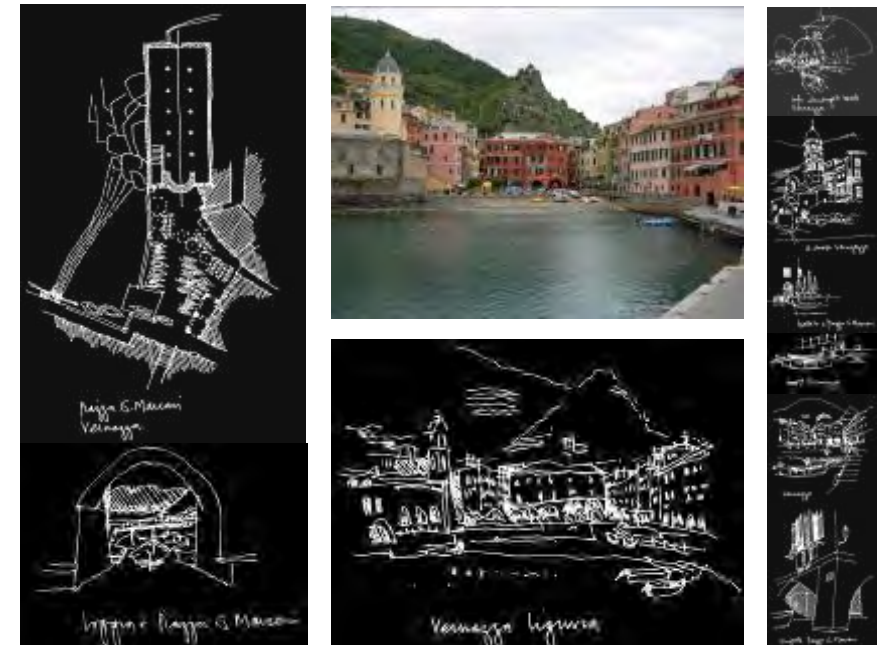
The villa was built on the Pincian Hill and integrated within a garden setting on the probable site of the Roman Incullus gardens. It was designed by Annibale Lippi in 1544 for Cardinal Ricci, with an austere street façade unchanged since that date.



Seaside urban, Cinque Terre

VARIOUS

These five seaside towns, Monterosso al Mare, Vernazza, Corniglia, Manarola and Riomaggiore, forming what is known as the Cinque Terra are collectively listed as a World Heritage site. Largely inaccessible by road, they are connected by rail and a precipitous cliff-side walk. The villages date back to the C11th, originally seaports though currently diversified into wine, fruit and, in recent times, world recognised tourism.



Cattedrale di San Lorenzo, Genoa

GOTHIC

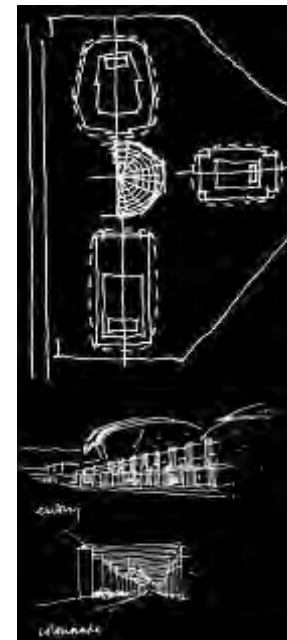
The Cathedral was consecrated in 1118 with the addition of bell towers and cupola in the 16th. The highly decorated façade is the most striking feature of the church, comprising black and white striped marble in the Gothic style with twisting columns.



Auditorium Parco della Musica, Roma

CONTEMPORARY

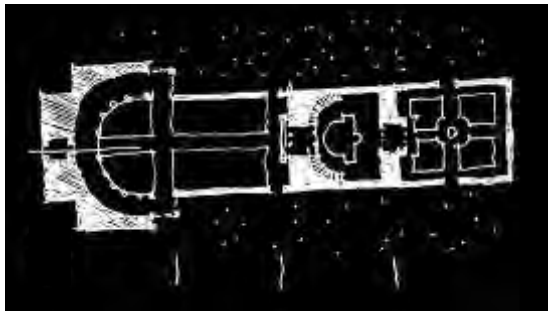
Located amongst the 1960 Rome Summer Olympics precinct, this project was designed by Renzo Piano and completed in 2003. Its design had to be amended numerous times to incorporate Roman ruins unearthed during the excavation. The design features three main performance spaces profiled against the sky and set upon a platform of support facilities and circulation routes. The planning disposition of the three performance spaces creates an outdoor fourth performance amphitheatre.



Villa Giulia, Roma

MANNERIST

Originally designed as a late Renaissance / Mannerist pleasure house, featuring an integrated garden in the style of a classic Roman suburban villa. Built for Pope Julius III, shortly after his election in 1550, the villa was the design work of a range of individuals. Michelangelo supervised the plans, whilst Vignola and Vasari all designed various segments. Ammanati is responsible for the strong connections to the villa planning and geometrics. The garden layout is noted for its Mannerist deviations away from the fundamentally axial and balanced layout and pathways.



Piedmont

Much of Italy's C20th industrial boom had its roots in the Piedmont and the area has long been associated with labour movements, intellectual activity and political action.

The region is nestled amongst the French and Swiss Alps, thus often forging a differing sense of identity amongst the Piedmontese as opposed to mainland Italy. These influences affect not only the topography but also cuisine and the language.

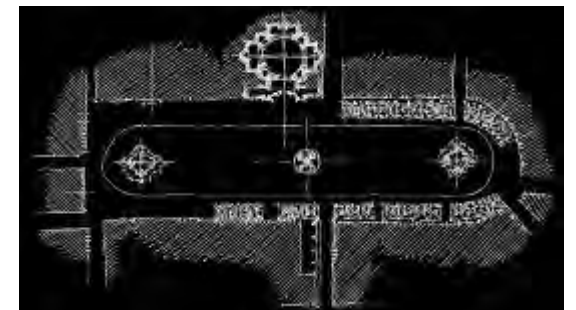
Piazza Navona, Roma

ROMAN

Originally laid out on Domitian's stadium used for chariot racing. The piazza is lined with Baroque palazzi and is focused along three pivotal fountains.

The Fontana dei Quattro Fiumi (Fountain of the Four Rivers) is the most famous of the fountains. It was designed by Bernini to depict the Nile, Ganges, Danube and Plate Rivers.

Within the piazza is the Chiesa Santi Agnese in Agone, which features a façade designed by Borromini, Bernini's bitter rival. It is held that the statues of Bernini's fountain are shielding their eyes in disgust from Borromini's church. This can be countered by the allegory of the Nile looking away as it is unsure of its source.



Il Campidoglio, Roma

RENAISSANCE

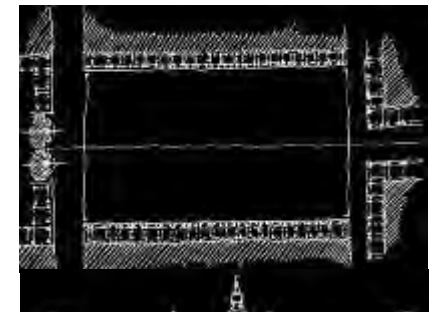
Pope Paul III commissioned Michelangelo to design the Capitol Hill in 1546. Whilst the Capitol had always been the centre of government and often referred to as Caput Mundi, the centre of the world, the execution took some 100 years from the time of commissioning, being finished after Michelangelo's death. The central square is lined by three buildings; the Palazzo Senatorio, the Palazzo Nuovo and the Palazzo Consenatorio. It is shaped in a trapezoid focused on the statue of Marcus Aurelius and accentuates the Palazzo Consenatorio. The square is oriented to face the modern city rather than the ancient forum and the piazza is approached from the Cordonata, a stepped ramp. All the palazzi feature the Giant Order of pilasters or columns running through two whole storeys, serving to tie the elevation together. This also allows the lower storey to carry entablatures rather than arches. The relationship of the smaller columns of the upper level tabernacle windows, the giant pilasters and lower level columns is complex and emblematic of the Mannerist love of complexity and formal contradictions.



Piazzas and Arcades, Turin

Turin is noted for its expansive piazzas and connecting, elegant porticoed boulevards. Most noteworthy are:

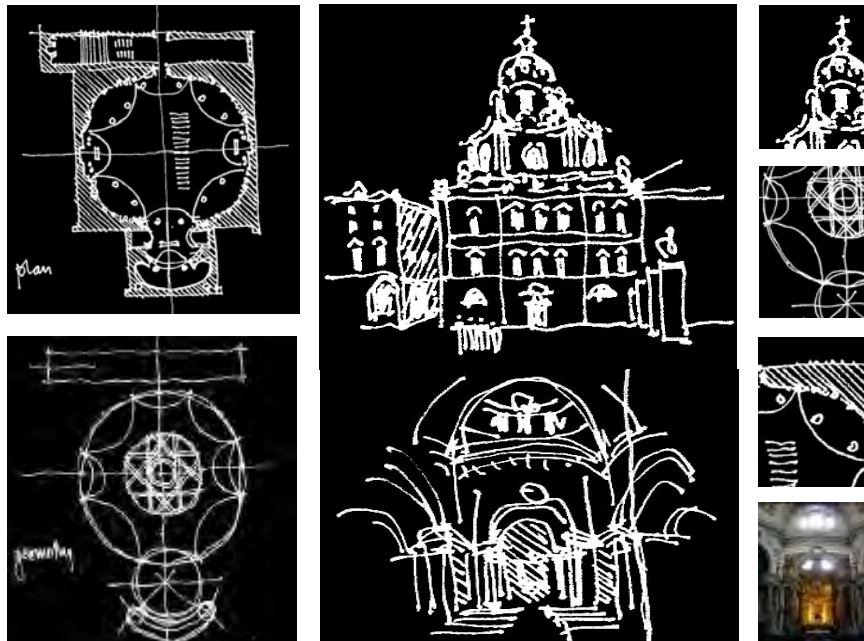
- Piazza Carlo Felice – a combined square and garden opposite the Stazione Porta Nuova built by Mazzucchetti in 1865,
- Piazza San Carlo – the square is surrounded by porticoes and is focused on the twin Baroque churches of Chiesa di San Carlo and Chiesa di Santa Cristina. It is connected further north by via Roma to Piazza Castello
- Piazza Castello – the heart of the historic centre of Turin. The piazza was laid out of C14th in a Baroque style to serve the House of Savoy. It is enclosed with Baroque façades including the C14th Palazzo Madonna and Chiesa di San Lorenzo. It is connected eastwards along via Po to Piazza Vittorio Veneto
- Piazza Vittorio Veneto – the focus of university life and adjacent the River Po where the colonnades are based on a recurring double grid pattern



Chiesa di San Lorenzo, Turin

BAROQUE

Located on Piazza Castello, this church was designed by Guarino Guarini in the 17th century in the late Baroque style. The exterior façade is simple in form and material, though heavily contrasted against the richly complex and decorated interior. The form of the church is set within a square and circle composition, with a Greek cross format utilising a set of complex, overlaying circular forms to resolve the overhead dome.



The Pantheon, Roma

ROMAN

Perhaps the best preserved building of ancient Rome the original temple was built by Marcus Agrippa in 27BC.

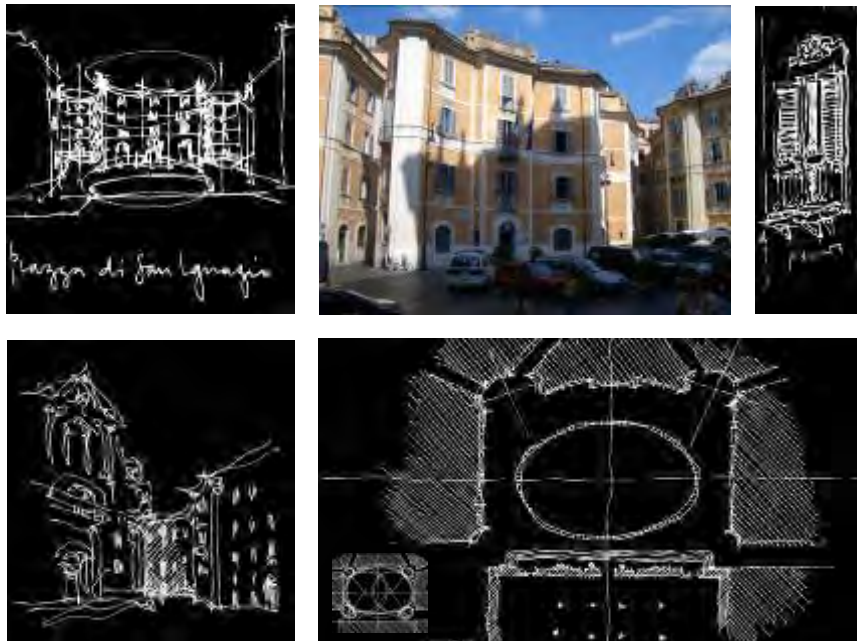
The dramatic and imposing interior features the largest masonry vault ever built, all based on a circular section and plan format, the hemisphere dome, is considered one of the most important achievements of ancient Roman architecture. The dome itself is made of solid concrete and exerts no side thrust at all on the supporting columns.



