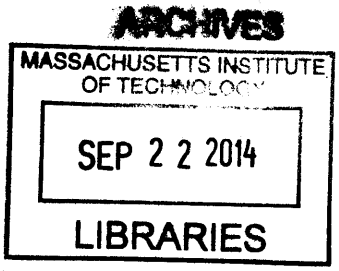
Secrets of the Arts: Enlightenment Spain's Contested Islamic Craft Heritage

by

Razan Francis



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Abstract

This dissertation examines the artistic and architectural mutations occurring in Spain during the eighteenth century, when Spain decided to participate in the Enlightenment's philosophical project that emphasized the classification of art, crafts, and other knowledge, and thereby raised important questions regarding the value of national heritage relative to a universal one. Spain was always viewed by Northern Europeans and Spaniards alike as tainted by its Muslim history, and its culture seen as semi-Oriental. In endeavoring to become part of the Enlightenment, Spanish artists, architects, natural philosophers, and policymakers struggled to come to terms with two challenging factors: their inheritance from the peninsula's Islamic past, and their corresponding isolation from the institutions of Northern Europe. They were forced to consider the hierarchies of the "liberal" over the "mechanical," intellectual over manual, high over low. The quest of the Spanish crown for economic reform shaped the relations among art, architecture, and crafts, which were manifested in the contrasting institutional stances on those hierarchies in the Academy of San Fernando (est. 1752) and the Economic Societies (est. in the 1770s). This dissertation probes how the reconsideration of past categories in light of the economic reform affected the practice and theory of architecture. It looks at ornament as a key site where Christian Spain sought to confront the marginality imposed upon it during the Enlightenment. Spain's experience—grappling with its Christian Iberian identity, its Arab and Jewish legacies, and its relationship to European institutions—constitutes a neglected episode in the art-historical narrative, one that informs the history of the decorative arts and knowledge construction in the eighteenth century.

Thesis Supervisor: David Friedman
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Introduction

Consider Spain's location. Spain is a "peninsula," etymologically an "almost island" (*paene insula*), and regarded in the eighteenth century as insular by Northern Europe to which it is an appendage walled off by mountains. To the south, Spanish and Arabs eyes stared reproachfully at each other across the Mediterranean, each with indelible scars of defeat, conquest, and reconquest. The Spanish were lords of the New World, yet lagging behind as the marvelous riches of gold and silver grew familiar, and the new worlds of Galileo and Newton fired Europe's imagination. Spain, in the eighteenth century, amid these influences, was seated at a table of cultural abundance, but disorganized—altogether too messy.

The messy table (*mesa revuelta,* one of the Spanish terms of what is better known by its French name, *trompe l'oeil*)[1] was a genre of painting common in the late seventeenth century. The celebrated Luis Paret y Alcazár (1746-1799), who was a professor at the Academy of Fine Arts of San Fernando in Madrid in 1779, produced a painting that remarkably adumbrates the issues the Spanish cultural establishment had to tackle, and which reflected the rise in relevance of Spain's mixed and rich heritage during the Enlightenment.[2] It depicts an amalgam of heterogeneous elements—eight paper leaves of texts and images (fig. 1). At the center of this composition and its largest element—but not topmost—is a page from the work of the Greek physician, Hippocrates, "On Epidemics," with a text in both Castilian and Greek.[3] Underneath, on the right side, half covered, is a 1543 edition of the widely known *Tragicomedia de Calixto y Melibea* of Fernando Rojas, considered today an epic of Spanish literature marking a departure

[1] Other terms in Spanish are *trampantojo* and *engañifa.*
[2] Enrique Pardo Canalis in *Goya,* (181-2), 1984, pp. 2-4. Although the work of the well-known painter Luis Paret y Alcazar, it was only briefly discussed once by art historian Enrique Pardo Canalis. The date of the painting is unknown but most certainly it was executed in the last quarter of the eighteenth century.
[3] This page comes from the third book of a translation by Dr. Andrés Piquer, Médico de Cámara. Hippocrates' work was published four times during the eighteenth century: 1757-1761, 1769-1770, 1774-1781, and 1788. Ibid.

from medieval literary traditions. On the other left side, also underneath the page from Hippocrates, is a partially covered drawing of what appears to be an image of a pious individual kneeling and raising his hands up. The drawing in blue underneath on the right side offers a view of an arcade by a river on one level, and a fortress-like building with towers on its corners, on an upper plane. Three other pages appear in the bottom third of the painting: a leaf of a map of Southwest Asia showing Persia, Tibet, the Caspian Sea, the Caucasus, Turkestan, and India. To the left is a page from *Aesop's Fables*, titled "Haedus & Lupus" in Greek, Latin, and Italian.

Figure 1. Luis Paret y Alcazár, *Mesa revuelta,* mid-eighteenth century, Madrid.

But topmost among all these seemingly carelessly assembled papers is a drawing of an Arabic inscription, round in shape, in blue and yellow on a red background. The inscription matches many inscriptions on the Alhambra's walls referring to its patron, the Nasrid King Mohammad V. The text reads: "Glory to our master, Sultan Abi Abd-Allah al-Ghani bi-Allah." The Arabiç inscription, which is also an ornament, appearing on top, is a striking and peculiar element put on the same plane or table as Greek, Latin, and Castilian works. This assemblage unfolds to the reader the intellectual circumstances created by or presented to eighteenth-century Spaniards because of their enlisting in the Enlightenment's philosophical project. While these *trompe l'oeil* compositions usually started as an assemblage of papers, predominantly maps, in this case the map, the emblem of discovery and colonization, retreats to the background, giving way to the rediscovery of already known works. The map might be conceived as representing the end of geographical discoveries and the beginning of cultural rediscoveries—the beginning of grappling with the present heritage, including the new discoveries in science, and resituating it relative to what is universal, national, and local.

Spain's artists, architects, and policymakers were confronted with two challenges: their inheritance from the peninsula's Islamic past, and their corresponding isolation from the institutions of Northern Europe. In light of the reevaluation of classical knowledge, they were forced to reconsider art classifications of the liberal over the mechanical, high over low, and intellectual over manual. For a range of Spanish groups and institutions, Spain's changing larger context unsettled the existing order of status, prestige, and the reasons that justified it. This was the situation faced in common by old institutions (e.g., guilds, monarchy), but also by institutions recently borrowed from Northern Europe (academies). In response, some advocated the creation of new institutions like the Economic Societies and their Schools of Drawings. In the chapters

that follow we encounter the interplay of these institutions and their debates over status and relative ranking of a wide range of "arts and crafts" (from acknowledged fine arts all the way to agriculture). Theories and mutual criticism were resources as groups in Spanish society sought to secure their status in an ongoing history.

From the standpoint of policymakers concerned with economic progress, like Count Pedro Rodríguez de Campomanes (1723-1802) and Gaspar Melchor Jovellanos (1744-1811), crafts were a potential source for economic growth. As the guilds were perceived as detrimental to the nation's prosperity and the liberty of the arts, reformers promoted a new type of institution, the Economic Societies, which sprang up in major Spanish cities in the 1770s as an alternative to the guilds. The contribution of these reformers to the development in the arts and crafts remains overlooked by recent scholarship because these reformers addressed the category of art in its broader sense, which encompassed arts like agriculture, medicine, trade, and industry, among other arts and crafts that do not necessarily converge with our definition of the arts as "fine arts."[4] Chapter One, "The Felicity of Spain with Drawing: Mechanical and Liberal Arts for Economic Progress," traces this development that involved a dynamic interchange among the arts, crafts, and economy. By recourse to sixteenth- and seventeenth-century authors who discussed the division of the liberal and mechanical arts, most notably, Gaspar Gutiérrez de los Ríos's *Noticia general para la estimación de las artes* (1600), a parallel discourse to the formation of the Economic Societies was advanced by these reformers. They ascribed Spain's

[4] *The Economic Societies in the Spanish World, 1763-1821* (1958) by R. J. Shafer is a pioneer study of economic reform vis-à-vis Spanish institutions. However, his measuring of their success in terms of their relationship with the colonies and colonial trade omits to examine their contribution to the local institutional structure for trade and crafts. Yet the latter is especially important, given that empirical reform through education was their main agenda. Agustí Nieto-Galan, in "The French Chemical Nomenclature in Spain" (1996), underscores the role of the economic societies among those institutions that applied new chemical theories to the arts, especially to dyeing and textile industries. These applications were facilitated by the founding of the Royal Laboratory of Chemistry in Madrid (1788), and the translation into Spanish of works such as Lavoisier's *Traité Elémentaire de Chimie* (Juan Manuel Munéartiz, 1798) and Berthollet's *Elements de l'art de la teinture* (Domingo García Fernández, 1795).

economic decline to an entrenched low regard among Spaniards for the crafts or the mechanical arts, manifested in the abandonment of drawing as a vital tool for craftsman's productivity. They also reasoned that the low esteem with which crafts were held was in part related to their association with the Arabs, who were the main practitioners of the crafts before their final expulsion in 1609: their culture, viewed as hostile and extravagant, deterred Spaniards from continuing their practices.

I show how art classifications in Spain were never fixed, but, as Gutiérrez de los Ríos maintained, were susceptible to change based on opinion, time, and tradition. Ríos included many of the decorative arts, and even agriculture under the umbrella of the liberal arts. However, economic reformers overlooked this open-ended division, and maintained a clear dichotomous one distinguishing the three fine arts from the rest of the crafts—a distinction they aimed to abolish. In fact, they were advocating changes in attitudes toward crafts that they themselves had shared, and even in part still held. Hence, some contradictions in their argumentation are clearly discernible. By examining how their discourse was rooted in the artistic tradition, relying on accounts by major artists and architects like Palomino, Carducho, Holanda, and Ardemans, I show how they conflated the arts and crafts, from whence emerged a new discourse on drawing.

Drawing was now to serve an industrializing nation. These reformers criticized drawing's restriction to the three fine arts, and advocated the teaching of drawing in School of Drawing, adjunct to the Economic Societies. By examining the Schools of Drawing in Zaragoza, I illustrate how the work of artisans began to seem more akin to that of the artists, leading to the conversion of the school into an Academy. This transformation, however, was met with objection from the Royal Academy of Fine Arts of San Fernando in Madrid that insisted on the separation of the arts, while acknowledging the relation of drawing to crafts, but within a

framework that reaffirmed artistic hierarchies.

The aspiration of architects to be included within the liberal arts goes back to the Renaissance; however, with the establishment of the Academy of San Fernando in Madrid in 1752, this status, as this dissertation shows, was documented in state regulations, statements by partisans, and theoretical writings—each one an episode in a long period of conflict with the guilds that still controlled architectural practice. The Academies represented the intellectual ambition of the professionally trained. Their conflict with the guilds and craftsmen was clearly translated into the arena of ornament as many of those who belonged to the guilds took on architectural projects and ornament.

Most architectural historians contend that the Academy adopted classicism and attacked baroque architecture because the former aligned with the Enlightenment's agenda for rationalism and universalism.[5] I address this change in architectural style through a different lens, which is the main theme of Chapter Two, "Ornament and 'The Orders' in Eighteenth-Century Spanish Architectural Tradition." By focusing on what came to be known as "Churrigueresque" style, I analyze how this connection between architecture and ornament alters with the advent of classicism. I argue that the discourse on artistic hierarchies was at the core of the conflict between the academies of fine art and the guilds. In fact, implicit in the attack on ornament was an attack on the guilds. I show how José Benito Churriguera (1665-1725) was perceived to belong to the guilds, and his art seen as entrenched in the materiality of gold and wood, departing

[5] Francisco José León Tello and María M. Virginia Sanz Sanz, *Estética y teoría de la arquitectura en los tratados españoles del siglo XVIII* (Madrid: Consejo Superior de Investigaciones Científicas, 1994); Delfín Rodríguez Ruiz, "Barroco e Ilustración en Europa," *Información y Revistas* (1989), no. 33; Fernando Chueca Goitia, *Varia neoclásica* (Madrid : Instituto de España, 1983), Carlos Sambricio and José Rafael Moneo, *La arquitectura Española de la ilustración* (Madrid : Consejo Superior de los Colegios de Arquitectos de España : Instituto de estudios de administracion Local, 1986).

from the maxims of good architecture. Ironically, Churriguera himself had attempted to free his art from its association with the mechanical and low and from the authority of the guilds.

Architects were not only trying to separate themselves from the crafts but from painters and sculptors, who also designed architectural projects. The strong ties between architecture, crafts, painting, and sculpture in Spain are epitomized in Spain's history of ornament, evident in the complex church retables, the work in plaster executed on the exteriors and interiors of buildings, the woodwork on interior ceilings (*artesonados*), and the tilework applied to the walls and floors. These rich sculptural and ornamental elements were an outcome of a long period of artistic interchange between the local building practices and the Islamic and European architectural traditions assimilated in the peninsula—all of which rendered the crafts crucial for architecture. Hence with the advent of new classicism in architectural practice in mid-century, these elements had to be reassessed. Should these elements be abandoned altogether? Or should they be reshaped, according to a new science?

A case study that illustrates these questions is the theme of Chapter Three, "Secrets Revealed: Codifying Ornament." Bernardo Montón's *Secretos de artes liberales y mecánicas* (Madrid, 1734 through 1814) is a text that addresses the hierarchies debated in the eighteenth century. A hybrid collection of writing about varied arts and crafts, including mechanical and optical devices and even formulas for artistic materials, this hitherto unstudied "book of secrets" ("secrets" now made public) endeavored to reconcile empirical knowledge and mathematical rigor. Drawing on Jakob Bernoulli's *Ars conjectandi* (1713) and Jean Prestet's *Elementos de Matematicas*, *Secretos* connects the Enlightenment and Islam by analyzing a central product of Islamic design—tile ornament—through the rationalizing lens of probability theory.[6] *Secretos*

[6] Lorraine Daston contends, in *Classical Probability in the Enlightenment* (1988), that the theory of probability could not have existed without its empirical applicability, specific to different disciplines and cultures. Ian Hacking

portrays patterns for a potentially infinite number of ornamental compositions and contains Islamic, Jewish, and occult elements, remnants of the medieval origins of the genre of books of secrets. Published in successive editions, *Secretos* was soon purged of these occult elements, including the medieval Islamic and Kabbalistic roots of probability theory. This secularization process, which facilitated joining the Enlightenment project, occurred just when tiles, which were a major ornamental element in the Islamic tradition, were losing their role in Spanish design and a new classicism was coming to dominate Spanish culture. *Secretos* thus illustrates the broader historical context of Enlightenment ideas, from which emerged a consequential debate over the status of Spain's "low arts" or crafts and their relations to institutions and pedagogy.

The Royal Academy of Fine Arts of San Fernando was founded in Madrid for the purpose of reinvigorating the "high" arts. The prevailing classifications of the arts implied that an emphasis on noble and fine arts would surely entail downplaying crafts, and along with them their Islamic residues surviving in practice. Yet, in dramatic contrast to the removal of the Islamic elements from *Secretos,* I show how the Fine Arts Academy chose to document Arab monuments as its inaugural project, commissioning paintings and drawings of the Alhambra, whose rooms epitomized the crafts of Islamic ornamentation. The explicit purpose of *Ántigüedades Árabes de España* was to refute the European assumption that expelling the Arabs

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in *The Emergence of Probability* (1775) locates the origins of the theory in the "low sciences" or "mixed mathematics." These two studies establish the empirical components of probability theory and the way it relates to the division of the arts. Historians of science (e.g., T. Kuhn, "Mathematical and Experimental," 1980; Hacking, Taming of Chance, 1990; Buck, "People who counted"; T.M. Porter, The Rise of Statistical Thinking, 1986; Porter, Trust in Numbers, 1995; M. Poovey, History of the Modern Fact, 1998) have examined the "quantifying spirit" of the Enlightenment and contended that numbers, being related to empiricism, evidence, facts, and objectivity, gained a larger social role in decision-making. I show how probability theory, as a rationalizing mechanism to generate patterns, became a modality for appropriation and suppression, manifested in the recreation of geometric patterns through a new arithmetic theory (the theory of numbers in place of geometry). My study also recognizes that probability theory emerged from inquiries into causality—a topic debated among medieval Muslim philosophers working on Iberian soil.

had irrevocably deprived Spain of architectural and artistic competence. The intent was also to theorize the Arab artistic contribution and thereby make it relevant for contemporary practice, offering Europe new knowledge. By showing the troubled history of the documentation project—recurrent delays, royal interventions, and changes of themes, media, and subjects of representation—I reveal the institutional indecisiveness toward the Islamic tradition and the eventual rejection of that tradition in the Academy's pedagogy and curriculum. Similar experiences occurred with the Academy of History's documentation of the Synagogue of *El Tránsito* in Toledo, and of the legacy of the expelled Jesuits. The quest for recognition as a contributor to the Enlightenment, I argue, compelled Spain to face its long-standing ambivalence toward its Islamic past, which represented both a source of artistic prestige and a discordant element in its national identity.

CHAPTER ONE

The Felicity of Spain with Drawing: Mechanical and Liberal Arts for Economic Progress

In 1700, Philip V, the grandson of the Bourbon Louis XIV, ascended the Spanish throne. The replacement of the Hapsburg dynasty with the Bourbons set off the War of the Spanish Succession (1701-1714), in which Spain allied with France against England, the Netherlands, and the Holy Roman Empire. Eighteenth-century Spain inherited the economic burdens of the previous century. Spanish industry lacked the necessary infrastructure for economic development, and there were still restrictions on landownership imposed by the church, the municipalities, and the nobility. It was almost impossible for Spain to compete with foreign manufactured goods. In most Spanish accounts, the French, who were the main suppliers of such goods, were accused of the ruin of Spain and its industry.[1] The Bourbon kings (Ferdinand VI, Charles III, and Charles IV) promised to lead the country to prosperity, rectifying the two hundred years of mismanagement which, they claimed, had been inflicted by the Hapsburgs.[2]

In the second half of the eighteenth century, as the country was facing these economic challenges, Spanish reformers conceived the arts and crafts as one of the crucial resources that would aid economic reform. To convince the nation of the vitality of the crafts, they projected a new era with a reformed mentality that valorized manual labor and applied practical sciences and new technologies. Above all, they emphasized drawing as a tool that would perfect artisanal manufacture and ultimately lead to economic prosperity. However, in this enterprise, they

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[1] One of the leaders in Valencia stated: "In order to ruin Spain the French have managed with cunning to induce laziness of spirit into Spaniards, to deaden their hands for laborious tasks, and to take from them their money and substance by sending all their wool to France." See Henry Kamen, *Spain in the Later Seventeenth Century, 1665-1700* (London: Longman, 1980), p. 188.

[2] The Spanish kings (Ferdinand VI, Charles III, and Charles IV) called for a new era that promoted labor and "a mix of industrial innovation, commercial protectionism, and development projects fueled as much by pragmatism as by enthusiasm for the new economic science." Ruth Mackay, *"Lazy, Improvident People": Myth and Reality in the Writing of Spanish History.* (Cornell University Press: 2006), p. 113.

adopted the sixteenth-century narrative of the division of the arts, despite the fact that these divisions, as this chapter argues, were never clearly fixed in Spanish practice. In their somewhat contradictory discourse, these reformers discussed the division of high and low arts, acknowledging (while criticizing) the low regard for the mechanical arts and crafts, a tradition they aimed to rectify. However, they were advocating changes in the attitudes toward crafts that they themselves had shared, and even in part still held.

The Spanish reformers contested the common belief, also shared by other Europeans, that only Spain's Arabs practiced the mechanical arts or crafts, which were allegedly disdained by the Spaniards. Accordingly, the Arabs' expulsion in 1609 was thought to have left a void in the domain of the crafts. The reformers were keen on correcting the associated belief that Christian Spaniards were lazy or merely preferred to be involved in warfare. As reformers aimed to dissolve the division between the high and low, the work of artisans began to seem more akin to that of the artists. This transformation, however, was often met with rejection from the Fine Arts Academy in Madrid that insisted on the separation of the arts. While the academicians acknowledged the importance of drawing to the crafts, they did so within a framework that reaffirmed artistic hierarchies.

To understand more deeply this complex relationship between the arts and crafts, I examine an early seventeenth-century book that addresses the divisions of the arts: *Noticia general para la estimación de las artes* (1600) by Gaspar Gutiérrez de los Ríos. This book's role in relation to art classifications and economic progress has never been discussed in recent scholarship. I then show how two early eighteenth-century literary works used the *Noticia*'s core arguments, and adopted drawing as a tool to defend the nobility of their respective "arts" of fencing and silversmithing. In doing so they illustrate that the divisions were never universally

agreed on. Analysis of the key arguments of major eighteenth-century economic reformers addressing the classification of the mechanical and liberal arts is the chapter's primary mission. I examine the works of Count Pedro Rodríguez de Campomanes and other prominent participants in this protracted debate. To illustrate the effects of these narratives on the institutionalization of artisan practice and the curriculum for his education, I present the school of drawing in Zaragoza: the model of a school for artisans that was transformed into an academy in 1792. I also discuss the response of the Madrid Academy of Fine Arts of San Fernando to the discourse on drawing and industrialization.

"General Note on the Valuation of the Arts"

For our discussion about eighteenth-century Spanish efforts to reform and reinvigorate the crafts, I would like to start with an earlier influential work by Gaspar Gutiérrez de los Ríos, *Noticia general para la estimación de las artes, y de la manera en que se conocen las liberales de las que son Mecánicas y serviles* (*General Note on the valuation of the arts, and the manner by which we know the liberal from the mechanical and servile,* Madrid, 1600).[3] As the first disquisition on the liberty of the arts in Spain, it was an important reference, extensively cited by subsequent painters and sculptors who aimed to prove their art is liberal. It was likewise influential with many eighteenth-century authors who theorized about economic policies in relation to progress in crafts and industry.[4] Gutiérrez de los Ríos's discussion of artistic

[3] The full title is: *Noticia general para la estimación de las artes, y de la manera en que se conocen las liberales de las que son Mecánicas y serviles, con una exhortación a la honra de la virtud y del trabajo contra los ociosos, y otras particulares para las persona de todos estados.*

[4] Among the works that relied on the *Noticia* are Vicente Carducho's *Dialogo de la pintura* (1633), Francisco Pacheco's *Arte de Pintura, su antiguedad y grandeza* (1634), and Juan Burtón's *Discursos Apologéticos en que se defiende la ingenuidad del arte de la Pintura.* Burtón criticizes Gutiérrez de los Ríos's attacks on Seneca (XVII of

classifications is crucial to our understanding of the history of the intertwining relationship between architecture, arts, and crafts in Spain. The book demonstrates how drawing became a means (being both an art and craft) by which an artisan could elevate the status of his art from the mechanical to the level of the liberal. Ríos introduced a new category, added to the already-established liberal arts—"the arts of drawing"—that encompassed both the fine arts and the crafts, thereby blurring the distinction between high and low arts. It is also important to note that other treatises discussing the arts and sciences often included categories like commerce and agriculture. They kept what we define today as art ("fine art" or the eighteenth century's "noble arts") marginal in their discussion. The *Noticia* therefore is the first Spanish work that emphasizes architecture, painting, sculpture, as well as the decorative arts when discussing art classifications.

Gaspar Gutiérrez de los Ríos (1566/8-1666) lived in Madrid and studied law and letters (*letras humanas*) at the University of Salamanca. That he was the son of the tapestry maker of Phillip II is a clue to his motivation for invigorating and elevating the arts and crafts (such as tapestry making) from the rank of the mechanical to that of the liberal. The book comprises four sections. Book I discusses the meaning of the words "art," "science," and "crafts," their origins, definitions, and divisions. Book II attempts to "undo the labyrinth of opinions" on how to distinguish the liberal from the mechanical. In Book III he proves that the "Arts of Drawing" are liberal, and in Book IV he tries to show how agriculture could be considered a liberal art.[5]

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book III). Later, in 1715, Antonio Palomino mentioned the *Noticia* in his *El Museo pictórico y escala óptica* (1715–24) to claim painting as a liberal art, after which he moved on to investigate the "essence and nature of art."

[5] Gaspar Gutiérrez de los Ríos, *Noticia general para la estimación de las artes* (Madrid, 1600), Prolog. General themes found in his book are: the defense of the nobility, liberty, and ingenuity of the arts; the recuperation of ancient art; the relationship between arts and sciences; philosophical thinking; the relationship between poetry and arts, the cult of images, the social status of artists, teaching of art and academies, the importance of treatises. See José María Cervelló, *Gaspar Gutiérrez de los Ríos y su "Noticia general para la estimación de las artes"* (Madrid: Fundación de Apoyo a la Historia del Arte Hispánico, 2006).

The *Noticia*'s central argument is that this liberty of the arts reveals that artistic ideas are responsive to economic, legal, and social changes. To the seven liberal arts he added the "Arts of Drawing" (*las artes de dibujo*), a category that includes architecture, painting, sculpture, tapestry, silversmithing, and embroidery.[6] These arts of drawing are liberal, not mechanical, because they imitate nature and adhere to his definition of liberal arts: "a collection of precepts and rules that are experimented and ordered with true reason and study, directing us to a good end and use."[7] Once drawing was proven to be an intellectual activity, it became a way for artisans to establish their "arts" as liberal because they required "profound study." The quest for precise drawing and accuracy became manifest in treatises that used drawing to enhance the status of erstwhile "crafts." Conversely, when drawings produced were inaccurate and merely schematic, they reflected an art that was no longer in use or did not seek to prove its noble liberty.

Gutiérrez de los Ríos situates the arts of drawing at the top of the seven liberal arts, systematically comparing them to each of the seven. For example, the arts of drawing compete with and defeat philosophy because they swiftly and more reliably transmit the "effects of virtue [as in] the retables of churches and in the divine images of saints, made by the hand of the artist (*artifice*) of these arts."[8] Ríos's seven liberal arts, however, differ from the seven liberal arts (*trivium* and *quadrivium*) introduced in the twelfth century by Hugh of Saint Victor in his *Didascalicon*, where the *trivium* included grammar, logic, and rhetoric and the *quadrivium*

[6] Bordado de matiz: embroidery of different colors.
[7] "recopilación y congregado de preceptos y reglas, experimentadas, que ordenadamente y con cierta razón y estudio nos encaminan a algún fin y uso bueno." Ibid., Book I, p. 16.
[8] "es estimada sobre otras artes, porque hace a los hombres virtuosos, [las artes de dibujo] causan más presto y con mayor vehemencia estos efectos de virtud [y asi] notorio es el mucho fruto que hacen en la iglesia de Dios los retablos y las imagines divinas y de los santos, hechas por... mano de los artifices de estas artes [del dibujo]... [asi] por lo menos negar sino que estas artes de dibujo son hermanas de la Filosofia..." Ibid., Book III, p. 189.

included arithmetic, geometry, music, and astronomy.[9] Ríos's seven liberal arts, to which he added the arts of drawing, consist of poetry, history, grammar, rhetoric and dialectics, mathematics, medicine, and philosophy. Hugh advanced seven mechanical arts: fabric making, armament, commerce, agriculture, hunting, medicine, and theatrics. Some of these were considered liberal in the *Noticia.* For example, Hugh classified medicine as a mechanical art, whereas in the *Noticia,* medicine is a liberal art.[10] Agriculture, for Hugh, is a mechanical art, yet it is the objective of the fourth book of the *Noticia* to prove that it could be considered a liberal art.

This departure of the *Noticia* from earlier classical and medieval art classifications leads us to another of Ríos' key contributions: his declaration that the classification of the arts is changeable because it corresponds to the "instability of opinion and changes in time, uses, and custom."[11] Many mechanical arts could at some point in time assume the status of the liberal.[12] This open-ended classification, I suggest, is what made Ríos's theories attractive for those who aspired to elevate their art from the mechanical to the liberal: there was always a case to make for a change in status.[13] Moreover, as a professor of law, Ríos was probably well aware of the relationship between law and tradition, noticing that traditions usually overtook laws, especially in the architectural profession, as they constituted an unwritten law.[14]

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[9] Hugh of Saint Victor wrote that "The distinction between art and discipline is the one which Plato and Aristotle wished to establish. Or, that can be called art which takes shape in some material. As is brought out in it through manipulation of that material, as is the case in architecture; while that is called a discipline which takes shape in thought and is brought forth in it through reasoning alone, as in the case of logic." Hugh of Saint Victor, *Didascalicon: A Medieval Guide to the Arts*. Jerome Taylor, trans. Book II Ch.1, p. 62. (New York, Columbia University Press, 1961). The *quadrivium* consists of arithmetic, music, geometry, and astronomy.

[10] *Didascalicon*, Book II, Ch. 20-27, p.74-97.

[11] Gutiérrez de los Ríos also refused to follow these strict art classifications in Aristotle and Cicero, among others.

[12] Bibliographic notes on Gutiérrez de los Ríos: María Teresa Cruz Yábar, *Gaspar Gutiérrez de los Ríos, teórico de la estimación de las artes: biografía* (Madrid: Academia de Bellas Artes San Fernando, 1996).

[13] In this sense, we have a chain of arts relying on each other. If one is proven to be liberal the other could also become liberal. This chain of dependence is what creates a dialogue between the arts.

