

# Locating the Distance Point: An Epiphany of Images, Thoughts and Places

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This paper intends to demonstrate how Jesuit perspective was introduced and rooted in the East, especially in China. The technique of linear perspective was first transported by Jesuit missionaries to the East for their scientific and liturgical teaching. As a graphic representation of imagery, Jesuit perspective is related to the meditation of *Spiritual Exercises* to visualize the image of God. Through the Jesuit construction of European architecture in the Court of Peking, the idea of linear perspective was presented and realized as a representation of Baroque thinking. The narrative trajectory of this paper first addresses the Jesuit development of linear perspective and its transportation to the East through missionaries in the late sixteenth century. It then focuses on the instrumental role of Giuseppe Castiglione as a court painter and an architect of the European section of an imperial garden, Yuan-ming-yuan. Through Castiglione's encounters, this paper concludes the differences between East and West in conceiving and perceiving representation.

## 1. MEDITATION FOR MEMORY AND IMAGINATION

In general, Catholicism of the Counter-Reformation possessed an effective mechanism in visual communication and representation. Through the emotional stimuli of the divine imagery of art, the believer was supposed to grasp the meaning of the liturgical teachings of the Church. In particular, two types of imaginative processes employed by the Jesuits are 1) starting with visual imagery to derive its verbal expression and inversely 2) beginning with the Word to arrive at visual images; the latter is particularly emphasized. At the very beginning of his *Ejercicios espirituales* [Spiritual Exercises] (Rome, 1539-41), Ignatius of Loyola (1491-56) prescribes internal ordering to proceed to "visual composition, seeing the place" in terms that might also be instructions for the *mise-en-scène* of a theatrical performance:

[41]The first prelude is composition[,] seeing the place. It should be noted at this point that when the

meditation or contemplation is on a visible object, for example, contemplating Christ our Lord during His life on earth, for He is visible, the composition will consist of seeing with imagination's eye the physical place where the object that we wish to contemplate is present. By the physical place I mean, for instance, a temple or mountain where Jesus or Our Lady is, depending on the subject of the contemplation (de Nicolas, 116).

*Locus* and *imago* are obviously referenced here as the two basic ingredients of the *Ars memorativa* [the art of memory], adapted to suit the subject and specific objective of each of the four weeks of *Spiritual Exercises*. For Ignatius, the internally ordered "composition" of vision is the prelude to meditation in the memory theater, practiced in the sixteenth century. In the first day of the second week, the spiritual exercise opens up a vast visionary panorama:

[106]1st. The first point is to see all the different people on the face of the earth, so varied in dress and in behavior. Some are white and others black, some at peace and others at war; some weeping and other laughing; some well and others sick; some being born and other dying, etc.

Second, to see and consider the Three Divine Persons seated on the royal throne of the Divine Majesty, how they behold the entire face and vastness of the earth and all the people in such great blindness, and how they die and go down into hell. Third, I will see our Lady and the angel who greets her. I will reflect, that I may draw profit from such sight (de Nicolas, 125).

Ignatius then invites readers to visualize the Temple of Jerusalem, the synagogues in which Christ preached, and the towns through which He passed. The overwhelming importance which Ignatius accords to the sense of sight follows Cicero's percept of insisting upon the use of "corporeal similitudes" with his *imagines* and provides evident links with the *Ars memorativa*, not in its classical notion, but as transformed in the Middle Ages to serve purely religious

ends, particularly by St. Thomas Aquinas (Wittkower and Jaffe, 63-97).

The Ignatian meditations call for the exercise of artificial memory rather than of natural memory in the mnemotechnical notion of the *Ars memorativa*. The *loci* and *imagines* of the Ignatian Spiritual Exercises are based on the Scriptural narrative. The *loci*, for instance, consist of a variety of places appropriate to meditation rather than of the specific temple, theater, typical of the *Ars memorativa*, which mnemonic *notae* or *imagines* are placed and subsequently plucked out at the appropriate time. Ignatius provides these memory “points” through language to describe how to imagine images absent from *Spiritual Exercises*. His insistence on meditation in the memory theater has one clear aim: to extract the pure and original image in perfect solitude — the divine image through which God’s signs will appear — which will then turn to language and return to the public domain. Thus Ignatian procedure is distinguished among other contemporary forms of devotion by the shift from the Word to the visual image as a way of attaining the most profound knowledge.