Piazza di San Ignazio

ROCOCO

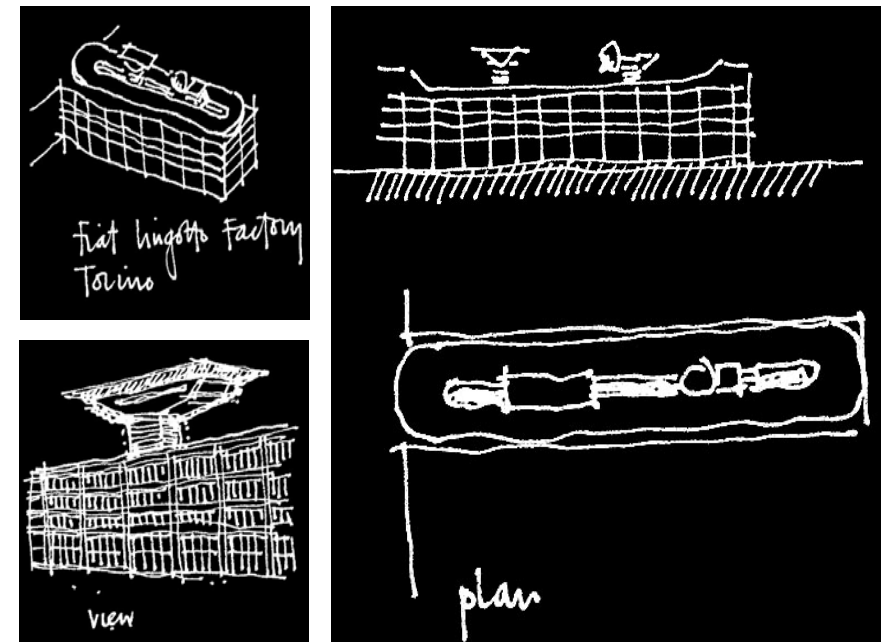
Located in the rione or quarter of Rome known as the Campo di Marzio or Field of Mars the area became densely populated by the middle ages and was often referred to as "the oldest part of Rome". The Piazza di San Ignazio stands as one of the finest Rococo creations of urban Italy. Whilst dominated by the Baroque façade of Chiesa di San Ignazio constructed between 1626 and 1685 the piazza is given its sculptural character by the surrounding group of apartment and office buildings. These buildings were designed in 1727 by Raguzzini and feature a similar language of highly detailed Rococo façades. The piazza is based in plan on a series of interlocking ellipses that reverberate from the spatial construct of the apartments through to the ornate façade detailing of cornices, entry portals and pediments.



Fiat Factory, Lingotto

MODERN / CONTEMPORARY

This complex was originally designed in the early C20th as the primary factory and support offices for the Fabbrica Italiana di Automobili Torino (FIAT) car company. Most notably, the design includes a test race track integrated into the roof of the building. Later extensions and refurbishments have been carried out by the world renowned Pritzker Award winning Italian architect, Renzo Piano.



Lombardy

Lombardy has a complex history, influenced over centuries by its geographic confluence between France, Germany, Austria and Switzerland.

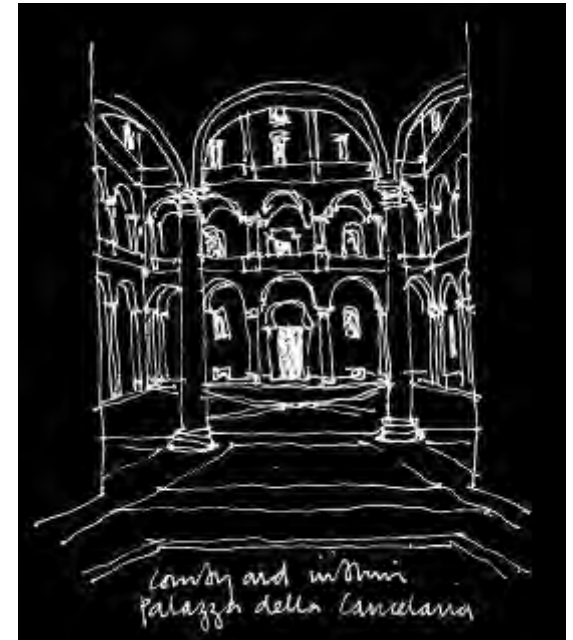
It features a diversity of landscapes, from the northern Alps to the rich alluvial plains of the River Po. The region is known for its range and quality of cuisine and is focussed on the industrial and economic powerhouse of Milan.

Palazzo Della Cancelleria, Roma

RENAISSANCE

Designed and built between 1486 and 1496, this three storey Palazzo has a façade based on mathematical principles and proportion similar to those practised by Alberti. The primary façade fronts the Piazza della Cancelleria between the Campo di Fiori and Corso Vittorio Emanuele II.

The design was influenced by Bramante, and the courtyard is attributed to him. The palace was begun for Cardinal Riario and taken over as the Papal Chancery. The façade consists of a high podium base with two storeys above, both comprising pilastered facings. The base is punctuated with small unstriated windows, thus forming a contrast to the lighter upper levels. The façade composition is based on a repetitive "ABABAB" rhythm and is geometrically aligned with the Golden Section principles. The façade used subtle layering and little decoration to express depth and modulation. The internal courtyard is equally mathematically derived featuring vertical gradation from columns at the base levels to pilasters on the upper level.



Lazio

The Lazio region was formally decreed in 1934 and has largely served as an extension of Rome since Roman times. Through the ages, the wealthy established villas in the Lazio countryside and small towns developed as fiefdoms for the Olsini, Barberini and Farnese families.

The region is now clearly dominated by Rome, the eternal city with its historic showcase operating as a living museum set within an evolving, vibrant city.

Pirelli Tower, Milan

MODERN

Designed by Studio BBPR in the late 1950s, this office tower is based on a contemporary abstraction of a medieval tower. The structure features expressed columns located to the exterior of the curtain wall. Windows within the façade are located in a random format to further reinforce the medieval abstract of fenestration.

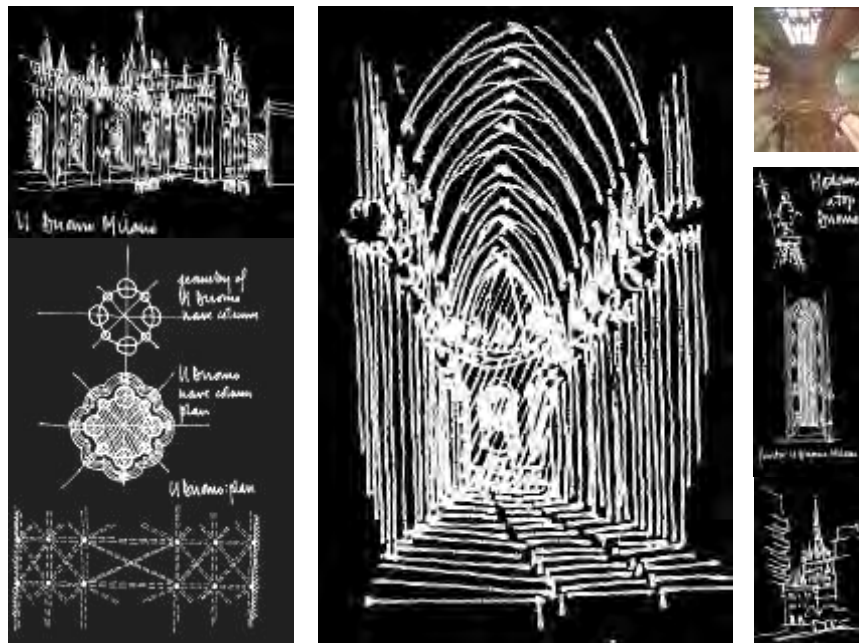


Il Duomo, Milan

GOTHIC

The Cathedral was commissioned in 1386 by Gian Galeazzo Visconti and stands as a highlight of the Italian late Gothic style and a symbol of Gothic architecture in Milan and Italy.

The structural system of lateral flying buttresses supports a central spine 108m above the Piazza del Duomo. The plan is based on the Latin cross with the nave split into rectangular lateral bays. Each side features two aisles, both composed on a square plan format.



Hill town urban, Orvieto

ROMANESQUE / GOTHIC

Dominating the town is the Cathedral on Piazza del Duomo. Commenced in 1290 by Pope Urban IV, and originally conceived in the Romanesque style, the design evolved into a Gothic form, primarily endowed within the façade.

Other sites in Orvieto include;

- C12th Torre del Moro
- The C12th Romanesque Chiesa di Sant' Andrea, located in the heart of Orvieto on Piazza della Repubblica, once the Roman forum
- Palazzo del Popolo located on Piazza del Popolo designed in the C12th in a mixed Romanesque Gothic style
- La Rocca designed in the C14th as a fortress at the eastern edge of the town.

The town is typical in that it is focused around both a secular and non-secular public place and adjoining supportive buildings.



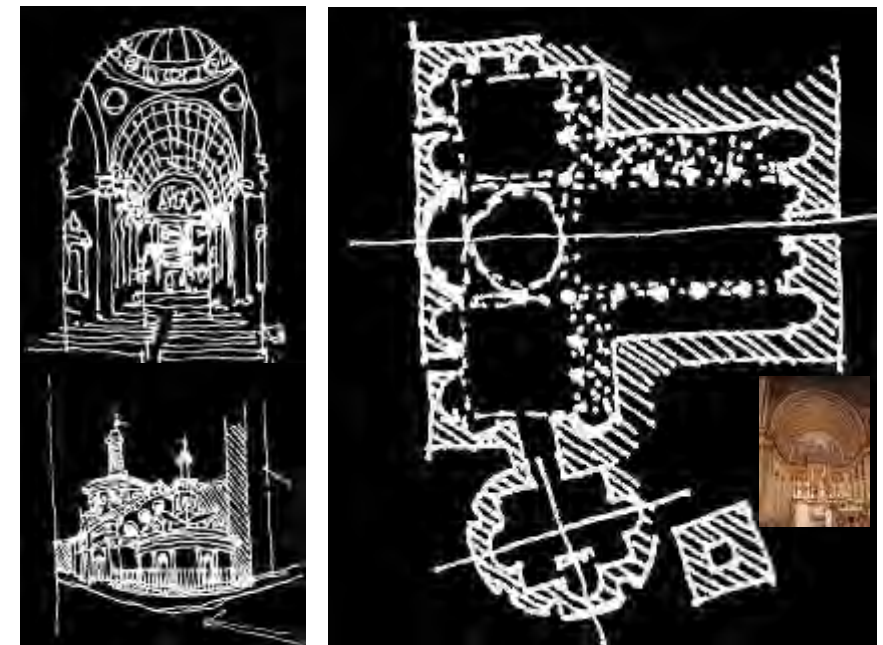
Santa Maria Presso San Satiro, Milan

RENAISSANCE

Bramante's earliest known building designed in the 1480's is noted for two features.

The first is the east end, which is constructed as a perspective illusion showing Bramante's deep influences as a painter under the guidance of Piero Della Francesca. The design positions architectural space as a series of planes and voids, like those found within a painting, rather than a series of three dimensional solids as found in sculpture.

The second is Bramante's adaptation of the Greek cross plan in the baptistery, thus blending early Christian with Florentine Renaissance architectural logic, seen as a precursor to many Italian churches of the C16th and C17th including St Peters in Rome.



Galleria Vittorio Emanuele II, Milan

NEOCLASSIC

Whilst almost destroyed by World War II bombing, the Galleria survives as il Salotto di Milano (Milan's drawing room).

Set on the edge of the Piazza del Duomo, it was designed by Giuseppe Mengoni as one of the first European buildings using iron and glass as structural elements.

The four floor mosaics around the central octagon represent Europe, Africa, Asia and the Americas.



Hill town, Spoleto

ROMAN / VARIOUS

Spoleto is a seminal Umbrian hill town dominated by the Rocca Albornoziana. The original town is laid out on Roman town planning principles of the Cardo and Decumanus. Other Roman sites include;

- Teatro Romano – this Roman C1st theatre is still in use
- Arco di Druso e Germanico, the Roman ruins marking the entrance to the ancient forum
- Ponte delle Torri erected in the C14th on the foundations of the Roman aquaduct. Also notable is the;
- C14th Cathedral set upon the sloping Piazza del Duomo
- The Piazza del Mercato, still the scene of daily markets
- the C12th Chiesa di Sant' Eufemia is noted for the matronei galleries set above the main church to segregate the female congregation, and
- the secular centre of town, the Piazza della Libertà.



Hill town, Gubbio

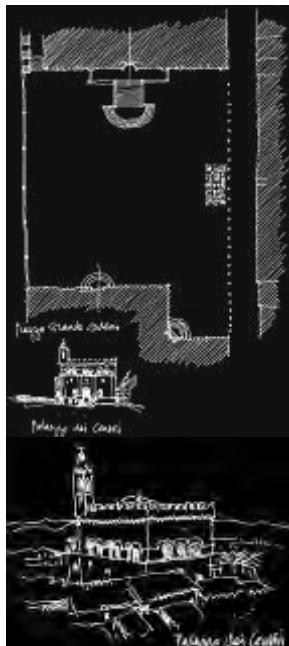
VARIOUS

Set on the precipitous slopes of Monte Ingino, the centuries old palazzi of Gubbio portray a consistent earthen grey hue.