[14] Ríos here relies on Aristotle's argument that "[i]t is from habit, and only from habit, that law derives the validity which secures obedience." Aristotle, *Politics* II, 1268b-1269a. Cited in Shirley Robin Letwin, *On the History of the*

But this does not mean that Ríos was not keen on making distinctions between what was liberal or mechanical, as the title of his book promises. For him, understanding (*entendimiento*) was the main measuring stick to classify the arts. Unlike the mechanical arts, which were performed with total dependence on the body, the liberal arts relied on understanding—the free and superior part of man—and its fundamental activity.[15] He also established a hierarchy between the sciences, arts, and crafts: the sciences are the domain of human understanding because they have rules and precepts and could not be of another sort.[16] The arts emerge from opinion, and are therefore changeable. The sciences belong to the soul (and the intellect) and the crafts to the body, whereas the arts are the composite of both.[17] He clearly puts the crafts at the lowest level of the arts, claiming that even the mechanical arts are not as abject as the crafts.[18]

This distinction between intellectual and manual was not enough to establish criteria for classification. Two examples supported his argument: first, geometry—a liberal art—has always been used by craftsmen as a means to conceive and execute a craft or an art. The definition of art as based on drawing originated with the medieval stonemason, where geometry allowed him to conceive the design or solve building problems through geometrical figures, even without recourse to mathematics. *Disegno* embodies both design (which might be based on geometry) and the graphic medium in which it is manifest.[19] Second, drawing—a mechanical activity—is

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Idea of Law (Cambridge University Press, 2005), p. 39. According to Ruth Mackay, "Guild ordinances were seen not as law ordered by the king but as tacit admissions of custom sanctioned by practice, sort of a starting point for negotiations." Ruth Mackay, *"Lazy, Improvident People": Myth and Reality in the Writing of Spanish History.* (Cornell University Press: 2006), p. 37.

[15] Ibid., Book II.

[16] "In the liberal arts understanding prevails over the power of the body (*esfuerza del cuerpo*) and is worthy of glory and fame." Gaspar Gutiérrez de los Ríos, *Noticia general* (Madrid, 1600), p. 46.

[17] "y en cuento al compuesto anima racional y cuerpo todo junto, que contiene saber divino e irracional, nos encontramos con las artes que podemos llamar liberales." Ibid., p. 33.

[18] "La una porque assi como las artes dixeron librelas y dignas de hombres libres por consistir en el entendimiento, que es la parte libre e importante del hombre: assi tambien por el contrario las ma destas se dixeron seruiles, y dignas de gente sujeta, por consistis en fuercas del cuerpo." Ibid., p. 46-47.

[19] Lon Shelby, "The Geometrical Knowledge of Medieval Master Masons," *Speculum,* Vol. 47, No. 3 (July, 1972), pp. 295-421.

fundamental to most liberal occupations and to intellectual exertion, most importantly, architecture. The involvement of the hand, therefore, even if part of the body, does not prevent an art from being liberal because what counts is the extent of the intellect's involvement in the production of that art. Following this rationale, he contends that agriculture is a liberal art. As both hand and intellect comprise almost all arts, whichever has a greater "percentage" in this art or is used more, determines this art's status. We call an art "servile" when the body is more at work. With this claim, however, he states that even if in agriculture the body is more involved than the intellect, it still is considered liberal because of the effects it induces in the spirit, making it good, religious, and simple (*sencilla*). Added to this, there are two main factors that render agriculture liberal: the first is profit and economic value, which distinguishes those who are engaged in agriculture, who are not only "liberated," but "the wealthiest, most honorable, and powerful."[20] The second is agriculture's resemblance to military art: both the army and the laborers of lands make gains and use instruments. They both guard their land. Both are indispensable for life.[21] In short, because their daily activities are similar, they are "sister" arts. Building on a chain of connection among the arts, because military art had already been proven to be a liberal art, so is agriculture. However, his defense of the use of the hands as not degrading an art did not deter subsequent authors from associating the hands with the mechanical arts and crafts. What also distinguishes the liberal arts, for Ríos, is that they are effective and noble: effective, because they make new things visible through diverse forms, figures, and histories; and

[20] "Arte liberal la llama Jenofonte [Xenoforte] Porque como dice, no trabaja en ella el cuerpo servil ni apocadamente, como en las mecánicas, sino tanto cuanto es lícito a un hombre libre. Por lo cual la aparta y distingue de ellas en su Económico, persuadiendo a que la ejerciten, no solo los hombres libres, sino también los mas rícos, honrados, y poderosos. Fuera de Jenofonte la llaman también liberal otros muchos: unos por la nobleza de su granjería (profit): otros por ser propinqua al arte militar. Yo asimismo (si no me engaño) pienso que es liberal, y se puede decir por esto: porque aunque respect de su ejercicio trabaje más el cuerpo, razón en que se fundan los que la llaman mecánica: con todo habida consideración a sus efectos los tiene de liberal, pues hace los ánimos buenos, religiosos y sencillos más que algunas de la que tenemos por liberales." Ibid., p. 229.

[21] "Sin soldados no se puede de vivir; sin labradores tampoco." Ibid., p. 241.

noble, because unlike mechanical arts whose final purpose is to gain money, the fame of those who execute the liberal arts "persists for centuries."[22]

Establishing the category "Architectonic"

Gutiérrez de los Ríos's third important contribution is establishing the dependence and inner connections among the arts that aid in their classification. More specifically, he took architecture as the model, more in a metaphorical sense, for the internal construct of any liberal art. In other words, determining whether an art is liberal or not depends on whether this art is "architectonic." He derived this "architectonic" metaphor from Vitruvius's account of the formation of the architect and the need for him to be versed in mathematics, arithmetic, geometry, perspective, as well as anatomy, as he writes in Book I, Chapter I, of *De Architectura*.[23] This architectonic construct of dependence, as Gutiérrez de los Ríos states, divides the liberal arts into two kinds: "elementary" (or foundational, "*pueriles*") and "absolute" (or "supreme"). The first are the "habits of the understanding such as geometry, arithmetic, but not yet the building itself." Architecture, for example, is an absolute art because it depends for its existence on these elementary arts.[24] An art is architectonic, hence liberal and not mechanical, if

[22] "dura de unos siglos a otros y es celebrada cosa milagrosa, casi por todos los poetas en sus versos." The mechanical arts "los que las usan solo atienden a amontonar dinero, [pero en las artes liberales sus profesores tienen como] fin principal... ganar honra y fama por medio de sus obras." Ibid., p. 120.

[23] Ríos writes that he will not talk about architecture because he cannot say more than what Vitruvius had said. He follows Vitruvius in his definition of architecture as "una ciencia adornada de muchas doctrinas y varias erudiciones... [el arquitecto debe tener] una general noticia de todas las artes y ejercicios... no deve ni puede ser el Arquitecto... tan grámatico como fue Aristarco: ni musico como Aristoxeno." Thus, Ríos maintains that Vitruvius does not want the architect to be an expert in every science, but to know sufficiently about every science. Ibid., p. 33-34.

[24] The seven liberal arts are "foundational" for Ríos, applied by the youth until the age of thirty. They are "habits of understanding" ("*habitos del entendimiento*"). Opposed to these are the "absolute" or "supreme" arts. "Se aplica para toda la vida del hombre [y que son] los cimientos pero no el edificio... las obras y el remate están en la Filosofia, y en las artes supremas y absolutas. La geometría, Artimética, y Pespective, principios son que tienen marvillosos fines, en la ciencia Milita, en la Arquitectura, Pintura y en las demás artes del dibujo." ibid., p. 107.

it has under its service other subordinate (*subalternadas*) arts, from whence it takes its principles and finds an end or purpose.[25]

But were the arts, once included under the rubric of the "liberal," all of equal value? No, they varied in both their function and potential for perfection. This difference existing between the arts, it would seem, anticipated the later eighteenth-century distinction between the fine and decorative arts (as separate categories). Among these six arts of drawing that Gutiérrez de los Ríos introduces as liberal, he follows the hierarchy established by Michelangelo: architecture, painting, and sculpture are equal and preeminent. The other three arts (silversmithing, tapestry, and embroidery) "only differ in material and execution, each with a different capacity for perfection than the others." This indicated that these three arts are minor or decorative arts.[26]

Another distinction informing the status of an art, for Ríos, is the different ways of working with prime matter, stressing the imitation of nature (which he connects to drawing) and the prominence of industry. Not everyone working with silver or gold deserves the title "silversmith, but only those who draw, sculpt, carve in relief (*relievan*), in small or large [scale,] animated figures and histories, [just like] artist-sculptors."[27] The "decadence" in this art happened "because [silversmiths] only made vases, rings, and simple chains without imitating the variety of nature's objects where the liberal resides."[28] Implicit in Ríos's account is the notion of invention, which in turn is connected to his belief that art classifications are not fixed.

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[25] This is also exemplified in a hierarchy in labor: "señoras y principales que tienen bajo su jurisdiccion a otras menores, de quien se sirven para conseguir su principal fin, a imitacion de la architectura, que (segun Vitruvio) es arte Architectonica y señora, que contiene debaxo de si a otras sirvientes y menores, como son cantero carpintero, cerrajero, arbañil, y todas las demas artes estructorias, cuyos fines sirven de medio al Architecto para conseguit su principal fin, que es formar un edificio." Ibid., p. 31.

[26] "solo difieren en la material y en el ejecicio, y en ser las una más capaces y perfectas que las otras." Ibid., Book III p.112-113.

[27] "sino solo a aquellos que dibujan, esculpen y relievan en pequeño o en grande figuras e historias al vivo, de la manera que se hace por los artifices escultores." Ibid., Book III, p. 128.

[28] "se vino en quedar en hacer vasos, anillos y cadenas a la llana, sin imitar la variedad de cosas de la naturaleza en que consiste el ser liberal." He also alludes to the perfection and variety of the works in the Escorial of "cálices, custodias... como hay en el glorioso Templo de San Lorenzo el Real y los ejercicios que acerca del dibujo y platería ha tenido el Rey Nuestro Señor (Felipe III) todo el tiempo su niñez." Ibid., Book III, p. 130.

In other words, even if he already affirmed that silversmithing is a liberal art, this is only contingent on the practice of the silversmith and how he creates his objects. If the silversmith steers from the creative path of discovering the liberal by imitation of nature, and instead he merely copies vases or chains, without any intellectual activity, then his products are classified as low crafts. This is a crucial point that distinguished Ríos from later eighteenth-century reformers on the notion of imitation and the value of the copy relative to drawing, as we will discuss shortly.

Ríos made another claim regarding the supremacy of art (the work of man's intellect and hands) over nature, and of fabrication over prime matter. The silver and gold mines of New Spain and Peru could never match the power of industry.[29] He contrasted the work of nature with the works of man: marble vs. sculpture; big stones (*colosos*) vs. columns; wood vs. galleys and galleons, statues and ornament in houses; colors vs. painting.[30] In each case human efforts and skill have operated. This claim was picked up later in the eighteenth century by authors who were concerned with the role of the crafts in economic reform, such as Francisco de Bruna, Francisco Martínez de la Mata, and Pedro Rodríguez de Campomanes. Francisco de Bruna, for example, rejected Spain's dependence on gold and silver as the prime source of wealth of the country and asserted that economic progress will only be achieved through encouraging the

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[29] "Tanta es la fuerza de la industria, que no hay minas de plata, ni oro en la nueva España, o en el Perú, que se puedan igualar." He describes the arts as "some of which are necessary, others beneficial to civil life, others for ornament and pomp, others for gifts and entertainment of the lazy," however the abundance of wealth coming from working primary matter, whether in wool, silk, wood, stone, iron, among other [materials], and combining the work of genius with the work of hands." Gaspar Gutiérrez de los Ríos, "Memorial sobre la industria y artificio." Cited in José María Cervelló, *Gaspar Gutiérrez de los Ríos y su "Noticia general para la estimación de las artes"* (Madrid: Fundación de Apoyo a la Historia del Arte Hispánico, 2006), p. 268.

[30] The main trade (*oficio*) of the Reason of State demands knowing the media by which to "found, conserve, and enrich a city or rein." Spaniard and French, before Roman conquest, were not recognized in history writing because they lived together; they did not trade with other nations. When Romans and Carthaginians conquered them they found, to their surprise, castles and towers, and an organized republic. This living order was maintained until the Goths ruined everything. With the conquest of the Arabs everything was lost of this policy. They could not renew the crafts and the arts until the departure of the Arabs: "no pudieron tener lugar de procurar que hubiese artifices, hasta que echados los moros de España, por los Reyes Católicos don Fernando y doña Isabel." Ibid., 167.

establishment of new industries and supporting commerce with foreign countries. Bruna described the arts as the "prime nerve for the wealth of the kingdom and its population."[31]

From Mechanical to Noble and Liberal

Ríos's work was a weapon in the unending struggle among professionals and crafts people for prestige. Besides being an invaluable source for painters and sculptors of the seventeenth and eighteenth centuries (whose repercussions will be our focus in Chapter Two), his book also had a profound impact on disciplines outside the domain of art and architecture, and aided the ongoing preoccupation with arts classification. Many subsequent authors cited it, defending the status of their art, by illustrating its architectonic character and its internal reliance on the mathematical sciences and on drawing. During the seventeenth and the early eighteenth centuries, many works from all fields and occupations appeared, where the title of the work itself declared that the task of the book was to demonstrate the nobility and liberty of the art discussed. An elevation in status, if achieved, of course had important consequences in the social, economic, and political arenas. In the field of architecture it meant acknowledging the equal value of the work of artisans and craftsmen: they would draw like artists and architects; they knew mathematics and geometry just like them.

A good example of this genre of writing is *Crisol historico-politico de la antiguedad, nobleza y estimacion liberal del arte insigne de plateros* (*Historico-Political Melting Pot of Antiquity, Nobility, and Liberal Esteem of the Distinguished Art of Silversmiths,* Madrid, 1700). Written by the "Congregación de San Eloy de Artífices Plateros" (Congregation of Saint Eloy of Silversmiths Artists), the book's main purpose is to argue that the art of silversmithing is a

[31] Francisco de Bruna " Reflexiones sobre las Artes mecánicas," Pedro Rodríguez Campomanes *Apendice a la educacion popular*, vol. 3 (Madrid, 1776), p. 297.

liberal and noble art. It does that first by arguing that his relies on the mathematical arts because its practice (and final form) depends on number, weight, and measurement, which perfect things require.[32] Second, the book establishes a relationship between silversmithing and painting (imitation of nature): "silversmithing is a beautiful competition with the same nature; painters imitate nature with the shadows of color, silversmiths with lights of stones and metals: those highlight their skill with the darkness of shadows, these glaze their pieces with the brightness of fire. Indeed, these two arts are daughters of the same study, and are equal in their principle of science."[33] From these two demonstrations the book deduces the architectonic character of silversmithing: "and finally, that if Painting is a liberal art [because it "subordinates"] Mathematics, Silversmithing has the same valuation, for having the same principles."[34] Through this affinity with painting, the author claims that just as the art of drawing is necessary for painting, it is also necessary for an excellent silversmith.[35] The book concludes that "with solid fundamentals ... the art of silversmithing is liberal and noble...[It] also conforms to the customs in our Spain," being a profession that the kings of Spain always honored.[36]

A striking instance of the extent of the desire to defend the liberty and nobility of an art is *Nobleza de la Espada* (*Nobility of the Sword*), a treatise on the "art of fencing—a pursuit whose

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[32] "de todo lo referido se deduce, que la forma del Arte de la Plateria es Nobilissima, pues está la consistencia en el numero, peso, y medida que requeire en las cosas perfectas." Congregación de San Eloy de Artífices Plateros, *Crisol historico-politico de la antiguedad, nobleza y estimacion liberal del arte insigne de plateros* (Madrid, 1700), p. 5.
[33] "Es la Plateria una competencia preciosa de la misma naturaleza; A esta la imitan los Pintores con sombras del color; los Plateros con luzes de piedras, y metal: aquellos realzan sus primores con lo apagado de los obscuros, estos esmaltan sus piezas con lo subido del fuego. Verdaderamente, que estas dos Artes son hijas de un mismo estudio, y las mas iguales en el principio de la ciencia." Ibid.
[34] "y finalmente, que si la Pintura es Arte liberal por subalterno de la Mathamticas, la Plateria tiene la propia estimacion, por arreglarse a sus mismos principios." Ibid., p. 9.
[35] "tan necesario es el estudio de debujo para ser excelente Platero, como para ser perfecto Pintor, de suerte." Ibid.
[36] "con fundamentos solidos, y autoridades genuinas, que la Plateria es arte liberal, y Noble: aora concluirémos, manifestando, que tambien, conforme a la costumbre en nuestra España." Ibid.
"ya hemos visto la Nobleza del Arte de la Platería, igualmente pribada por todas las razones que enseña la rigurosa, y verdadera Philosophia, pues se material es la mas preciosa, su forma, la mas liberal, su obras, las mas sagradas, y Regias, su fin, el mas fiel, y necesario y ultimamente sus Professores, los mas excelentes, y celebres en los Annales de el Mundo y fama Arquitectonica de los Virtuosos, y aplicados." Ibid.

status is no longer debated by scholars, who would likely consider it a "sport."[37] Written in Madrid in 1705 by marqués Francisco Lorenz de Rada,[38] the treatise is composed of three thick books, of which the first was printed at the Royal Press. I attempt here to briefly demonstrate how drawing served as a bridge between intoxication with rationality and the obsession with taxonomy. As we shall see, there was a desire to rigorously classify all activities of human life, even when the art (in this case, fencing) relied primarily in its execution on bodily movements. Fencing is rationalized based on the claim that its movements are not mechanical, even though associated with the body, but liberal because these movements can be documented in drawing and adhere to geometric and mathematically calculated rules (figs. 1-6).

Rada's undertaking throughout the book is to prove that the "art of fencing" is both a science and an art, and like every art or science, to be perfected, it should be "reduced into a method and demonstration."[39] Therefore, he follows Gutiérrez de los Ríos and shows the "architectonic" character of fencing, which like military art, Rada claims, depends on a unified collection of precepts, maxims, and a method "[that] could be described as a science... that has the discipline of mathematics as subordinate ....[Fencing is] a demonstrable science and most noble due to its subject (the man with the sword in hand) who is actually a mathematician."[40] For this reason Rada "followed the infallible means of mathematical demonstrations."[41] In fact,

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[37] "Destreza de Espada," sword-play (swordsmanship), or Fencing. The word "Destreza" means "skill" and has the same root as "dexterity" in English. It became synonymous with swordmanship, an art evolving in Spain in the sixteenth century.

[38] The book introduces him in the title as "Cavallero del orden de Santiago, Marqués de las Torres de Rada, Canciller Mayor, y Registrador Perpetuo de los Reynos de la Nueva España."

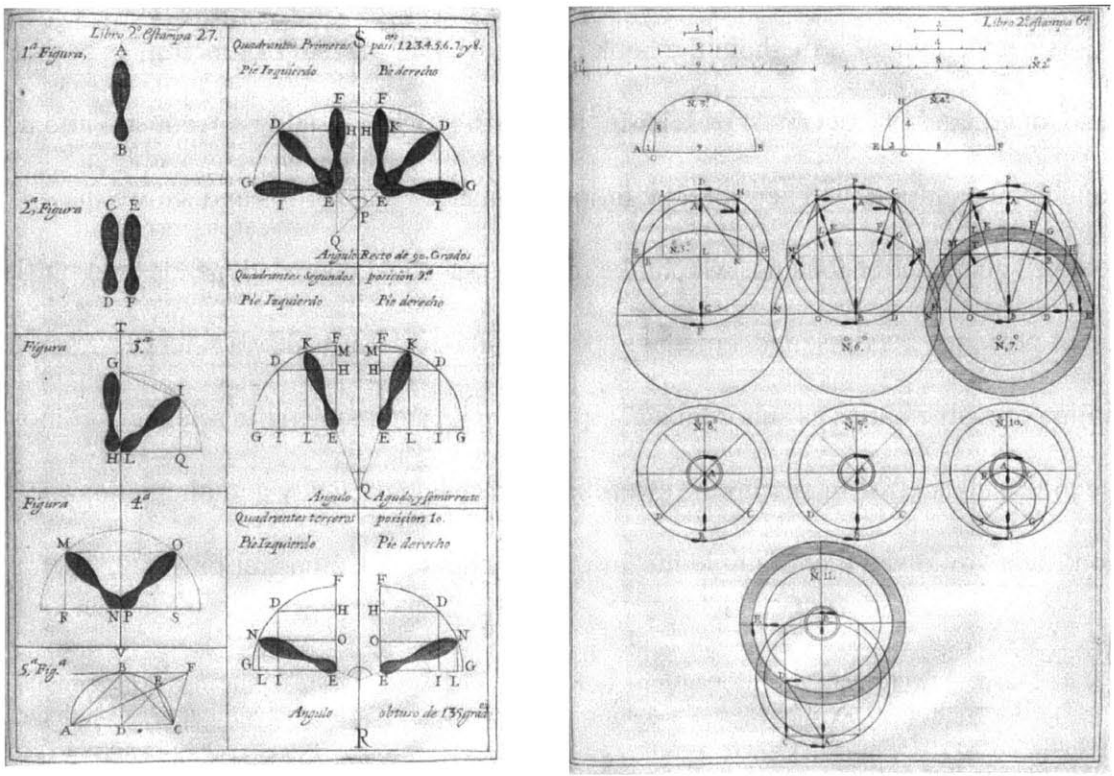
[39] He follows Virgil: "las han reducido á methodo, y demonstracion: para que sin las nieblas de las afectaciones, se gozen con provecho comun, y publico." Francisco Lorenz de Rada, "Al Que Leyere Salud y Felicidad," *Nobleza de la Espada* (Madrid, 1705), Book I, p. 2.

[40] "con este conocimiento se puede calificar por Ciencia la Destreza de la Espada (acompañada ó sola) en que son subalternas las disciplinas de mathematicas, assi como en la Philosophia: de donde resulta, que la Destreza es Ciencia demonstrable, y nobilissima por el sugeto (que es el hombre con la Espada en la mano) a por el cierto modo de probar, que se mathematico." Ibid.

[41] "sigo el medio infalible de las demonstractiones mathematicas, assi en la composicion, como en la resolucion, que son los dos polos, ó basis de que estrivan las Ciencias." Ibid.

major parts of the book resemble a treatise on geometry, where Rada defines geometry's basic elements from point and line to three-dimensional solids, to quantify the movement created by the body, like the cylinder (being imaginatively formed as a rotated rectangle).[42] This account of geometry is a prelude for his total geometrization of fencing. In fact, he establishes fencing as an independent category, just like geometry.

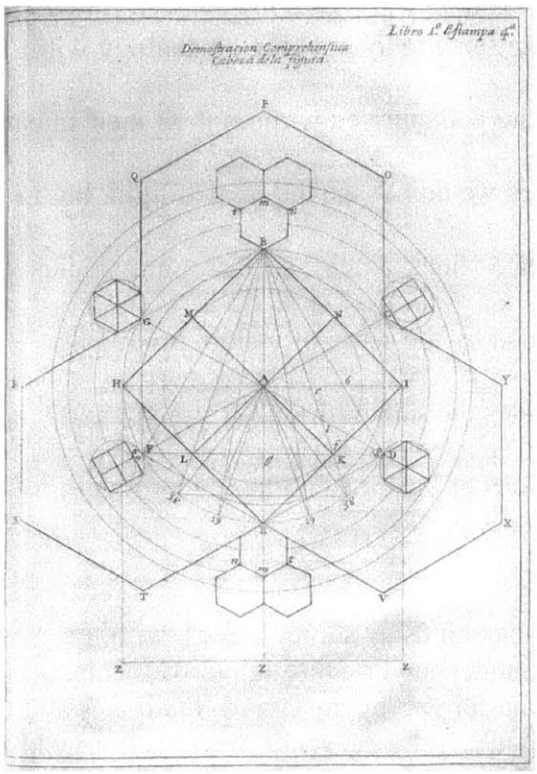
> The fencing-skill is brought about by way of straight and curved movements of the body and the arm with the sword, and those cannot be formed without the kinds of quantities, lines, angles, surfaces, and body. From this follows that Geometry and Fencing accept demonstrable and true means: if in geometry they are infallible, they are also infallible in the Fencing."[43]

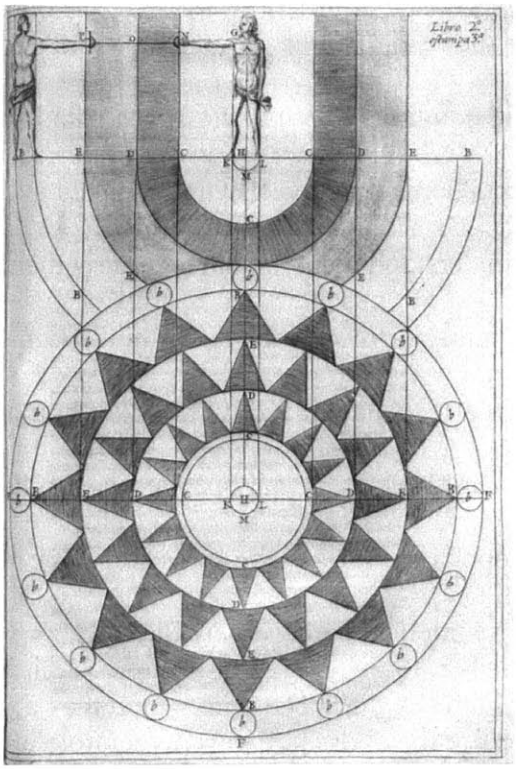


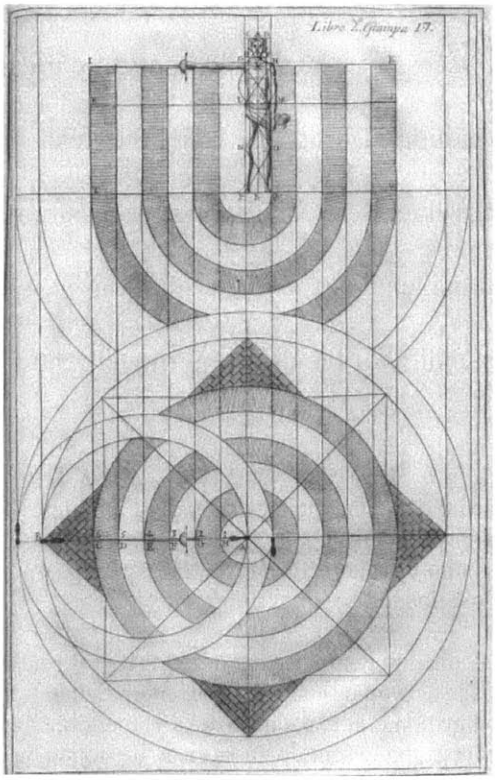
Figures 1, 2. Marqués Francisco Lorenz de Rada, Book II, engraving 7 (left); Book II, engraving 64 (right), *Nobleza de la Espada* (Madrid, 1705).

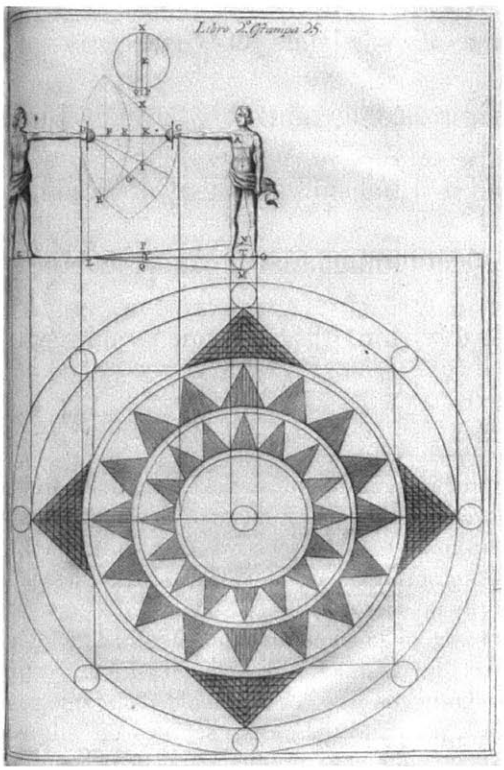
[42] "esphera... que... es cuerpo solido contenido de una superficie, en cuya medio está un punto que se nombra centro; de el qual todas las lineas tiradas rectamente á la circunferencia son iguales." Ibid.

[43] "la Destreza obrase por médio de movimientos rectos, y curvos, con el cuerpo, con el braço, y con la Espada; y estos no pueden formarse sin lase species de la quantidad, linea, angulo, superficie, y cuerpo. Luego suguese que la Geometria, y la Destreza, admiten unos medios demonstrables, y ciertos y si en la Geometria son infalibles, tambien lo son en la Destreza de la Espada, acompañada, ó sola." Ibid., p. 3.









Figures 3, 4, 5, 6. Marqués Francisco Lorenz de Rada, Book I, engraving 4 (upper left); Book II, engraving 17 (upper right); Book II, engraving 25 (bottom left); Book II engraving 3 (bottom right), *Nobleza de la Espada* (Madrid, 1705).

But how are bodily movements geometrized? Based on what logic? Rada hoped to convince the readers of his rationale behind geometrizing fencing by drawing an analogy with optics and painting, which like other arts and sciences, are geometrized without their mechanism or elements being perceived with the naked eye. In optics we do not see the rays of light, but in order to understand them we have to draw them and create "lines, angles, surfaces, and bodies metaphysically formed in the air without being understood by the sense of vision, producing marvelous effects in perspective... [P]ainting demonstrates the same; [through] straight and curved lines, transparent and opaque, [it] produces sections of imagined bodies according to visual proportions..."[44] In the same way, he continues,

> The intellect perceives by the sense organs or understands by some analogy with the visible. In Fencing, the same mechanism works, understanding through movements, of which (by the speed with which they are made and formed by the sword) the traces and where they pass [are not] perceptible or understood [...] by the sense of sight, from which the intellect translates (its data?).[45]

This absence of visual data (or whatever is not physically accessible) he supplements "by means of the metaphysical imagination, through similarity of pyramidal, cylindrical, and spherical figures, and by [the] similarity they entertain with their movements ... facilitating [accessibility to] the intellect through mathematical demonstrations that make physical representations perceptible to vision, [thereby] one could reach an understanding of the different movements

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[44] "A mayor inteligencia, sea primer exemplo de la optica, que por medio de la imaginacion de lineas, angulos, superficies, y cuerpos formados metaphysicamente en el ayre, sin comprehenderse por le sentido visual, produce efectos maravillosos en la perspectiva... como tambien lo demuestra la pintura; con el valor de lineas rectas, y curvas, claros, y obscuros, producidos de los perfiles de los cuerpos imaginados, segun proporciones visuals, colocandolas de tal suerte." Ibid., p. 4.