More intriguing, Jesuit liturgical teachings reverse the direction of meditation stated in *Spiritual Exercises* from a given image proposed by the Church itself and not first “imagined” by the believer to liturgical meaning: from the imagery to the Word. Points of departure and arrival for the “composition” of vision are already established by a given image, but en route “there opens up a field of infinite possibilities in the application of the individual imagination, in how one depicts characters, places, and scenes in motion” (Calvino, 86). This motion of memory is best illustrated by Geronimo Nadal’s (1507-80) supervision in the liturgical book *Evangelicae historiae imagines...* [Images of Spiritual History](Antwerp, 1593), in which engravings illustrate biblical scenes in perspective and by which the believers begin to access imagining and remembering as practiced by a sixteenth-century man like Ignatius. Even the first Jesuit missionary, Matteo Ricci (1552-10), relied on Nadal’s book pedagogically to demonstrate the image of God in his liturgical teaching and to assure the Chinese that stories of God are real; that God is indeed alive (Spence, 62-3).

With memory objects as images, the Jesuit art has particular interest in classical and mnemotechnical use of *Ars memorativa* for religious purposes. Although Jesuits never claimed a style of art as their own, they have ennobled theories, technics, and techniques of perspective in their literature, painting, and architecture to propagate their liturgy in an analogous relationship with Ignatian composition of vision by guiding the believer’s spiritual life with an adequate and faithful depiction of biblical scenes.

## 2. PERSPECTIVAL CONDITIONS FOR REPRESENTATION

Baroque culture was intimately bound to the Counter-Reformation and in particular, the Jesuit order which allied art with

science and religion. For example, the concern with acoustics and optical effects in Jesuit sermons is reflected in the church plan of Gesù in Rome, the first Jesuit church designed by Jesuit priest Giacomo Barozzi da Vignola (1507-73). Vignola established a lecture-hall-like geometry derived from a combination of the central plan (the grand scale of the dome) and the basilica plan (reduced, however, to a single nave, the side aisles being replaced by chapels). The façade of Gesù was finished by Giacomo della Porta (1532-02) in 1575 and served as a prototype for many later Baroque churches, including St. Paul’s (1602-27) in Macao.

Not only had Vignola established a Jesuit model for the Baroque church using geometrical orderings, but he explicated “Jesuit perspective” in *Le due regole della prospettiva pratica* (Rome, 1583) as the distance-point method of linear perspective, known in contemporary terms as the workshop method, or the office method which divides lines to obtain ratios between them without defining precise locations of vanishing points. This technique could be manipulated to produce a unified central perspective without designating the picture frame favored by Alberti’s techniques of vanishing-point perspective. Although Vignola’s treatises, *Regole* (Rome, 1562) and *Le due regole della prospettiva pratica* (Rome, 1583), were more practical than Sebastiano Serlio’s (1537-51) methods in *Architecturae libri septimus* (Venice, 1537 and 1540; Paris, 1547), and had better illustrations with clearer procedures, the distance-point method was unable to convince Italian commentators to imagine perspectival effects without constructing and conceiving the picture frame. Nonetheless, the distance-point method was favored in the artist’s workshops of northern Europe and proved effective in construing a cartographic vision of the world for the Age of Discovery (Alpers, 26-71).

Through the science of perspective, the Jesuits were able to unite Christianity with art and science, such as in astronomy and architecture, by ordering nature and supernature in geometrical relationship and representing terrestrial space and celestial space in pictorial space. Linear perspective was applied to a unique way of thinking that took in the entire universe from the infinite to the infinitesimal; it was a crucial constituent of total knowledge. For the Jesuits, it was significant to discover that divine infinity could be represented in pictorial, finite space without defining a vanishing point, as well as designating a picture frame. Hence, *trompe-l’oeil* became a technique associated with Jesuit perspective to allude to movement, flight, instability, metamorphosis, magnificence, and paradise.