Whilst famous for its C2BC Eugubian Tablets, constituting ancient Umbrian script, the town was a Roman ally and a key stop along the via Flaminia. The town declined with Saracen invasions, eventually to be incorporated into the Papal states.

Key architectural sites include;

- Palazzo dei Consoli located on Piazza Grande and built in the C14th, designed by Gattapone
- the C13th cathedral on via Ducale featuring a stained glass window by Bernardino Pinturichino
- Palazzo dei Bargello designed in the C13th.



Old Town, Pavia

ROMAN / ROMANESQUE

Originally the Roman town of Ticinum, Pavia once boasted 100 medieval watchtowers, of which three remain on the Piazza di Leonardo da Vinci.

The two main streets Corso Cavour and Corso Strada Nuovo represent the Roman Cardomanus and Decumanus respectively.

Currently focussed around the campus of the University of Pavia, other landmarks in the town include the;

- Cathedral, Italy's third largest, which was started in 1488 with design contributions by both Leonardo da Vinci and Donato Bramante,
- Basilicata di San Michele, built in the Romanesque C11th period
- Porte Coperto designed by Giovanni de Ferrera and Jacopo de Cozzo in 1351 to cross the Ticino River



Hill town, Bergamo

MEDIEVAL

Bergamo's walled hill town, or *città alpa*, was a former outpost of the Venetian empire. The town is focussed around Piazza Vecchia and features the C17th Palazzo Nuovo, the C12th Palazzo della Ragione and the Torre del Canpanone.

Adjacent is the Piazza del Duomo, the focus of spiritual life, featuring the Romanesque Basilica di Santa Maria Maggiore, the Renaissance Cappella Colleoni, the octagonal Baptistery and the small Baroque Cattedrale.

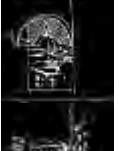
The town is connected east to west by Via Gombito and Via Colleoni respectively.



Hill Town, Assisi

VARIOUS

Located on Monte Subasio, Assisi is mostly famous as the birthplace of St Francis. The hill town itself is a well preserved example of the fortified town. Its largely intact town walls connect to the towering Rocca Maggiore presiding over the town. A number of primary roads run laterally across the hillside connecting the Basilica San Francesco on one side to the Cathedral and the Basilica di Santa Chiara on the other.

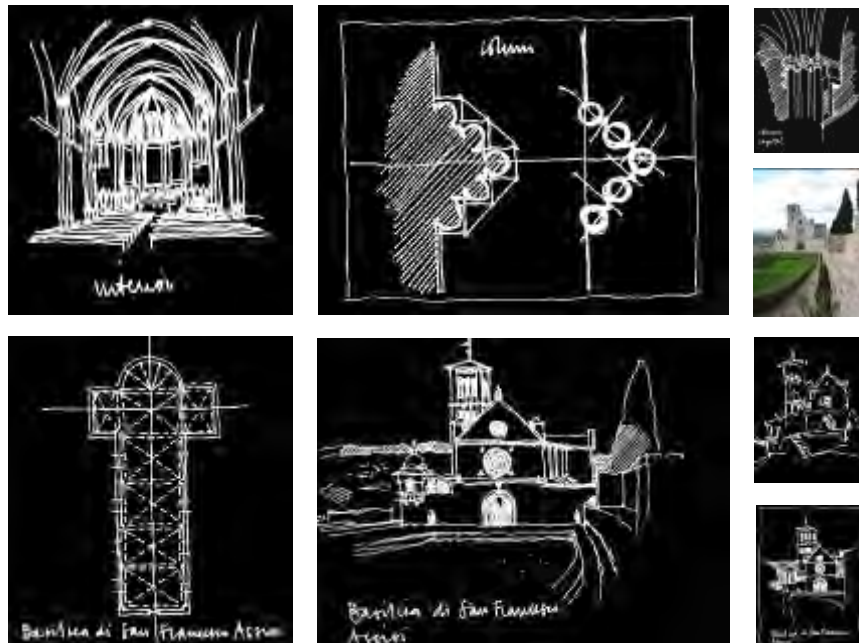


Basilica di San Francesco, Assisi

RENAISSANCE

Set within the medieval hill town, the Basilica is in fact two churches dedicated to St Francis. The churches and the site comprise one of the greatest monuments to C13th and C14th Italian art.

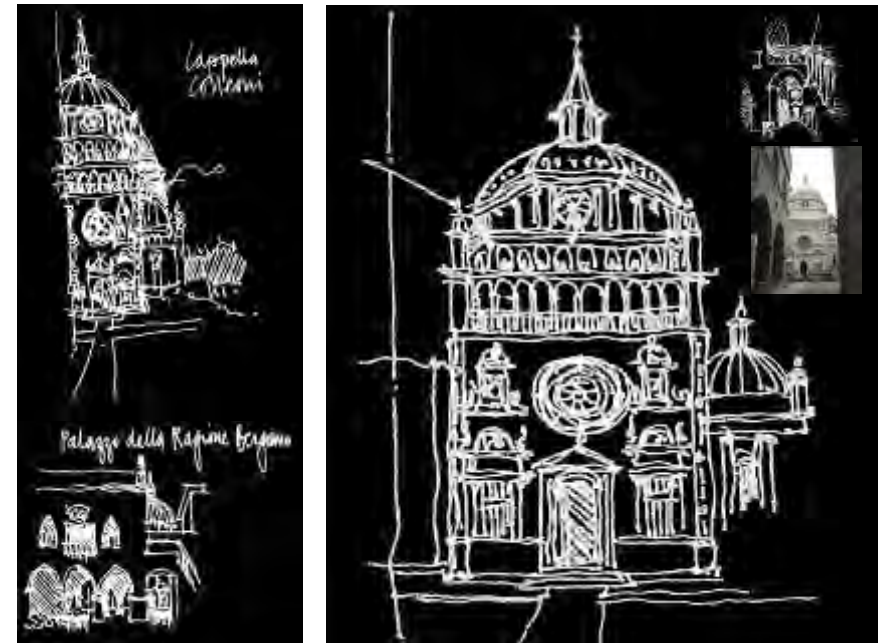
The lower church, the "inferior", is Romanesque and of a lower scaled, more subdued design. The upper, or "superior", church was consecrated in 1253 and consists of a single nave with low wide proportions and no side aisles. Assisting the structural thrust are external lateral buttresses. The interior of the upper and lower churches are notably decorated with frescoes by Giotto, Pietro Cavallini, Simone Martini and Pietro Lorenzetti.



Cappella Colleoni, Bergamo

RENAISSANCE

Designed by Giovanni Antonio Amadeo, a collaborator of Bramante's, in the 1470s. The building features a high octagonal drum with dome and lantern. This form sits atop a façade that is typical of more decorative treatment to that usually seen throughout northern Italy. The overall composition is a mixed style of classical principles used by Tuscan architects blended into the decorative, sculptural northern style.



Basilica di Sant' Andrea, Mantua

RENAISSANCE

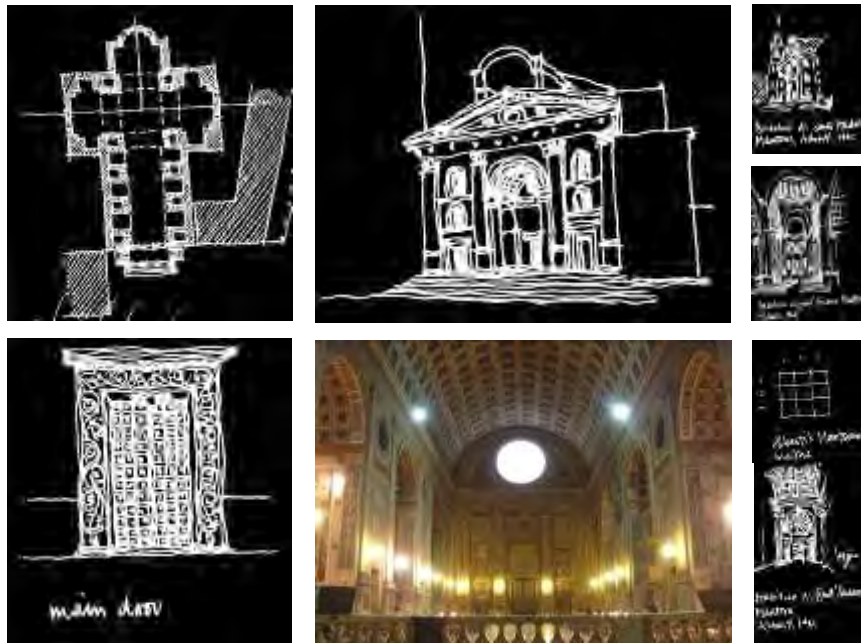
Designed by Alberti in 1472 and set upon the Piazza della Erbe.

The plan is a Latin cross format with no aisles but rather a series of alternating chapels and exedra, thus introducing a lateral series of axis in addition to the main nave longitudinal axis.

The nave features a barrel vaulted ceiling with painted coffers, all based on Roman prototypes.

The absence of aisles and the inclusion of chapels and exedra in the structural side walls are important as it pre-empted further work in wide span churches with lateral structural supports by following architects.

The façade is organised around a square geometry set into equal sub squares. The work above the pediment is not that of Alberti.



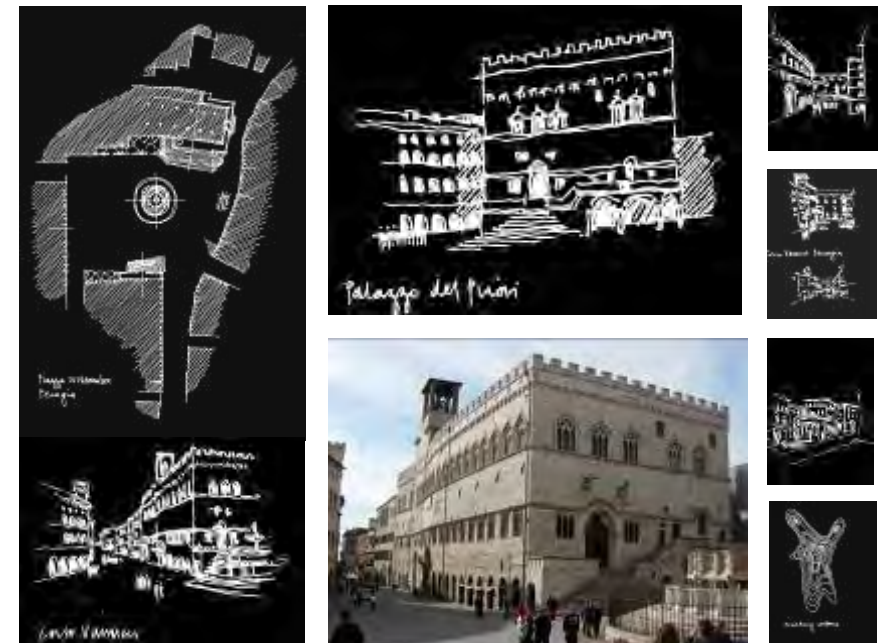
Hill town, Perugia

VARIOUS

One of the best preserved Italian hill towns, its tributary roads strike out along the topographic ridges towards other towns giving a tentacled format that naturally aid in the original defensive intention. Originally established by the Etruscans in the C3rd BC with the original name of Perusia, the town is primarily aligned along the Corso Vanucci. This in turn leads to Piazza IV Novembre within which is the central Fontana Maggiore, by Nicola and Giovanni Pisano, an exemplar of fountain design as public urban monument.

In 1342, the town commune prohibited the destruction of any towers citing them for their Grandissima Belleza (very great beauty).

The piazza is flanked by the C14th cathedral and, notably, the C13th Palazzo dei Priori featuring the vaulted Sala dei Notari on the piano nobile.



Umbria

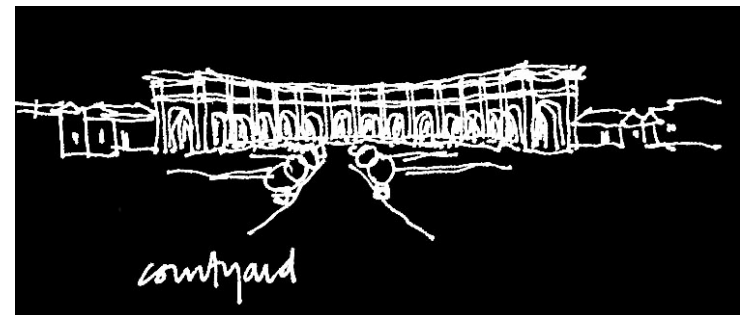
Umbria is representative of thousands of years of culture and history. Dominated by the mountains of the Apennine, the region was inhabited by Etruscans and Romans and then various Popes, who conquered town councils across the region that grew out of the Middle Ages. Similar to Tuscany, it is world famous for its unique landscapes and cuisines.