[45] "Compruebase con la comun maxima de Philosophia que percibe el entendimiento por los organos de los sentidos, ó entiende por alguna analogia de lo visible. En la Destreza de la Espada al propio modo se obra, entendiendo por medio de movimientos, que por la velocidad con que se hazen, y forman, como la Espada no dexa perceptible á la vista el vestigio por donde passa, por ser muy dificultoso comprehenderse con el sentido de la vista, de donde ha de trasladarse el entendimiento: porque no puede proporcionarse con distincion visible aquello mesmo, que physicamente se obra, y se vé á causa de lo acolorado (acelerado?) de los movimientos de la Espada, como se experimenta en lo riguroso del combate, quanto al acto. Y por consequencia, tampoco el entendimiento puede comprehender, ni conceptuar formado, de donde resulte evidencia en lo visible." Ibid., p. 4.

they make and form with the sword: therefore regulating perfectly the defense and offense of man, which is the object of this science."[46]

Although we often notice a lineage between Spanish and French works—the latter more often being the source of inspiration and influence for the former—it is interesting that in this case, instead, fencing was an art developed in Spain and disseminated into Europe.[47] Rada alerts us to the national differences in the rules of Fencing: Spain's sword-play is portrayed differently in the French and Northern European authors, "who each applied the form and use of the Sword according to his Nation." He mentions the work of Gerard Thibaut, *Academie l'espée* (Paris, 1628), which demonstrates a completely different visual representation of the play (figs. 7, 8). Rada writes that "Gerardo Tibaut [is] a modern author, native of Amberes, whose book is very large with many engravings, very expensive, which even if it would not have anything [to present] but its ornament, is still worthy of great esteem, owing a lot to those who went sleepless to communicate the merit of their work [on] a noble instrument, customary and necessary for every honorable man."[48]

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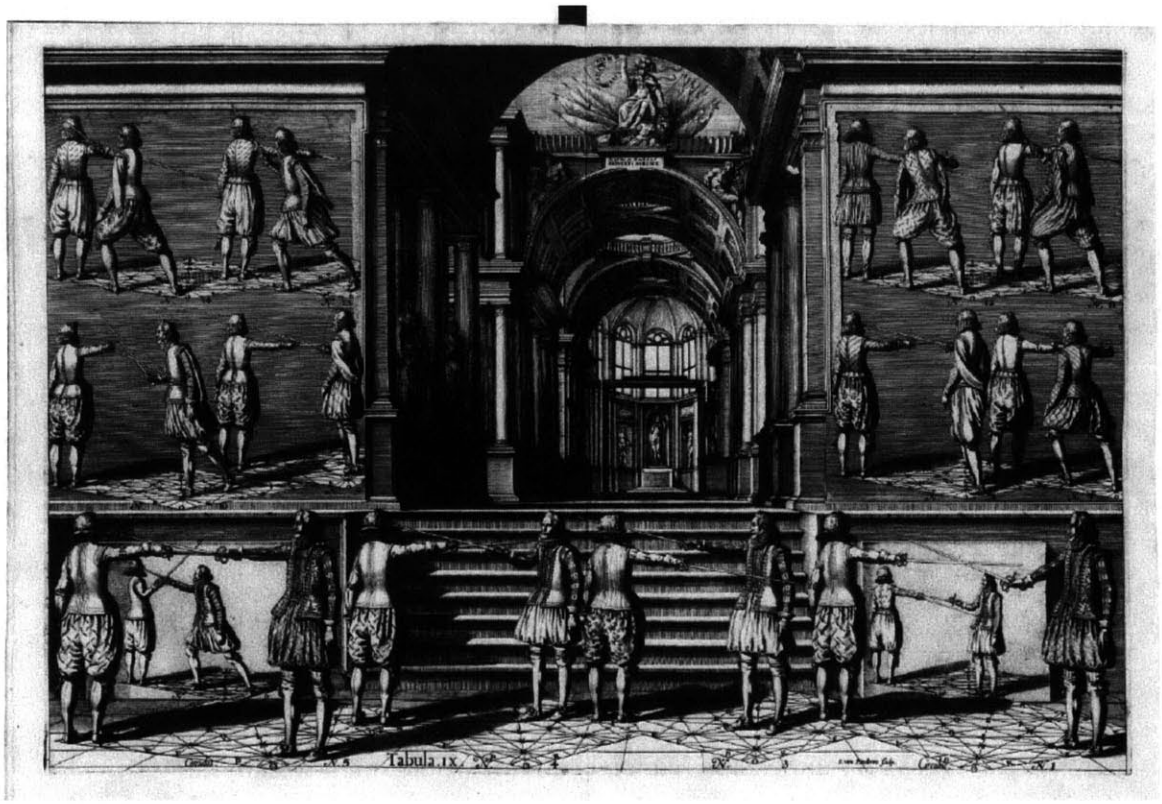
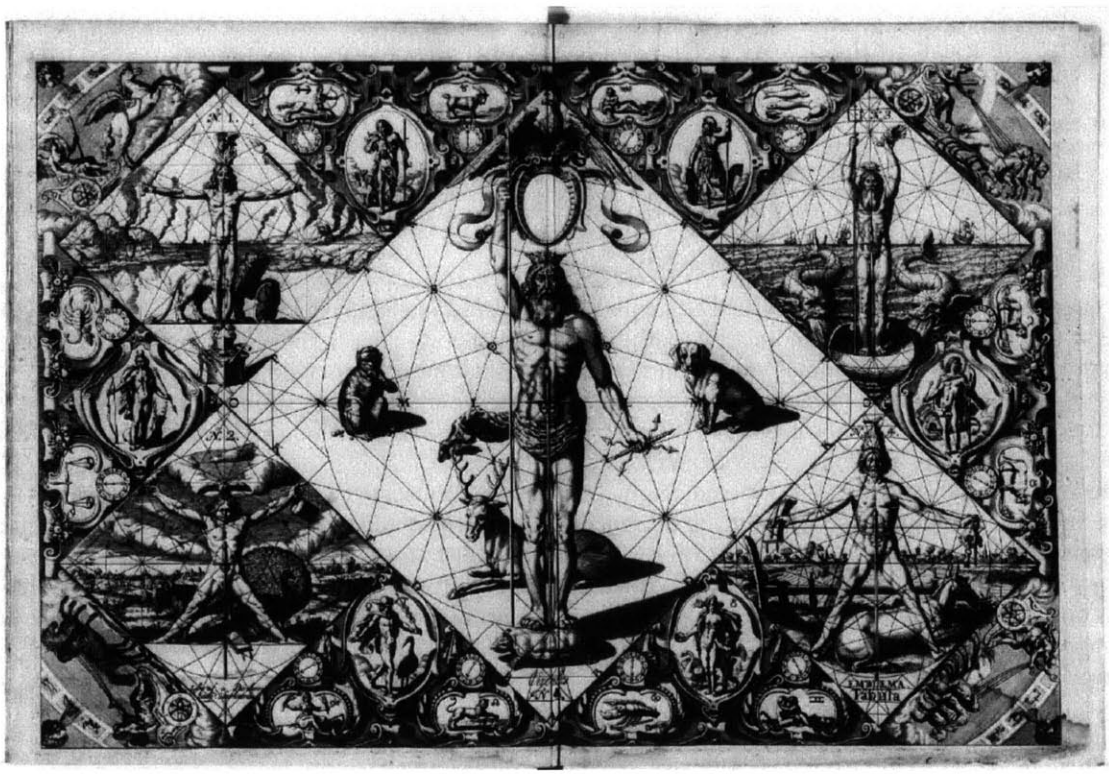
[46] "Pero esto que es tan inaccesible en lo physico, se supple por el medio de la imaginacion metaphysica, de la semejança de las figuras pyramidales cilindricas, y esphericas, ó sus porciones; por la similitud que tienen con los movimientos propios, y contrarios, por mas vehementes, y acelerados que sean, facilitando la inteligencia con demonstraciones mathematicas, que hagan representacion physica, perceptible á la vista. Con que pueden llegar á entender las diferencias de movimientos que se hazen, y forman con la Espada: regulando assi mas perfectamente la defense y ofensa en el hombre, que es el objeto de esta Ciencia." Ibid. p. 4.

[47] Rada acknowledges earlier Spanish works on Fencing written in the seventeenth century on the topic, such as Jerónimo de Carranza's (Comendador Geronimo de Carrançca) *De la Philosophia de las Armas* (1605) and Luis Pacheco de Navaez's *Libro de las Grandezas de la Espada* (Madrid, 1600). If we examine these earlier works, we understand the difference between the two genres of writing as their objective differs: De Rada aspires to prove the nobility of his art, rather than merely state its rules and document them in a text. This difference is evident in the ample geometric drawings in Rada's books. See also *Compendio de los fundamentos de la verdadera destreza y filosofía de las armas* by Francisco Antonio de Ettenhard. See on the Turkish fencing Narvaez write on "El Turco se afirma y como se ha de herir," discussing Turkish fencing. *Libro de las Grandezas de la Espada* (Madrid, 1600), p. 236.

[48] "Gerardo Tibaut moderno Autor, natural de Amberes, cuyo Libro es tan grande, y con tantas Estampas, y tan costosas, que quando no tuviera mas que el ornato dellas, merece digna estimacion, debiendose mucho á todos los que se han desvelado en comunicar el fruto de sus trabajos, para hallar la perfecta Destreza de la Espada; noble instrumento, frequente y necessario á todo hombre honroso." Ibid., Book. I, p. 2.





Figures 7, 8. Gérard Thibaut, "Tabula IX" (top); "Tabula I" (bottom), *Academie l'espée* (Paris, 1628).

Tibaut's treatise situates the fencing men in perspectival views formed by an architectural setting of arcades and walls that have vignettes, with representations of men practicing fencing. These representations, with their excess of ornament, go beyond the mere practicality and demonstration of rules that Rada sought. Rada praises Tibaut's use of ornament—the perspectival views, the vignettes, the dress and ornament of the swords. Even when Rada abstains from using ornament in his treatise, geometrization being his objective, the human body is replaced by notation of footsteps and lines showing traces of movements and fencing strategies. Nevertheless, one could argue that through these imagined geometrized body movements, he creates very precise drawings of ornamental patterns.

If we are to accept the arguments of the proponents of silversmithing and fencing, the architectonic character of these pursuits demonstrates that their arts are both liberal and scientific. Architecture is recruited as a pattern for military art in a series of drawings of cannons held in the Archivo de Simancas, produced in the first half of the eighteenth century. Here, the criterion "architectonic" is satisfied: one art is subordinated to or dependent on another art. The outcome is a literal imitation of the architectural orders, their ornament and proportions, similar to what we find in architectural treatises. For example, consider this drawing (fig. 9), captioned thus: "The present drawing (*deseño*) with its explanation demonstrates the proportions, moldings, and ornament, which must be applied in pieces of bronze to the five regular sizes of 24, 16, 12, 8, and 4 in order to serve the rules … in the Foundation of Barcelona and Seville from the year 1742 onward."[49] It shows five cannons laid out vertically, like architectural columns, similar to those in the treatises of Serlio and Vignola. This drawing exemplifies the growing

[49] "El presente deseño con su explicación demuestra todas la proporciones molduras y adornos, que deben concurrir en la Piezas a Bronce a los cinco calibres regulares como son de 24. 16. 12. 8. Y 4 para que sirva a reglas ___ en las Fundaciones a Barcelona y Sevilla desde el año 1742 en adelante." Archivo General de Simancas MP and D, XXV-83.

interdependence that was growing between the arts that presented themselves as liberal. In particular, this architectonic relativity between the arts made architecture a field upon which the arts were encroaching.

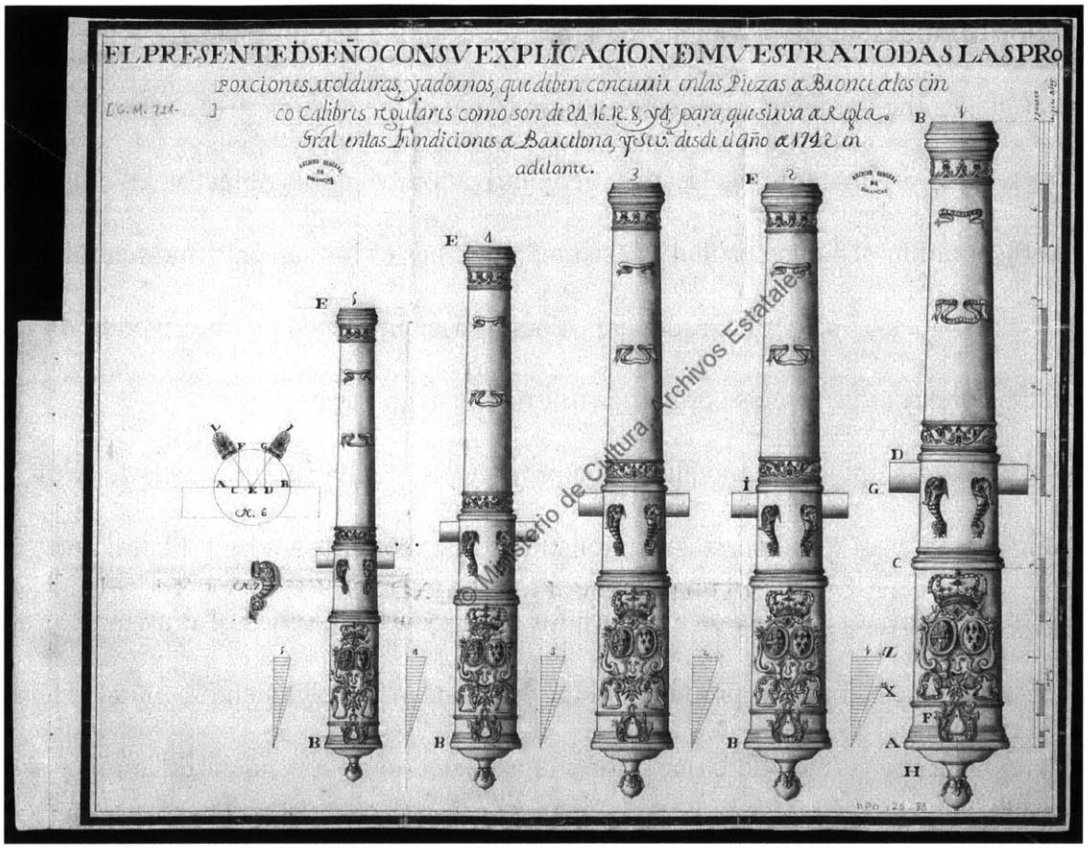


Figure 9. Drawing of Cannons titled: "Diseño de cinco cañones de bronce de a 24, 16, 12, 8 y 4 y de las proporciones que deben tener," 1741.

As we shall see in Chapter II, the guardians of the architectural profession organized with the establishment of the Academy in Madrid did not welcome this encroachment, and started to reassess their profession from within, which entailed establishing boundaries with the other arts, including the fine arts (painting and sculpture). The purity sought by the Academy was mirrored

in its attacks on the guilds and attempts to control all architectural practice. This occurred simultaneously with their participation in the resurgence of classical art and architecture.

The Economic Societies and the Revival of Gutiérrez de los Ríos's Theories

Seeing Spain's economy falling behind that of Northern Europe, the Spanish crown and its policymakers came to recognize Spain's crafts and mechanical arts as economic assets. This recognition led to the institutionalization of the crafts, by a reform policy that challenged the authority of the guilds over the mechanical arts, and modernized the education of craftsmen through organized instruction. This effort also sought to institutionalize drawing outside of the academy's boundaries. The "Economic Societies" (*Sociedades economicas de los amigos del país*) were a new type of institution that emerged in the 1760s. Their number reached sixty by 1780. These societies, springing up in Madrid, Seville, Granada, Zaragoza, Valencia and elsewhere, were meant to promote prosperity by improving the education of artisans, who could thereby combine new science and technology with craft traditions. They were established through both private and public initiatives, involving state patronage.[50] In most cases, these societies began as an informal assembly of noblemen and clergymen to study history, geography, mathematics, and physics, after which they petitioned to the Council of Castile for official recognition. They discussed issues of culture relative to science and economics. The Economic Society of the Basque was the first to be established in 1765. It consisted of noblemen who

[50] See Manuel Dánvila y Collado, *Reinado de Carlos III* (Madrid: Real Academia de la Historia, 1894), vol. 6, p. 401. No Economic Society was established in Barcelona, where the guilds were both powerful and productive. As a symptom of their decline in the rest of Spain, in 1786, Jovellanos wrote an essay addressing these Societies' decadence. See "Dictamen," in Gaspar Melchor de Jovellanos, *Obras,* vol. 2, ed. Cándido Nocedal, Biblioteca de Autores Españoles, vol. 50 (Madrid, 1859), 57. Juan Sempere y Guarinos, who emphatically supported these societies, voiced his disappointment at their functioning. See *Ensayo de una biblioteca española de los mejores escritores del reynado de Carlos III,* vol. 5, p. 135-151).

petitioned the king to create this society with the claim that it will "cultivate the inclination and taste of the Basque Nation toward the Sciences, Letters, and Arts; correct and polish its customs; abolish idleness and ignorance and their calamitous consequences; and solidify the union of the three Basque provinces of Alava, Vizcaya, and Guipúzcoa."[51] Madrid's Economic Society was established in 1775 by Charles III after the initiative of Count Pedro Rodríguez de Campomanes (1723-1802), previously the king's attorney general or representative (*fiscal*) at the Council of Castile (today the Society's activities have been renewed). The statutes of the Society in Madrid state first that it "consists of an indeterminate number of individuals. Its inauguration's goal is to confer and produce memoranda in order to improve popular industry, the crafts, and the secrets of the arts."[52] These discourses would entail news regarding progress and would be communicated to the public in the "Actas de la Sociedad."[53] They would address agriculture, industry, and the arts, with a special emphasis on the "design of machines," as well as "instruments of the arts, furniture, plants, and minerals." The governing board consisted of a director, censor, secretary, accountant, and treasurer. They gathered in a Junta Ordinaria once a week.[54] The director had the most important post, and "preferably he should have acquired sufficient learning on the means by which the arts and industry are advanced."[55]

The Economic Societies began to found "Schools of Drawing," which taught "design" through drawing. While the Fine Arts Academy in Madrid was concerned only with painting, sculpture, and architecture, the Economic Societies challenged the exclusion of the crafts and

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[51] Jean Sarrailh, *La España Ilustrada de la segunda mitad del siglo XVIII* (Mexico City: Fondo de Cultura Económica, 1985), p. 242.

[52] "constará de un número indeterminado de individuos...su instituto es conferir y producir las memorias para mejorar la Industria popular, y los Oficios, los secretos de la Artes, las máquinas para facilitar las maniobras, y auxiliary la enseñasa." Published in *Aparato a la industria popular del Urgel* (Barcelona, 1777), p. XII.

[53] Ibid., p. XV.

[54] Ibid., p. XIX, titulo IV.

[55] "debe recaer con preferencia en persona que hay adquirido instruccion suficiente de los medios con que se adelantan la Artes, y la Industria." Ibid., p. XX, titulo V.

their classification as "low," tying them to science and drawing and emphasizing their economic value.

Count Pedro Rodríguez de Campomanes was one of the most influential and passionate advocates of the reform of both artisanship and guild structure. He published intensively on artisan activity in his two major works on labor: *Discurso sobre el fomento de la industria popular* (Madrid, 1774) and *Discurso sobre la educación popular de los artesanos y su fomento* (Madrid, 1775). His aspirations for a profound change in administering the crafts was met with resistance from the guilds. His viewpoint also clashed with the low esteem in which crafts were held in Spain.[56] Most Spanish ministers and advisors called for reform of the guild system. Perhaps the criticism against the guilds is best captured by the words of the royal advisor Bernardo Ward, who in 1762 charged that "The spirit that generally prevails in these bodies is that of vanity, idleness, and monopoly; they also are against liberty."[57] The most vocal proponent of the abolition of the guilds was Gaspar Melchor de Jovellanos (1744-1811). Jovellanos shared Adam Smith's views that the guilds imposed on artisans' freedom and their monopoly raised the prices of manufactures, but unlike Smith, he thought the state should have some control over the guilds.[58] The Economic Societies, whose instigator was Campomanes, were viewed as a replacement of the guilds, which were not formally abolished until 1790.

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[56] Campomanes supported the manufacture of luxury commodities: "las de puro ornato, aunque parezcan menos necesarias; cuando se hallan establecidas en un pais, prueban su aplicación y instrucción."
"el adorno de las habitaciones de los hombres; sus diversiones, vestidos y muebles, de que usan á pie á caballo, á en sus carrozas, suministran á las artes diferentes ocupaciones." Pedro Rodríguez de Campomanes, *Discurso sobre el fomento de la industria popular (*Madrid,1774), Introduction, p. 16.

[57] Bernardo Ward, *Proyecto económico en que se proponen varias providencias, dirigidas a promover los intereses de España con los medios y fondos necesarios para su plantificación* (1762), p. 190-191. This book was published posthumously in Madrid in 1779. Ward was also amember of the Council of Castille and the Junta de Comercio.

[58] Ruth Mackay *"Lazy, Improvident People": Myth and Reality in the Writing of Spanish History.* (Cornell University Press: 2006), p. 117.

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REAL CEDULA

DE S. M.

Y SEÑORES DEL CONSEJO,

POR LA QUAL SE DECLARA, QUE NO SOLO el Oficio de Curtidor, sino tambien los demas Artes y Oficios de Herrero, Sastre, Zapatero, Carpintero y otros á este modo, son honestos y honrados; y que el uso de ellos no envilece la familia, ni la persona del que los exerce, ni la inhabilita para obtener los empléos municipales de la República en que estén avecindados los Artesanos ó Menestrales que los exerciten; con lo demás que se expresa.

AÑO 1783.

EN MADRID:

En la Imprenta de Don Pedro Marin.

Figure 10. Real Cédula, *Real Cédula de S.M. y señores del Consejo* (Madrid, 1783).

For the purpose of this chapter, I will focus on the section on drawing, "*El dibuxo*," of the *Educación popular* to show first that in order to convince the nation of the importance of the crafts, the issue of high and low arts was brought to the center of the reformers' argument; and second, to illustrate the ways the discourse on the importance of drawing for the artisan was incorporated by the Economic Society. At the outset of his *Educación popular* Campomanes criticizes the dictionary of the Academia Española that classifies crafts, like shoemakers and blacksmiths, as low and differentiates between mechanical and liberal.[59]

> It has been a great error in politics to question the preference in the arts and crafts, distinguishing some as *liberal* and others as *mechanical.* From here stemmed another distinction of low and humble crafts; calling some noble. These arbitrary and badly

[59] The dictionary of the Academia Española "dice que se aplica regularmente á los oficios baxos de la Republica, como zapateros herreros y otros: y que se diferencian los oficios en mecánicos y Artes liberales." Campomanes, *Discurso sobre la educación popular de los artesanos y su fomento* (Madrid, 1775). p. 85.

> assimilated denominations have stimulated repetitive emulations and urged many to abandon the arts or dissuade their children from continuing practicing them, contrary to the general core idea that crafts are indirectly hereditary in families that love and perfect these crafts.[60]

Already by 1783 a Royal Decree stated that "not only the craft of the Tanner, but also of the other arts and crafts of the Blacksmith, Tailor, Shoemaker, Carpenter and others of this kind, are honest and honorable; and that their use is not degrading to the family, nor to the person who practices it, nor does it inhibit [him] of obtaining a municipal employment in the Republic."[61] (fig. 10).

Campomanes mentions the work of Juan de Burton's *Discursos á favor de la pintura* (Madrid 1626), who based his work on Rios's *Noticia.* As Campomanes values both works, especially the "excellent and good rationale by which drawing was recommended," he thinks they fell into the error of an exaggerated praise for the three noble arts. Campomanes agrees that painting, architecture, and sculpture are ingenious, noble, and useful arts exercised by wise men, versed in the learning of antiquity, but contends that they should not be honored at the expense of the other arts. Rios's erudite work is of great value but, for Campomanes, it nonetheless bears contradictions. Rios first declares that "the decline in the arts and crafts is due to the little esteem they have." But he indirectly "supports the vision of the vulgar," degrading the crafts when he says: "Ultimately, those who work leave their arts and crafts; for being poorly esteemed by the

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[60] As Campomanes declared, "No basta establecer las artes y oficios de qualquier especie en un país, é poseerles de largo tiempo. Es menester irles perfecionando continuamente á competencia de las otras naciones...Ha sido grande error en politica cuestiones sobre la preferencia de las artes, y de oficios: distinguiendo á unos con el citado de *liberales,* y á otros con el de *mecánicos.* De ahí se pasó á hacer otra distinction de oficios baxos, y humildes; titulando á algunos de nobles. Estas denominaciones voluntarias y mal digeridas, han excitado repetidas emulaciones y han sido parte, para que muchos abandonasen las Artes ó apartasen á sus hijos de continuar en ellas contra otra máxima general de hacer indirectamente hereditarios los oficios en las familias para que los amen y perfeccionen." Ibid., p. 36.

[61] "Real Cédula de S.M. y señores del Consejo por la qual se declara que no solo el oficio de Curtidor, sino tambien los demas Artes y Oficios de Herrero, Sastre, Zapatero, Carpintero y otros á este modo, son honestos y honrados; y que el uso de ellos no envilece la familia, ni la persona del que exerce, ni la inhabilita para obtener los empléos municipales de la República." *Real Cédula de S.M. y señores del Consejo* (Madrid, 1783).

idle and less virtuous."[62] This error, for Campomanes, stems from a "hateful system" that limits the liberal and noble arts to only three (curiously, Campomanes does not mention the other crafts Ríos designated as liberal arts). Despite this contradiction, Ríos's major contribution, for Campomanes, is advancing the idea that "drawing is what gives ingenuity and appreciation to the arts and crafts: whether practical or speculative." Campomanes stresses that Ríos in Book IV rectified his error (classification) when he talked about labor without "excluding any class."[63]

Campomanes's "intention in this discourse is to stimulate those who practice the arts and crafts in Spain" to use drawing's rules, symmetry, and proportions. Despite his rejection of classifications, Campomanes states that "if we exclude the crafts that deal with ordinary sustenance of men, with transport, shepherding flocks, or working the soil, others in general need art and rule."[64] Campomanes goes back to consult with various authors on the difference between the arts and crafts; it is here that his confusion is mostly manifested. He first states that we should not confuse an art, which comprises rules, with a craft. Following Gutierrez de los Ríos, he distinguishes between crafts and mechanical arts on the basis that "the mechanical arts are not known naturally, for they require time and learning to understand their rules and precepts; the more the difficulty, the more it takes to master them, the less they are considered mechanical."[65] This assumes a correspondence between the difficulty of the art and its status as

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[62] "Finalmente los que trabajan dejan sus artes y oficios; por verse tenidos en poco de los ociosos, y no tan virtuosos, como ellos." "Pues en el fin atribuye *Rios* con fundamento el atraso de las artes y oficios á la poca estimacion, que se hacía yá de ellos á principios del siglos pasado en nuestra España; y cae en el propio error indirectamente, apoyando la vision de la opinion vulgar." Ibid., p. 41.

[63] Gaspar Gutiérrez de los Ríos, *Noticia general para la estimación de las artes* (Madrid, 1600), Book IV, p. 290.

[64] "Si exceptuan los oficios, que se ocupan en el sustento ordinario de los hombres, en los acarreos, en apacentar los ganados, y labrar la tierra, los demas por lo comun requieren arte y regla." Pedro Rodríguez de Campomanes, *Discurso sobre la educación popular de los artesanos y su fomento* (Madrid, 1775), p. 97. Campomanes mentions that Marciano adds, servant, laborer, carrier, and consruction worker (*criado, jornalero, arriero, peon de albañil*).

[65] "las artes mecánicas no se saben naturalmente, porque requieren tiempo y dotrina, para aprender sus reglas y preceptos; y quanto mas dificultosas, y mas tiempo han menester, tanto menos tienen de mecánicas." Ibid., p. 98. Quoted from Roís's *Noticia,* p. 26.

"liberal."[66] Campomanes confesses, though, that although he does not agree with Ríos's "deductions," he agrees with him when he says that "the crafts do not need rules, enough for them is pure imitation, natural disposition (*disposicion*) and power (*fuerza*)."[67] "It is true," he continues, that "all arts are crafts, but not the opposite." Campomanes, therefore, "understands the 'arts' as those that need rules"; therefore, he wants to promote the idea of the "utility and necessity of drawing" to artisans' work (the arts).[68] Clearly, Campomanes considers the crafts to be of lesser value than the arts, which have rules.

Campomanes's objective therefore was to "demonstrate [the importance of drawing based on] the authority of our predecessors [*mayores*] and the rationale with which they founded the importance of drawing for the arts."[69] So far we think that he does not include the crafts among the arts that need drawing because they lack rules, but then he writes that he aims to show that drawing will revive the role of crafts in Spain:

> [I hope] my *discurso* will [urge] people to follow the path paved by the academy of arts. On these grounds I propose teaching drawing in [the economic societies as] obligatory to improve the nation. [T]hrough the assistance/auxiliary [of drawing], *crafts* will recover their splendor, and the public inside Spain will have people who would make all things they will need according to their taste and rule, which they now lack, not being able to give reason to their operations, not even copy and imitate with accuracy pieces of their respective art."[70]

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[66] Campomanes stops echoing Ríos. But Ríos actually followed this sentence by claiming that it only takes a person half an hour to understand the cafts.