In *La perspective pratique par un Parisien, religieux de la Compagnie de Jesus* (3 volumes, Paris, 1642-9), Jean Dubreuil stated a Jesuit ecclesiastical function to direct the world through perspectival order. With Dubreuil “every natural and architectural phenomenon that can be reduced to perspective is so reduced and every form of unconcealed change is submitted to the general discipline of perspective” (Lawrenson, 178; also Kemp, 122). Moreover, the good *religieux de la Compagnie de Jesus* was concerned with the

application of perspective decoration to every aspect of his life, as well as to the theater, the representation of life. Evidently, the care with which Serlio worked out the vanishing points of his perspective had little to do with Vitruvius and more to do with the maturation of the Baroque perspectival stage, but he certainly opened the domain for Jesuits to contribute their ecclesiastical illusions to the theatrical representation of space.

A self-proclaimed “lover of perspective,” Andrea Pozzo (1642-09) epitomized Jesuit ecclesiastical illusions as “theaters” of the world with scientific conviction in religion and his dizzying *trompe-l’oeil*. In the preface of his treatises *Perspectiva pictorum et architectorum* (two volumes, 1693 and 1700), Pozzo firmly announced that he intended “with a Resolution to draw all the lines thereof to that true Point, the Glory of GOD.” In the engravings of both his real and ephemeral architecture, illusion was miraculously to coalesce the distorted chaos of shapes into a coherent revelation when viewed from the proper position.

In Pozzo’s proposal for theater design, the point of infinity in the stage scenery, alluded to by angled flats, mirrored the privileged location of the royal box where the single-point-viewing perspective incarnated the epiphany of the ideal. In the case of the nave vault, *The Transmission of the Divine Spirit* (1688-94, Rome, S. Ignazio), the perspectival point is actually the Son of God, who in Pozzo’s own words “send[s] forth a ray of light into the heart of Ignatius, which is then transmitted by him to the most distant regions of the four parts of the world” (Kemp, 139). As a virtuoso of *trompe-l’oeil* and of that famous Italian perspective known as *di sotto in su* (from below upwards), Pozzo brought Paradise down to within sixty feet of the earth as *majorem dei gloriam*, or “to the greater Glory of God”, the motto of the Society of Jesus. As it surged to its central focus, the perspectival system of optical dynamics served as the radiant core of vision while the rays of spiritual energy radiated to people of the world through Jesuit missionaries.

### 3. DISEGNO AS THE FOUNDATION FOR THE SCIENCE OF ART

The term, *Arti del disegno*, upon which the notion of design in *École des Beaux-Arts* was probably based, was coined by Giorgio Vasari (1511-74) as the guiding concept for his well-known collection of biographies, *Le Vite...* [Lives of the Most Eminent Painters, Sculptors and Architects] (Florence, 1550). The notion of *Arti del disegno* marked a change in theory which found its institutional expression in 1563, again under the personal influence of Vasari, when painters, sculptors, and architects dissolved previous connections with the craftsmen’s guilds and formed an Academy of Design “*Accademia del Disegno* in Florence, the first of its kind that served as a model for later institutions in Italy and other countries” (Kristeller, 182).

The idea that *disegno* could serve as the foundation for art and science was born out of the debates between the Platonism

of Florence and the Aristotelianism of Padua in the late sixteenth century. At first, *disegno* was directed toward drawings that referred to the selection and ordering of subjects rather than their appearance, according to the judgement of the artist and in particular to the ordering of the human body. Establishing *disegno* as the basis for rendering natural selections allowed an artist to command one eye to nature, or the real, and the other to beauty, or the ideal.