Palazzo del Te, Mantua

MANNERIST

Designed and built by Giulio Romano, it was designed in the C16th for Frederick II Gonzaga as a summer palace and retreat away from the Palazzo Ducal in Mantua. Its façade composition is assembled for the benefit of the cognoscenti. Many, if not all, of the rules of classic proportion and rhythm are broken or attuned using the tools of bay sizes and arrangements, windows, pediments and cornices.

Its central focus is the Camera dei Giganti large scaled room where the focus on the Mannerist style includes the emphasis on ornament as well as variety and irregularity. The artworks within this room knowingly intend to blur the delineation between ceilings and walls, creating otherworldly effects. The work is considered one of the highlights of the High Mannerist design style.



Chiesa San Sebastian, Mantua

RENAISSANCE

Designed by Alberti in 1460 and located along the ceremonial route between the Palazzo del Te and the Palazzo Ducale. It is based on a Greek cross plan format and would stand to represent most of Alberti's theoretical treatise on architecture. The current church has been executed without Alberti's intended full width flight of entrance steps. Alberti regarded the centrally organised Greek cross planning format as close to perfect and thus reflecting the perfection of God of Church.



Hilltown urban, Urbino

RENAISSANCE

During the C15th regarded as one of the most prestigious courts in Europe and birthplace to Bramante and Raphael. Scholars have shown how, during the C15th, the skyline was reoriented from the original town and cathedral image (east view) to that of a south view, depicting the ducal palace and its towered frontispiece. This shift is a clear representation of the changing social construct using architecture as a powerful means of civic expression. Key sites include the;

- Palazzo Ducale – completed in 1482 dominates the height and topography of Urbino. It features a three storey loggia, the Facciata dei Torricini, in the form of a triumphal arch flanked by circular towers all designed by Luciano Laurana and sanctioned under the ruler Federico da Montefeltro.
- Piazza Duca Federico – the original non secular focus of the city including the Basilica Metropolitana; and the
- Piazza della Repubblica – the focus of the people.



Marches

Marches is a primarily mountainous region between the Apennines and eastwards towards the Adriatic Sea. The topography gives rise to many hill towns, originally fortified strongholds, now becoming iconic tourist destinations.

Urban grid, Sabbioneta

MANNERIST

Sabbioneta was laid out in the 1550's by Domenico Giunti under the patronage of Vespasiano Gonzaga Colonna, as a utopian town made to man's measure – "misura duomo". The town featured surrounding fortification walls, a rocca, two gates to the east and west and is laid out within an eccentric mannerist street grid.

Within the star shaped exterior walls, the urban grids appear to separate several functional spheres within the town, the private ducal realm, the public ducal realm, the area of habitation and production and the centre of the town where all three meet and coexist.



Veneto

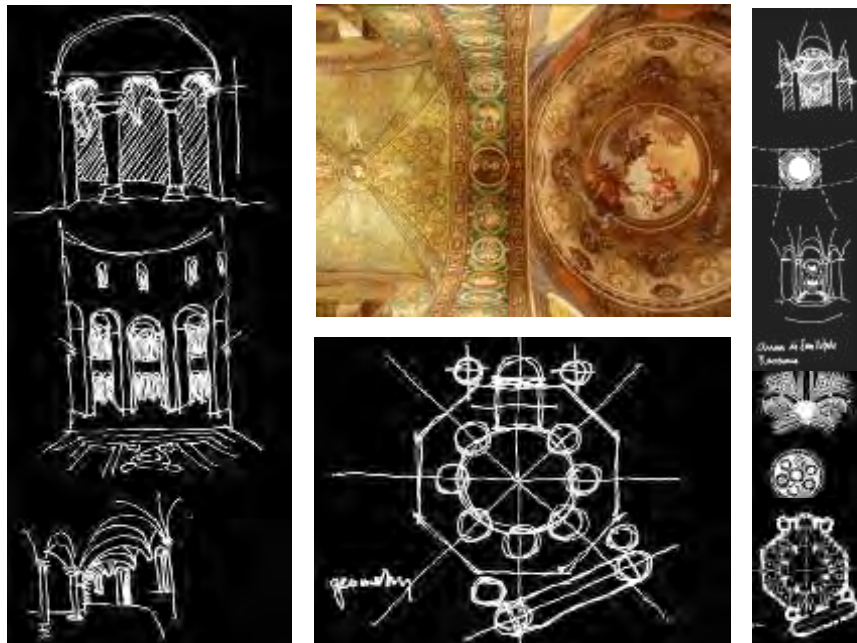
The Veneto is a region largely focussed on the unique city of Venice, though it is also known for the history of Verona, the architecture of Palladio in Vicenza, the Dolomites to the north and for its rice and corn based polenta cuisine.

Basilica di San Vitale, Ravenna

BYZANTINE

The octagonal basilica was built in the 6th by the Byzantine ruler Justinian.

The sombre exterior masonry façade hides an interior filled with carved capitals and dazzling geometric floor mosaics. The double octagonal plan is rooted in mathematical construct and is divided using circular geometry to resolve the spherical dome. Its eastern inspired arrangements of solids and voids, dark and light, was unique for an Italian building of its era and took its inspiration from Old Testament scenes.



Piazza delle Erbe, Verona

ROMANESQUE

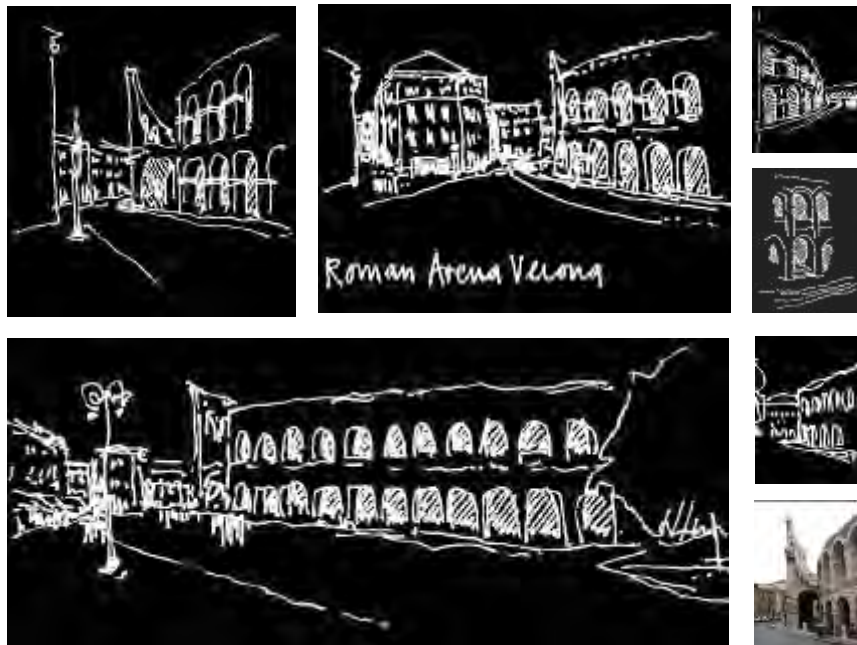
Originally the site of a Roman forum and connected by primary road to the Roman Arena. The piazza is lined with some of Verona's key buildings including the 14th Palazzo Mafei, the adjoining Torre del Gardello, the Casa Mazzanti, with its frescoed façade, and the Arco della Costa.



Roman Arena, Verona

ROMAN

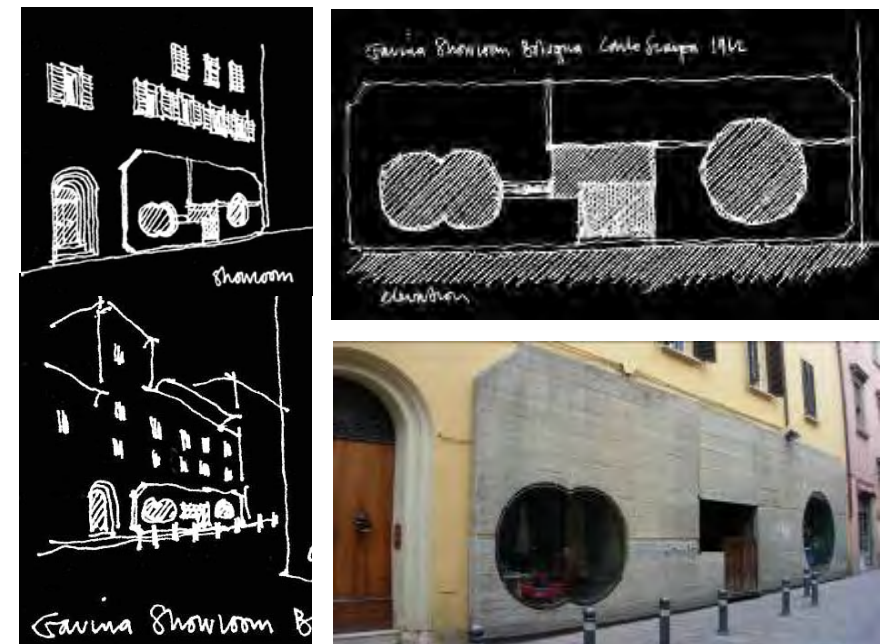
Constructed out of Veronese pink marble, the arena was built in the 1st century A.D. Most of the outer wall has been destroyed though the amphitheatre is one of the largest surviving from Roman times and can hold 20,000 people.



Gavina Showroom, Bologna

MODERN

This furniture showroom was designed by Carlo Scarpa in 1962 in Via Altabella within the central historic district of Bologna. The single storey façade sets out an abstract synthesis with the existing multistorey palazzo façades. The use of exposed concrete sets out a street based materiality heightening the focused composition of circular showroom windows.



Le Due Torre, Bologna

ROMANESQUE

The two slender towers are within the Piazza di Porta Ravegnana. At 97m and 48m, the Torre degli Asinelli and Torre Garisenda were respectively representative of their families' fortunes.

This expression of wealth and power of mercantile medieval families was quite common throughout Emilia Romagna and Tuscany.



Why Italy?

Italy is arguably the most geographically compact crucible of western architecture available. Etruscan, Roman, Byzantine, Romanesque, Gothic, Renaissance, Mannerist, Baroque, Neoclassicism, Fascist, Modernist and contemporary architecture are all represented, sometimes iconically, within Italy.

Greek and Etruscan

The Greek and Etruscan period began in the 6th BC and encompasses the earliest existent structures in Italy. These built forms characterise the qualities of classic Greek architecture with strong and simple outlines, rigorous adherence to the principles of proportion, a total unity of horizontal and vertical elements and the extensive use of decoration to emphasise structure.

The architecture of this period was constructed primarily out of marble and was designed to the three orders of Ionic, Doric and Corinthian. All comprised an upright column upon a base, topped by a capital and an entablature of architrave, cornice and decorative frieze.

This Greek and Etruscan period encompassed a variety of building types including temples, open air theatres, [often set against hillsides in dramatic locations] city walls, gateways and tombs.

- temples Paestum, Campania; Agrigento, Selinunte, Segesta and Syracuse, Sicily
- open air theatres Syracuse and Taormina, Sicily
Volterra, Tuscany
- city walls / gateways Volterra, Tuscany
Lucca, Tuscany
Perugia, Umbria
- tombs Cerveteri and Tarquini, Lazio

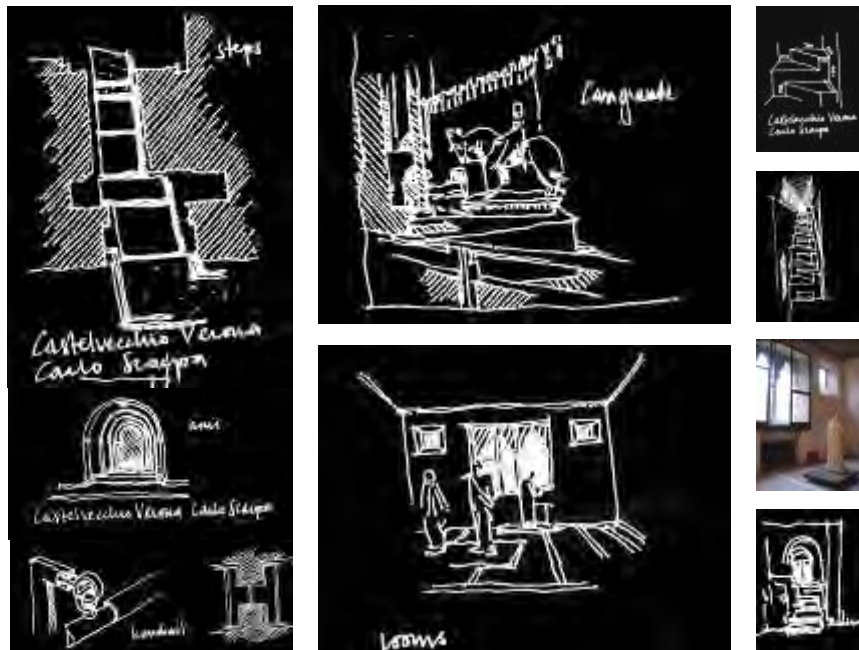
Roman

The Roman era was a period of development and adaptation from the Greek and Etruscan ages. This period of greatest development and ingenuity may be contained between the 3rd Century BC and the 3rd Century. As with most art forms, a preference was developed for order and function over beauty and

Castelveccchio, Verona

MODERN

Located on the banks of the Adige River is the C14th fortress of Cangrande, Castelvecchio. Whilst damaged by World War II bombing the building complex was refurbished in the 1970s by Carlo Scarpa into its current use as a museum. The refurbishment is renowned for its adaptive reuse of, and sympathy towards, the original building whilst developing its own Modern aesthetic and tactile resonance.