[67] "los oficios no necesitan de reglas, y les basta la pura imitacion, dispocision natural y fierza." Campomanes, *Discurso sobre la educación popular* (Madrid, 1775), p. 98.

[68] He quotes Pablo de Cespedes who 200 years ago explained the excellence and necessity of design/drawing (*diseño*), asserting that what agrees with the principle of noble art is drawing—which only represents it with lively lines.

[69] "Creo haber demonstrado con la autoridad de nuestros mayores, y por las razones en que lo fundan, la importancia del dibuxo para las artes. El que no se convenza con ellas, ni fie de la opinion de tan señalados varones, y de la experiencia agena; puede recurrir á la propia, para quedar persuadido. Dudo haya quien no lo esté; asi mi discurso servirá á los venideros, para seguir el camino, allanado por la academia de las artes." Campomanes, *Discurso sobre el fomento de la industria popular* (Madrid, 1774), p. 111.

[70] "Con estos fundamento voy á proponer la enseñaza del dibuxo en este lugar, como precisa; pudiendo prometerse la nacion, que mediante este auxilio, recobraran los oficios su splendor, y el publico tendra dentro de España, quien trabaje en todos ellos las cosas, que necesitáre, á su gusto por regla, de que ahora carecen no pocos, sin poder dar razon de sus operaciones, ni aun copiar ó imitar con acierto las piezas de su priopio arte, que se les presentan; ó las que proponen los dueños de obra, si estos tampoco saben demonsrarselo con el lapiz." Ibid., p. 111-112.

He even states that "arts and crafts that do not need drawing immediately will eventually be obliged to use drawing. In order to know their instruments, machines, and operations: by means [of drawing] they make [their designs] perceptible to those who do not understand or practice."[71]

Campomanes further obscures the distinction between the arts and crafts in discussing the category of "fine arts." Although he is addressing artisans, not those who are associated with the fine arts, the institution to which he looks as a model for imitation is the Academy of Fine Arts of San Fernando, thus leading to the confusion between the artist's and artisans' work. Campomanes links the Academy's experience with the future of crafts in Spain.[72] From this it follows that all the authors whom Campomanes cites to illustrate his point about the importance of drawing to artisans are not artisans but architects, painters, and engravers reflecting on their own arts. Hence, he often takes the liberty of claiming that the artist had initially meant to broaden his account of his art to encompass the rest of the arts, including the mechanical. For example, he cites the Portuguese painter Francisco de Hollanda saying that "drawing is the head, key for all things and arts of this world."[73] Sixteenth-century architect Juan de Arfe y Villafañe's books, *De varia commensuración para la Esculptura y Architectura* (Seville, 1585), are an account of drawing, where Arfe was not only talking about the representation of living things but asserting, according to Campomanes, that "all human inventions cannot be sufficiently

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[71] "las artes y oficios, que inmediatamente no necesiten el dibuxo, se ven precisadas á valerse de él. Para dar á conocer sus instrumentos, máquinas, y operaciones: por cuyo medio se hacen perceptibles a los que no las saben, ni profesan." Ibid. p. 111.

[72] "La experiencia de nuestros dias, desde la ereccion de la academia de San Fernando, hace evidencia de la utilidad y necesidad del dibuxo: á vista del progreso, que todas las artes y oficios adquieren en el Reyno por virtud de la enseñanza del diseño, que con utilidad ya se va propaganda á otros pueblos por enseñanza de los grandes maestros individuos de este ilustre cuerpo (14), y por imitacion de sus excelentes obras." Ibid., p. 110.

[73] "El qual dibuxo es la cabeza, y llave de todas estas cosas, y artes de este mundo." Ibid., p. 100. Campomanes cites this quote from Holanda's *De la Pintura Antigua* (translated into Castilian by Manuel Denis in 1753).

understood with any explanation without the aid of drawing, nor how to execute them."[74] Of Francisco Pacheco, "one of the most celebrated painters of the *escuela sevillana*," Campomanes states that he "explained well his belief in the importance and necessity of drawing; hence despite that it appears he is only talking about painting, one will see that his judgment applies to the arts and crafts in general."[75] Hence, even if Pacheco only spoke about painting, Campomanes interpreted his account to apply much more widely.

> Because everyone imitates the drawing of the painter, [it is] from drawing that almost all arts [...] of man enrich themselves [,] primarily, sculpture, architecture, silversmithing, embroidery, weaving, and other innumerable [arts] that use plans and sections. For something to signify beauty and good grace in its form, we see that it has drawing.[76]

Campomanes also quotes Vicente Carducho, painter to the royal family of Felipe IV (*pintor de cámara*) who wrote in his *Dialogo de la pintura* (Madrid 1633) that drawing is the synecdoche of the perfection of art.[77] He then provides an elaborate quote from Antonio Palomino's *Theoria de la Pintura* (Madrid, 1715), which in fact highlights the role of drawing in the hierarchical relationship between the fine arts and the crafts, allowing the artist to simplify his ideas for the inferior artisan. However, Campomanes avoids addressing the hierarchy implicit in Palomino's statement, a hierarchy he initially protested against.

> Any artifact or work of the humblest crafts, has a certain symmetry, organization, and good profile, whose skill is undergirded by drawing: this is shown in the [drawings] offered each day to painters regarding certain things, which contain

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[74] "Todas las invenciones humanas de las artes; no siendo posible darlas á entender suficientemente con qualquier explicacion que sea, sin el auxilio del diseño; ni de fixar de executarlas." Ibid., p. 101. In addition, Campomanes contends that Arfe said "grafidia, que es dibuxo, para diseñar las historias, y cosas que hubiere fabricado el artifice en la imaginacion." ["Drawing's function is to design histories and things that the artifice would fabricate in his imagination."], ibid., p. 101.

[75] "se explica muy al intento persuadido de la importancia y necesidad del dibuxo para las artes; pues aunque parece contraerse al suyo de la pintura, se verá que la sentencia es aplicable á las artes y oficios en general." Ibid., p. 104.

[76] "Porque todo lo imita el dibuxo del pintor, que él les de donde se enriquecen casi todas las artes y exercicios convenientes á el uso de los hombres. Y principalmente la escultura, arquitectura, plateria, bordadura, arte de texer, y otros innumerables tocantes á trazas y perfiles. Y para significar de qualquier cosa la hermosura, y buena gracia en su forma, vemos que se dice que tiene dibuxo." Ibid., p. 106.

[77] In Carducho's words, "siempre que oigas decir dibuxo, entiende por antonomasia, que es la perfeccion del arte." Campomanes then mentions poet and painter Juan de Jauregui who said that drawing is "escritura viva" (animated writing). Ibid., p. 107.

> special difficulty or novelty that they represent in drawing and intelligible form so that inferior artisans can execute them, reducing them to the rules of fine symmetry with measurement (scale) and proportion. And as shown in the same drawings that architects realize in their works, highlighting [their works] light and dark, which are monochromatic paintings, as we already said, and thus [the works] would be better if the artifice knew more about painting and drawing. [78]

Campoames finally has recourse to Guttierrez de los Ríos's term to state that "from all this, Antonio Palomino deduces that generally the arts and crafts are under the architectonic steering of drawing."[79]

At the end of this section on drawing, Campomanes discusses practical matters related to how he envisions the Academy to administer these schools: "In Madrid, Seville, Valencia and other parts, the academy of the arts will facilitate this teaching. Where there is no [academy], a patriotic school of drawing [will be] established under the economic societies, according to the form and method proposed in the *Discurso sobre el fomento dela industria popular.* The hours of this school, following those of the academy of the arts, could be adjusted and different from [the working hours of] the artisans so that the apprentices do not impede their assistance in their masters' workshops." The masters should insist that the apprentices attend these schools of drawing; "therefore this teaching should be viewed as an essential part of the guilds policy and of teaching."[80] Campomanes envisioned the material taught, evoking what a student in the Academy would study—for example, drawing of the human body.

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[78] "Qualquiera artefacto y obra de los oficios mas humildes, consta de una cierta simetría, organizacion, y buen perfil, cuyo acierto subministra el dibuxo: como se califica en los que cada dia se ofrecen á los pintores en algunas cosas, que contienen especial dificultad ó novedad; poniedolas en dibuxo, y forma inteligible para que lo executen los artifices inferiores; y reduciendo á reglas de buena symetría con medida y proporcion. Y como se confirma en las mismas trazas, que los arquitectos executan para sus obras; alumbrandolas de claro, y oscuro, las quales son pinturas monocromadas, como ya diximos; y en tanto serán mejores, en quanto el artifice tubiere mas noticia de la pintura, y del dibujo." Antonio Palomino, *Theoria de la Pintura* (Madrid, 1715), Volume I, Book II, Section IV, p.141-2.
[79] "De todo deduce Don Antonio Palomino, que generalmente las artes, y oficios están baxo dela direccion architectónica del dibuxo." Campomanes, *Discurso sobre la educación popular* (Madrid, 1775), p. 109.
[80] "Pues debe mirarse esta enseñanza, como una parte esencial de la policía gremial, y del aprendizage." Ibid., p. 114.

> In these schools not only the general rules of drawing and the parts of the human body should be taught; it is advisable also to descend to the designs of machines, instruments, operations of the respective art of the apprentice[. Only] after the apprentice is found to be advanced in the principles of drawing, common to everyone; these advanced disciples are divided in classes of the [respective] guild or art to which they belong...[81]

Drawing, therefore, became a common denominator among the crafts, a fundamental knowledge that the artisan should acquire, just like geometry, before he embarks on learning the specificities of his own crafts. Consequent to this thought, drawing could even transcend the territory of the arts and crafts and become of popular value. Campomanes aspired to promote knowledge of drawing not only to professionals but to the general consuming public—even the nobility.

> It is even very advantageous for the nobility to know drawing in order to distinguish good taste in furniture, cars, paintings, buildings, fabrics, upholstery, carpets, and things of good taste. [Hence] they will not be fooled when buying [these things]...Today not many of those who request and commission these manufactures or furniture nor those who make them understand [drawing]. [Therefore] everything is left to the caprices of the artists, lacking rules and is usually governed by blind and arbitrary imitation."[82]

If Campomanes called for the reform of the guilds and for rewriting their ordinances (municipal legislation), other authors, especially in Catalonia, viewed the guild as the only institution that would protect the artisan and at the same time guarantee economic progress. Antonio de Capmany, who wrote his *Discourse on the defense of mechanical labor* (*Discurso economico-politico en defenso del trabajo mecánico,* Madrid, 1778), was one of the voices

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[81] "En estas escuelas no solo se necesita dar las reglas generales de dibuxo, y las partes del cuerpo humano; conviene tambien descender a los diseños de las máquinas, instrumentos, y operaciones propias del arte respectiva del aprendiz, luego que se halla adelantado en los principios de dibuxo, comunes á todos; (*) dividiendo á los discipulos ya adelantados, por clases del gremio ó arte, á que pertenecen, y no antes; porque sería prejudicial." Ibid., p. 115.

[82] "Aun es de suma ventaja, que la nobleza posea el dibuxo, para discerner los muebles, coches, pinturas, edificios, telas, tapicerias, alfombras, y estofas de mejor gusto; á efecto de no ser engañados en lo que compran, y emplear con utilidad propia á los artesanos en las cosas de uso, ó de gusto.
Ahora ni muchos de los que piden y encargan estas manufacturas ó muebles; ni los que las han de hacer, se entienden. De aqui resulta quedar todo ello fiado al capricho de los artistas, que suelen obrar destituidos de reglas, y gobernados de ordinario por una imitacion ciega y arbitraria." Ibid., p. 116-7.

supporting the preservation of the guilds.[83] Capmany addresses the "truth of labor and its influence on popular customs and the happiness of individuals." Happiness, for him, is work; it is gaining money, not inheriting it. He wanted to undo two false assumptions: the belief that work and sweat are disgraceful, and the idea that those who work always work to serve other people who do not: "Where labor lost its public esteem it is hard for people to pursue a career in the arts."[84] He aimed to reexamine the idea of a nation, as this notion has been only "partial" because of the country consisted of diverse estates, as he calls them, of the privileged classes (the nobility, *magistratura*, and army). "A respectable society is that which has a political system that loves labor,"[85] and hence for him, the guilds afforded artisans with a political framework where they can practice their citizenship. Whereas other authors we discussed contrasted raw material (*materia prima*) with their processing in industry, Capmany goes one step further to state that it is not the art of the silversmith that makes him honorable but the silversmith guild. The guilds protect labor and guarantee artisans' survival amid the unpredictable circumstances and changes of the market.[86] Therefore, to preserve this protection the guilds should be visible in society.[87]

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[83] He signed the book with a pseudonym, Ramón Miguel Palacio. "En un gremio tiene el publico una responsabilidad legal de la suficiencia, y fidelidad de los artesanos. En la anarquia de las artes se establece un artifice sin ser conocido, y desparece del mismo modo. Como no depende de cuerpo alguno, no trahe reglas, ó no las puede comunicar con un metodo constante; porque sin la economía gremial que promueva la enseñaza, este hombre no se quiere embarazar; ni tampoco los padres entregáran sus hijos en manos de unas personas que no pueden, ni deben educarlos. Donde falta este sistema politico y fabril de los oficios, todas las artes son hijas del momento, ó de la causalidad: una peste, una Guerra, ó una mala cosecha bastan para no dejar rastro de industria." Antonio de Capmany, *Discourse on the defense of mechanical labor* (Madrid, 1778), p. 48.

[84] Ibid, p .11.

[85] Ibid, p .3.

[86] "Ademas los cuerpos gremiales, como partes representativas de la industria nacional, y por lo mismo tan interesadas en su propia conservacion, y prosperidad; pueden dirigir con inteligencia representaciones al gobierno sobre los daños que los oficio experimenten, ó á veces prevean de la introduccion de generos, ó artefactos estrangeros, que son la verdadera ruina de nuestros oficios. ?Quien major que ellos, tan intimamente interesados, podrá vigilar, y hacer sostener la observancia de las pragmaticas, que en beneficio de las artes nacionales, prohiben las manufacturas forasteras? El artesano solitario, dispersion, ó vagante ni calcúla, ni prevé, ni teme: nada oye, nada entiente; pasa sus trabajos, sufre y calla; ó porque no sabe de donde provienen, ó porque no tiene representacion, poder, ó medios para ser escuchado. (*cone la sabia institucion de las sociedaes patrioticas se podrá lograr el fruto que los curpos gremiales no pudieron coger, ó por falta de la luces necesatias ó de poder bastante paraser atendidos.) so is he advocating for the existence of these economic societies for teaching?" Ibid, p. 51.

In the Wake of Campomanes

Following Campomanes's publications and the establishment of many Economic Societies in major Spanish cities, more voices were raised, calling for the reinvigoration of the mechanical arts and abandoning false opinions denigrating the crafts as low. They probed the reasons for decline in the arts, affirmed the role of drawing in enhancing manufactures, and when addressing the utility of manufactured objects and a growing public taste for commodities, they expressed enthusiasm for experimental, rather than abstract science, and addressed the benefits of sciences like chemistry to the work of artisans.

In 1779, in Zaragoza, a Sevillian physician, Sebastian Miguel Guerrero, published *The Sciences, Arts, and Crafts: Academic Discourse on the Connection the Sciences have with the Arts and Crafts and whether a Nation could make Progress in these without knowledge of those* (*Las ciencias, artes y oficios: discurso academico de la conexion que tienen las ciencias con las artes y oficios y si una nacion hará progresos en estos sin previo conocimiento de aquellas*). This work emphasizes empirical knowledge and examines how the sciences were instrumental to the progress of the arts. Guerrero contrasts experimental physics, which has a real impact on material things (including the practices of the arts, sciences, and crafts), with philosophy, which remains within the realm of the abstract, having no real consequences for these disciplines. After demonstrating in detail the benefits of chemistry to the making of pigments, tints (dyes), building materials for architecture, glazing, and manufacturing porcelain, he concludes, "we cannot point at any art or craft whose main materials, operations, and products are not an immediate object and property of experimental physics; this is what manifests the connection or identity of this

[87] "pues si la buena policia quiere que los hombres sean conocidos ocupados cada uno su lugar; esta distribucion, y demarcacion de clases authorizadas son unos verdaderos organos de su harmonia, y mas en las Ciudades populosas, y pueblos mercantiles, donde ordinariamente residen los artesanos..." Ibid., p. 4.

science with the arts."[88] The noble science of experimental physics had a direct influence on the arts and crafts, and allowed man to cultivate knowledge about the "agreeableness of natural phenomena, the infinite variety of transmutations, through which it seems that man had created another nature, and another universe; its extensive and admirable aspects, explications, and doctrine."[89] As a result of the intervention of experimental physics, Guerrero states, "materials, physical and real bodies were produced and combined, through which sensible effects were formed."[90] These properties are only "manifested through experience" because "the Physics which is printed in books has not penetrated sufficiently the properties of bodies."[91] This issue of "practical philosophy" was the claim Spain adopted to respond to the attacks launched by French *philosophes* against Spain (see Chapter Four for the discussion of these attacks).[92]

Another work that highlights the importance of the practical arts and probes the reasons behind their low status in Spain is *Disertación sobre el aprecio y estimacion que se debe hacer de las artes* (*Discourse on the appreciation and esteem to be granted to the arts,* Zaragoza, 1781), written by Antonio Arteta de Monteseguro, a cleric in the metropolitan church of

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[88] "no puede señalarse arte alguna, ni oficio, cuya principales materias, operaciones, y productos no sean objeto inmediato, y propio de la Fisica experimental; esto mismo manifiesta la conexion, ó identidad de esta Ciencia con la Artes." Sebastian Miguel Guerrero, *Las ciencias, artes y oficios: discurso academico de la conexion que tienen las ciencias con las artes y oficios y si una nacion hará progresos en estos sin previo conocimiento de aquellas* (Zaragoza, 1779), p. 57-58.

[89] "De esta conexion, ó dominio de la Fisica experimental sobre todos los cuerpos, sobre las tendencias, y operaciones de estos, y sobre el uso yá activo, y yá pasivo, que ellos se hace en las varias Artes, y oficios, resultan las delicias, y especiales alectivos, con que algunos entendimientos eminentes han cultivado esta nobilisima Ciencia: la amenidad de los fenomenos naturales, la variedad infinita de transmutaciones, con que parece que el hombre cria otra naturaleza, y otro Universo; lo extenso, y admirable de sus aspectos, explicaciones, y doctrinas." Ibid., p. 58.

[90] "Por si mismo se manifiesta, que todas las Artes, que se ocupan en manejar de qualquier modo los entes materiales, y los cuerpos fisicos, y reales, produciendo, combinando, y formando en ellos efectos sensibles, regularmente para las precisions de la Republica, son parcialmente Fisica experimental." Ibid., p.58.

[91] "la Fisica, que se estampa en los libros, no ha penetrado suficientemente las propriedades de los cuerpos... Los fisicos de juicio saben, y confiesan, que no hemos penetrado suficientemente la naturaleza de los cuerpos; y que no conocemos del todo sus propiedades para hacer de ellas los usos que las Artes necesitan: los que de los cuerpos sabemos, nos la há manifestado la experiencia; y la misma nos manifiesta cada dia nueva propriedades, de que se puede hacer uso lucroso, las que adquirimos con una lentitud proporcionada á nuestra desidia; pues la Naturaleza nos muestra sus arcanos á proporcion de la fuerza que la hacemos." Ibid., p. 60.

[92] The emphasis on practicality as opposed to abstract science is a direct response to French attacks on Spain, claiming its backwardness.

Zaragoza and the Secretary of the Arts in that city's Royal Economic Society. The preface introducing this well received work describes an awakening of the Spaniards from stagnation, where now "their mode of thinking is much different from the previous centuries," aided by education's role in "the improvement of our respective crafts, until it reaches the level of foreign nations."[93] The "main objective" of the *Disertación*, as Monteseguro puts it, is to rectify certain opinions entrenched in the Spanish nation that are "contrary to public happiness," with the aim of motivating "artisans to abandon the idea that arts and crafts are low."[94] His conviction that the decline in the country was a direct outcome of the lack of esteem in society for labor and for the practical arts prompted him to attempt to prove the contrary by discussing their origin, invention, and utility. At the end of his *Disertación*, he also suggests ways to reinstate public appreciation of the practical arts by looking at laws prohibiting foreign trades and promoting artisans' education.

Throughout the book Monteseguro cites Campomanes, whom he calls a "political writer," as well as Gutierrez de los Ríos and the architect Teodoro Ardemans. He assesses the decline in Spain first by recounting the prosperity of the country at the time when Charles V had united it in 1516, having a fertile land, good weather, wealth, possessions in the New World, mines and a powerful marine, and an active commerce. "But all this great prosperity evaporated."[95] The "political writers" ascribed the reasons for this crisis to be the "second expulsion of the Moors in 1611, the populating of the colonies, the transmigration to the diverse parts that comprise the Spanish Monarchy in Europe, abandoning agriculture, and the loss of

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[93] "Su modo de pensár ya es muy diferente del de los dos tenebrosos siglos anteriores....que os esmereis en el adelantamiento de vuestros respetivos oficios, hasta llegar á ponerlos al nivel de las Naciones Extrangeras." Antonio Arteta de Monteseguro, *Disertación sobre el aprecio y estimacion que se debe hacer de las artes* (Zaragoza, 1781), Preface.

[94] "desimpresionar á la Nacion de unas opinions tan contrarias á la felicidad pública, de desterrar unos resabios que no tienen fundamento alguno solido, y de animar juntamente á los Oficiales y Artesanos, quitando de sus Artes y Oficios la nota de baxeza y desestimacion que los arredra." Ibid., p. 5.

[95] "Pero toda esta grande prosperidad se desvaneció como el humo." Ibid., p. 43.

industry and the arts."[96]

> As to the first of these causes there is no doubt that the expulsion of the Moors in 1611 significantly decreased the population of Spain. But leaving that aside now—that if the *Moriscos* left a void in Spain, it was only because they were people who worked—the fact is that ... Dr. Moncada in 1619 and Camallos in 1621 had even counted a fairly large population.[97]

Before continuing the discussion on Monteseguro, it is useful to introduce what will be a major theme of Chapter Four on the Arab crafts heritage.

Crafts and Arabs in Spain

The practice of the crafts and the mechanical arts in Spain was strongly associated with the Arab presence in Spain, as manifested in the writings of artists and economic reformers. We notice that artists practicing the fine arts blamed the Arabs, to a large extent, for the destruction of the Spanish arts. In contrast, those involved in advancing economic progress, as we saw in Monteseguro, mostly agreed with the European view that the Arabs were the only people who practiced the crafts in Spain; hence, upon their expulsion they left a substantial void that needed to be filled. Others, whose work is discussed below, refused to accept this position because they were keen to refute European claims for Spain's inferiority, attributed to the expulsion of the Arabs. But a parallel or associated belief, which these reformers refused to adopt, was that Christian Spaniards looked at the crafts with disdain and either conducted an idle life or went to war. Are these two views contradictory? The answer is no—simply because what painters like Carducho, Palomino or Velázquez called "art" was different from the art (or craft) that economic

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[96] " la segunda expulsion de los Moros en 1611, la población de las Colonias, las freqüentes transmigraciones á las diversas partes que componian la Monarquia Española en Europa, el abandon de la Agricultura, y la perdida de la industria y de las Artes." Ibid., p. 43.

[97] "En quanto á la primera de estas causas no tiene duda que la expulsion de los Moros en 1611 disminuyó considerablemente la poblacion de España. Pero prescindiendo ahora, de que si los Moriscos hicieron falta en España, fué solamente porque era gente que trabajaba, lo cierto es que sin embargo de esto el Dr. Moncada en 1619 y Camallos en 1621 contaban aun una poblacion bastante numerosa." Ibid., p. 44.

reformers considered when plotting the path of their endeavor. In any case, they all agreed that Spaniards should change their image and embark on work and labor for the sake of a happy *patria.*

When discussing the divisions of the arts and the reasons behind classifying painting as a mechanical art, the renowned painter Antonio Palomino (1653-1726) linked it with the Arabs' dominance of Spain which for him, ruined art, and consequently led to events that effected its false classification as mechanical. In his *El Museo pictórico y escala óptica* (1715-1724), he wrote,

> Lamentable was the destruction of Spain since that terrible century in which the delightful kingdoms saw from their elevated pride the abominable arrogance of the Saracen, subject to his aggressive spirit and vile servitude of a very barbaric and infidel dominance! But how easy it is to introduce damage! How difficult it is to find a remedy! In a few years the Moors dominated all Spain: for many centuries these kingdoms mourned their misfortune, buying [Spain's] restoration with their own blood.[98]

Palomino clearly did not associate the Arabs with his definition of noble and liberal arts. He goes on to explain that when Spaniards reclaimed ownership of the country, one of the solutions to remedy the damages inflicted by the Arabs was the institution of military and religious orders whose statutes, with the language used at that time, deprecated many arts and professions. These statutes classified painting as "vile" and "mechanical" along with many other crafts like those of the silversmiths, "embroiders, stonemasons, innkeepers, barkeepers, writers," and other crafts that were not associated with works at the court.[99] Palomino insisted that painting is "liberal and

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[98] "Lamentable fué la ruina de España desde aquel funesto siglo en que vieron estos deliciosos reynos sobre sus altivas cervices el yugo abominable del sarraceno, sujetandose sus espéritus belicosos é la vil servidumbre de tan bárbaro infiel dominio! Pero qué fácil es de instroducirse el daño! Qué dificil de encontrarse el remedio! En pocos años dominaron los moros toda España: en muchos siglos lloraron su desventura estos reynos, comprando su restauracion con su sangre." Antonio Palomino, *El Museo pictórico y escala óptica* (1715-1724), p. 123 Chapter, V (section/part I), p. 123. (Under the title: "En que se concluye el intento del pasado, con otras objecciones.")

[99] "Uno de los medios que tuvo por eficaces la prudencia de aquellos siglos para medicar achaques tan inveterados, fué la institucion de las órdenes, y religiones militares de caballería, cuyos estatutos, dictados con el inculto idioma de aquella edad, han denigrado, en el sentir de los que menos bien lo consideran, muchas artes y profesiones

noble, as evidenced by laws and authorities ... because even the ones who [are] extremely opposed to this truth" cannot deny the "considerable difference between the art of Painting" and the others mentioned: "[If] these... are vile and mechanical arts; Painting, which is a different thing, cannot be the same as these."[100]

In his defense of mechanical arts, Francisco de Bruna (1719-1807), a member of the Council of Finance, a Seville magistrate, and member of the Economic Society of that city, wrote in his *Reflexiones sobre las artes mecánicas*, included in the *Apéndice a la educación popular* (1776):

> There is no doubt that the unjust vileness that is often attributed to the mechanical arts markedly contributes to their abandonment because few want to exercise crafts that are deprecated. The misconception could perhaps arise, that the Moors [*moriscos*] were in general those who exercised the arts in Spain, and [that] after their expulsion it was necessary to bring in foreigners in order to supplement their absence. It seems that the Spaniard, like the Spartan (*lacedemonian*), was believed, [to be] born only to practice war, [and] thus looked with disdain at all mechanical arts.
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> It is of great importance to undo this false thought, as it contradicts industry, by giving the [deserved] honor to artisans, whose application [and industry] benefits society, and to a large extent, dispenses with other professions that perhaps do no more than promote idleness and sustain the spirit for war.

De Bruna therefore agrees that the Moors were those who practiced the mechanical arts, but he rejects the idea that Spaniards looked at the arts and crafts with contempt, as he asserts that the

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decorosas. Una de las que fluctuáron á el parecer en este naufragio fué el arte de la Pintura; pues habieno prevenido los dichos estatutos que el caballero que hubiere de ser de aquellas órdenes, ó su padre ó abuelos no hayan tenido oficio viles y mecánicos, dice despues estas palabras: *Y oficios viles y mecánicos se entiende platero, ó pintor que lo tenga por oficio, bordador, canteros, mesoneros, taberneros, escribanos que no sean secretarios del rey, ó de qualquiera persona real, procuradores públicos, ú otros oficios semejantes á estos, ó inferiores de ellos; como son sastres, y otros semejantes, que viven por el trabajo de su manos.*" Ibid., p. 123.

[100] "Que nos hallamos en el caso preciso de usa de este medio, nos lo persuade con evidencia el ver la Pintura puesta en dicho estatuto, con denominacion tan indigna á su calidad como el llamarla oficio vil y mecánico; pues aun el ser oficio no le quedara, siendo arte liberal y noble, como queda probado con evidencia constante, leyes y autoridades expresas, y se calificará mas en este capítulo; porque aun el mas opuesto á esta verdad no puede menos de concederme una muy considerable diferencia entre el arte de la Pintura, y el mesonero, y tabernero, y otros allí con numerados: luego si estos, así por la práctica de los reynos, como por la disposicion de este estatuto, son oficios viles y mecánicos; la Pintura, que es muy otra cosa, no sera lo mismo que estos: ó sino, que seran estos, si la Pintura es oficio vil mecánico?" Ibid., p. 124.

Spanish kings honored artisans in every Spanish city they entered.[101] The defense of Spanish labor goes back even to the time of Guttierrez de los Ríos. In his short essay on industry and artifice or crafts, *Memorial sobre la industria y artificio* (*Essay Concerning Industry and Art*, Madrid 1589), Ríos contends that what led to the low regard for Spanish contribution to the arts was the unjust and deliberate lack of acknowledgement of Spain's artists (*artifices*), who, for him, excelled everyone else in their creations. These ingenious Spanish artists include painters and architects such as, "Berruguete, Siloe, the Machucas, Covarrubias, Gregorio Pardo, Gaspar Becera, Juan Fernando Navarrete, the Hernández, Vargas, Juan Bautista de Toledo, Juan de Herrera."