Founder of the *Accademia di San Luca* in Rome, Federico Zuccaro’s (1542-1609) penned *L’Idea de’ pittori, scultori e architetti* (Turin, 1607), which has been regarded as the end of Italian Renaissance art literature and as the furthest theoretical development of the idea of *disegno* (Summers, 283). For Zuccaro, *disegno* (which means drawing, or more specifically, drawing with lines) becomes the foundation for arts. Once this scientific foundation is established, the arts (with their characteristic rules and procedures) would be free to find their places among all human activities.

Zuccaro defined a line as a “simple *lineamento*, circumscription, measurement and shape of whatever real or imagined thing”—as the “proper body” and visible substance of *disegno interno*. Line is “simply the operation of forming something.” It “declares and expresses” an “ideal image” formed in the mind and is called *disegno* because it “signifies and shows to sense and intellect the form of the thing formed in the mind and impressed in the idea.” Line stands between the true *disegno interno*, which is in the *concetto* formed by the soul, and its realization in the colors of painting or the stone of sculpture (ibid., 300). For Zuccaro, not only does knowledge arise from sensation, but it is also necessary for all sciences to assume sensible form.

Zuccaro depicted *Allegory of Disegno* in his home on the ceiling of the so-called *Sala del Disegno*. The painting is a sharply foreshortened bearded allegory of *Disegno* surrounded by female allegories of the three arts of *disegno*: painting, sculpture, and architecture. *Disegno*, haloed by three wreaths symbolizing the trinitarian unity of the three arts, gazes upward to a higher source of light toward which he seems to be ascending. Here, we find inscriptions on a plaque: “light of the intellect and life of activities; one light shining in three.” Therefore, *Disegno* is ultimately derived from the central light of divine grace, illuminating the intellect and refracted in the subordinate lights of painting, sculpture, and architecture (ibid., 285).

Zuccaro offered the belief that *Disegno* is the creative force of the human mind evident in all our activities including the sensation and the conduct of life, as well as the most marvelous achievements of art and the loftiest feats of speculation. *Disegno* acts as a mirror of the divine creativity of the ordained world, continually bringing it into existence. It is not difficult to imagine that Zuccaro’s adaptation of Aristotelian psychology and Platonic ordering to formulate the idea of *disegno* for painting, sculpture, and architecture had far-reaching implications for both pedagogy and propaganda when it appeared with great frequency in Counter-Reformation writings on art and its applications (ibid., 299).

The Jesuits were certainly familiar with the idea of *diseño* and its flourishing practices in the recently founded academies in Italy. Such a disciplined, constructed, quantifiable idea of art deriving intellect from the absolute light of God, defining line as the essential element of divine order, constructing visionary imagery through graphic procedures, and codifying the world into geometrical hierarchy, particularly suited Jesuit metaphysics. It was upon this logic that Matteo Ricci, the founder of the Jesuit mission in China, and his followers also wished to model the mathematical sciences and their missions.

#### 4. JESUIT REPRESENTATION IN CHINA

Matteo Ricci was the first to realize that in order to spread the Christian faith, enlarge his audience, and above all, convert the high officials (the Chinese *literati*), it was advisable to present himself as a radiant ambassador of Western science rather than as a humble missionary who had taken the vow of poverty. Ricci was sure that if the Emperor's mandarin scholar-bureaucrats became convinced of the superiority of Western science, they would similarly succumb to the logic of Roman Catholic Christianity, signifying the greatest Christian victory after the conversion of the Roman Empire. Ricci's plan of action was "to identify the Jesuit missionaries as the cultural counterpart of the Chinese scholar-gentry, and to sugar the pill of Christian proselytism with the coating of Western science" (Boxer, 43). The triumph of Christianity over Buddhism in China could easily be obtained by demonstrating the impeccable power of Western science through intellectual inquiry into Catholicism.