Piazza Maggiore e Nettuno, Bologna

RENAISSANCE / GOTHIC

This square hosts the city's seminal secular and non secular built forms;

- Basilica di San Petronio – designed in the Gothic late C14th by Antonio di Vincenzo and one of the largest basilica in the world. On the floor, near the central doorway, is a 1655 meridian line indicating the time when the sun beams through a small hole in the ceiling. The central doorway was designed by Jacopo della Quercia in 1425 featuring Madonna and Child.
- C13th Palazzo Re Enzo – featuring an inner courtyard and main staircase
- Fontana della Nettuno – created in 1566 by the Flemish sculptor Giambologna, featuring the four cherubs of the winds. The four sirens symbolise the four known continents of the time;
- Palazzo Comunale – comprising two buildings C13th and C15th, with a frescoed ceremonial hall and central staircase attributed to Bramante; and
- Palazzo del Podestà featuring the Renaissance façade and colonnade facing the piazza.

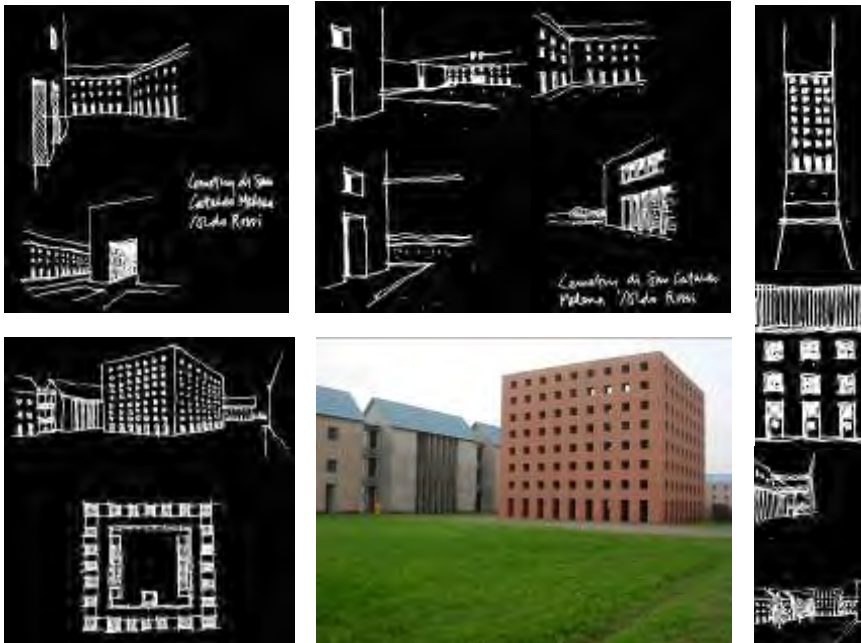


Cemeterio di San Cataldo, Modena

POST MODERN

Designed by Aldo Rossi between 1971 and 1983 this complex is located in Via San Cataldo on the outskirts of Modena.

This sombre assemblage of geometric buildings, mainly crypts, is Rossi's analogous expression of the crossing into a collective "case dei morti" or house of death. It stands as a monumental design, a destination and focus for the community.



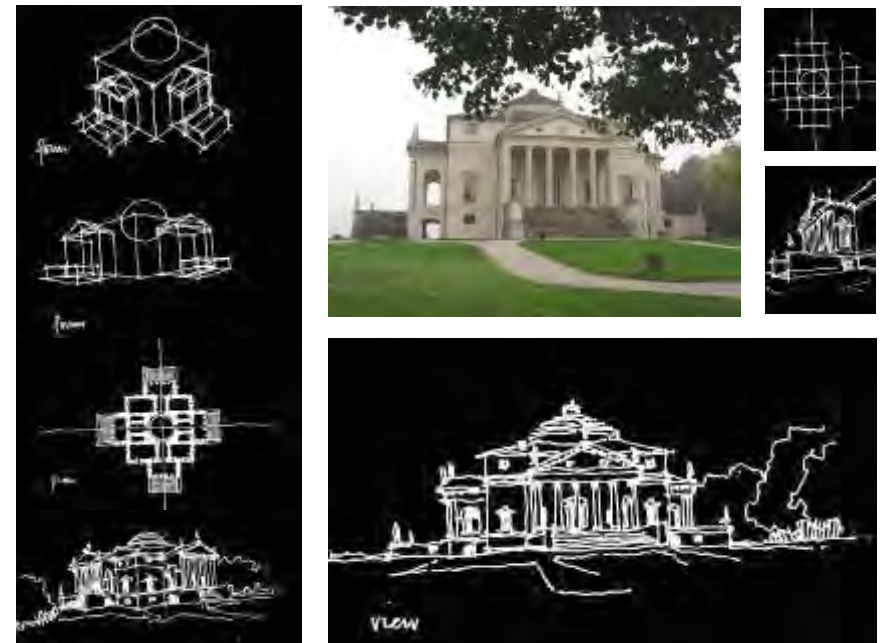
Villa Capra Rotunda, Vicenza

RENAISSANCE

The centrally planned structure, with the square outer walls symbolizing the physical world and the circular interior representing the idea of divine perfection and mathematical harmony, was designed by Palladio between 1566-1570.

It is unique amongst Palladio's villas in that it is not designed as the main building of a farm but as a pavilion for entertaining and enjoyment of the landscape.

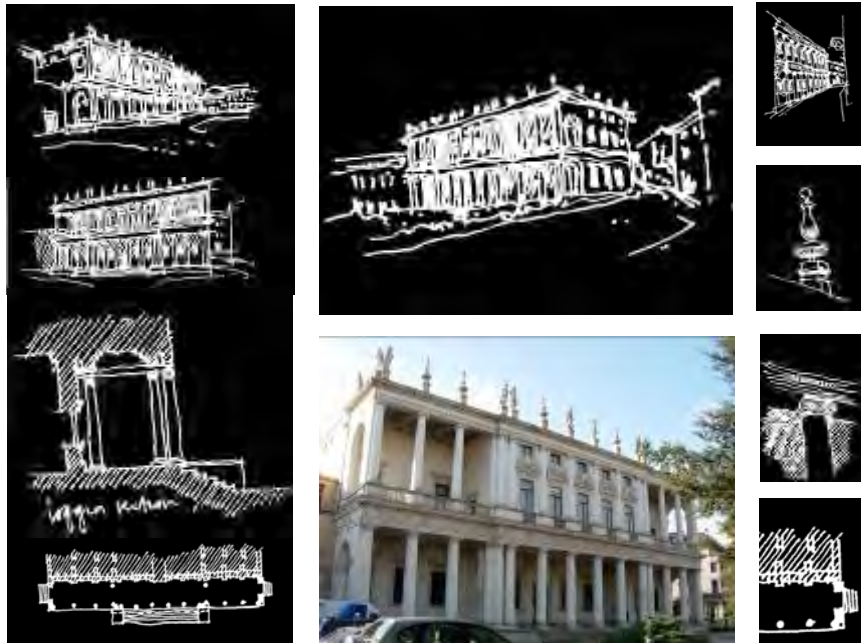
Palladio conceived the building in a formal sense encompassing symmetry and balance within the three dimensional composition.



Palazzo Chiericati, Vicenza

RENAISSANCE

Located on Piazza Matteotti and designed by Palladio in the 1550s. This project reflects upon the classical design elements of Doric and Ionic columns and mathematical proportioning systems. The Palazzo was intended to be part of a forum, an unrealised series of loggia that would encircle Piazza Matteotti. As such, and coupled with the narrow depth of the site, the focus of space and proportion is very much towards the ground floor loggia rather than the palazzo's interior room proportions.

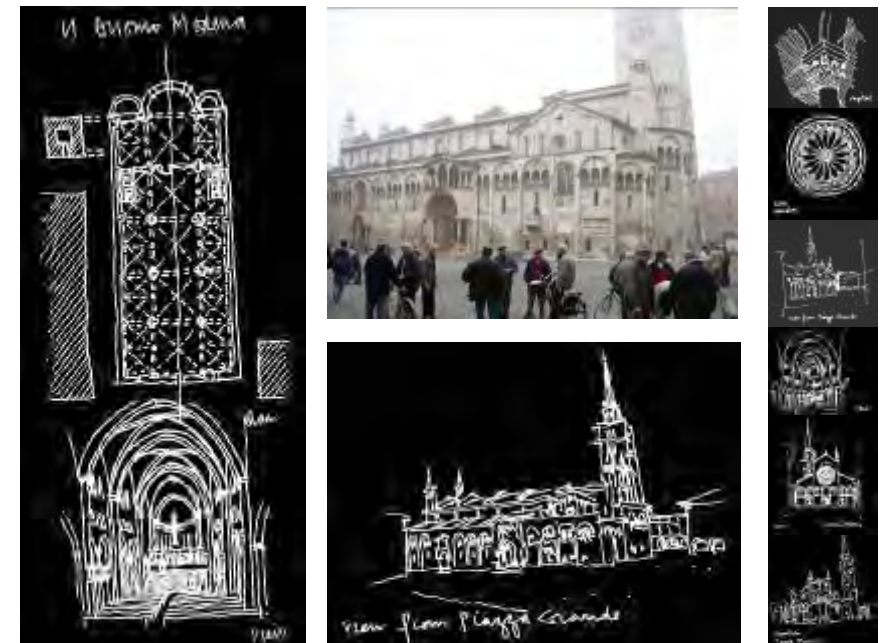


Il Duomo, Modena

ROMANESQUE

This World Heritage listed church was built in the 12th century and is one of Italy's finest Romanesque buildings. It was designed by Lanfranco and is situated upon Piazza Grande. The planning composition features a dominant nave with supporting side aisles.

Its most striking feature is its west façade, just off the Piazza Grande, whose portal is supported by two majestic lions and fringed with decorative relief. The entrance façade is further decorated with sculptural and bas relief depicting scenes from Genesis by Wiligemo.



Emilia Romagna

Emilia Romagna's riches are focused within the late Romanesque and Renaissance periods, and especially that of the powerful mercantile families of the Farnese, Este and Bentivoglio.

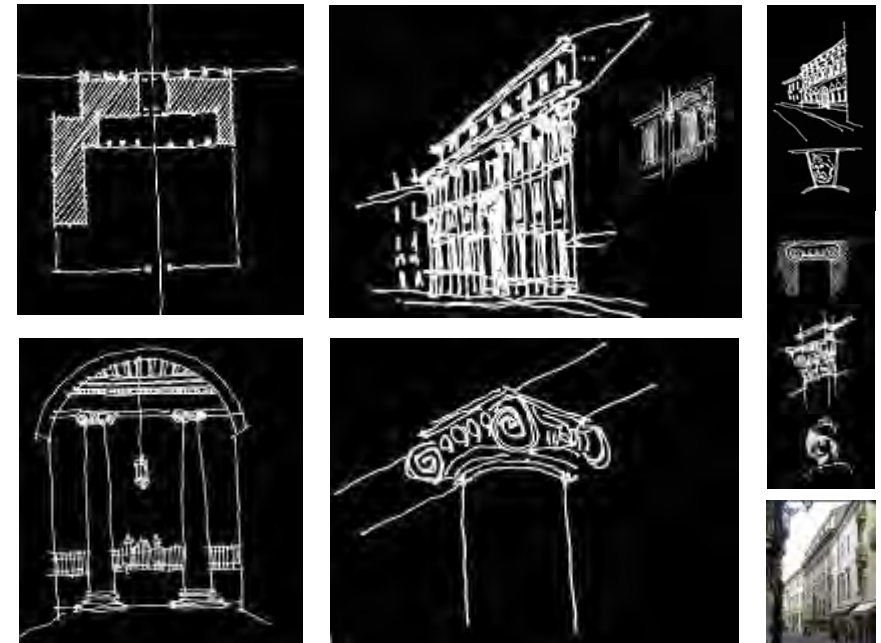
The region is focused on Bologna, the 'red' medieval university town famous for its colonnades and cuisine. Additionally Ravenna, with its Byzantine connections and history best shown in the rich non secular mosaics, and Modena with its World Heritage listed Romanesque Duomo are highlights of the region.

The Po Valley, running through the region, ensures that fresh produce is a key ingredient to daily life.

Palazzo Valmarana, Vicenza

RENAISSANCE

Located on Corso Antonio Fogazzaro and designed by Palladio in 1566, the building is considered one of his more eccentric creations. The work features a curious mannerist departure of a window within the end bay composed as a pediment with a statue rather than with rectangular windows as elsewhere in the piano nobile. The façade also used the Giant Order of column structure, borrowing from Michelangelo's lead in the Roman Capitol. The interior courtyard features a single sided loggia.