> They have the best ingenuity in the world, and they say that there is no ingenuity in Spain, they have the most famous silversmiths of gold and white silver to be found in the world, and they do not appreciate it. If there is a famous Spanish artist and the foreigner painted mice, they say that the foreigner's is better and many other irrelevant things."[102]

Moreover, to make the case regarding the importance of the crafts to a country, Gutierrez de los Ríos opens his *Memorial* with a story evoking the "Orient" as a model to be followed in the endeavor to invigorate a nation's arts and crafts: Selim the First, emperor of the Turks, in order to populate and enrich Constantinople, brought many excellent craftsmen (*artifices*) from the

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[101] "No tiene duda, que la injusta vileza que suele atribuirse entre nosotros á las artes mecánicas, contribuye mucho á su abandon; porque pocos quieren exercer oficios, que los deshonren. Este falso concepto pudo tal vez nacer, de que los moriscos eran por lo general los que exercían las artes en España, y depues de su expulsion fue necesario, que viniesen estrangeros á suplir su falta. Parece, que el español se creía como el lacedemonio, nacido solo para exercicio de la Guerra, y asi miraba con desden toda arte mecánica. Es importantisimo deshacer una preocupacion tan falsa, como contraria al adelantamiento de la industria, concediendo á los artesanos aquel honor, que merece su aplicacion en utilidad de la sociedad, y que con larga mano se dispensa á otras profesiones, que acaso no sirven mas que de fomentar el ocio, y sostener el espíritu de contienda. El santo Rey Don Fernando se hallaba bien penetrado de la maxima politica, de honrar á los menestrales, que traia en su exercito: pues quando ganó á Sevilla, dice el arzobispo Don Rodrigo en su crónica, que repartió, y dió heredamientos á los maestros y oficiales de las artes, igualmente que á los caballeros, que le habian servido en la conquista. Esto hace ver, que es posterior á esta época el desprecio, con que despues las miraron los españoles." Francisco de Bruna in Pedro Rodríguez Campomanes, *Apéndice a la Educación popular* (Madrid, 1775-77), vol. 3, p. 296.

[102] Gaspar Gutierrez de los Rios, *Memorial sobre la industria y artificio* (Madrid, 1589).

royal city of Tauris and from great Cairo.[103] This story is detailed by the eighteenth-century Cairene chronicler al-Jabarti. It was also retold by the seventeenth-century Arabist Fray Francisco Martínez de la Mata in his *Memorial* (1650), parts of which were republished as *Apendices* to Campomanes's *Educación popúlar.*[104]

Campomanes's views on the Arabs are strikingly contradictory. On one hand, he praises their contribution to Spanish arts and crafts, especially their advancements in the silk and paper industries, agriculture, and cotton, among others. In his *Educación popular* when he discusses the mechanical and liberal arts, he abruptly asks: "How many arts and secrets does Europe owe to the other Asiatic nations, and how many did the Arabs bring to Spain?"[105] These questions clearly suggest a considerable appreciation for the Spanish Arabs' legacy. However, he soon after associates them with hostility and laziness.[106]

In the fourth volume of the *Apendice de la Educación popúlar,* Campomanes alerts us to religious, social and racial restrictions[107] that relate to the issue of art classifications, that is, the low esteem with which some of the crafts were regarded was because either Jews (*conversos*) or Arabs practiced them: "The aversion and infidelity that [they Arabs] maintained against us, and the pride that [their] wealth aroused, make them suspect and intolerable in the kingdom." He continues, "The practice of the Arabs of the mechanical arts produced, to my understanding, two

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[103] "Selim primer Emperador de los Turcos, para poblar y ennoblecer a Constantinopla hizo venir muchos excelentes artifices de la Real ciudad de Tauris, y del gran Cairo" Ibid. Gutierrez de los Rios states that he relies in his article on the book *Della region di Stato* (*The Reason of State*) of Giovanni Botero (1544-1617), translated into Spanish.
[104] "Selin, primer Emperador de los Turcos, para hacer magnífica a Constantinopla, y que el dinero que entrase en ella se conservase, hizo poblarla de artes que hizo traer de diversas partes. Y el Reino de Polonia cuando eligieron por su Rey a Enrique Duque de Anjou, entre otros capítulos que le pusieron, fue que había de traer cierta cantidad de familias de oficiales de diversas Artes." Francisco Martínez de la Mata, *Memorial* (1650).
[105] "¿Cuantas artes y secretos debe Europa á la naciones asiaticas, y cuántas trajeron los Arabes á España?" Campomanes, *Discurso sobre el fomento* (Madrid, 1774), p. 18
[106] "Los Moros no nos hacen mas daño con su hostilidades, que las especies que se propaguen, para disculpar la ignorancia, y alagrar la inaccion. Todos los que no promueven la ocupacion de las gentes, no conocen el interés verdadero del public, ni el de su patria." Ibid., p. 71.
[107] On the Spanish heritage and purity of blood (*limpieza de sangre*), see Jean Pierre Dedieu, *L'Espagne de 1492 à 1808.* Paris: Belin, 2005; Santiago Muñoz Machado, *Los grandes procesos de la historia de España.* Madrid: Iustel, 2010.

bad effects: one, that Christians view these occupations as vile, and another, that to avoid their practice, we did not learn our [arts]."[108] For this reason, according to Campomanes, the Spanish monarchy, in that same year of the Arabs' expulsion (1610), extinguished all manufactures practiced by the *moriscos*. In 1623 Fernando IV saw it as a "bad necessity" to bring to the country foreign workers and artists.[109] Even in the eighteenth century there were racial restrictions on workers and craftsmen.[110]

We return now to Monteseguro's analysis of Spain's economic backwardness. For Monteseguro, the abundance of silver and gold brought to Spain from the New World had "raised the price of manual labor and ruined manufactures."[111] According to the testimonies of other political writers, "the extinction of manufactures has been the immediate cause of depopulation and poverty in Spain." With the destruction of all factories and workshops, rather than the promotion of Spain's industry, manufactured products had to be imported from foreign countries.[112]

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[108] "la aversion é infidelidad que nos conservaban, y el orgullo, que infundia su riqueza, los hizo sospechosos, é intolerables en el reyno...El exercitar los arabes las artes mecánicas produxo á mi entender dos malos efectos; uno mirar los cristianos como viles tales ocupaciones, y otro que por evitar su trato, no las aprendiesen los nuestros." Campomanes, *Apendice de la Educación popular*, Part, 3 (Madrid, 1776), p. xxiii.

[109] "Ya he manifestado en otra parte con el testimonio de nuestros mejores escritores politicos, que la introduccion de géneros estrangeros en desmedida cantidad, tuvo su origen en la misma época del año de 1610, por haberse extinguido en aquel tiempo todas las manufacturas de los moriscos que fueron expatriados por sus contínuos levantamientos, y ocultas tramas contra la seguridad del estado. El remedio fue un mal necesario. Era mas fácil subrogar vecinos utiles, que tolerar vasallos infieles, como ellos eran. Conociendose esta falta se permitió la introduccion de labradores, y artistas estrangeros en el año de 1623 por Felipe IV." Ibid., p. xxv.

[110] A member of the Madrid Economic Society attributed the failure of the wool industry in Toledo to the fact that people scorned the workers because usually in the past these "had been Jews." "Laborers in Seville's cathedral stated in 1784 that "neither black nor mulatto nor morisco" could be a member of the Confraternity of Nuestra Señora de la Granada." AAS SEC. III.1.6, Hermandades, caja, 12, no .6 (1784), cited in Ruth Mackay *"Lazy, Improvident People": Myth and Reality in the Writing of Spanish History.* (Cornell University Press: 2006), p. 186.

[111] "la qual encareció la mano de obra y arruinó las manufacturas." Antonio Arteta de Monteseguro, *Disertación sobre el aprecio y estimacion que se debe hacer de las artes* (Zaragoza, 1781), p. 45. Monteseguro is quoting an English writer.

[112] "testimonies de Francisco Cisnéros y Gerónimo de Porras en el memorial presentado á Carlos II, de Francisco de Martinez de la Mata y de Don Miguél Alvarez Osorio, todos los quales se explican ... que la extinction de las manufacturas habia sido la causa inmediata de la despoblacion y pobreza de España, y que por la falta de los telares y fábricas, se velan infinitas casas cerradas destruidas y asoladas de todo punto, luego que cesaron las Artes y que las primeras materias se sacaron del Reyno, introduciendose los generos fabricados en los países extrangeros, en

Monteseguro, like Guerrero, recognized the problematic, well-rooted opinion denigrating practice and valorizing speculative knowledge, an opinion that caused much damage to the necessary arts and crafts.[113] He, therefore, dedicated a whole chapter, "Of the Word *Mechanical*," to combat the idea that practical arts are low, particularly for their "false" association with the word "mechanical" and with a connotation this word does not really have.[114] He goes on to historicize the meanings of the word "mechanical," deriving his arguments directly from Teodoro Ardemans's *Ordenanzas de Madrid* (Madrid, 1720), which he (curiously) calls a "treatise on architecture." But whereas Ardemans used this etymological history to divide the arts and argue that the mechanical contaminates the liberal, Monteseguro instead hoped to convey the positive meanings of the word and to show that none of these meanings suggest the idea of "low" (*bajeza*) art. To the contrary, they convey that all those called *mecanicos* had knowledge and skill, and were considered "authors, inventors, and masters of complex things requiring talent for their making."

"Some think," Monteseguro explains, that "the word signifies those who with their ingenuity and skill make mechanical organs, pneumatic and automata." Others relate them to those who invent new military and other machines, "in other words, engineers." Others postulate that the word connotes "the superior (*principe*) architect of the most sublime rank, value, and privileges[. T]hose who are called *Mecanicos* give rules for the incision and division of the works and the manner in which they are conserved; they were in charge of the costs and

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lugar de trabajar los los Españoles con sus crudos propios." Ibid., p. 51.

[113] "es indecible el daño que se sigue á las Artes y á los oficios necesarios á la vida y al bien de la sociedad, por no descender jamás á la práctica de las cosas." Ibid., p.66.
"Tal ha sido la idea de désprecio y de desestimacion afecta a esta palabra *Mecánicas,* baxo la qual son comprehendidas la Artes practicas." Ibid., p. 84-85.

[114] "Pero pasemos á impugnar un error que se ha difundido generalmente y que es muy prejudicial á las Artes prácticas. Este es el de llamarlas *Mecánicas* en un sentido que no tiene esta voz. Esto merece un Artículo separado." Ibid., p. 84.

expenses and were entrusted with taking care of the whole enterprise."[115] The Roman emperor Caracalla, for example, used the word "erudite *Mecanicos*," and offered a prize for those who transported at low cost the columns of the *Capitolio*. Alexander the Great named Archimedes "*Mecanico.*" Emperors Teodosius and Valentinian called "*mecanicos* or *Profesores Mecanicae*" those who built basilicas and bridges.[116] The word also referred to complex machines and instruments used by those who practice the arts.

Monteseguro demonstrates that "the notions of lowness (*bajeza*) and scorn (*desprecio*) had no solid grounds" in relation to the word "mechanical"; that belief was in fact a universal error. He then arrives at the difference between the liberal and practical arts. He discredits the view promoted by this "prejudiced and hateful (*odioso*) system," which established the former as dependent on speculative science, and the latter as relying on the body.[117] He denies that this bodily association is something degrading to the arts: "It is of little importance that practical arts are exercised purely with the body and that they lack speculative doctrines in order to be esteemed in the Republic, because they serve the relief and happiness of the nation."[118] Comparing utility with speculative abstract science, he continues his contestation with a series of

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[115] "Creyeron algunos que por los *Mecánicos* se significaban aquellos con cuyo ingénio y habilidad se hacian los organos mecánicos pnumáticos y atomotopoeticos...el principe de la Arquitectura de mas sublime grado estimacion y prerrogativas y aquello se llamaban *Mecanicos* que daban las reglas para las incisiones y divisiones de las obras y el modo que se habia de guarder en ellas, á cuya confianza corrian los gastos y expensas y tenian el cuidado de toda la fábrica." Ibid., p. 86.

[116] Espanciano mentions on the life of Caracala that he called *Mecanicos* "los doctos Mecanicos, que Suetonio en la vida de Vespasiano dice que este Emperador promteio un gran premio al Mecanico, por hacer ofrecido transporter á poco costa las columnias del Capitolio, y añade el mismo Suetonio que el Emperador Alexandro nombro por su insigne Mecnico á Archimédes Siracusano. Que en tiempo de los Emperadores Teodosiano y Valentiniano hace mencion Simaco de aquella á quienes se habia encargado las insignes obras de la Basilica y Puente, llamandolos mecanicos o *Profesores Mecanicae,* los quales fueron considerados no menos que con la dignidad Comicial y Senatoria. Añaden que contestan en la grande autoridad estimacion honra y perrogaticas de estos Principes de Arquitectura llamados *Mecanicos* Jacobo Gotofredo y otros muchos." Ibid., p. 87.

[117] "la nota de baxeza y de desprecio no ha tenido fundamento alguno solido, y que ha sido un error que quizá ... that became so universal "que se han llegado á publicar por los Jurisconsultos Españoles Tratados enteros baxo de este sistéma tan odioso y tan prejudicial á las Artes y á su debida perfeccion." Ibid., p. 88.

[118] "De aqui se infiere que importaria poco las Artes practicas se exercitasen puramente con el cuerpo y que careciesen de especulaciones doctrinales, para ser estimables en la Republica, como ellas sirvan para el alivio y felicidad de la Nacion." Ibid., p. 90.

questions: "Who are the ones that supply useful, accurate, and pleasurable things? The ingenious Sophists or practical Artists? Who, Cicero says, offers us things without which it is impossible to live? Who aids the sick? ... Who takes care of what is necessary for the sustenance and clothing of the body, if it is not the Arts?" He concludes, "This is the reason why Casiodoro called [practical arts] the decorum and ornament of cities."[119]

As for the relationship between the fine arts and the other arts, Monteseguro agrees with Campomanes that "the expansion of their praises should not be at the expense of the arts and crafts, presenting them in an exclusive manner with little esteem and lack of respect for their professors."[120] He therefore, does not deny the nobility of the fine arts but, for him, this should not undermine the utility of practical arts to the public and therefore should not prevent appreciation of the arts and crafts.

All crafts and arts, even those that involve the body, need a doctrine. He refers to fencing: "having a sword and giving a stroke is not an art; but with true doctrine and meditation on the form taught in the games of fencing, [fencing] is an Art that depends on rules and precepts that lead to an end."[121] He asks, "Why is a lock, a table, a garment good? Because of its corporeal functions, or its conformity with rules and precepts, the work of understanding?"[122] He argues

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[119] "Quienes son los que nos surten y abastecen de las cosas precisas útiles y deleytables? Los ingeniosos Sofistas, ó los Artistas prácticos? Quienes, dice Ciceron, nos ofrecen las cosas sin las quales seía imposible vivir? Quien socorrería á los enfermos? Qual sería el deleyte y comodidad de los sanos? Quien nos administraria lo necesario para el sustento y vestido del cuerpo, si todo esto no nos lo procurasen las Artes? Esta es la razon por la qual Casiodoso las llama *el decoro y ornament de las ciudades*... Y la que halle mas conducente á este fin la estimará y apreciará mas y la mirará como el mejor ornament de la Republica, como escribió Libio...Entonces, dice este gran Politico, tendrá una ciudad su ornament, quando tenga sustento suficiente artificios y muchos instrumentos." Ibid., p. 91.

[120] "pero no sea la extension en sus elogios á costa de las otras Artes y Oficios, presentandolos en un aspecto exclusive de poca estimacion y decencia respecto de sus profesores." Ibid., p. 94.

[121] "tomar una espada y dares de golpes no es Arte; pero si se hace con cierta doctrina y meditacion en la forma que se enseña en los juegos de esgrima, es Arte que depende de reglas y preceptos que dirigen al fin." Ibid., p.98.

[122] "El que la cerraja sea buena, la mesa, el vestido &c, consiste en las fuerzas del cuerpo, ó en la conformidad con las reglas y preceptos del Arte que son obra del entendimiento?" He asks: where is the body more involved? In agriculture, architecture, fencing, or in the arts of tailoring, shoemaking, or locksmithing? Ibid., p. 100.

therefore that in all arts and crafts the intellect is more at work than the body.[123] Descartes maintained that he "would trust the artisans' experiments more than the speculation of all the learned."[124] Monteseguro recognizes that Campomanes confused crafts with the arts and underscored institutional support of a political system establishing rules making connections with speculative science.[125] Discourse is what reduces the experiments of the philosopher, naturalist, or chemist and operations—physical, chemical, and metallurgical combinations— into a system and order that artisans follow.[126] In a practical way, therefore, the artisan "knows" this discourse. This is why Campomanes stressed the influence of mathematics on practical arts and supported the establishment of schools in Spanish cities.[127]

No one can doubt the importance of drawing for executing the arts, especially after reading Campomanes's account, where he called drawing "the father of practical crafts" ("*padre de los Oficios practicos*"), without which they cannot flourish.[128] Monteseguro analyzes at length Gutierrez de los Ríos's account of the arts of drawing and agrees with his rationale; "however," he claims,

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[123] "si es pues evidente lo contrario, y que en todas la Artes el entendimiento es el que govierna las manos y los instrumentos de que el Artifice se vale para producer su obra conforme á las reglas, habremos de confesar que en todas obras mas el entendimiento que el cuerpo, siendo todas practicadas y executadas con habilidad é inteligencia nobles honrosas y liberales." Ibid., p. 100.

[124] "hacia mucho mas caso de las experiencias de los Artesanos que de las especulaciones de todos los doctos." Ibid., p. 101.

[125] "Los oficios (entiende lo mismo que por Artes) requieren una actividad continua ayudada de un sistema politico y de reglas constantes dedicadas incesantemente a su diaria perfeccion que no puede se duradera sin las especulaciones cientificas de una Academia de ciencias." Ibid., p. 102.

[126] "Sin discurso y ciencia (prosigue) nada de esto ha podido reducirse á sistema y orden, y asienta que si se debe al Filósofo, al Naturalista, ó al Químico el hallar y descubrir estas combinaciones, se debe á los artistas el copiarlas á costa de experiencias racionadas, lo que supone necesariamente conocimientos muy elevados de estas materias." Ibid., p. 105.

[127] "no en vano dice este Autor que la Matematica influye inmediatamente en las Artes practicas, y que sin su socorro jamás podran adquirir el grado de perfección necesaria á cuyo sin habia ya propuesto en el discurso sobre la Industria popular el establecimiento de dos catedras en cada capital una de Aritmetica Geometra y Algebra, en que se enseñasen los principios que necesite saber cada Artista, y otra de Maquinaria en que se aplicase estos mismos principios al progreso de la Artes, á perfeccionar los instrumentos que necesita cada una, y á facilitar con ellos sus respectivas operaciones." Ibid., p. 105.

[128] Ibid., p. 112.

> in his time it was unknown that drawing could serve not only Painting, Sculpture, Architecture, Tapestry, Silversmithing, and Embroidery, distinguishing them from the other arts, calling then liberal, honorable, and different from the others. There is no doubt when looking at his rationale that had he seen the employment of drawing by the other arts, and how artisans would use it to delineate dress, tables, and other artifacts, he would have attributed to them the same honor as the other [arts].[129]

By criticizing Ríos's confinement of drawing to certain arts, Monteseguro puts all arts on the same level. Whereas Ríos used drawing to demonstrate the liberal status of an art, by showing its inventiveness, Monteseguro banishes this division, by stating that all arts and crafts could use drawing.

For Monteseguro, the decline and decay of the crafts in Spain reached its lowest point when drawing was abandoned. Following Campomanes, he cites the artists who (supposedly) spoke about the importance of drawing to perfecting the arts, achieving accuracy also in designing machines by the support of newly founded local schools of drawing.[130] After he argues the futility of the division between the liberal and mechanical, he goes on to say that this conclusion reflects on the people practicing these arts, meaning that because the crafts are now appreciated, the artisans practicing them should be granted equal esteem. Monteseguro consequently asserts that "Wise men insist and argue that the spirit of true nobility is not incompatible with the exercise of arts called mechanical. Legislation has opened the door to

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129[129] "pero en su tiempo no se conocia que el dibuxo pudiese servir, sino para la Pintura, Escultura, Arquitectura, Tapiceria, Plateria, y Bordadura distingue á estas Artes de las demás, llamandolas liberales y honrosas á diferencia de la otras. No puede dudarse á vista de sus razones que si él huviera visto empleado el dibuxo en las demás Artes, y qué los artifiecs de ellas se valian de él para trazar y delinear los vestidos, mesas, y demás artefactos, les huviera atribuido el mismo honor que á las otras." Ibid., p. 111.

[130] "Francisco Olanda Portugués, el qual llamó al dibujo la cabeza y llave de todas las Artes de este Mundo: Francisco Pacheco uno de los mas celebres pintores de la escuela sevillana, el qual dice que del dibuxo se enriquecen casi todas las Artes y exercicios convenientes al uso de los hombres: Vicente Carducho que llama al dibuxo la perfeccion del Arte: y Don Antonio Palomino que adirma que qualquiera artefacto y obra de los Oficios mas humildes consta de una cierta simetría organizacion y buen perfil, cuyo acierto subministra el dibuxo: de donde deduce que generalmente las Artes y Oficios estan baxo la direccion arquitectonica del dibuxo." Ibid., p. 112.
He mentions the school of drawing in Barcelona as well as in the Society of Terraga in Cataluña, and The royal society in Valencia who entrusted the Academy there to teach drawing only for artisans. "Oxala que á estos golpes de luz abriesemos los ojos los demás!" Ibid., p. 113.

honorable artisans to practice honorable jobs in the Republic."[131]

The change in mentality promoted and announced by Monteseguro is also expressed in the writing of Juan Sempere y Guarinos. A lawyer and member of Madrid's Economic Society, he rebutted in his extensive writings on the Spanish Enlightenment the European criticism against Spain, which had primarily been launched by Nicolas Masson de Morvillers' famous article on Spain's backwardness (to be discussed below). Sempere y Guarinos, like many other Spanish *ilustrados*, rejected the characterization of Spain as a marginal nation. He often claimed the superiority of Spanish authors like Geronymo Ustariz, Miguel de Zabala, and Francisco Martínez de la Mata[132] over Europeans like Montesquieu or Hume. His major work *History of Luxury* (Madrid, 1788) denounced excess, but at the same time also warned that if luxury trades were banned, artisans would revert to idleness.[133] In his *Reflections on Good Taste in the Sciences and the Arts* (*Reflexiones sobre el buen gusto en las Ciencias y en las* Artes, Madrid, 1782), he discussed the role of the arts in relation to economic policy (*politica economica*)—a topic he identified as new to the majority of Spaniards.

What is important about Sempere y Guarinos's work is that he also describes a new intellectual scene in Spain and a growing public interest in taste and judgment of commodity or luxury objects, reflected in an increasing appreciation as some "started to view the arts and commerce with less hostility."[134] Public awareness and good taste were simultaneous with a new valuation of natural science:[135] "[on the podium and between the ladies] now it is fashionable to talk about natural history of animals, plants, and minerals, [to discuss] crafts and factories

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[131] Ibid., p. 61.
[132] Martínez de la Mata's work writings were incorporated in Campomanes's discursos.
[133] Sempere y Guarinos, *Historia del luxo* (Madrid, 1788), vol. 2, 9.
[134] Juan Sempere y Guarinos, *Reflexiones sobre el buen gusto en las Ciencias y en las Artes* (Madrid, 1782), p. 273.
[135] The translation in 1753 of the Abbé Pluche's *Espectuaculos de la Naturaleza* "attracted the affection and taste of the kingdom." Ibid., p. 279.

(*fabricas*), subject matters entirely unknown outside the class of artisans or a few physicians."[136] He continues, "This taste was entrenched and spread more with the study of experimental physics and mathematics." Many events helped this change: Ferdinand VI's importation of machines, the role of the Semenario de Nobles and Nollet, the progress in Chemistry, and the foundation of the Royal Garden of Botany and the Cabinet of Natural History.[137]

Sempere y Guarinos ascribed this new public appreciation for the arts and crafts to the publication of painter Antonio Palomino's book on Painting, *El Museo Pictórico* (1715). The increased "affection toward political material" coincided and culminated with the establishment of the Academy of San Fernando in Madrid in 1752.[138] He acknowledges the efforts of the Italian, Domingo Olivieri, in this endeavor, and in "purifying the taste in Painting, Sculpture, and Architecture. Beauty, proportion, and decorum succeeded impropriety and disorder." Olivieri was one of the Europeans whom Spain attracted for its "gardens and works of Balsain [Valsaín], the La Granja, and the New Palace, and the fame of Felipe V who favored the arts." Guarinos recounts that Olivieri was the first sculptor of the king and founded a private academy where he taught drawing. As the government wanted to promote this institution, Olivieri suggested to the king the erection of an Academy of Noble Arts, who formed a Junta Preparatoria in 1744.

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[136] "Hasta en los estrados, y entre las Damas llegó á hacerse moda el hablar de la Historia Natural de los animales, de las plantas, y de los minerales; y de los oficios, y fábricas, asuntos antes enteramente desconocidos, fuera de la clase de los artesanos, y de bien pocos facultativos." Ibid., p. 279.

[137] "el estudio de esta ciencia (he means politica económica) no se havia hecho general en España todavia, no pudieron producir todo el efecto de que eran capaces sus disposiciones." Ibid., p. 281.
He talks about the great projects executed by Charles III. (with his eyes on Italy?) "S.M. que en Italia, centro de las Artes, havia yá dado grandes pruebas del gusto con que las miraba, traxo á España la misma inclinacion, y deseos de favorecerlas. No ha havido pensamiento alguno util, que no haya sido acogido benignamente por su real Corazon, y al que este no haya contribuido con su generosidad." Ibid., p. 282.

[138] He mentions how Feijoo in his *Teatro* confronted many errors toward the arts, and supported the foundation of academies and other projects important for both politics and economy. Another work he mentions as a renovation of Ustariz's work is Bernardo de Ulloa's *Restablecimiento de las Fábricas, y comercio Español* (1740). The affection ofr political material is also manifested in the reception of the translated book *Estado Politico de Europa*, which only in one month had three editions. Ibid., p. 276.

However, Felipe V died, leaving to Felipe VI "the glory to be the founder of the Academy of the Noble Arts."

> We cannot emphasize enough the influence that these arts have on all the other arts that they serve or [how] they remedy the necessities of life or increase its comforts. Whoever views the arts as [merely introducing] change in appearance of things, past or distant, thinking perhaps of their short merit [therefore] will find it hard to promote them. But whoever knows that, without drawing and without exactitude in dimensions... the mechanical arts would never depart from their primitive rudeness nor reach perfection, will think differently, or will be easily convinced of the necessity and importance [of drawing].[139]

Clearly, as with Campomanes's view, for Sempere y Guarinos drawing plays a major role in introducing a qualitative change in the goods produced. Moreover, he connects the mechanical arts, fine arts, and drawing, when he talks about the role of the academies of fine art in the valorization and spread of drawing, "which is the soul of the arts."[140]

> The ideas we have now are very different from those that were formed by our predecessors. They held it to be indecent and unseemly not only to practice [the mechanical arts] but even to know them. The nobility seemed to be degraded by engaging in cultivating their heritage with their hands [...] Begging was believed to be better and less embarrassing than the stain [produced by] the contact of fingers with mechanical instruments. What concern!
> Now we think otherwise. Perhaps the time has come, as Cardinal Alberoni announced that [...] in Spain [it] could [be] believed, as in the rest of Europe, that a gentleman does not commit evil or act against the nobility of his birth, [if he himself] cultivates the best of his lands (1). At least that kind of horror, previously [directed at] the crafts and their instruments, is not noticed [especially with our king's and nobility's] concern with understanding the exercises of drawing, tiling, carpentry, clock-making, and other arts, without stumbling at the ridiculous labeling of whether they are noble or mechanical.[141]

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[139] "no se puede explicar bastantemente el influxo que tienen estas Artes en todas las demas que sirven, ó para remediar las necesidades de la vida, ó para aumentar sus comodidades. Quien mire solamente en ellas las mudas imagines de las cosas, ó pasadas, ó distantes, acaso sospechará que es su merito muy corto, para que es procure promoverlas con tanto empeño. Mas quien sepa que sin el dibuxo, y sin la exactitude en las dimensiones, que por medio de ellas se adquiere, nunca havieran podido las Artes Mecánicas salir de su rudeza primitive, ni llegar á perfeccionarse; pensará de otra manera, u se convencerá facilmente de su necesidad, y de su importancia." Ibid., p. 278.

[140] "La Aacademia de San Fernando ha recibido en este tiempo los aumentos que pueden verse en las Actas que se publican en cada triennio, y especialmente en las de 1778. La de San Carlos de Valencia, y otras particulares que se van fundado por el Reyno, demuestran claramente la extensión, que va recibiendo el dibuxo, que es el alma de la Artes (1)." Ibid., p. 282.