With such apparent purposes, Ricci brought two important books to China: the aforementioned *Evangelicae historiae imagines...* by Geronimo Nadal and an annotated and illustrated copy of Euclid's *Elements of Geometry* by Jesuit mathematician Christopher Clavius (1537-12). Like all missionary orders in the sixteenth century, the Jesuits were concerned that their converts might misinterpret Christian images and worship them just as they had worshipped their idols. Ricci's intention, therefore, was to employ drawings and paintings as a liturgical means of conveying Christian messages, especially to those *literati* unable to understand verbal expression of divine meaning. Ricci's aims were to convince the Chinese through the perspectival "realism" of drawings in Nadal's book that Christ is indeed the "living" God and to provide the converts with "given" images to imagine and obtain the liturgical meaning from God. (Ronan and Oh, 103-26) Unfortunately, Ricci, who was not an artist, was incompetent to demonstrate Renaissance perspective and chiaroscuro, as well as unable to present the discovery of *diseño* from the recently founded academies of Florence and Bologna.

After completing his noviciate at the Jesuit monastery at Coimbra, Giuseppe Castiglione (1688-66) sailed on a Portuguese ship, tracing Matteo Ricci's footsteps, and arrived in Macao in July 1715, the fifty-fourth year of K'ang-hsi (1662-

22). Four months later, Castiglione was presented to Emperor K'ang-hsi under the aegis of Father Matteo Ripa (1682-45), whose knowledge of Chinese enabled him to act as a Court interpreter and painter, working alongside Chinese painters and given the Chinese name, Lang Shih-ning. Employed in the Court, Castiglione secured a privileged position to demonstrate the idea of *diseño* and to incorporate techniques of perspective and chiaroscuro into Chinese painting. No other Jesuit in China could articulate the Western science of art as effectively as Castiglione, a disciple of Andrea Pozzo.

During Yung-cheng's reign, Castiglione assisted Nien Hsi-yao, Superintendent of Customs and Director of the Porcelain Works in K'ing-tö-chen, to adapt Andrea Pozzo's treatise *Perspectiva Pictorum et Architectorum* into Chinese with the title of *Shih-Hsüeh* [Visual Techniques], which appeared in 1729 and was reissued in 1735. In his preface to *Shih-Hsüeh*, Nien Hsi-yao stated that he studied the subtleties of Chinese painting, especially the illusion of three dimensions by shadows under the guidance of Lang Shih-ning — Castiglione (Beurdeley, 37). The term linear perspective was first regarded as a special kind of visualization; its Chinese translation, *sien-fa*, did not denote any perspectival effects. *Sien-fa* literally means "linear method" and relates more to the idea of *diseño* than linear perspective.

One of many differences between Chinese and European paintings lies in the conceptual understanding of line and its functions in representation. Before Castiglione's presence in Court, no Chinese painter employed the chiaroscuro method in painting, nor did they attempt to present any perspectival effects typical of the Renaissance perspective. Appropriating line as a conceptual apparatus, the development of *diseño* had provided Renaissance perspective and chiaroscuro with a scientific foundation to distinguish line as an irreducible element of geometrical construction from an essential form of pictorial, graphic representation.

Although the techniques of Chinese *literati* painting are based primarily on lines, this linear technique is integrated with calligraphy within which lines are essential forms of pictorial representation. Both Chinese *literati* painting and calligraphy elaborate on the "strength" of brush work and its variations of line-forms. To the Chinese, permeated by Taoist teaching, the term "still-life" has no meaning. There are no inanimate objects (including lines); everything has its vitality and spirit, *ch'i-yun*, which must be made to "resound" in painting. Chinese painting and drawing manifest the possibility of depicting the expression, rather than representation, of being. The Chinese postulate the impossibility of addressing permanent being through impermanent becoming.

The function of lines in Chinese paintings do not illustrate the same conceptual representation as they do in Renaissance realism or Baroque naturalism. The creative process of Chinese painting corresponds with the poetic, literary mind of the *literati*. In contrast, the Western painter, armed with the sciences of mathematics and physics, followed

linear perspective, observed chiaroscuro, and sought to draw buildings in accordance with architectonics and strove for anatomic accuracy in portraying human figures.