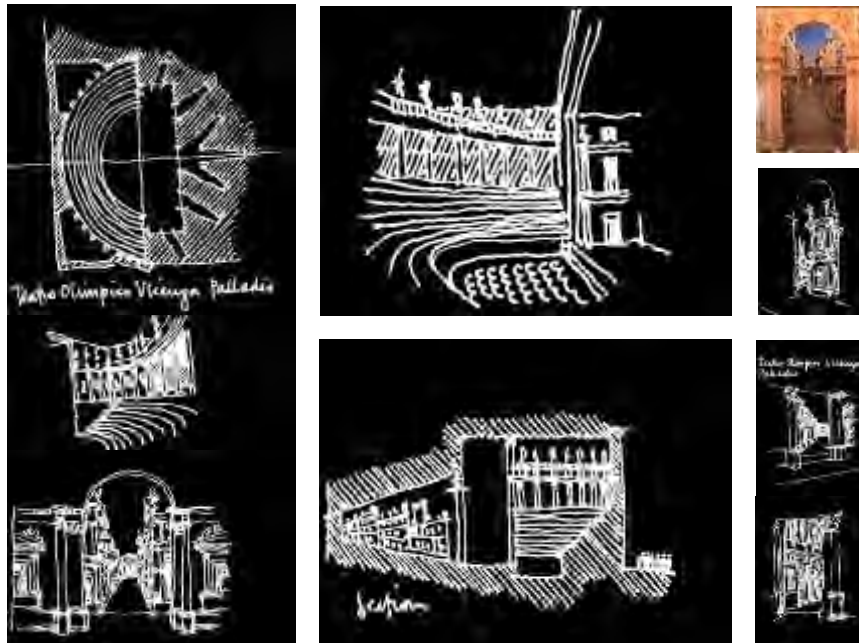


Teatro Olimpico, Vicenza

RENAISSANCE

Located on the Corso Andrea Palladio, and considered one of the finest creations of Renaissance architecture, the building was designed by Palladio in 1584 and built by Scamozzi. The design is based on the Roman principles of building three dimensional versions of streets and architectural backdrops internally and permanently into the scaena.

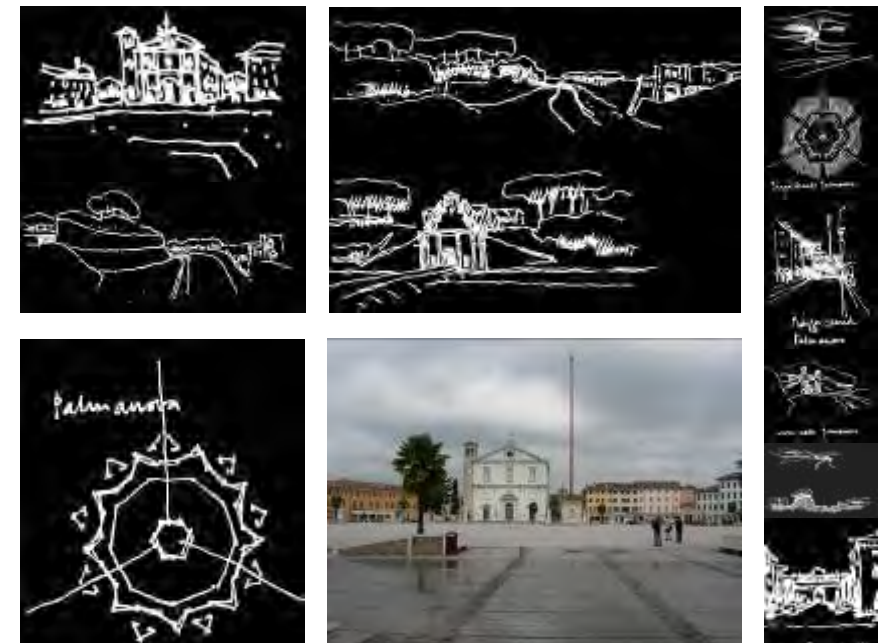
The art of perspective takes over and unifies the street sides with theatrical and architectural devices. Building façades, statuary, the upward sloping of the backstage floor, the overt narrowing of the streets and the ability to add multiple theme lighting techniques, all accentuate the sense of perspective and "exterior reality" of the space.



Urban Plan, Palmanova

RENAISSANCE

Palmanova was built by the Venetians in 1593 as a fortress in the form of a nine pointed star. The town is centred on the large scaled hexagonal, gravel paved Piazza Grande. From here six roads radiate to the town's perimeter walls. The three primary walls lead to access portals. At each portal is a complex system to guard the town featuring outer walls, ramparts, moats and strategic defensive positions beyond the portal itself.



Roman Town, Aquileia

ROMAN

Once the fourth city of the Roman Empire, Aquileia was founded in 181BC as a trading link at the head of the Adriatic Sea.

The remains of the Roman settlement include houses, markets and the forum on Via Giulia Augusta. A complete port and dock system, with storehouses adjacent, is to be found along the former primary river that fed into the Adriatic.

Within the current basilica, rare and intact floor mosaics have been found from both the C1st and C4th previous constructions.



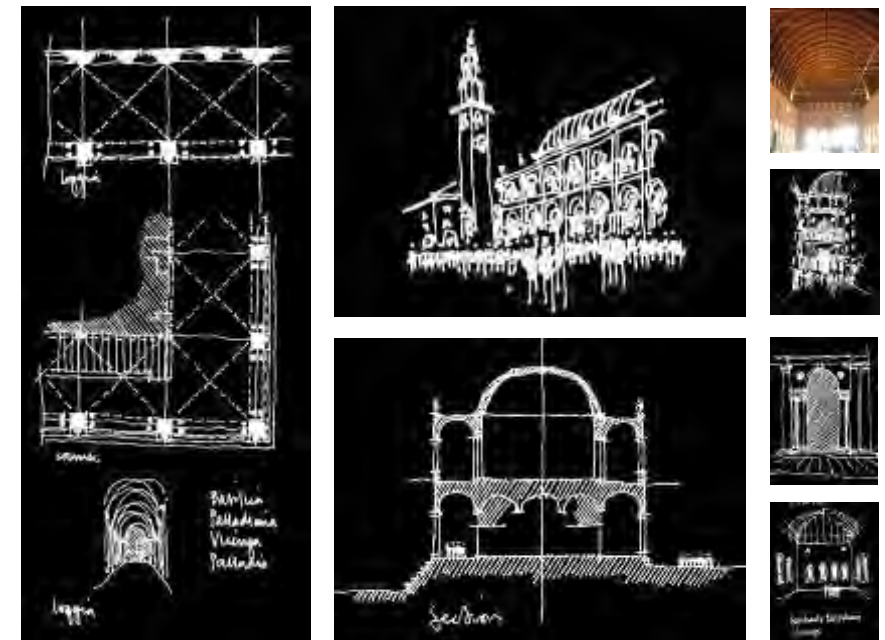
Basilica Palladiana, Vicenza

RENAISSANCE

Located on Piazza dei Signori, the design was commenced by Palladio in 1549 and works around the earlier Basilica structure.

Palladio's design of an encircling double storeyed loggia provided structural stability to both the existing Basilica and a public colonnade addressing Piazza dei Signori.

The loggia façade design is based on the classics with a Doric base and Ionic upper storey. Within each bay are the arches and supporting columns that serve to lighten the overall effect of the façade and ensuing building mass.



Palazzo Porto Breganze, Vicenza

RENAISSANCE

Located within central Vicenza on Piazza Castello and designed by Palladio in 1571. It was built by Scamozzi and is also known as the Casa del Diaro. This is a later palace within Palladio's career and again features the Giant Order popularised by Michelangelo. The façade also carries a number of richly decorated Mannerist design features.

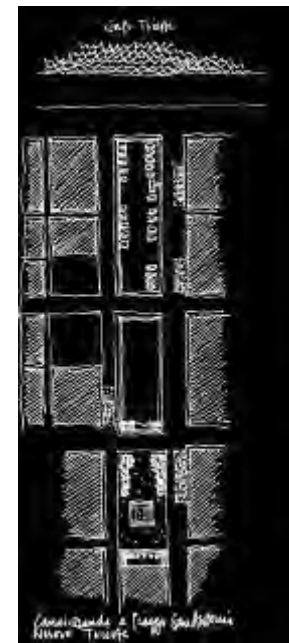


Canal Grande / Piazza San Antonio Nuovo, Trieste

NEOCLASSIC

Canal Grande and the adjacent Piazza San Antonio Nuovo were designed by Austrian urban planners in the C18th at the behest of Empress Maria Theresa.

The long canal runs east to west focused on the Neoclassical Chiesa di Sant' Antonio Taumaturgo and empties into the Gulf of Trieste. Along its boat filled waterway and facing Piazza San Antonio Nuovo is the Serbian Orthodox Chiesa di Santa Spiridione.

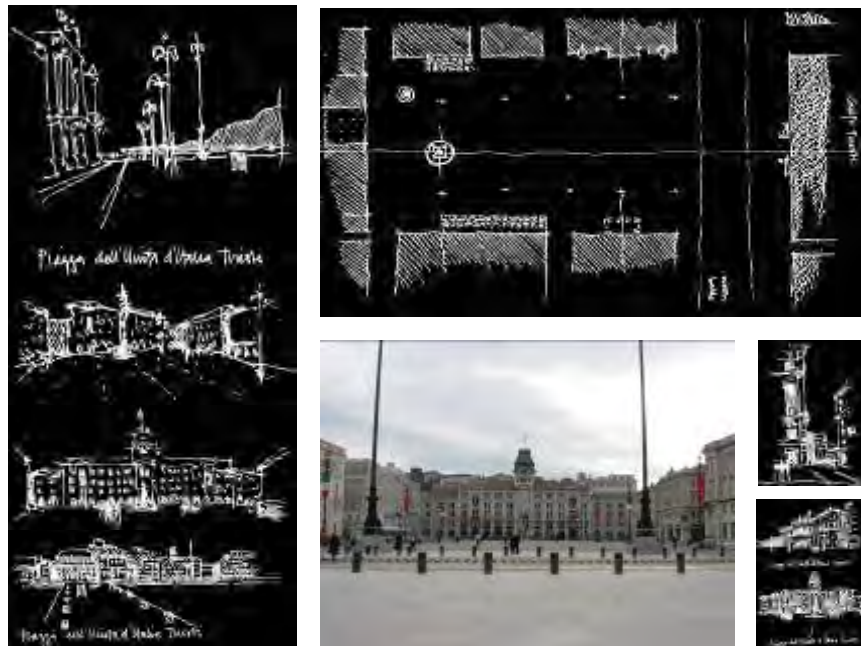


Piazza dell'Unità d'Italia, Trieste

NEOCLASSIC

This piazza was designed by Austrian town planners in the C18th at the behest of Empress Maria Theresa. The elegantly scaled piazza is flanked by the Governor's residence and features numerous ceremonial fountains and sculptures.

This piazza and city proper is overlooked by the C15th castle and environs, including the Cattedrale di San Giusto, completed in 1400 blending northern Adriatic and Byzantine styles. The castle site dates back to Roman times as a fortification post.

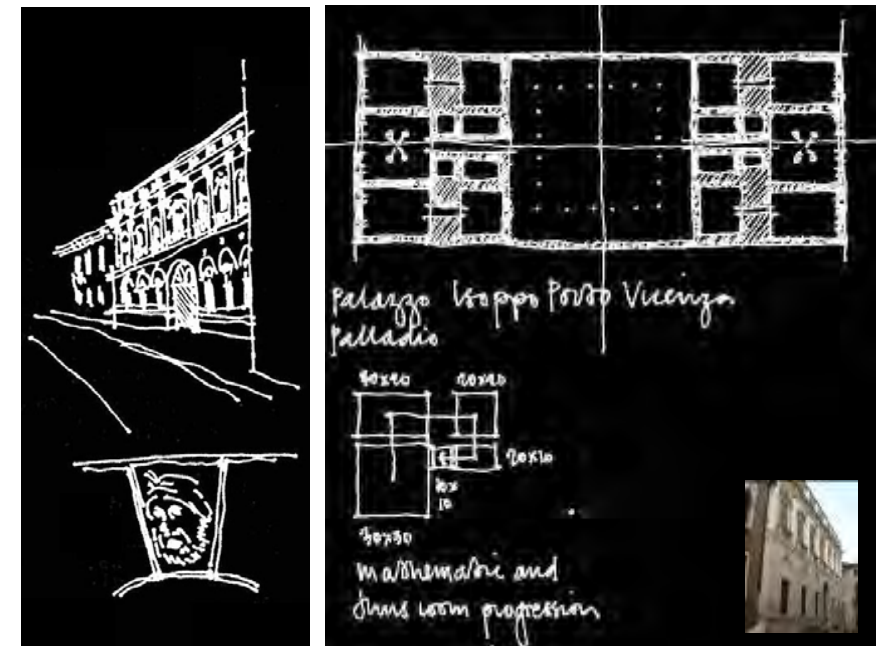


Palazzo Isoppo da Porto, Vicenza

RENAISSANCE

Located on Contra Porti and designed by Palladio in 1552. This is one of his earliest works in Vicenza. The plan is focused on a reconstruction of an ancient house. Symmetrically disposed blocks on either side of a central courtyard, framed with Giant Order columns, form a classic atrium.