[141] "Las ideas que ahora se tienen de estas son muy distintas de las que se havian formado nuestros mayores. Aquellos tenian por indecente, y por indecoroso, no solo el exercitarlas, sino aun el conocerlas. La nobleza parecia

For him the Academy therefore (ironically) enabled the crafts to traverse class demarcations. These efforts at perfecting the arts were further augmented after the establishment of the Economic Societies in major cities of Spain, most prominently the Society in Madrid (1775); they examined the reasons for decline and probed how to fight idleness.[142]

From a School of Drawing to an Academy: The case of Zaragoza

Schools of Drawing opened their doors to young students and were highly influenced by the activities of policymakers (like Campomanes and Jovellanos) who were also involved in Madrid's Fine Arts Academy and saw it as a model for the artisan's institution. It is no surprise that these schools gradually began offering classes and curricula similar to the ones offered by the Madrid Academy. Instruction in rudimentary drawing outside the academy was a rising phenomena in major European centers of the eighteenth century, and more forcefully in the nineteenth century. Most notably is the École Gratuite de Dessin in Paris (established in 1766), where workers received instruction in drawing to foster trade and industry. The emphasis on drawing as a tool for industrial purposes and the similarity in pedagogy and focus inevitably led some of the students of these schools, like Carpeaux, Rodin, and Garnier, to move on and join

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que se degradaba por ocuparse en cultivar con sus manos su patrimonio, ó en ganar, el sustento con la industria. Menos malo, y menos vergonzoso se creía el mendigar, que el manchar los dedos con el contacto de los intrumentos mecánicos. Qué preocupacion! Ahora se piensa de otro modo. Acaso ha llegado yá el tiempo, que anunció el Cardenal Alberoni, quando dixo que en España podria creerse, como en todo el resto de la Europa, que *un caballero no hace mal, ni obra contra la nobleza de su nacimiento, cultivando por sí mismo la mejor de sus tierras* (1). A lo menos no se advierte yá aquella especie de horror que antes se tenia á los oficios, y á sus instrumentos. El Príncipe nuestro Señor, y los Señores Infantes...se ven ocuparse muchas veces por entendimiento en los exercicios del dibuxo, la labranza, la carpintería, reloxería, y otras Artes, sin pararse en la ridícula etiqueta de si son nobles, ó mecánicas." Ibid., p. 283-284.

[142] In the footnote he gives important works treating agriculture, commerce, industry, economics, chemistry, botany, natural history. The Madrid Society was founded by the initiative of Rodriguez de Rivas, Josef Faustino de Medina, and Josef de Almarza. The two publications by Campomanes, for him, triggered the study of economic policy and its application to the arts, from which emerged infinite projects, relative to the material in these books for its "recommendation to promote the arts and industry, and establish economic societies in all capitals and cities of the rein." Ibid., p. 289. See Francisco Romá y Rosell, *Las señales de felicidad de España* (Madrid, 1768).

the Academié.[143] The École, however, carried on with its same function throughout the nineteenth century. In Spain, however, the conflation of the arts and crafts encouraged some of these Schools to lay claim to the title "Academy," despite the Madrid Academy's objection. Most notable was the School of Drawing in Zaragoza, which began its activities in 1776 and was officially transformed into La Real Academia de Bellas Artes de San Luis in 1792. The account that follows can only be a sketch of what could be a rich case study of institutional hierarchies and art divisions.

In 1754 a Junta Preparatoria was established in Zaragoza as a prelude for the foundation of an academy of fine art, most notably with the efforts of Vicente Pignatelli, the viceprotector of the Academy of San Fernando at that time.[144] However this Junta failed to progress toward the establishment of the envisaged Academy, primarily because the majority of its members soon died. After the academicians of San Fernando petitioned for the renewal of these efforts, the king, in 1771, created another Junta Preparatoria under the leadership of Ramón Pignatelli (Vicente's brother).[145] However, this time there was not enough budget to sustain teaching; therefore, in 1779, the professors decided to suspend their classes until they received royal financial support.[146]

At about the same time, in 1776, the "Real Sociedad Economica Aragonesa" (the Royal Economic Society of Aragon) was established in Zaragoza, and associated with it a School of

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[143] See Anne Wagner, *Jean-Baptiste Carpeaux: Sculptor of the Second Empire* (Yale University Press, 1986), Chapter 2.

[144] A.S.F. arm. 2, 36. Cited in Claude Bédat, *La Real Academia de Bellas Artes.* (Madrid: Fundación Universitaria Española: Real Academia de Bellas Artes de San Fernando, 1989), p. 405. The royal order for the foundation of the Academy was signed by Ricardo Wall in 18-9-1754. Other figures involved in the process the inception of the acdemy are Marqués de Sástago, Marqués de Lazán, Marqués de Campo Real, Fernando de la Mata, fiscal de la Audiencia, and Antonio de Ara ("regidor decano de Zaragoza").

[145] A.S.F., arm. 2, 35. The royal order was signed by marqués de Grimaldi in 10-9-1771. Cited in Claude Bédat, *La Real Academia de Bellas Artes.* (Madrid, 1989), p. 406.

[146] Junta Particular of 7-11-1779. Most notabely involved were professors of painting, Josef Luzán Martínez (Goya's teacher), Juan-Andrés Merklein, and Manuel Eraso; professors of sculpture Juan Fita and Carlos Salas and Domingo Estrada, and of architecture Pedro Ceballos, Agustín Sanz, and Gregorio Sevilla.

Drawing was created. It was underwritten by Juan Martín de Goycoechea y Galarza, a wealthy man who was then a member of this Economic Society, known for his travels to France and favoring classical art and architecture.[147] After its opening, the school of drawing suspended its activities because of disagreements voiced by both the Junta Preparatoria in Zaragoza and the Madrid Academy.[148] In the *Estatutos de la Real Academia de San Fernando* of 1757, it is stated that if any other academy is to be established in Spain, the Madrid Academy is the only one who could request its creation, after giving an account to the king about its governance and modes of sustenance. In addition, all other academies would eventually be subordinate to the Madrid Academy.[149] But despite all this, on 23 September of 1784, the school announced the re-opening of its classes.[150] In the beginning, the school was located in the house of Miguel Franco Generes, known as the "Casa de la Infanta," the only plateresque Aragonese patio in Zaragoza.[151] The "Libros de Resoluciones de la Real Sociedad Económica" describes students' work of 1787 as including drawings of the statue of Médici Apollino, a model in clay of this statue, and a drawing

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[147] Real Academia de Bellas Artes de San Fernando, *Distribucion de los premios* 1790, p. 4. For bibliography on Goyceochea: Pedro Valero, *Elogios del Sr. D. Juan Martín de Goycoechea* (Madrid, 1806); Juan Enrique Iranzo, *El muy ilustre señor Don Juan Martín de Goicoechea Estudio biográfico leído en la real y excma. Sociedad Económica Aragonesa de amigos del País* (Tip Casañal, Zaragoza, 1912). José Francisco Forniés Casals. *Fuentes para el studio de la sociedad y la economia aragonesas, 1776-1808.* Zaragoza, 1980.

[148] This text indicates the disagreement "Rendidos ya todos los esfuerzos de la junta preparatoria, se desengañó la Sociedad absolutamente de que por parte de esta junta nada se adelantaría en la material, ni conseguiría el fin; antes bien, sus pensamientos o los medios que se elegían, eran de algún modo opuestos a los que el cuerpo patriótico meditaba por más convenientes a la empresa." *Actas de la Real Academia de las nobles artes establecida con el título de San Luis y relación de los premios que distribuyó en 25 de agosto de 1801,* (Zaragoza 1801), pp. 30-31. Cited in Claude Bédat, *La Real Academia de Bellas Artes.* (Madrid, 1989), p. 406.

[149] "No solo prohibo en mi Corte qualquiera otro Estudio Público de todas y cada una de las TRES NOBLES ARTES, sino es tambien mándo. Que no se pueda fundar alguna en los Pueblos de mis Reynos sin que primero se me dé cuenta por medio de la misma Academia del establecimiento que se intent, de sus medios de subsistir, y método de gobernarse: pues en caso de estimarlo conveniente, no solo le concederé el permiso necesario, pero le participaré los honores y privilegios que le sean adaptables de esta Academia, á la qualquiero que estén subordinadas todas las de sy especie que se fundan en mis Reynos." *Estatutos de la Real Academia de San Fernando* (Madrid, 1757), p. 91-92.

[150] As announced in the *Gaceta de Zaragoza* of October 19, 1784.

[151] It acquired this name because doña María Teresa de Vallabriga y Rozas-Drumond, married to Charles III's brother Luis Borbón y Farnesio. Today it serves the headquarters of the Caja de Ahorros y Monte de Piedad de Zaragoza, Aragón y Rioja.

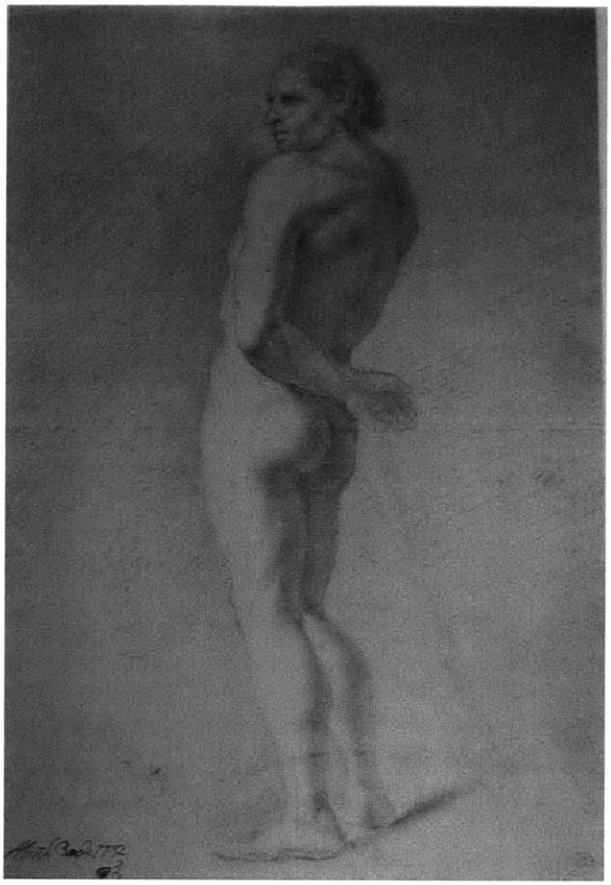

Figure 11. Goya y Luciente, Francisco, Drawing in red pencil (saguina) and white chalk on white paper, 1785-1790, School of Drawing, Zaragoza

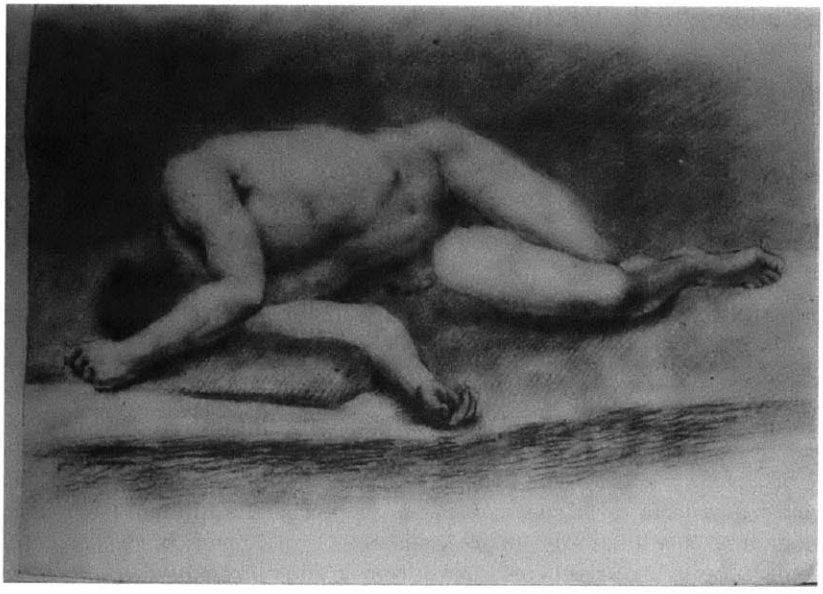

Figure 12. Anonymous, Drawing in black pencil and white chalk, second half of the eighteenth century, School of Drawing, Zaragoza.

Figure 13. J. B. Piranesi, engraving of "Veduta di Piazza Navona sopra le rovine del Circo Agonale," second half of the eighteenth century, School of Drawing, Zaragoza.

in plan and elevation of a building in the Corinthian order.[152] In 1784, the school taught architecture and drawing to two hundred students. In that year Goycoechea, the director, opened a new hall for plaster models, clearly promoting a resurgence of classical art and architecture.[153] The *Actas* of the Academy of San Luis mentions that Goycoechea, the vice-president, brought "figures and heads, various studies in paper of the most famous artists in Rome," as well as

[152] Goya reported to his friend, one of the founder of the Economic Society in Zaragoza in a letter alluding to neoclassical style invading Spanish architecture: "la cual te responde que lo que se estila aqui (en Madrid) arora es estilo arquitectónico, de lo cual dará razón y hidea min amigo Arali." See Goya, Francisco, *Cartas a Martín Zapater*, ed. lit. Mercedes Águeda y Xavier de Salas (Tres Cantos, Istmo), 2003; *Principios del dibujo sacados de las excelentes estatuas antiguas para los jobenes, que quieren instruirse en las bellas artes publicados, i gravados por Juan Volpato, i Rafael Morhgen, traducidos del Italiano al Español en Zaragoza* 1786; Real Sociedad Económica Aragonesa de Amigos del País, *Fondo de pintura aguafuerte: Dibujos de Academia de la Real Sociedad Economica Aragonesa del País* (Zaragoza, Real Sociedad Económica Aragonesa de Amigos del País, 1995), p. 188.
[153] The *Libros de Resoluciones* tell us that there were "Sala de Principios," Sala de Cabezas," or "Sala de Académico de Semana."

drawing from the Academy."[154] Indeed, the archive of the Economic Society holds drawings of Goya's sketches and painter Francisco Bayeu y Subías's sketches and preparatory drawings for his "La Caida de los Gigantes," "La apotheosis de Hércules," and "San Augustín entre Cristo y la Virgen" (figs. 11, 12, 13). The ambassador of Spain to Rome, José-Nicolás de Azara y Perera, sent the school heads of Rafael, drawn by Mengs.

A royal order requested on December 30, 1790 that the Economic Society should write the statutes for its school, soon to assume the title "Academy." Despite renewed disagreement with the previous Junta Preparatoria of Zaragoza, the Economic Society appointed in 1791 a new committee comprising Juan Martín de Goycoechea, Luis Rancaño de Cancio, Joaquín García and the famous neoclassical poet Juan Meléndez Valdés. In March 1792, Juan Antonio Hernández de Larrea, a member of the Economic Society, wrote to his friend viceprotector of the Academy, Bernardo Iriarte, to ask for his support for the petition he sent to the Monarchy to obtain the title "academy." Iriarte responded by saying, "The truth is that in order to give a study [institution] of the arts the title Academy, it requires something more than what appears. The substance is what is important; and if in Zaragoza the arts achieved the required perfection, which is not so easy to achieve there or elsewhere in the country, this institution would be worthy of the royal and effective appreciation." He alluded to regretting giving this title to the Academy in Valencia "prematurely and without necessity or basis."[155] Iriarte went on to criticize the general state of natural science in the country, including the Economic Societies.

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[154] "El Señor Goycoechea, vicepresidente perpetuo de la misma, cedió, tal y como tenía ofrecido 372 Academia, figuras y cabezas, varios estudios en papel de los mas famosos de Roma, y de algunos pensionistas de San Fernando en la misma; cincuenta y dos cabezas; trece baxo relieves; treinta medallitas; dos piernas de niños; y un pie y una mano de la anatomia en yesos, como constaba con individualidad por una relación formal (hoy perdida), firmada de su mano, que se insert en la Acta." Actas de la Real Academia de Nobles Artes de San Luis de Zaragoza 11-04-1793

[155] "Lo cierto y positivo es que para dar a un estudio de las Artes el título de Academia se require algo más de lo que parece. La substancia es lo que importa; y si en Zaragoza llegan las Artes a la debida perfección, que no es tan fácil se consiga ahí ni en otra parte del Reino, será este establecimiento digno del aprecio real y efectivo que nunca bastará a proporcionarle la sola denominación a que aspira muy inmaduramente y se dio sin necesidad ni

> For some time now there is a magnificent building being built in Madrid for the Academy of Science, and also for some time now everyone said the word "academy," i.e., Museum. I search for wise men who would constitute it [the Academy], but I cannot find them. We will start to make them [the wise men] once the house is finished. ... in which so much is said and so little is done and can be done.[156]

In April 1792, the monarchy transformed the school of drawing to the Academia de Bellas Artes de San Luis, and appointed as its president Félix O'Neille, who was the director of the Economic Society of Aragon, and as its vice president Juan Martín de Goycoechea. When this happened Conde de Aranda was the prime minister, but after that, in November 1792, Conde de Floridablanca (a friend of Iriarte) took on the office. Members of the Madrid Academy raised the problem of the foundation of San Luis.[157] The Academy not only objected to the creation of the academy in Zaragoza but, as manifested in Iriarte's writing, it criticized those of Valladolid and Valencia, both of which began as schools of drawing.[158]

Did the Academy's rejection of the transformation of the school to an academy stem from a refusal to accept the fact that artisans were encroaching on its territory (especially when these artisans clearly used classical art and architecture as their models)? Or was it because the guardian institution was the Economic Society? I would argue that both these hypotheses are

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fundamento a la Academia valenciana." A.S.F., arm. 2, 39. The letter was sent on 4-4-1792. Claude Bédat, *La Real Academia de Bellas Artes.* (Madrid, 1989), p. 407.

[156] "Ha tiempo que se está fabricando en Madrid un magnífico edificio para la Academia de la Ciencias, y ha otro tanto tiempo que todos se llenan la boca dela palabra Academia, o sea Museo. Yo busco los sabios que la han de componer, y no los encuentro. Empezaremos a fabricarlos cuando esté concluida la Casa.... No quiero hablar más de esto, ni decir lo que piensa de nuestras sociedades económicas, en que tanto se habla y tan poco se hace y puede hacer." Ibid., p. 407-8.

[157] Juan Antonio Hernández de Larrea wrote to Iriarte in 1796 to inform him about the new problems in the Academy whom he served as its councilor.

[158] "Además de las Academias de Valencia y Zaragoza, hay también otra bien inútil y rídicula en Valladolid, la cual se estableció con incompetente aprobación del Consejo de Castilla que, lo sabe Usted, rabia por meterse en negocios ajenos y que no le incumbent... y después se procuró subsanar aunque defectuosamente, el exceso de aquel Tribunal por la primera secretaría de Estado. Hoy se intenta consolide y reconozca la Academia de San Fernando como tal Academia a la de Valladolid que ni ha prosperado ni lleva trazas de ello." Claude Bédat, *La Real Academia de Bellas Artes.* (Madrid, 1989), p. 411.

true. The Academy was keen to maintain art divisions and make the boundaries clear between the noble arts and the crafts, which it continued to seek even in the nineteenth century.

Drawing and the Felicity of Spain

Much of the narrative pronounced by the Economic Societies' reformers stressed the relation of productivity and industry to the general happiness and prosperity of the nation. Jovellanos, for example, said "I do not use happiness in a moral sense... I understand it here as that state of abundance and comfort to which all good government and its individuals should aspire."[159]

Conceived as an Enlightenment institution that subscribed to the monarchy's agenda for economic recovery, the Madrid Academy of San Fernando had to acknowledge the work of artisans as equal in importance to that of the artists. Nevertheless, the Academy affirmed artistic hierarchy and control. In 1817, after the Academy reopened its doors with the departure from Spain of the French troops (who occupied its headquarters from 1808 to 1814),[160] the Academy's viceprotector, Pedro Franco, wrote *The Felicity of Spain: Industry Perfected by Drawing* (*España féliz con la industria perfeccionada por el dibujo*, Madrid, Imprenta Real). This book captures eighteenth-century institutional efforts to center the discourse on economic progress around drawing as a means to stimulate industry, and ultimately, national prosperity.[161] In this work, the Academy reaffirmed itself as the only authority responsible for all arts and crafts, supervising "national industry" and the production of commodity and luxury objects in Spain. It called for freeing national manufactures from their dependence on foreigners, who "raised their

[159] Jovellanos, "Discurso sobre los medios de promover la felicidad del principado," in Gaspar de Jovellanos. *Obras publicadas é inéditas*, vol. 2 (Madrid, 1859), p. 439.
[160] Pedro Franco, *España féliz con la industria perfeccionada por el dibujo*, (Madrid, Imprenta Real, 1817), p. 29.
[161] See Antonio Buenaventura Gassó, *España con industria, fuerte y rica,* (Barcelona, 1816).

factories on the ruins of [Spain's] and destroyed us with their beautiful manufactures."[162] For Franco, drawing should now be studied by people from all social classes; however, he immediately explains the artistic hierarchy pertinent to this study:[163] "[For] those who wish to pursue a career in the noble arts of painting and sculpture, it is necessary to become versed in drawing by studying antiquity ... perspective, anatomy, and the human skeleton...With this they could earn their living, teaching drawing to decent people or *maestros* in subordinate schools distributed in the country." These craftsmen would produce a "thousand useful things frequently offered by particular subjects or by the crafts."[164] He now turns to advise "those who cannot reach the sublime stage of skill and are not able to earn their living only from drawing"—"the *maestros* and workers of all crafts." He presents the "things that would come out of their hands," and how drawing will aid and transform their "manufactures, ornament, furniture," and the myriad of drawings and patterns that would appear on artifacts of "general and individual use."[165]

Artistic hierarchy, therefore, was still embedded in these claims; however, the importance of crafts was nonetheless strongly highlighted as something crucial to the nation's progress in face of foreign industry and manufactures. Franco reiterates many of the ideas previously developed by Campomanes as well as the *ilustrados*' appeal to Spanish youth to become "useful

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[162] "los extrangeros... levantaron sus fabricas sobre las ruinas de las nuestras... No erraron el cálculo; y para asegurarse mejor procuraron establecer un Nuevo gusto en los artefactos, recurriendo al dibujo para que les diese buenas formas, invencion y primos, con cuya conducta han ido adelantando en las fabricas, artes y oficios, en terminos que con sus hermosas manufacturas nos han aniquilado enteramente." Pedro Franco, *España féliz,* p. 64.
[163] Ibid., p. 51.
[164] "los que quieran seguir las nobles artes de pintura ó escultura es necesario que se perfeccionen mucho en le dibujo por medio de los estudio de antiguo y del natural en alguna de las academia ó escuelas del reino, donde se exponent tales modelos, como tambien en los conocimientos precisos de perspectiva, de anatomia y el esqueleto humano para entender bien la colocacion de los huecos y músculos con sus funciones y movimientos. Con esto ya podrán ganar su subsistencia, dando lecciones de dibujo á personas decentes, ó bien colocandose de maestros en las escuelas subalternas de esta clase repartidas en las provincias, y hacienda dibujos para mil cosas que se ofrecen frecuentemente á los sugetos particulares y á los oficios." Ibid., p. 70-71.
[165] "Hasta aqui se ha tratado de los jóvenes que se dediquen á la carrera de las nobles artes: resta explicar lo que pueden hacer otros que no lleguen á tan sublime grado de habilidad para ganar dinero con la guia sola del dibujo." Ibid., p. 80.

members of the *patria*"—to achieve common and individual happiness through work.[166] If the economic reformers ascribed Spain's relative economic stagnation to the low esteem with which arts and crafts were regarded, the Madrid Academy saw that the "backwardness of the country in industry consists primarily in the ignorance of the effects that drawing and the noble arts have on civilization, and on the richness and power of states."[167]

Although the eighteenth- and nineteenth-century economic reformers were influenced by Gutiérrez de los Ríos's theories, their stance on artistic hierarchy, the relationship between the arts, and how drawing informs the arts and crafts differed markedly from his.

While Ríos determined the status of an art based on the degree of intellectual and bodily involvement in its formation, these reformers insisted that bodily work and sweat, because of their connection to utility, never contradicted nobility. Perhaps the new mentality pervading the nation, indicated in their accounts, was already predicted by Ríos two hundred years earlier, when he clearly maintained that art divisions constantly change with changes in opinion, customs, and time. Indeed, the time they described was of a new public awareness of economic policy, as well as the arts and sciences. The public realized, they proclaimed, that experimental science (not speculative knowledge), materiality (not abstraction), and utility (not theory), were what transformed a nation into an economically prosperous industrial one.

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[166] Ibid., p. 67, 69.

[167] "el atraso de esta heroica naciona en los ramos industrials consiste en que la mayor parte de sus individuos no conoce el infujo directo que el dibujo y las nobles artes tienen en la civilizacion, la riqueza y el poder de los Estado; siendo lo mas sensible que muchas personas cultas la graduán únicamente como cosa de puto lujo, y muy corto á proporcion el número de las que poseen una idea justa del aprecio que merecen. Para demonstrar la equivocacion en que viven los sugetos que siguen la opinion primera, y el recto modo de pensar de los otros, se dividirá este escrito en dos partes: haciendo ver en la primera que el lujo en los objetos pertenecientes á las nobles artes debe graduarse por cosa útil en cualquiera pais civilizado, atendiendo al crédito que le da la posesion de tales preciosidades artísticas; y en la segunda se manifestará con rezones convincentes que el dibujo, padre de las bellas artes, promovedor de las liberales, y de casi todos los oficios, no solamente es precio para adelantar en la industria, sino que no puede haber nacion floreciente sin el auxilio de este appreciable estudio." Ibid., p. 9-10.

All these arguments relied on Ríos's emphasis on drawing—the center for all their discourse. Whereas for Ríos the use of drawing elevates the status of an art as it demonstrates its maxims and precepts—drawing (*disegno*) is tied to geometry and the demonstration of geometric rules, as we saw in Rada's treatise on fencing—these reformers connected drawing to utility and rendered it a common denominator to all arts. Criticizing its confinement to the fine arts, these reformers expanded the boundaries suggested by Ríos. Everyone could practice drawing, even outside of the domain of the arts and crafts. The popularization of drawing supposedly put all arts, high and low, at the same level. In conflating the arts and crafts, they overlooked Ríos's opinion on the relationship between drawing and the arts. Ríos saw drawing as an intellectual process of invention. A silversmith could degrade his art if he produced mere copies without recourse to discovering the liberal in nature. Campomanes and his followers on the other hand, stressed drawing as a tool that serves industrial production, enabling craftsmen to make copies of objects. They argued that if a doctrine had produced the first primary object, then this doctrine was inherent in the copies imitating the first model. Drawing's function to demonstrate nobility and intellectual activity was no longer relevant.

By conflating the arts and crafts, economic reformers aimed to suppress the exaggerated praise the fine arts had enjoyed in previous centuries. Their arguments, which promoted popular instruction in drawing, however, were rooted in the artistic tradition, as they repeatedly made comparison between the high and low arts, and between the academies and the economic societies. Despite their implicit disdain for the crafts, it is no surprise that with such discourse on the equality of the arts, some of these schools, as in the case of Zaragoza, would assume the title "academy." The kind of drawing taught in these schools went beyond the geometric drawing often used by the craftsman. Now craftsmen began to make copies of exemplary works of art by

Goya or Piranesi, without necessarily knowing their merit or their author—their only aim was to reproduce with exactness and perfection. They were learning to copy living nature from engravings or casts. The assumption that drawing was a necessary prerequisite in the formation of the artist now took on a wider application. It was generalized for all arts and crafts and the larger public, aiding its judgment and taste.

In light of these changing dynamics between the arts, crafts, and economy, the Academy was confronted by two challenges: its commitment to economic reform through the promotion of national industry, and its desire to maintain the long-held hierarchies among the arts. To accomplish both, the Academy had to proclaim itself as the main guardian for these schools and for the teaching of drawing nationwide.

CHAPTER TWO

Ornament and "The Orders" in Eighteenth-Century Spanish Architectural Tradition

The debate over the division of the arts in Spanish institutions of the Enlightenment called into question the relationship among the arts, as well as their relative status, as we saw in Chapter One. When the architectural profession turned its attention to this debate, it had to focus on ornament as a key site for this assessment. Advocates of neoclassical architecture insisted that excessive ornament, associated with the crafts, should be repudiated. Because Spanish architecture's main characteristic is its long history of collaboration between the arts and crafts, which manifestly intersects in architectural ornament, the separation of the crafts from architecture had crucial repercussions on the structure of the architectural tradition, but most importantly it altered the dynamics of its leading institutions—the guilds, as well as the Academy and the Economic Societies.

Most accounts by contemporary architectural historians attribute the promotion of classical architecture during the Enlightenment, in places like France and England, to the fact that classicism fulfilled the Enlightenment's agenda of a sweeping rationality, rules, and methods. From this argument there has also emerged a parallel claim that the rejection of the baroque aesthetic was proclaimed against architectural theories that encouraged freedom of expression in design that went against the rules established by classical authors for the discipline of architecture. These two related arguments are similarly articulated in contemporary, but also in eighteenth-century, Spanish architectural history accounts, which called for a return to architecture's classical ideals and the abolition of excessive ornament. Adopting classicism

meant building with a universal style in conformity with what was being built in the major "Enlightened" European centers of Northern Europe.

In what follows I would like to open another approach that sheds light on the reasons behind the adoption of classicism and the attacks on the baroque in Spain in academic circles of the Enlightenment. I argue that in the Spanish quest for a return to classicism, there was embedded another discourse that was directed against the guilds, which at the time of the establishment of the Academy in the mid-eighteenth century were at a high point of their control of the architectural profession, and emphasized its crafts character. The attack on the guilds was therefore an attack on ornament, and vice versa. The Academy centered its efforts on seizing control from the guilds over architectural practice, while advocating for a classicism that would cleanse architecture from its excess of ornament. I show, by focusing on what came to be known during the eighteenth century as the "Churrigueresque" style, that these attacks on ornament were part of a larger struggle between the Academy and the guilds. This systematic institutional consensus against the guilds (recall the similar opposition from the Economic Societies) inadvertently proscribed important ornamental constituents of the Spanish architectural identity—the product of centuries of artistic collaboration between the arts and crafts (and among three religions).