When the Jesuits first presented their Western style paintings to the Emperor, he and his courtiers all admired the theatrical effect of perspective shown in those “stereolistic” paintings. However later, Emperor Ch’ien-lung no longer appreciated Western techniques of painting and ordered Castiglione to learn Chinese painting techniques. Eventually, Castiglione developed a new style by representing objects in geometric space through the art of *disegno* and employing perspective effects and chiaroscuro. He also added some Chinese techniques of line-work as final touches to satisfy the imperial demands (Loehr, 37-8).

In Ch’ien-lung’s Court, Castiglione’s artistic performance was more that of an illustrator than an artist. His talent and knowledge of painting was directed to document historical events such as the Battles in Upper Asia, Kashgaria, Turkestan, and Zungars (in 1759 under the name of Sinkiang or New Territory), and the Emperor’s ceremonies such as the famous *Mu-lan* scrolls (0.77x27m) recording the Emperor’s annual hunting event. Nevertheless, before Castiglione, the Jesuits were not effective in articulating the idea of *disegno* as the foundation for representation in art. Although religious illustrations were first brought to China by Ricci, no Jesuit was as talented a painter as Castiglione in being able to demonstrate the idea of *disegno* and perspective geometry in painting. Through his sophisticated techniques of perspective and Pozzo’s treatises, Castiglione confronted the Chinese conception of painting and picture by introducing the science of art through his religious understanding of *disegno*.

## 5. YUAN-MING-YUAN

As an architect, Castiglione was an effective agent of Baroque architecture in the construction of the European section of Yuan-ming-yuan, or Garden of Perfect Clarity (1747-60). It is interesting to note that the role of architect fell to Castiglione who was known above all as a painter and draftsman. Because the Emperor assumed that Castiglione possessed the same abilities of traditional Chinese *literati*, who were not only equipped with an impeccable knowledge of science, art, humanity, and engineering, but capable of construing and constructing the Emperor’s imagination into tangible form. To assist them in this work, the Jesuits sent away to Europe for a certain number of works on architecture, among them *Le premier volume des plus excellents batiments de France* (1576-9) by Jacques Androuet Du Cerceau (ca.1520-84), three versions (Latin, French, and Italian) of Vitruvius’ *De Architectura* and treatises on construction (Beurdeley, 66-7, and Loehr, 78).

The European palaces at Yuan-ming-yuan were begun in 1747 after drawings by Castiglione, whose knowledge of the art of *disegno* and the idea of perspective geometry served as the foundation for positioning allegorical figures and de-

vices in/of/among buildings to obtain every possible perspectival effect: a design process based upon his graphic procedures of constructing linear perspective (Adam, 23-40). The final designs submitted to the Emperor by Castiglione were a fascinating kind of Baroque. As fair as one may judge from the ruins and the decorative fragments which still may be seen at Yuan-ming-yuan and in some Peking gardens, Castiglione might have drawn his main inspiration from Italian Baroque architecture. “Some of the façades with their curving lines and their enormous volutes over the doorways and windows remind one of Borrominesque buildings, others of Genovese palaces from the late sixteenth century” (Sirén, 47). “The French influence is, on the whole, less apparent” in building design, but evident in reference to Versailles for the European sources of landscape (Loehr, 86).

The European section of the garden of Yuan-ming-yuan comprised three major precincts. In the first stood the *Hsieh-ch’i-ch’u* [Palace of Delight and Harmony], “bear[ing] comparison with the châteaux of Versailles and Saint-Cloud” (Beurdeley, 68). All of marble with Corinthian motifs, the *Hsieh-ch’i-ch’u* was flanked by two musicians’ pavilions linked by a glazed gallery. In the process of construction, the most difficult task was the installation of theatrical machinery, specifically the spectacles of water-works. Castiglione had to rely on Michel Benoist (1715-74) to construct the spectacles of hydraulic works, for Ch’ien-lung had called for palaces “in the manner of the European barbarians” in the midst of a multitude of jets of water, cascades and fountains (Beurdeley, 152). These fountains enchanted the emperor most. From his window, seated on his throne and surrounded by his concubines, the Emperor could contemplate the jets of water spat out by bronze sheep and wild geese.