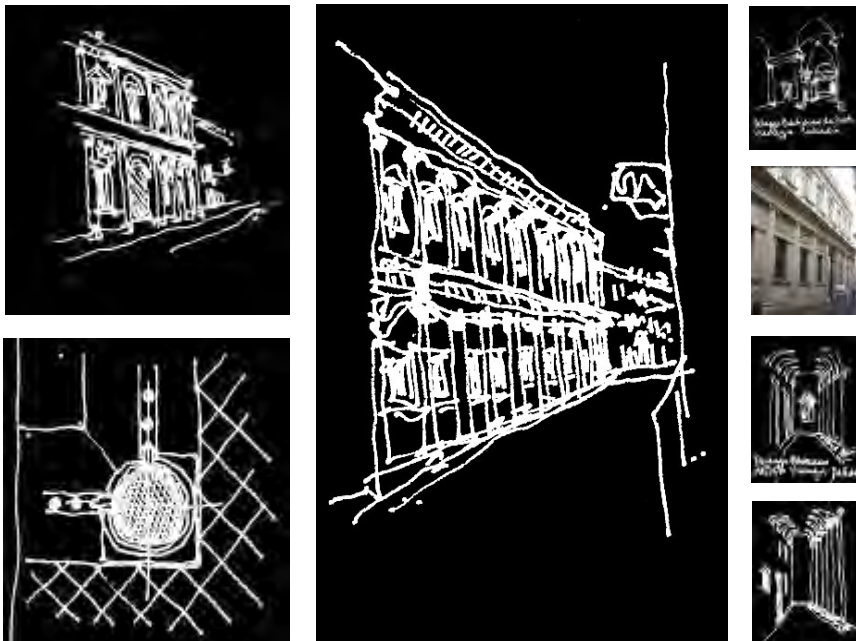
The sequence of rooms is organised around symmetrical balance. Visitors move from the 30'x30' central hall to the 30'x20' room, leading to a 20'x20' room and mathematically reduced so on. The façade features a number of mannerist sculptural design elements.



Palazzo Barbaran da Porto, Vicenza

RENAISSANCE

This richly decorated building, with its double row of columns, Doric on the base and Ionic above, is World Heritage listed. Located on Corso Andrea Palladio, it was designed by Palladio in the 1540s. The building features a columned entrance loggia and a central court surrounded by a loggia and a grand staircase. The building now operates as the Palladian Museum and library.



Piazza della Liberta, Udine

RENAISSANCE / GOTHIC

Set within the refined city of Udine, the piazza houses the city's finest built forms.

The Palazzo del Comune (a homage to the Palazzo Ducal in Venice), also known as the Loggio del Lionello, was designed by local goldsmith Nicolo Lionello in 1448. It features alternating pink and white horizontal stone banding and fenestration details in the Gothic style.

Opposite is the Renaissance Loggia di San Giovanni designed by Bernadino da Morcote. The piazza is fed by the Via Mercatovecchio (the old market street).

Other elements within the piazza are the fountain designed by Giovanni Carrara in 1542, the columns with the Venetian Lion and the Statue of Justice (1614), the statues of Hercules and Cacus and the Statue of Peace (1819).



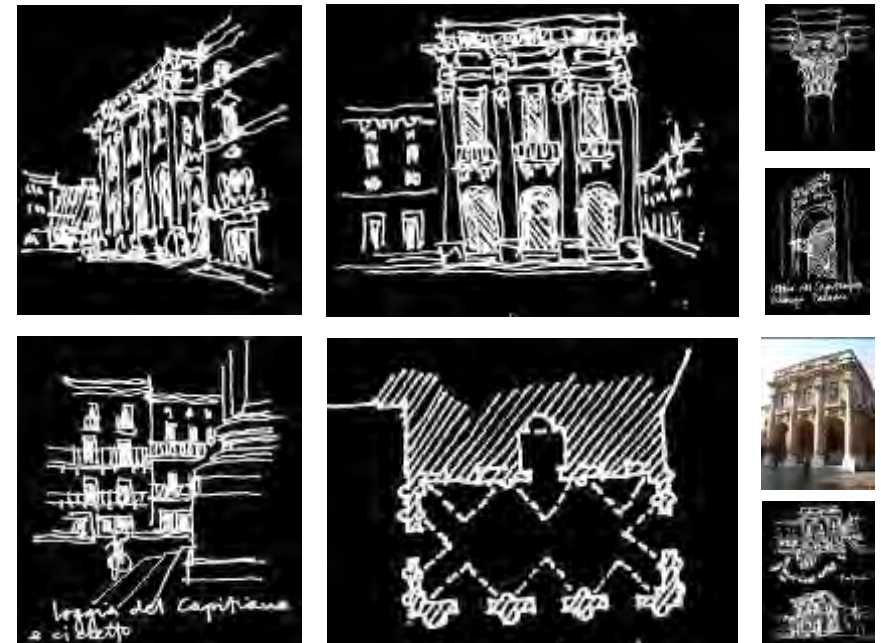
Friuli-Venezia Giulia

This low lying region is edged by the Alps and Austria to the north, the Veneto to the west, Slovenia and the Adriatic Sea to the south. As such, it has a diverse history and set of influences. Largely unexplored by tourists, compared to the remainder of Italy, it is dominated by the cities of Udine and Trieste.

Loggia dei Capitano, Vicenza

RENAISSANCE

Located on the Piazza dei Signori and designed by Palladio in the 1550s. It was the last project he worked on at the time of his death and, as such, it has been retained in its partially unfinished state. The façade features three bays framed by a Giant Order of columns, reduced in scale by the smaller interior arches. Again, the design uses themes from the classics in its overall composition.



Tomb Brion, Treviso

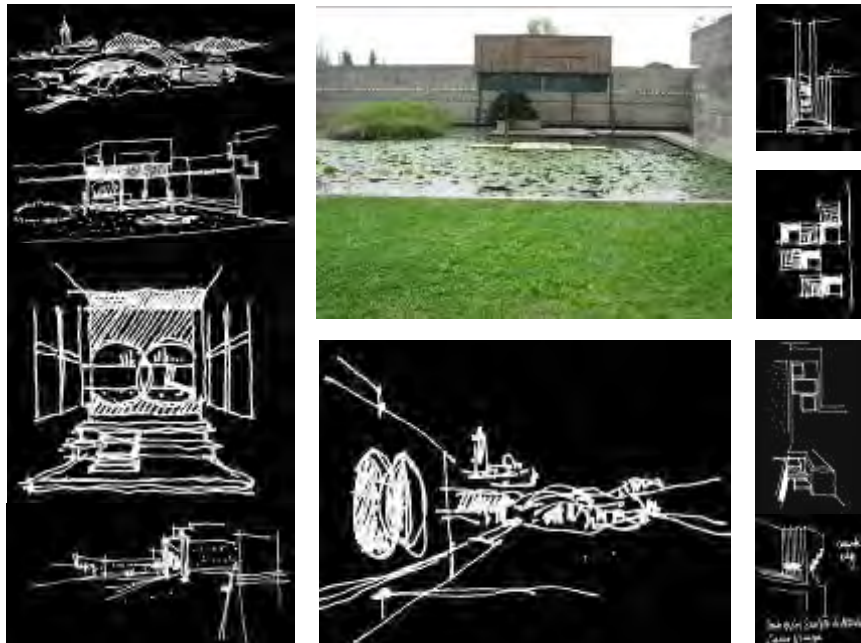
MODERN

This seminal work was designed during the 1970's by the Italian modernist architect Carlo Scarpa to house the Brion family tomb.

The garden setting features the principal family tombs, separate extended family tombs, a small chapel and tranquil areas of observation and contemplation.

The design is rich in allegory and meaning, featuring the innovative use of exposed reinforced concrete, ceramic tiles and water elements. Scarpa's use of concrete explores its planar attributes and inherent qualities of depth in an abstraction of medieval architectural forms and detailing.

Carlo Scarpa's tomb is also located within a secluded part of the garden with a tombstone designed by his son, the architect Tobia Scarpa.



Il Santo, Padua

ROMANESQUE / GOTHIC

The basilica di Sant' Antonio was completed in the C14th and features a mixture of architectural forms befitting an eastern influence.

The chapel's decorative relief sculptures are a sequence of 9 panels created in the C16th, depicting scenes in the life of St Anthony by Donatello.



Piazza San Marco, Venice

RENAISSANCE

Described by Napoleon as "Europe's finest drawing room". The square is surrounded by St Mark's Basilica, the Palazzo Ducale, Campanile, the Libreria, the Procurie Vecchio and the Procurie Nuovo and adjoins the Piazzetta della San Marco. Libreria, Procurie Nuovo and Procurie Vecchio surround the square by colonnades. The campanile was built in the C10th, though has been faithfully rebuilt after of 1902 collapse.

The Libreria was designed by Jacopo Sansorino in 1537 and meets the entire western edge of the Piazzetta San Marco. Palladio referred to it as "the richest and most ornate building that has been put up, perhaps since the time of the ancients".

The Procurie Nouve was also designed by Sansorino, though completed by Scamozzi, and faces the southern side of the Piazza. The Procurie Vecchio designed by Mauro Cadussi occupies the entire northern side of the piazza.

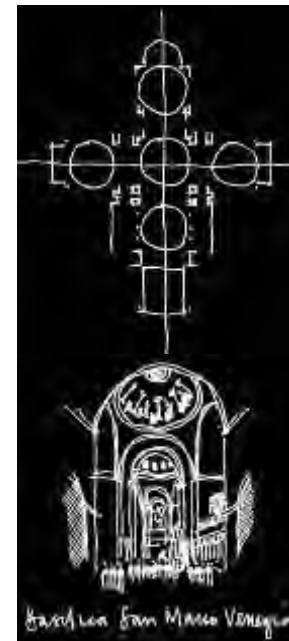


Basilica di San Marco, Venice

BYZANTINE

Whilst a blend of eras and styles are encompassed, the Byzantine is the dominant architecture of the Basilica. Most importantly, the Basilica is built on the plan of a Greek cross, with five domes, and was consecrated in 1094. Its position is the central focus of St Mark's Square, a symbol of Byzantia, Venice and Italy.

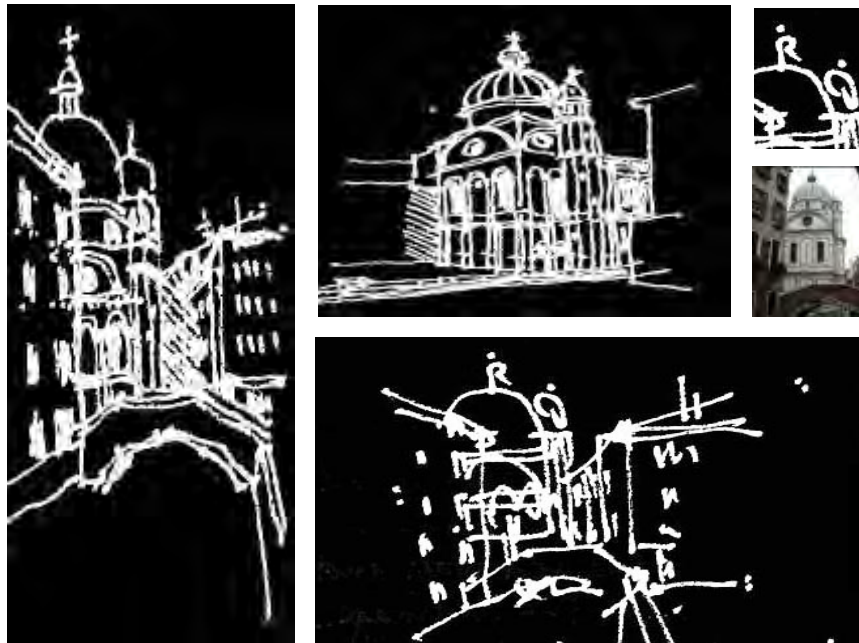
The arches above the doorways feature detailed mosaics accumulated by the various Doges during their travels. The Basilica's adjacent campanile dates back to the C10th. The Basilica's Byzantine style and Greek cross planning place it alongside Istanbul's Hagia Sophia as one of the seminal non-secular works of this era.



Chiesa Santa Maria de' Miracoli, Venice

RENAISSANCE

Santa Maria de' Miracoli was designed by Mauro Caducci for the Lombardi family in the latter part of the C15th. It is located in the San Marco region of Venice, north of St Mark's Square. It is noteworthy due to its influences taken from Basilica di San Marco, a common trend in the Veneto for some time after its completion.