The Academy tried to control practice by seeking the crown's support to give it exclusive privileges to certify architects and approve architectural projects. Controlling pedagogy was more complex. The academicians undertook, in the process of putting together a Formal Plan of Study, a reexamination of the theoretical knowledge available for architects. There was a need to define architecture as a separate discipline, different from painting or sculpture, with which it shared the category of the "fine and noble arts," and also as one with clear boundaries that set

architecture apart from its associated crafts. The persistence of the influence of the guilds over the architectural profession nurtured this strong relationship between the arts and crafts that often left no clear distinction between them, nor between the duties of architect, master of works, *albañil*, or *alarife*. Architectural treatises available in Spain in the early eighteenth century clearly still operated within a medieval tradition including the guilds. These treatises were practical in manner, either reduced in scope to only treat geometry, or with content dedicated in part, or wholly, to guild ordinances.

Early architectural history accounts of the second half of the eighteenth century were written by architects as well as academicians involved in both the academies and the economic societies. As these authors advocated for classicism, they paralleled the attacks of the Academy against Churrigueresque architecture. This was especially true when the conflict between the academies and the guilds was still unresolved. The Academy's control over the architectural profession was not yet achieved, even with the continuous royal support. The guilds continued to operate, which is evidenced by the need to issue new royal decrees or reissue the old ones, as our narrative will show.[1] Despite their desire to separate themselves from artisans, the Academy's architects had to adhere to the guidelines of the crown to reinvigorate the crafts (as we saw in Chapter One). With the Academy's agenda to control the architectural crafts, many building-related positions had to be abolished, only leaving that of the *albañil* (a construction worker who builds with bricks, stones, or other materials) under the scrutiny of the architect. The most important treatises written within the Academy took pains to detail the work of the *albañil,* thus indicating clearly that the Academy is the institution with the upper hand regarding practice.

[1] A series of decrees were issued to affirm the Academy as the main artbiters on architecture, most notably in 1757, 1777, 1783, 1786, 1798, 1801, and 1808.

Section I: Practice and Control: The Academy and the Guilds

Upon its establishment in 1752, the Academy of San Fernando recognized how reform of the artistic and architectural tradition would aid its agenda to seize control from the guilds (*cofradías, congregaciones*, etc.) over practice. The guilds were, at that point, those who certified architects, examined projects and plans, and obtained their approval from the Council of Castile.

The *Ordenanzas* and the *Alarifes*

Architects, *maestros de obras* (masters of architectural works), and *alarifes*, constrained to operate within the guild system, resorted to the *ordenanzas*, which were the laws or regulations of their profession, to resolve their conflicts or approve their work. In general, each craft had its own *ordenanzas* that varied in each city. Usually, the guild or municipality prepared the *ordenanzas* and submitted them to the king or to the Council of Castile. Upon their approval they were announced in a major public space of the city.[2] The *ordenanzas* contained specific details about the guild, as well as its rules, labor structure, relationship of the guild members, and other general technical matters.[3] The *ordenanzas* that concerned the architectural profession were those of the *alarifes*. These were so old that it is hard to pinpoint their origin. During the

[2] The *Ordenanzas* presented general information about the guild and discussed rules and access, the structure of labor relations, raw materials, production, internal authority, assistance to members, and religious and ceremonial matters. For bibliography on the guilds and their *ordenanzas* see, Antonio Manuel Moral Roncal, *Gremios e Ilustración en Madrid (1775-1836)* (Madrid: Acatas Editorial, 1998).

[3] Antonio Miguel Bernal et al., "Sevilla: De los gremios a la industrialización," *Estudios de historia social,* no. 5-6 (1978). Presenting the ordinances orally the Plaza Mayor by the town crier was what made them real. It demonstrated the "authority of the municipality over the guilds." See, Juan Uña Sarthou, *Las asociaciones obreras en España* (1900).

sixteenth century new *ordenanzas* for each city were recompiled and published.[4] Later in the seventeenth century, there were attempts to rewrite them by *alarifes*, architects, or masters of architectural works.

Originating with the Muslim conquest of Spain, the *alarife* (literally "the knower" in Arabic) was versed in "all the liberal and mechanical arts,"[5] and usually inspected municipal buildings. Despite the Muslim origin of the word, and despite inheriting the duties that were introduced by the Islamic building tradition, the *alarife,* after the Reconquista, came to be defined as "an old Christian." Because the *alarifes* resolved conflicts arising from building, they were described as those who "serve God to enter Holy paradise because they make peace among men, judging their rights and relieving them of great conflicts."[6] Although the titles of architects, *alarifes,* and *maestros de obras* were different, there was not always a clear distinction of their duties (perhaps due in part to temporal variation). For example, "*alarife*" was defined by Covvarubias in 1611 as "versed in mechanical arts, judge of construction works"; while for Diego López de Arenas in 1633, the *alarife* was excluded from architecture, it being "only necessary for his profession to know geometry, counting, and how to read and write." On the

[4] For example, the recompilation of the *Ordenanzas* de sevilla started on May 18, 1515 and was completed in August 1519. In Seville (and Toledo) on 23 March, 1534, there appeared a Provisón Real de Charles V on "Maestros, oficials y aprendices del arte y oficio de la yesería y albañilería mandaron hacer y hicieron las ordenanzas de los cuarenta y un Capítulos y las siguentes." This Provisión became equivalent to the second part of Seville's ordinances, but both referred to exams, years of apprenticeship and exercise of the profession. On September 22, 1631 a *licencia* was given for a new edition published with the title "Ordenanzas de Sevilla que por su original son ahora nuevamente impresas con licencia del Señor Assistente." The section on the Alarife included forty-one chapters.

[5] On *alarifes* see María Angeles Toajas Roger, *Diego López de Arenas: Carpintero, alarife y tratadista en la Sevilla del siglo XVII* (Seville: Deputación Provincial de Sevilla, 1989), Chapter 1 and 2; Alicia Cámara Múñoz, *Arquitectura y sociedad en el Siglo de Oro* (Madrid: Ediciones el Arquero, 1990), chapter 3. The *alarifes* have a similar judicial authority as the Roman surveyor and, later city surveyors in Italy. They pass binding judgments on matters of physical facilities (e.g. boundaries).

[6] Victor Pérez Escolano and Fernando Villanueva Sandino, eds., *Ordenanzas de Sevilla* (1632) (Seville: Oficina Técnica de arquitectura e Ingeniería, 1975), 141v-142. These ordinances were recompiled in 1632.

other hand, in 1661 Torija situated the *alarife* within the category of architecture, "in possession of science and ingenuity, practice and theory."[7]

In the ordinances of the various cities, any autonomous work was banned if its merit was not presented in front of a tribunal. For example, the *Ordenanzas de Granada* stated that any craftsman (*oficial*) "whether citizen of this city, or having come from outside, cannot work in this craft (*oficio*) unless he is examined by the *alarifes*, appointed by the city, and in front of a notary... If he cannot be examined, he could work with another *maestro*, who had been already examined. These are the only two ways to be certified."[8] Each craftsman would be examined in his craft and could not practice other than his own craft. According to Murcia's *Ordenanzas*, those who wished to become "*maestros*" were expected to exhibit their skill by physically building architectural elements such as arches, pillars, and staircases, among other things.[9]

Among eighteenth-century Enlightenment authors, as mentioned in Chapter One, Jovellanos was most critical of the tyranny of the guilds and called for their abolition, just as in "France on 12-2-1776 by Turgot and in Tuscany on February 3 1770, confirmed in 1775." In 1785, in his "Informe: Dado á la Junta general de comercio y moneda sobre el libre ejercicio de

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[7] "A pesar de las diferencias entre arquitectos y maestros de obras, no hubo siempre una titulación clara, y los terminos no siempre se correspondieron con los contenidos, introduciéndose además variantes temporales: así, por ejemplo, 'alarife', que para Covarrubias en 1611 era el 'sabio en las artes mecánicas, juez de obras de albañilería', para López de Arenas en 1633 tampoco tenía categoría de arquitecto, siéndole necesario para su profesión tan solo saber leer, escribir, contar y geometría, y en cambio en 1661 Torija considerará al alarife dentro de la categoría del arquitecto, en posesión de la ciencia como del ingenio, de la práctica y de la teoría." Alicia Cámara Múñoz, *Arquitectura y sociedad en el Siglo de Oro* (Madrid: Ediciones el Arquero, 1990), p. 63.

[8] "Así vecino de esta ciudad, como venido de fuera parte, no pueda labrar en el dicho oficio, sin que primero sea examinado por los alarifes puestos por la ciudad y ante el Escribano de ella, y que cada uno tenga su carta de los que supiere para que puedan tomar obras por si, y si no pueden examinados, que labren con otro maestro que sea examinado y no de otra manera." *Ordenanzas de Granada*, 1521, fol. 187. Cited in Francisco José León Tello, *Estética y teoría de la arquitectura en los tratados españoles del siglo XVIII* (Madrid: Consejo Superior de Investigaciones Científicas, 1994), p. 589.

[9] "Los que hubieren de examiner para maestros del dicho oficio sepan hacer un arco de ladrillo descubierto bien hecho y un portal de ladrillo descubierto bien labrado y una escalera de los vueltas bien hecha y bien repartida y descubiertas las ruedas que parezca el ladrillo y un pilar de ladrillo cuadrado de diez palmos en alto que esté exento; y hechas la tales obras a vista de los veedores y acompañados del dicho oficio con dos maestros viejos sabidores de dicho oficio todos seis juntos viendo que el tal pretendiente es hábil y suficiente lo den por examinado y le den titulo de ello por ante escribano." *Ordenanzas de Murcia,* 1695, article, 25. Cited in Francisco José León Tello, *Estética y teoría de la arquitectura* (Madrid, 1994), p. 592.

las artes" he contends that the arts only prosper under liberty, and questions the guilds' fixed system of certification, in which the craftsman is promoted from an apprentice to a *maestro*.

> The classification of artists became a principle for the destruction of the same arts. Their professors gathered in Guilds, hindering their particular interest to the detriment of the common interest ... they established the classes of apprentices and craftsmen (*oficiales*) ... invented technical precepts, prescribed examinations and inspections, dictated economic laws and penalties, set boundaries, and in short, reduced arts to slavery, their practice limited to few hands ... The guilds' laws, as they circumscribed a man's power to work, did not only violate his natural characteristics but also his civil freedom.[10]

Control Over Practice and Examination

The Academy's control over the certification of architects and approval of their work was first established, at least formally, through a royal decree, documented in the statutes of 1757. The decree explicitly meant to suppress the activity of the guilds and give artistic liberty to architects and artists, allowing them to practice their art freely. After being certified by the Academy (or any other body approved by the Academy) there was no need for architects or artisans to be enrolled in any guild.[11]

> The King prohibits all committees, congregations, or confraternities, established or with the intent of being established in my court in order to regulate study and practice of the

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[10] "La clasificación de los artistas se convirtió en un principio de destrucción para las mismas artes. Reunidos sus profesores en Gremios, tardaron poco en promover su interés particular con menoscabo del interés común...establecieron las clases de aprendices y oficiales... inventaron preceptos técnicos, prescribieron reconocimientos y visitas, dictaron leyes económicas y penales, fijaron demarcaciones, y en una palabra, redujeron las artes a esclavidad, estancaron su ejercicio en pocas manos...las leyes gremiales en cuanto círcunscriben al hombre la facultad de trabajar, no solo vulneran su propiedad natural sino también su libertad civil." Gaspar Melchor de Jovellanos, "Informe: Dado á la Junta General de Comercio y Moneda sobre el libre ejercicio de las Artes," ["Report: Presented to the General Committee of Trade and Currency on the Free Exercise of the Arts"], *Obras del Excelentísimo señor D. Gaspar Melchor de Jovellanos* (Barcelona, Oliva, 1839), p. 225.

[11] Those who were certified (*titulados*) by the Academy could practice freely, "sin que por ningún Juez o Tribunal puedan ser obligados a incorporarse en Gremio alguno, ni a ser visitados de Veedores o Sindicos... el que en desestimación de sus Noble Arte se incorporate en algún Gremio, por el mismo hecho queda privado de los honores y grado de Académico." Real Academia de Bellas Artes de San Fernando de Madrid, *Estatutos de la Real Academia de San Fernando* (Madrid, 1757), p. 94-97.

three noble arts, and especially that confraternity which is called Nuestra Señora de Belén in the Parish of San Sebastían in my court in Madrid.[12]

These confraternities (*cofradías*) could gather together to "practice piety and devotion" but not "usurp the title of colleges of architecture, Academy of architecture, or other similar [institutions]." They cannot be authorized to evaluate, measure, or direct construction "without having the titles just mentioned or [without] taking the exam by the Academy to obtain [these titles]."[13] The Cofradía Belén was mentioned in the statutes because it was one of the most powerful guilds in Madrid, with a long history of conflict with architects in the city, even before the establishment of the Academy of San Fernando. Similar royal decrees were granted to both the Academy of San Carlos in Valencia and the Academy of San Luis in Zaragoza.[14]

Early signs of the conflict between the Academy and the guilds go back to a proposition (*representación*) sent to the king on December 4, 1768, written by the academicians and policy makers, the Marqueses of Sarriá, Villafranca, and Távara, the Conde de Barrios, and architects Pedro da Silva, Pedro Martín Cermeño, José de Hermosilla, and Ignacio de Hermosilla. The letter complained about the abuses committed by woodcarvers (*tallistas*), stonemasons (*canteros*), construction workers (*albañiles*), constructors of retables (*retablistas*), and other subordinate arts. These artisans could at that time "design" and construct retables, altars,

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[12] "Prohíbo [el Rey] todas las juntas, congregaciones o cofradías establecidas, o que se intenten establecer en mi Corte para reglar los estudios y práctica de las tres nobles artes, y con especialidad la que se dice de Nuestra Señora de Belén sita en la Parroquia de San Sebastían de mi Corte en Madrid." Ibid., p. 89-90.

[13] "Todos sus Cofrades podrán continuar en los ejercicio de piedad y devoción que con aprobación legítima hayan abrazado, pero no podrán usurper los títulos de Colegio de Arquitectos, Academia de Arquitectura u otros semejantes, ni tasar, ni medir, ni dirigir fábricas sin tener los títulos que quedan expresados o presentarse al examen de la Academia para conseguirlos." Those who do not abide by these rules will be penalized hundred *ducados* the first time, two hundred the second time, and three hundred the third time. Ibid., p. 90.

[14] "Es mi voluntad que todos los que el presente día en adelante hayan de ejercer la arquitectura y señaladamente el medir trazar, idear y dirigir fábricas, han de ser precisamente habilitados por la Academia y no por otro Tribunal, Magistrado, Gremio ni persona alguna, procediendo un riguroso examen hecho en Junta ordinaria, no solo de la teórica de la Arquitectura, sino también de la práctica de la Geometría, Aritmética, Maquinaría y demás ciencias matemáticas necesarias para hacer con acierto unas operaciones en que tanto se interesan mis vasallos." This decree appears in both the Statutes of the Real Academia de San Carlos de Valencia, *Estatutos de la Real Academia de San Carlos* (Madrid, 1768), p. 112-113.

fountains, building portals, totally independent from the Academy. The complaint highlighted the imperfections visible in religious buildings and city streets, arguing that these abuses would threaten their teaching, as the youth, according to them, would become accustomed to the scenes of barbaric and bad taste. Hence, it would be difficult to convey to them the value of the Academy's learning. The academicians requested that in cities where there are academies of fine arts, like Madrid and Valencia, no work could be constructed without it being presented and examined by the Academy. Further, those who did not abide by these rules would be penalized according to the Academy's statutes (articles 33).[15] Architectural projects went through a long bureaucratic process until they were approved. They were first examined in the offices of the Palace or the Council of Castile or Indies (Consejo de Castilla or Indias). When they reached the Academy they were scrutinized by the "Junta Ordinaria" as evidenced in the "Libros de Actas" of the Academy.[16]

In the same year (1768), the Council of Castile accepted the Academy's desire to be the only body that evaluates and gives a final decision on architectural projects, but it maintained that the Council should first scrutinize these projects before their arrival at the Academy. After the Academy's *revisores* examined the projects for a period of ten days, they would send these projects back to the Council to approve their execution. The Academy considered this arrangement threatening to its autonomy and decision-making.

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[15] "En la Arquitectura declaro hábiles para idear y dirigir toda suerte de fábricas a los Directores, Tenientes y Académicos de Mérito de esta Facultad; y por consiguiente para trasarlas y medirlas, sin necesidad de título o licensia de Tribunal alguno, y así podrán emplearse libremente en estos ministerios." Real Academia de Bellas Artes, *Estatutos de la Real Academia de San Fernando* (Madrid, 1757), p. 97-98. See A.S.F.: leg. 28-1/2 (December 4, 1768) and A.S.F.: 28-1/2 (February 23, 1770).

[16] For more information on the approval of projects in the years 1775-86, see Libros de Acatas: A.S.F. sign., 3/84. From 1786-1794 information is found in Libros de Acatas: A.S.F. sign., 3/85; 1795-1802 3/86; 1803 in 3/87.

The Decrees of 1777

On April 6, 1777, the academicians (*consiliarios*) sent to Carlos III a letter that included a severe criticism on the current state of affairs of architecture, which threatened good taste and was a "disgrace to the nation...filling up temples with infinite indecorous and ridiculous objects." These temples consisted of "monstrous ornament and altars," "pines without an end," and "mountains of gold" that gilded retables. Only the Academy would put an end to this "extravagance." They were clearly attacking not only the excessive ornament of baroque architecture, but specifically the retables, "whose material is fragile, corruptible, and inappropriate for such an end, of short duration, and ultimately susceptible to fire... If the major altar of the El Escorial was made of wood... after two hundred years, it would be eaten by moths, blackened and broken into many parts, just like all wood at that age."[17]

This letter led to the two important royal decrees of 23 and 25 of November of 1777, signed by Conde de Floridablanca, stating that all works should be sent to the Academy, now the only arbiter on architectural works.[18] The first was sent to the Council of Castile, consequently affecting civil architecture; the second to the ecclesiastical authorities.[19] The decree stated that "archbishops, bishops, chapters and prelates, and councils of cities" must present to the Academy

[17] "cuya materia era frágil, corruptible, menos propia de tan digno destino, de corta duración y últimamente expuesta a incendios... Si el altar mayor del Escorial fuese de madera, como es de mármoles y bronces, estaría después de doscientos y viente años que se hizo, apolillado, ennegrecido y roto en muchas partes, como sucede a casi todos los de madera de aquella edad." Cited in Claude Bédat, Claude. *La Real Academia de Bellas Artes* (Madrid: Fundación Universitaria Española: Real Academia de Bellas Artes de San Fernando, 1989), p. 380.

[18] A. Rodríguez de Ceballos in "La reforma de la Arquitectura religiosa en el reinado de Carlos III. El neoclasicismo y las ideas jansenistas," *Fragmentos,* no. 12-13-14. Madrid, Secretaria General Técnica del Ministerio de Cultura, June 1998, p. 115-127. In this document there were presented criteria for religious decorum, dignity, and majesty that required adequate aesthetic manifestations.

[19] A.S.F.: 28-1/2 (*legagos*), November 23 and 25, 1777.

of San Fernando drawings of plans, elevations, and sections of public works they wish to build. The Academy will examine and correct these drawings.[20]

In addition to examining projects, the Academy's control was practiced through the certification of architects. On January 15, 1783, the Academy proposed to the king an improved system of examination. Those who aspired to gain the title "Académico de Mérito" should be examined in one of the academies' halls and produce drawings (plans, sections, and elevations) "of a building assigned by the academies." The applicants should prove their reliance on notable works built by famous architects to demonstrate going beyond being mere theorists. They should also demonstrate, through a second exam, their "fundamental knowledge of the construction in masonry, carpentry, ... as well as [knowledge of] geometry, calculus, necessary to the performance of [their] art." The letter also proposed the abolition of the title "*maestro de obras*," which was a clear attack on the guilds.[21] On 24 November 1783, Carlos III approved the proposal. Consequently, the royal decree of March 22, 1786, was issued and announced the creation of the Comisión de Arquitectura. The Comisión was a body formed inside the Academy, consisting of its architecture professors. It examined, censored, and corrected architectural projects.

A series of decrees were issued after the establishment of the Comisión to further strengthen its control. On 27 February 1787 a royal decree stated that "no Tribunal, city, town, nor any other body, ecclesiastical or similar, [is authorized to] give the title Architect nor *Maestro de Obras* without [this individual] having been subjected to a rigorous exam in the

[20] The decree of November 23 is recounted by Ponz in his *Viage de España*, Vol. VII p. viii-xii. Furthermore, a series of documents issued by the Academy (through the efforts of Antonio Ponz) concerning religious architecture led to the "Consulta al Rey sobre la arquitectura de los Templos" of 1777 (written in the Junta Particular of 10, August 1777).

[21] "inventar en una de su salas los dibujos de una fábrica que las Academias les señale," "examen del conocimiento fundamental de la construcción en las partes de cantería, carpintería y demás que corresponde a la montea y asímismo en la Geometría y calculus necesarios para el desempeño de su facultad." Junta Ordinaria of December 7, 1783. Libro de Juntas Generals (1774-1785) A.S.F.: 3/84, fol. 235 rev.-236 anc.

Academy of San Fernando or San Carlos in Valencia."[22] This royal order was transcribed in an extensive Provisión of January 5, 1808, including a copy of article 33 of the academy's 1757 statutes, mentioning the same Cofradía Belén. The restoration of these legal orders is a proof that these guilds showed resistance and carried on with their activities, approving architects and projects. On December 20 of 1798, again, the monarchy ordered that the architectural projects proposed by city councils, guilds, and magistrates must be sent to the Academy before being sent to the Council of Castile for approval.[23] This decree, however, did not materially change the situation. On January 5, 1801, and January 29, 1808, the decree was reiterated.[24]

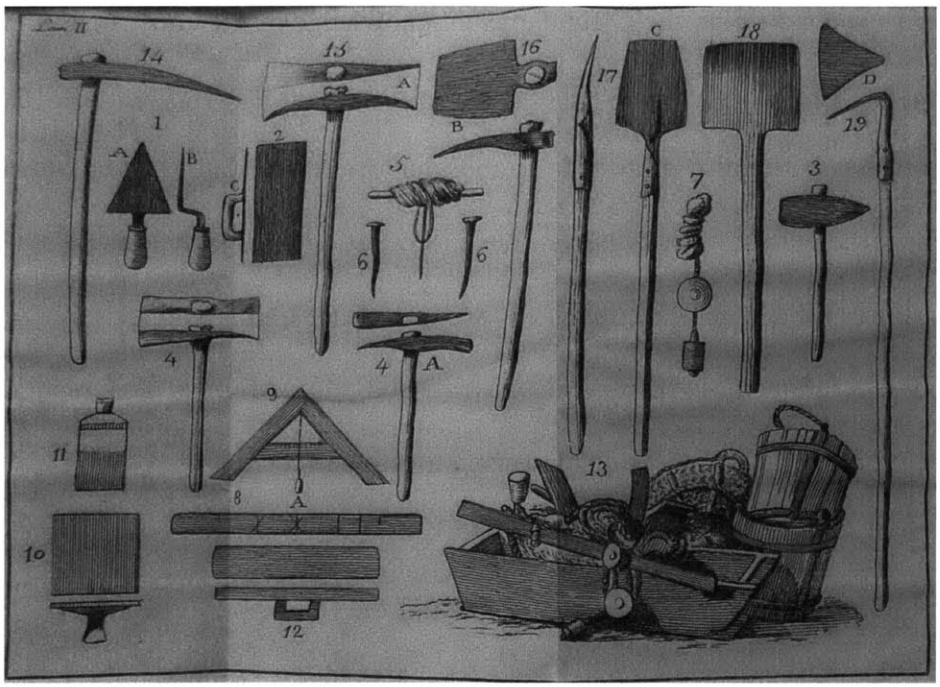

Figure 1. Juan de Villanueva, engraving VII, *Arte de albañilería o intrucciones para los jóvenes que se dediquen a él* (Madrid, 1827).

[22] "No pueda ningún Tribunal, Ciudad, Villa ni Cuerpo alguno eclesiástico o similar conceder título de Arquitecto ni de Maestro de Obras, ni nombrar para dirigirlas al que no se haya sujetado al riguroso examen de la Academia de S. Fernando o de S. Carlos en el reino de Valencia." Cited in Francisco José León Tello, *Estética y teoría de la arquitectura* (Madrid, 1994), p. 623.

[23] "la exacta observancia de sus referidas órdenes… y en su consecuencia se expidiese la Circular correspondiente a todos los Ayuntamientos, Cuerpos, Magistrados y personas a quien compitiese con especial encargo de que antes de dirigir al nuestro Consejo los proyectos, planos y dibujos de obras de Arquitectura, se presentasen a la Academia para su examen y aprobación o enmienda en caso de necesitarla." *Coleccion de reales ordenes comunicadas a la Real Academia de San Carlos, desde el año de 1770 hasta el de 1808* (Madrid, 1809), p. 101-102.

[24] To this last decree it was added that "a que se remitan para el mismo efecto los diseños o modelos de las pinturas o estatuas que se traen de construir o colocar de nuevo en los templos, plazas y demás parajes públicos." Ibid., p. 127.

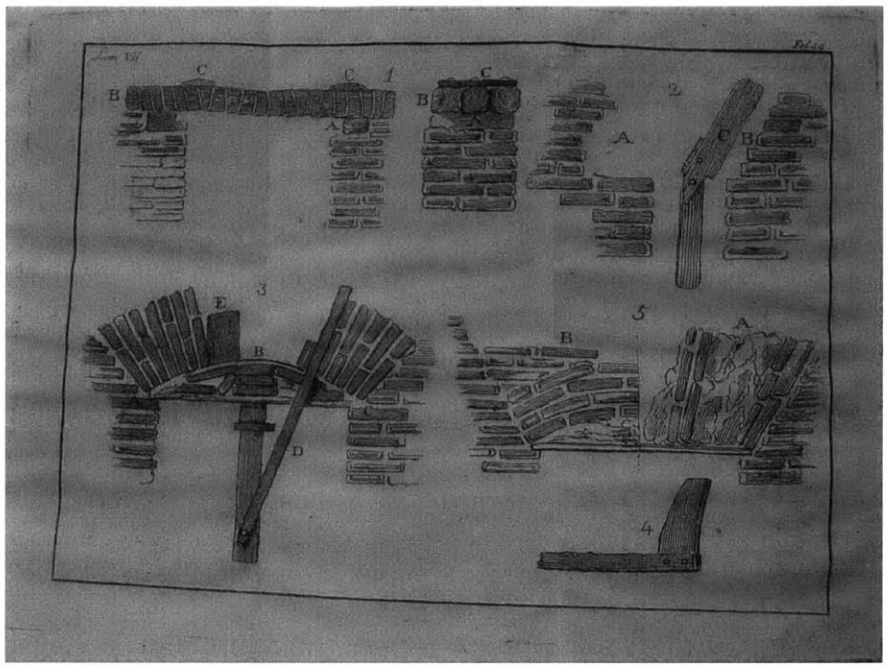

Figure 2. Juan de Villanueva, engraving II, *Arte de albañilería o intrucciones para los jóvenes que se dediquen a él* (Madrid, 1827).

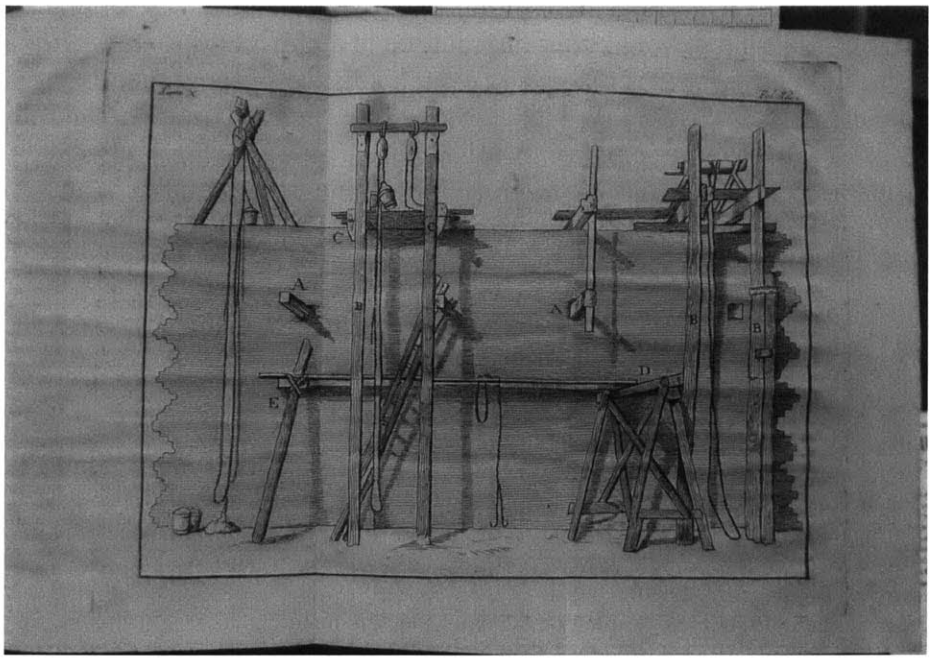

Figure 3. Juan de Villanueva, engraving X, *Arte de albañilería o intrucciones para los jóvenes que se dediquen a él* (Madrid, 1827).