A bridge over fountains led to the second precinct, all of marble, where there was a centered kiosk in a European maze called the *Hua-yuan* [Garden of Flowers]. On the Festival of Lanterns, the Emperor would hold a lantern race for the young girls of the Palace. Each of them carried a yellow-silk-lantern with a lit candle attached to its tip. The first to reach the kiosk received a gift from the Emperor. In the center rose the *Hai-yen-t’ang* [Palace of the Calm Sea], so-called on account of the vast reservoir placed on the terrace to feed the fountains and cascades. Despite numerous Baroque details, the architectural style of the *Hai-yen-t’ang* was inspired by the court at Versailles and the porcelain Trianon (1670-87), which was ironically regarded as a palace of “Chinese style” in Europe (Rykwert, 55-7). Ch’ien-lung particularly praised the extraordinary water-clock decorating the foot of the monumental staircase. Indeed, it was a major venture for Benoist: twelve animals of the Chinese zodiac; a rat, a bull, a tiger, a hare, a dragon, a snake, a horse, a goat, a monkey, a cock, a dog, and a boar spat out water, one after the other in turn for an hour. At midday alone, the water spurted from all their mouths.

Castiglione also built other supporting pavilions, such as the *Hsu-shui-lu* [House for gathering the Waters] which also

concealed a hydraulic machine. The walls of Yang-ch'ueh-lung [Aviary] were covered with paintings of boats and pheasants. Here, the Emperor's peacocks and other rare and precious birds were reared. For this building, Castiglione designed a wrought-iron door with a jig-saw pattern that was greatly appreciated by the Emperor.

"A place is created by natural spirits and treasured by Heaven which provides a space for [the] King to wander and to rest" (Collected, 12), according to the comments of Emperor Ch'ien-lung when surmising the extreme beauty of the Yuang-ming-yuan after its construction. Evidently everything in these buildings demonstrated a deep admiration for theatrical effects: architectural motifs stimulating abounding of all senses, a Baroque profusion of superfluous ornaments. The proliferation of colors recalled certain resemblance to Italian or Portuguese palaces, but the roofs covered with yellow, blue or green tiles respect the Chinese tradition. However composite as it was, the total effect of Chinese Baroque was nonetheless elegant. It was impossible, said the Jesuits, not to "admire the art with which this irregularity was carried out" (Beurdeley, 74).

On August 5, 1774, news reached China of the arrest and imprisonment of the General of the Jesuits, Father Laurent de Ricci, and the papal proclamation of the dissolution of the Society of Jesus. Foreign missionaries were never to regain the privileged positions the Jesuits had formerly enjoyed at the Imperial Court. In the following century the Europeans employed very different methods to impose their will; the cannon took the place of the sermon.

When the Franco-British troops led by Lord Elgin and General Cousin-Montauban pillaged Castiglione's Summer Palaces in 1860, the soldiers found a profusion of jewels, gold snuff boxes, porcelain dishes, table services and sumptuous costumes in which they dressed themselves during a wild masquerade. The soldiers delighted in the remarkable collections of automata which the Chinese emperors had received from Western sovereigns. "The second night we spent in the Summer Palace was impossible, crazy, giddy," the Comte d'Herisson wrote in his diary. "Every trooper had his bird, his music box, his alarm clock and his rabbit. . . . Everywhere bells were ringing" (ibid.). The pillage lasted two days and ended with a fire. "The delirious soldiery tore down tapestries threaded with silver to try to put out the blaze" (ibid.).

The "Arabian Nights" palace of the emperors of China and their curious toys, monkeys, automata-dancers, cymbal-playing rabbits, went up in flames, while the singing birds warbled madly in their golden cages. Even the memory of buildings once dedicated to the refinements of pleasure has vanished. The only existing witness to this magnificence are twenty copper-plates made in 1786, by two pupils of Castiglione under the supervision of the Emperor.