Seaside village, Burano, Venice

VARIOUS

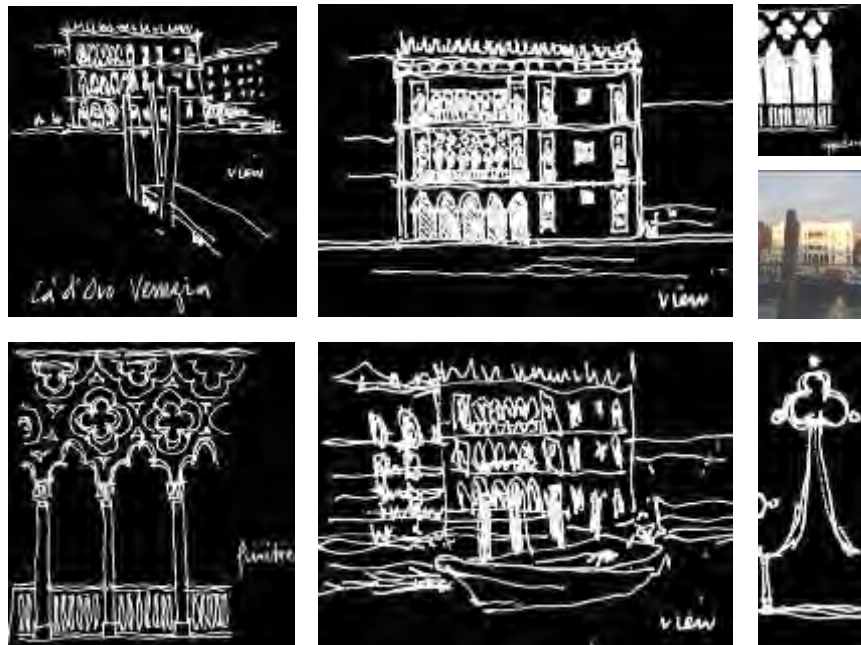
Though famous for its lace industry, the village was originally a fishing port. The built form attractions are streets lined with bright, pastel coloured houses. The variety of colours on the small scaled buildings, combined with the maritime elements, all set within the Venetian lagoon, makes Burano a unique built form experience.



Ca' d'Oro, Venice

GOTHIC

Located on the Grand Canal and seen as one of the exemplars of Venetian Gothic, along with the Palazzo Ducale. Designed between 1427 and 1436, the design features a double arcade of windows and openings atop a low level colonnade. This colonnade is partially within the Grand Canal. It is typical of Venetian palazzi in that it has a large opening at water level with stairs rising from the entrance to the piano nobile. The main room, or Grand Salone, is on the first floor, centrally located and lit by the bank of central windows or balcony openings.

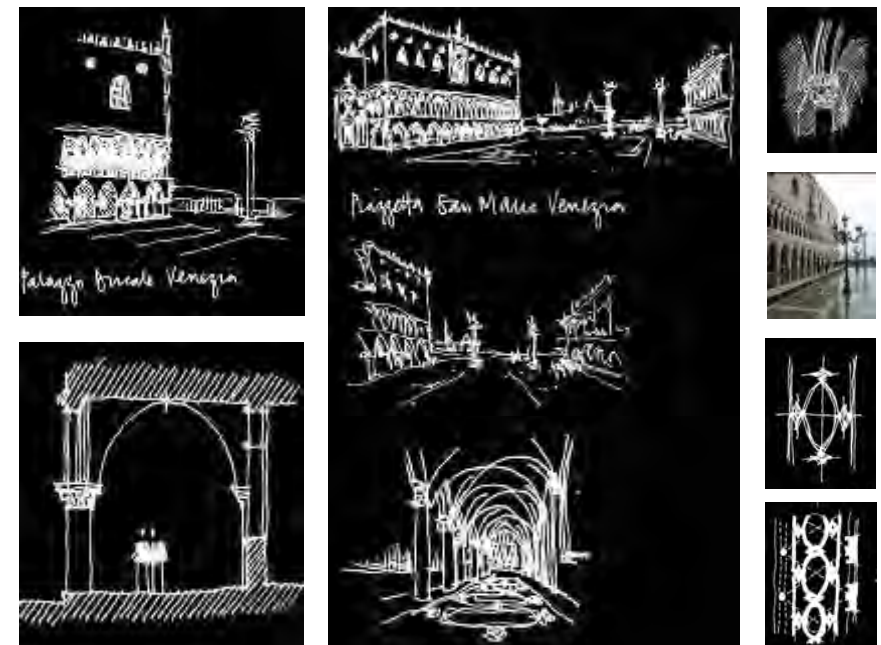


Palazzo Ducale, Venice

GOTHIC

Designed in the 1420s and 1430s, the Doges Palace is one of the key exemplars of Venetian Gothic architecture. The two primary façades face the Grand Canal and the Piazzetta di San Marco, comprising decorative white Istrian stone and pink Veronese marble.

The interior features the Scala dei Giganti, or Giant Stairs, designed by Antonio Rizzo. Further interior features include designs by Palladio and frescoes by Tintoretto.

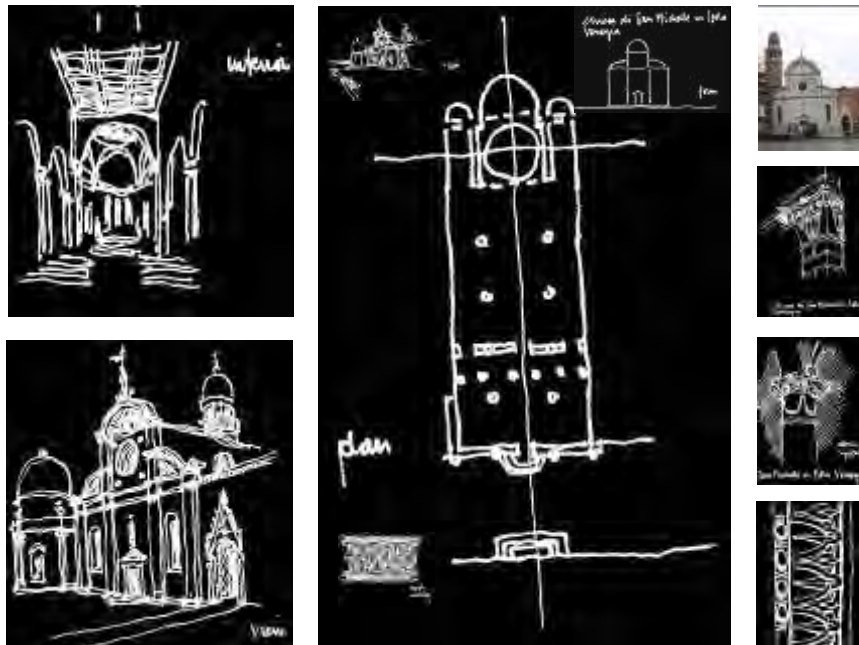


Chiesa di San Michele in Isola, Venice

RENAISSANCE

Located on the Isola di San Michele and designed by Mauro Codussi, between 1469 and 1479. The building features a restrained façade design compared to some of Codussi's other concurrent Venetian projects of the era. This is reflective of its sombre location as the primary place of worship within a cemetery, thus being a mortuary rather than parish church.

The façade composition borrows from Alberti and the classics in its mathematically derived elevation and material simplicity. It also alludes to sea based allegory within the detailing, again reflective of its location.



Ponte di Rialto, Venice

RENAISSANCE

This area surrounding this bridge was one of the earliest settled in Venice and the current crossing was considered one of the highest, and therefore safest, land areas on the canal to establish a permanent trading area.

The area has been a market for 1,000 years and the bridge was designed by Antonio da Ponte and completed in 1592. Ponte won a design competition to complete the commission.

The bridge features the unique central corridor with stepped shops along either side of the walkbridge.

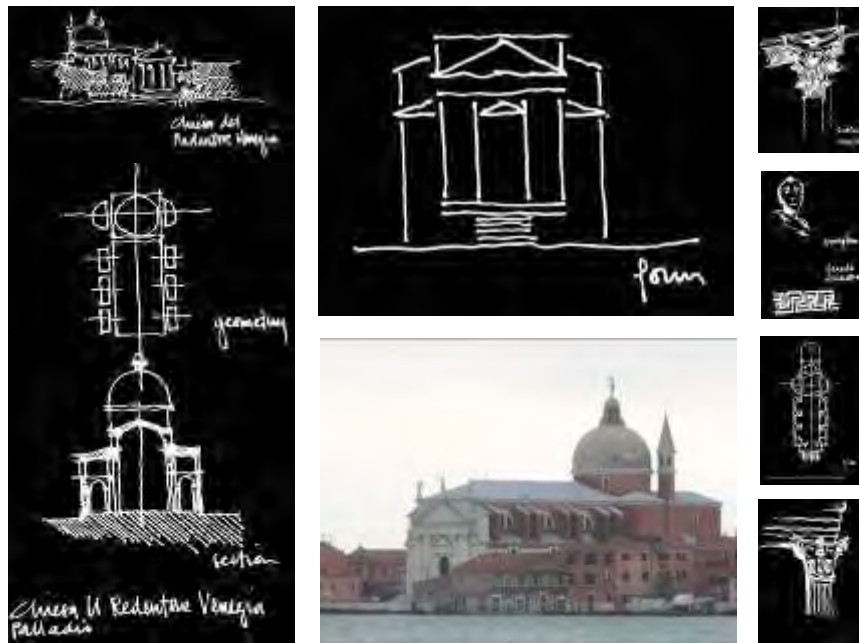


Chiesa del il Redentore, Venice

RENAISSANCE

Located on the island of Guidecca and designed by Palladio in 1577. This is noted as a late work in Palladio's career and, as such, reflects a maturity in his ideals.

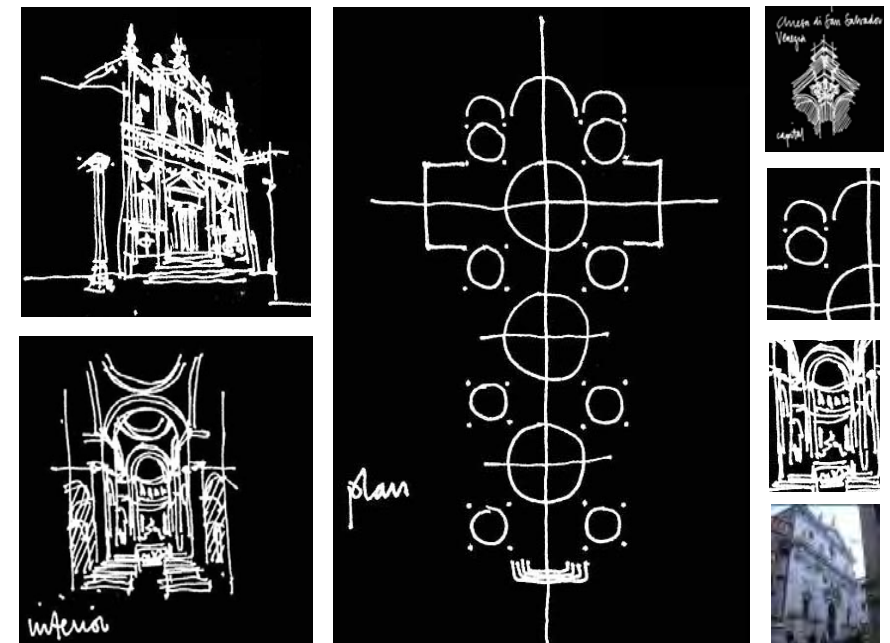
Similar to Chiesa di San Giorgio Maggiore, this church is intended to be seen from across the canal and was approached in a processional manner. Also similar to the San Giorgio is the resolution of the basilican façade into two forms expressing the interior planning. Again similar to San Giorgio, the interior features an open screen between the nave and the choir though in this case more geometrically complex. The monochromatic interior allows a variety of light effects upon the forms.



Chiesa S. Salvatore, Venice

RENAISSANCE

Located to the north of Piazza San Marco and designed by Mauro Codussi between 1507 and 1534, the layout features a unique form of Latin cross planning. This derivative comes from the planning of St Mark's and is based on a long nave made up into three interlocked centralised plans, each with a large dome surrounded by four smaller domes. The Latin cross form is obtained by the addition of further transepts and apses.



Chiesa di Santa Maria della Salute, Venice

RENAISSANCE

Located on Dorsoduro, and dominating the entrance to the Grand Canal opposite the San Marco area. The church was built in the late C16th and designed by Baldassare Longhena to an octagonal plan.



Chiesa di San Giorgio Maggiore, Venice

RENAISSANCE

Located on the Isola di San Giorgio Maggiore, this Palladian design was built between 1565 and 1580. The austere interior is a contrast to the bold external façade and its presence on the Venetian skyline.

The façade design is aimed at resolving the desire for a classical image within a basilican building form. In this resolution, Palladio chose to interlock two separate temple fronts onto the façade. The nave is treated as a high narrow temple within four large columns on bases supporting a pediment. Behind these columns, and subservient to the primary forms, runs a lower wider temple form the full width of the basilica.

The overall composition, when viewed from a distance across the canal, builds logically towards the central dome. One of the key aspects of the interior is the introduction of an open screen through which the monastic choir may be seen from the nave. This particular aspect produces unique acoustic effects. The church is one of the key notes of Palladio's career and the Renaissance period.



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