## EPILOGUE

For nearly two hundred years (1582-1773), the Jesuits had a

privileged position in the Middle Flowery Kingdom which enables them to act as cultural interpreters between East and West, literally and figuratively. Their representation in China mirrored a unique period of intellectual inquiry in the West. In his Preface to the *Novissima Sinica* [Latest News of China] (Leipzig, 1697 and 1699), Gottfried Wilhelm Leibniz (1646-16) wrote (Lach; also Cook and Rosement, 46 & 50):

In the useful arts and in practical experience with natural objects we are, all things considered, about equal to them [the Chinese], and each people has knowledge which it could with profit communicate to the other. In profundity of knowledge and in the theoretical disciplines we are their superiors. . . . The Chinese are thus seen to be ignorant of that great light of the mind, the art of demonstration . . . which our artisans universally possess.

Then he concluded:

But there is no doubt that the monarch of the Chinese saw plainly what in our part of the world Plato formerly taught, that no one can be educated in the mysteries of the sciences except through geometry. Nor do I think the Chinese . . . have failed to attain excellence in science simply because they are lacking one of the eyes of the Europeans, to wit, geometry. Although they may be convinced that we are **one-eyed**, we have still another eye, not yet well enough understood by them, namely, First Philosophy. Through it we are admitted to an understanding even of things incorporeal.

What did the Jesuits really contribute to the civilization of the East, especially China, in the last three centuries? Joseph Needham noted in *Science and Civilization in China* that the Jesuits brought four engineering principles to China: (1) the screw in the form of the Archimedean water-raiser, (2) the Ctesibian double force-pump for liquid, (3) the crankshaft, and (4) clockwork (Needham, 241-3). In *The Heritage of Giotto's Geometry*, Samuel Y. Edgerton contended that the Jesuits introduced the Chinese to Renaissance chiaroscuro and linear perspective, democratizing trade skills and technical knowledge in Europe (Edgerton, 254-87). For Needham and Edgerton, the visible realms of technology and science become both an important contrast and a significant connection between the West and the East. Their differences reflect the anthropocentric development of architectural thinking and its practices in the West, specifically recognizing the power of drawing as an epistemological process.

Regardless of metaphysical debates between Aristotelianism and Platonism, the West was able to depict the conceptual in the domain of the perceptual and to transform the invisible into the realm of the visible through the procedures of drawing developed by architectural thinking. In the case of inventing machinery, drawing realized the formation of ideas through experimentation. For instance,

by the seventeenth century, Francesco di Giorgio Martini's (1439-01) treatise, *Trattato di architettura, ingegneria ed arte militare* (Urbino, ca. 1470), containing drawings of his experimental machines (at one time owned by Leonardo Da Vinci), was the most influential engineering book in all of western Europe. In fact, Jesuits had brought his ideas in drawings to China.

Through the demonstration of drawing, especially drafting, an object and its parts can be defined by spatial sequences, controlled by geometrical orders, and measured by projective scales. Without the invention of drawing, scientific and technological principles would have conceptual and perceptual difficulties in achieving any further technical invention and advancement. Likewise, without the science of drawing, or *disegno*, linear perspective and chiaroscuro might only produce "realistic" effects and would not be as influential as Edgerton proclaimed. Therefore, the construction of the European section of Yuan-ming-yuan seeded the science and art of *disegno* in the soil of China. With the "luck" of historical coincidence, the Jesuits were able to foster Baroque development of architectural thinking, specifically the idea of *disegno* as the foundation of arts and the graphic procedures of constructing linear perspective as Western architectural theory, and carried them to China as theological and scientific imports.

Jesuit history alludes to the belief that architecture was once viewed as both a profession and a discipline of inquiry into various modes of thinking. The scripts of this drama consist of Vitruvian treatises where the Jesuits assumed that architecture spoke the language by which God first inscribed His natural laws of the universe. Above all, the Jesuits tried to induce China's powerful, deep-rooted, and highly developed civilization to change its very essence for Roman Catholic Christianity by adopting the Western science of representation.

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