Ultimately, the Academy's efforts to fix the titles and duties in the architectural profession yielded some results. On February 28, 1802, it decided that the architect should lead works on the building, "leaving all that is merely material construction to the practitioner or those called '*maestros albañiles*,' whether they have or do not have the title."[25] Architect Juan de Villanueva, whom art historian Fernando Chueca Goitia describes as "the first and almost last of the great neoclassical architects," wrote *Arte de albañilería o intrucciones para los jóvenes que se dediquen a él* (Madrid, 1827).[26] Treating practical issues pertinent to the *albañil*, his instruments, materials, and knowledge of mathematics and practical geometry, the book is an expression of the architect's authority over his subordinate *albañil* (figs. 1-3). Isidoro Bosarte reports in his *Viage artístico a varios pueblos de España* (Madrid, 1804) on the fate of these titles in the architectural profession.

> It should be noted that in the style of our historians, architects are often called "masters of stonework" ... [T]he national honorary degree in architecture, "*maestro de obras*," has been placed in an infamous place, and even abolished ... consequently, architects treated these maestros with disdain. We also use the title "*maestro alarife*," and this is a tautology ... [I]n his municipality the *alarife* is an antonym for Architect ... we also have the Mohammedan name of the "*albañil*," whose Spanish literal version is "constructor of the building"... Everyone knows the difference between the builder and the architect, which is like that between a gardener and a professor of botany"[27]

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[25] "quedando todo lo que es mera construcción material al cargo de los prácticos o llámense maestros albañiles, tengan o no título para ello." Real Academia de Bellas Artes de San Carlos *Colección de Reales Ordenes comunicadas a la Real Academia de San Carlos desde el año 1770 hasta de 1828* (Valencia, 1828), p. 86.
[26] Fernando Chueca Goitia, *La vida y las obras del arquitecto Juan de Villanueva* (Madrid, 1949).

[27] "Hay que advertir aunque en el estilo de nuestros historiadores los arquitectos suelen llamarse maestros de cantería... el título nacional honorífico en la arquitectura es de "Maestro de obras"...ha venido a quedar en infimo lugar, y aun abolirse...fue consiguiente que los arquitectos desdeñasen por acá a los maestros de obras. Tenemos también en nuestros usos maestros alarifes, y este es un pleonasmo... en su municipalidad el alarife era una antonomasia del arquitecto...tenemos también de la denominación mahometana la voz albañil, Cuya version literal castellana es "constructor del edificio... Todos saben la diferencia que hay entre el albañil y el arquitecto que viene a ser como la que hay entre un jardinero y un professor de botánica..." Isidoro Bosarte, *Viage artístico á varios pueblos de España, con el juicio de las obras de las tres nobles artes que en ellos existen y épocas á que perteneces,* (Madrid, 1804), p.52-54.

As we have shown, the Academy's aspirations to become the only arbiter on built projects in Spain were satisfied by a tedious process. It involved preparing several memoranda (*memorias*) and reports (*informes*) that were written by the academicians and sent to King Charles III. These texts concerned issues related to the revision of the pedagogical system, like the training and formation of the architect, the employment of exams for different academic degrees, and control over the guilds. The establishment of the Academy did not end the struggle with the guilds. Nevertheless, it demonstrates that the reasoning behind control over the guilds aimed to establish fixed duties among the architectural crafts, finally reducing them, at least in principle, to that of the construction worker (*albañil*). The attacks targeted the craftsmen, who previously claimed to be architects. They centered on the makers of retables, which we will discuss more thoroughly in section three.

Section II: The Architectural Treatises in Eighteenth-Century Spain

Pedagogical control was another expression of the Academy's desire to be the sole guardian of both theory and practice. In preparation for the publication of its Plan of Study, the Academy appointed Director of Architecture Diego de Villanueva and architect Joseph de Castañeda.[28] In this process, Villanueva wrote his *Colección de diferentes papeles críticos* (Madrid, 1766), in which he reflects on the status of the discipline, assesses reasons for its decline, and proposes solutions for its recovery. The architectural treatises that Villanueva critiques shed light on many of the issues with which the Academy was struggling, mainly striving to define architecture as an autonomous discipline. It aimed to resolve the confusion between architecture and the other fine arts (painting and sculpture) and with its associated crafts. Before we analyze the architectural treatises addressed by Villanueva, we will show his views of Spanish architecture of his time.

Ruined Architecture

Villanueva declared the ruin of Spanish architecture. The first symptom of its destruction connects architectural ornament to the architects' mere act of copying the architectural orders from treatises. This destruction occurred, according to him, when architects "viewed the work of the celebrated Vignola as easy"; therefore "they ceased studying or reading other works" and "became ignorant of the principles of this art, combining the work of one author to another, not for utility, but for ostentation." Their "ornament of altars, palaces, and other things" became an

[28] This was one of two major projects the Academy undertook upon its inauguration (the other project is the subject of Chapter Four). Real Academia de San Fernando, *Distribución de los premios,* (Madrid, 1772).

amalgam of elements from many authors, "more or less extravagant, where all [ornamentations] are equal," contrary to the "cleanliness" which Villanueva is calling for. [29]

The other issue Villanueva alludes to, which we discussed in the first section, is the loss of the architect's identity and its confusion with other professions, classified under the rubric of mechanical arts, like that of the construction worker (*albañil*) or the *alarife*. According to Villanueva, architects "can be divided into two classes: the first are those who are mere constructors, men who are in general miserable and poor, lacking in education and principles." Each one of these "starts as an apprentice and reaches the rank of an officer/craftsman (*oficial*), and then a master (*maestro*)... [He] understands something about practical geometry without demonstration or proof of what he is doing." He also studies "arithmetic, enough to count what he receives, without any other proper knowledge of good construction." This adversely affected his ability to teach or provide adequate knowledge to his disciples, "alienating them from public and private study."[30]

The second class of architects encompasses those who are "pure delineators. With [some knowledge] of drawing figures, they have copied Vignola [and] presented the engraved works of

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[29] "La facilidad que todos hallaron en el celebre Viñola, pues su obra solo con la vista se comprende, acabo de arruinar el estudio de la Arquitectura, este grande hombre contra su saber, y intencion, hizo de un golpe ignorantes de los principios de este Arte la mayor parte de los Arquitectos, pues todos con su obra lo son con facilidad, y en poco tiempo, con ella no se estudia, ni se lee otra, y si se junta alguna de otro Autor, mas es por ostentacion, que por utilidad; con ella los Altares, Palacios, y otras cosas semejantes estrangeras (que propias no hay una, aunque pudieran muy bien juntarse á ellas, pues estravagancia mas ó menos, todos somos iguales) un poco de limpieza en el diseño, ya es Arquitecto famoso como lo fueron la mayor patte [parte?] de los que Vm. encontrará al fin del Tratado de las Ordenanzas de Madrid; de modo que este noble titulo solo esto la ha dado, y lo dá, con tal que haya proteccion, y dinero." Diego de Villanueva, *Colección de diferentes papeles críticos* (Madrid, 1766), p. 158-9.

[30] "Otra causa del atraso de la Arquitectura viene de los mismos que se dedican á este Arte, que debemos dividir en dos clases: Los primeros son los meros constructors, gente por lo regular miserable, y pobre, faltos de educacion, y principios, empieza por aprendiz llega á oficial, y despues á maestro, el que solo aprendió lo que vió hacer á otro como él, quando mas sabe algo de Geometria practica, sin demonstracion, ni certeza delo que hace; assimismo la Aritmetica, que basta á contar bien lo que recibe, sin otros conocimientos propios de una buena consturccion; pues aunque quiera saberlos, ni tiene egemplos, ni donde estudiarlos, con tal que tenga dineros para fiar, ya compite con los mas famosos Arquitectos, queriendo tratar de ignorantes á todos con su practica, él no enseña, ni puede otra cosa á sus discipulos, procurandolos apartar en todas ocasiones del estudio publico, y privado y tiene á su favor tantos votos como gentes fia, y discipulos, y albañiles emplea en sus obras." Ibid., p. 159-160.

Michelangelo, Bernini, Borromini, with little or nothing of mathematics or physics." For them, "antiquity is not in fashion... still these [architects] are famous. They received a thousand praises from all of those who saw their plans... even [when] none of them knows the definition of architecture."[31] "These classes of professors with their mutual wars have ruined [architecture]." They do not realize "that pure practice and being founded in mere tradition, as we practice today, is without value, which [architecture] and public utility demand; [on the other hand,] although theory comprehends the parts that the architect needs to know, [relying solely on it] would be very risky without practical knowledge, which [initially] produces theory."[32] Villanueva therefore emphasizes both theory and practice.

For Villanueva, the confusion surrounding the architect's profession emerged from the Spanish building tradition. Compared to its difficult old system, its easiness allows the *albañil*, the "most ignorant of the rules of drawing, proportion, and good taste... to declare himself an architect." He says that the English architects, "jealous of our superiority in the arts, . . . [have] started to like our method...They have abandoned their Inigo Jones and the profound/tedious tradition of copying Palladio," and instead, without the Spaniards being careful enough to safeguard our secrets, they "copied engravings of some of our ornament of portals, windows, and chimneys; but not being able to stop copying and imitating these engravings, they unveiled our secret."[33] This account is a proof that Spanish decoration disseminated through drawing from

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[31] "Los segundos son los puros delineadores, éstos con algo de dibujo de la figura, haver copiado al Viñola, tener presente las obras estampadas de Micael Angel, Bernino, Borromino, & c. poco, ó nada de Matematicas, Fisica, ni por sueño, antiguedad no es de moda, ni ninguna de las partes, que halla al Numero IV. de la Coleccion de papeles criticos sobre todas las partes de la Arquitectura, ya se tiene por famoso, recibiendo mil aplausos de todos los que ven sus planos, que entre mil se puede congeturar sin temeridad no havrá uno que aun conozca la Arquitectura por su definicion." Ibid., p. 160-161.

[32] "estos dos clases de Professores con sus mutuas guerras arruinan este Arte, sin reflexionar unos, y otros, que la pura practica, y mas fundad en mera tradicion, como la que oy practicamos, es de ningun valor como pide el Arte, y la publica utilidad, y la Teorica aunque comprenda todas las partes que debe saber un Arquitecto, seria muy Aventurada, no teniendo los conocimiento practicos, que produce la misma Teorica." Ibid.

[33] "los conocimientos, y perfección de este Arte, que en el sistema antiguo estaban llenos de dificultades, en el

which the English architects copied. In the beginning the ornament produced by them was a cause of laughter as they did not reach the aspired results in execution, but as they could not stop copying, with time, they revealed the secrets of Spanish decoration by disseminating it.

The proliferation of treatises that had engravings of ornament helped the dissemination of extravagant ornament. However, Villanueva thought these made "intelligent people laugh." He might have been alluding to Matías de Irala, among others, whose work consisted primarily of engravings with little or no text on architecture. Irala belonged to the Franciscan order and was a native of Madrid, "Professor of Noble and Liberal Arts of Drawing."[34] Irala's *Succinct and Abridged Method of Five Symmetries Appropriated to the Five Orders of Architecture Adorned with Other Useful Rules* was published between 1730 and 1739 and dedicated to King Fernando.[35] More of a compendium than a doctrine, the *Método* presents a repertoire of engravings, offered for the use of architects and artists to ornament their building interiors and exteriors, including church retables (figs. 4, 5, 6). The forms that Irala engraved were usually incorporated into highly geometrized architectural structural elements, and included allegories of

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nuestro es la cosa mas facil del Mundo; la experiencia diaria hace ver que el Albañil mas ignorante de las reglas del dibujo, proporcion, y buen gusto, en estando bajo de nuestra mano, ya se halla en estado de declararse Arquitecto, y con muy poca diferencia, assi de nosotros, como de los mas famosos: pudiendo añadir para nuestra Gloria, y la de la Patria, que los Estrangeros han empezado á gustar de nuestro metodo, y hai apariencias de que vendrán en tropas á perfeccionarse entre nosotros; aun los Ingleses, zelosos de nuestra superioridad en las Artes, le han abrazado tal pasion, y locura, que han abandonado á su Iñigo Jones, y la pessada costumbre de copiar al Paladio; lo que en algun modo pudo causarnos alguna desazon, fue la imprudencia que se ha tenido, permitiendo se gravassen algunas decoraciones de nuestras Puertas, Ventanas, Chimeneas, &c. que excitarlos la risa de algunas personas inteligentes, que no hallaban en ellas la hermosas que havian esperado; pero no pudieron despues dejar de copiar, é imitar estas estampas, quitando el velo de nuestro secreto; aunque por otra parte no es dificil de aprender, pudiendose encontrar en todo Pais genios optos, para conseguir con perfeccion estas ligeras gracias, pero tuvimos con esto mismo un motive de parabienes, haviendo hecho á todos los hombres á muy poca costa Arquitectos famosos: es verdad que con algun trabajo de nuestra parte." Ibid., p. 58-9.

[34] According to Ceán Bermúdez, Matías de Irala was born in Madrid in 1680 and was a painter, then an engraver. He belonged to the order of Saint Francisco de Paula in the Covento de la Victoria in Madrid in 1704. He converted his convent cell into a workshop (*taller*), and until 1753 was dedicated to artistic activity and teaching. More on Irala see: Antonio Bonet Correa, *Vida y obra de Fray Matías de Irala grabador y tratadista español del siglo XVIII* (ed. Turner, Madrid, 1979).

[35] *Método sucinto i compendioso de cinco simetrías appropiadas a las cinco órdenes de arquitectua adornado con otras reglas útiles* "Dedicadas al Serenísimo Sr. Príncipe de Asturias D. Fernando Nuestro Sr. que Dios prospere."

battles and rococo fantasies.[36] His drawings emphasized human anatomy, animals, heads, as he confessed his influence by the work of Juan de Arfe as he incorporated in his drawings the Solomonic column, which he added to the five orders, and used figures from Roman mythology. Irala also collaborated with José Benito de Churriguera, whom Villanueva emphatically attacked.[37]

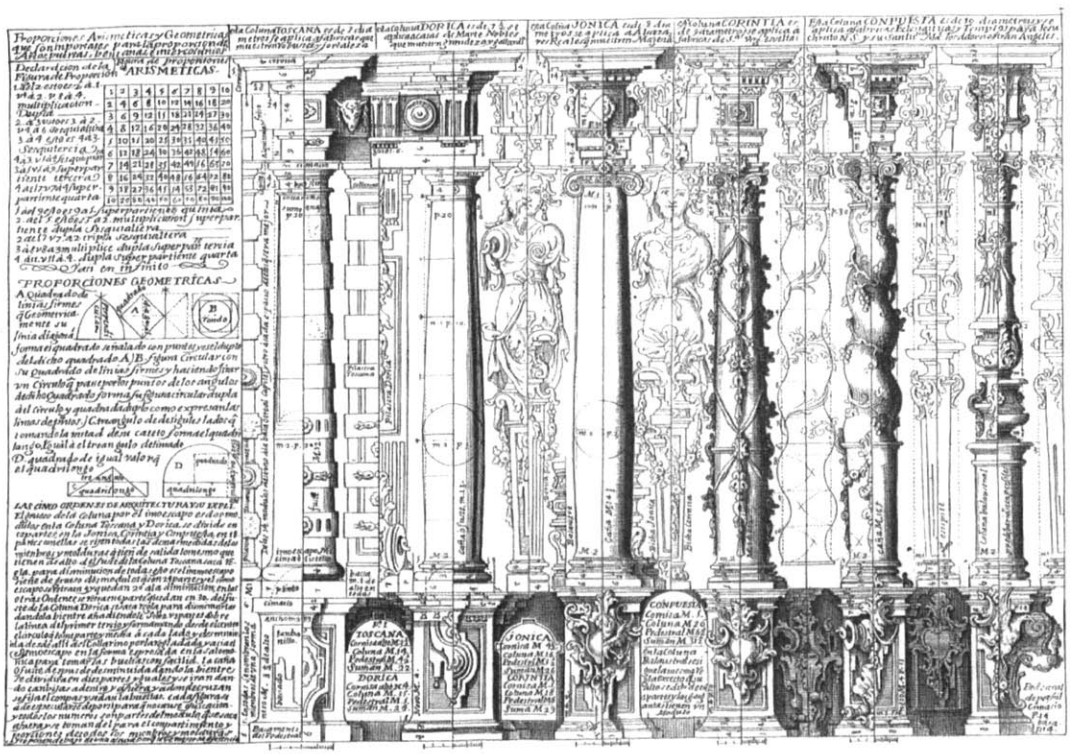

Figure 4. Matías Irala, engraving no. 23 from *Método sucinto i compendioso de cinco simetrías appropiadas a las cinco órdenes de arquitectua adornado con otras reglas útiles* (1730-1739).

[36] Bonet Correa presents other works that explain the influence on Irala's work. For example, Luis de Solis Villaluz's *Geroglíficos varios, sacros, y divinos epitos;* Fenelón (Archbishop Cambray) engraving of the work *Aventuras de Telémaco hijo de Ulises*, *La anatomía galenico-moderna* of Manuel de Porras (1716), Martin Martinez's *La anatomía complete del hombre* (1745).

[37] See Bonet Correa, *Vida y obra de Fray Matías de Irala,* p. 5 and 15.

Figure 6. Matías Irala, engraving no. 10 from *Método sucinto i compendioso de cinco simetrías appropiadas a las cinco órdenes de arquitectua adornado con otras reglas útiles* (1730-1739).

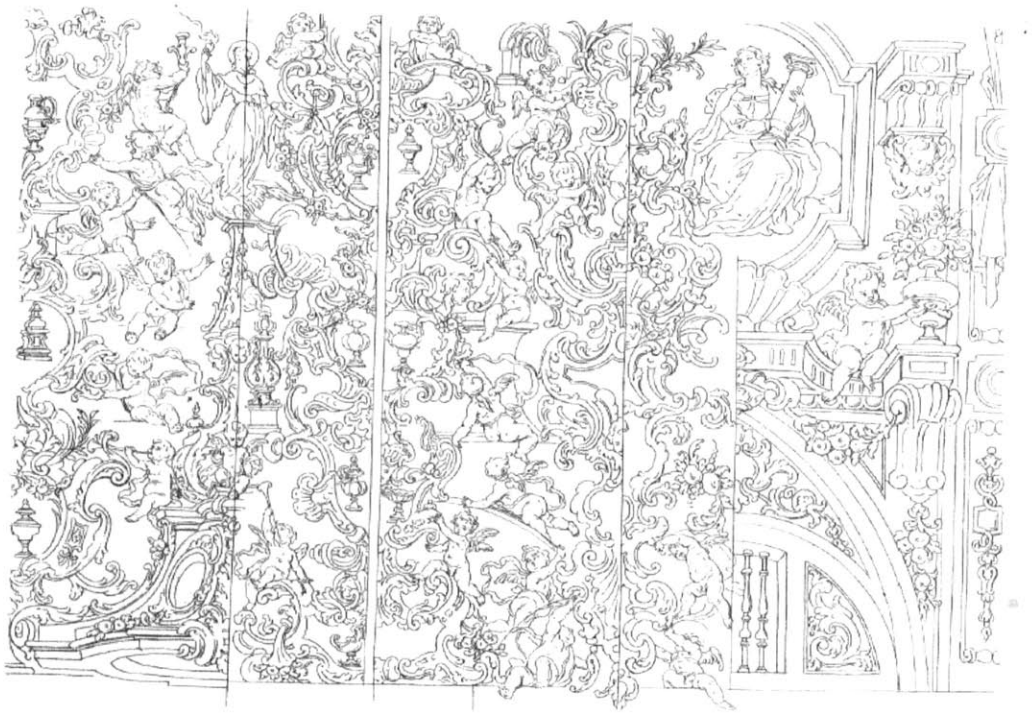

Figure 6. Matías Irala, engraving no. 29 from *Método sucinto i compendioso de cinco simetrías appropiadas a las cinco órdenes de arquitectua adornado con otras reglas útiles* (1730-1739).

Villanueva counts eighteen works available for architects in Castilian in 1766. Some are originally written by Spaniards; however, the majority are translations from Italian, French, or English. As he criticized most of these texts for their poor translations, rough execution of drawings, generality of scope, partial rendering of whole treatises, or inability to communicate lessons of architecture, Villanueva, through them, wished to prove that there was good reason behind the claim that "the art of architecture is less cultivated in Spain."[38]

For example: the first translation of Vitruvius into Spanish in 1582 by Miguel de Urréa, in Villanueva's opinion, was unintelligible for young beginners because of its "confused style" and the "scarcity and lack of exactness of the rough drawings." Even if this work may be understood with clarity, it would not produce an architect because it only makes reference to other books the architects should study, without teaching these parts. The translation of Alberti's *Ten Books* by "*maestro de obras* Francisco Lozano in 1582 is more confused than the original. The lack of drawings demonstrating this doctrine adds to the confusion." Villanueva favorably viewed Diego de Sagredo's *Medidas del Romano* (Toledo 1526), which treated parts of Vitruvius's work, like the architectural orders and proportions, but it "barely discusses other topics; the drawings are coarse and badly executed."[39] Palladio's first book, translated by architect Francisco Praves and printed in Valladolid in 1625, includes an account of the "proportions and other general things... [I]t would have been useful," according to Villanueva, "if we had the whole complete work, [especially when] Palladio, with reason, [is considered] in all Nations the first architect of the moderns."[40] He found the "Compendium of Vitruvius of

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[38] Diego de Villanueva, *Colección de diferentes papeles críticos* (Madrid, 1766), p. 161.
[39] "Antes de esta Traduccion nos dió Diego de Sagredo parte de la Obra de Vitruvio, con el titulo de: *Medidas antiguos Romano,* impress en Lisboa año de 1542. y en Toledo año de 1564. Esta Obra comprende solo la proporcion, que á los ordenes dió este principio de la Arquitectura, y algunas otras cosas aunque ligeramente; las figuras son muy rudas, y mal hechas." Ibid., p. 162.
[40] "Del Palladio han en Castellano el primer libro de su Arquitectura, traducido por Francisco Praves, Arquitecto de S.M. impress en Valladolid año de 1625. Este libro comprende las proporciones de los ordenes, y algunas otras

Perrault, which was translated by Joseph Castañeda in Madrid in 1761, more of a handbook that helps to keep in mind the doctrine of Vitruvius."[41] "Sebastiano Serlio's third and fourth books, translated by Francisco Villalpando, architect in Toledo in 1552 would have been of great utility had it been reprinted and put together with the rest of the original, and its drawings made exact and intelligible."[42]

Geometry

If we examine the treatises mentioned by Villanueva, we notice, especially in those originally written in Spanish, that the architectural profession was still influenced by a medieval building tradition, or merely addressed the *albañil*'s practical concerns. Evident in these treatises is the emphasis on geometry and stereotomy (the art of the stonemasons), illustrating how medieval master builders believed practical geometry was fundamental to their work. Most of these texts are characterized by a level of practicality that departs from the usual format of the architectural treatise, often discussing the architectural orders while presenting their employment in plans and elevations of buildings, both new and old, through which they achieve good proportions and harmony. The word "beauty," for example, is nonexistent in many of these accounts. Vitruvius's First Book is often the main source (just as in the treatises we already discussed in Chapter One) for discussion on the "architectonic" quality of architecture, its dependence on other arts and sciences, and its inseparability from practice.[43]

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cosas muy en general; seria muy util tuvieramos toda la Obra completa: Paladio, y con razon en todas las Naciones está tenido por el primer Arquitecto de los modernos." Ibid. 162-163.

[41] "esta obra no es mas que un prontuario para tener presentes las doctrinas de Vitruvio." Ibid.

[42] "*Tercero, y quatro libro de Arquitectura de Sebastiano Serlio,* traducido por Francisco Villalpando, Arquitecto en Toledo año de 1552. Este libro pudiera ser de mucha utilidad reimprimiendole, juntando á él todo lo demás del original, y hacienda sus laminas exactas, é inteligibles." Ibid. p. 63.

[43] Rieger, for example, claims that "the craft of the architect not only [implies that he should] perfectly conceive in his intellect the idea of a building and delineate it on paper with all perfection, but also build it." ["El oficio del Architecto es, no solo concebir perfectamente en su entendimiento la idea del edificio y delinearlo con toda

Intended for surveyors and written by *maestro* Juan de Berruguilla is *True Practice of the Resolutions of Geometry on the three dimensions for a perfect architect, with a total resolution to measure and divide* (*Verdadera practica de las resoluciones de la Geometria, sobre las tres dimensiones para un perfecto Arquitecto, con una total resolucion para medir, y divider,* Madrid, 1747). Clearly this book was useful to both architects and builders. Berruguilla, addressing "his brothers the *maestros de obras*," stressed the practical knowledge that they should know, which surpasses in importance theory, as "experience is the mother of science."[44] To these treatises on geometry, we could add treatises on stereotomy, like the one written by architect and "*aparejador de obras Reales*" Juan de Torija's *Breve tratado de todo genero de Bovedas, assi regulares, como irregulares, egecucion de obras, y medidas* (Madrid, 1661).[45]

Antonio Plo y Camín's *El arquitecto paráctico, civil, militar, y agrimensor* (*The Experienced Architect, Civil, Military, and Surveyor,* Madrid, 1766) is an example that demonstrates the predominance of this interest in practicality, pertinent to the architectural profession. This book is a pure treatise on geometry, teaching architects how to draw, measure, make divisions of lines, arches, etc. (figs. 7, 8). It does not include any account or drawing of the architectural orders. Villanueva does not mention this book in his list, perhaps because it was released in the same year he published his own account. However, on behalf of the Academy, together with Ventura Rodríguez, Villanueva led an attack on Plo y Camín's design for the

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perfección en el papel sino es ponerlo en ejecución."] Christiano Rieger, *Elementos de toda la Arquitectura Civil, con más singulares observaciones de los modernos,* (Madrid: Joachin Ibarra, 1763), p.17.

[44] "Hermanos míos, Maestros de obras, miremos que es mucho lo que tenemos que saber; advierto que el que no fuere gran práctico con muchisimo trabajo sera gobernar obras ni imponerse en el como se ha de gobernar en muchos casos....yo conozco por mí que la cosa que leo de éstos si no es corto, los que escriben largo me han vuelto loco... Así en la Corte, como en sus casas y en el aula: la experiencia es madres de la ciencia." Juan de Berruguilla, *Verdadera practica de las resoluciones de la Geometria, sobre las tres dimensiones para un perfecto Arquitecto, con una total resolucion para medir, y dividir* (Madrid, 1747), p. 132, 104-5.

[45] Another two important earlier works that locate mathematics and geometry as the center of architects work are: Bartholomé Ferrer, *Curiosidades utiles de Aritmetica, Geometria, y Arquitectura* (Madrid 1719) and Tomás Vicente Tosca's *Compendio Mathematico, en que se contienen todas las materias mas principales de las ciencias, que tratan de la cantidad,* (Madrid 1707-1715).

church of the convent of San Francisco (El Grande) in Madrid. This anecdote demonstrates the Academy's conflict with the guilds. Plo y Camín was a *maestro de obras*, practicing in Madrid on the margins of the Academy. His design proposals for the church were repeatedly rejected by the Academy from 1768 until 1770, claiming he applied plaster in unsuitable places and used the wrong method of building buttresses, among other deficiencies. The Academy tried to convince the Council of Castile to hire the neoclassical architect Francisco Sabatini. But suddenly, backed up by both the Council and the convent's *superior*, in 1770, the Council, overriding the authority of the Academy, issued a decree that approved of Plo y Camín as the architect. Sabatini, ultimately, designed the neoclassical façade, transferring the conflict into the building's exteriors and interiors, as it combines both baroque and neoclassical elements.[46]

Despite the seeming neglect of ornament in these treatises, however, what we see in the arena of architectural practice barely resembles their content. Highly ornamented architectural projects were built up until this moment in time.

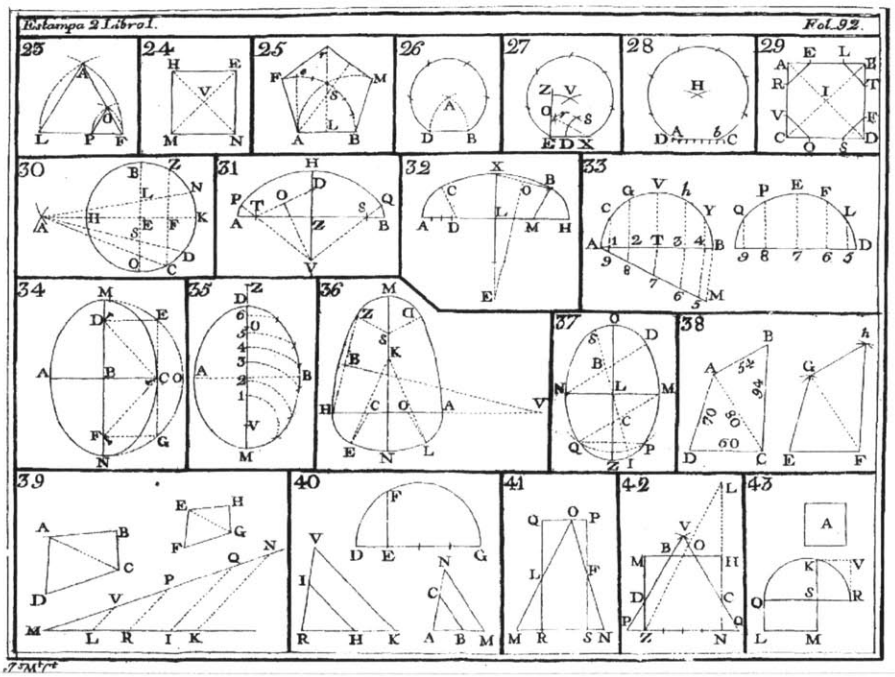

Figure 8. Antonio Plo y Camín. Engraving 2, fol. 92, Book I from *El arquitecto paráctico, civil, militar, y agrimensor* (Madrid, 1766).

[46] Esteban Ibáñez, *San Francisco el Grande en la historia y en el arte* (Madrid: Editorial Offo, 1962).

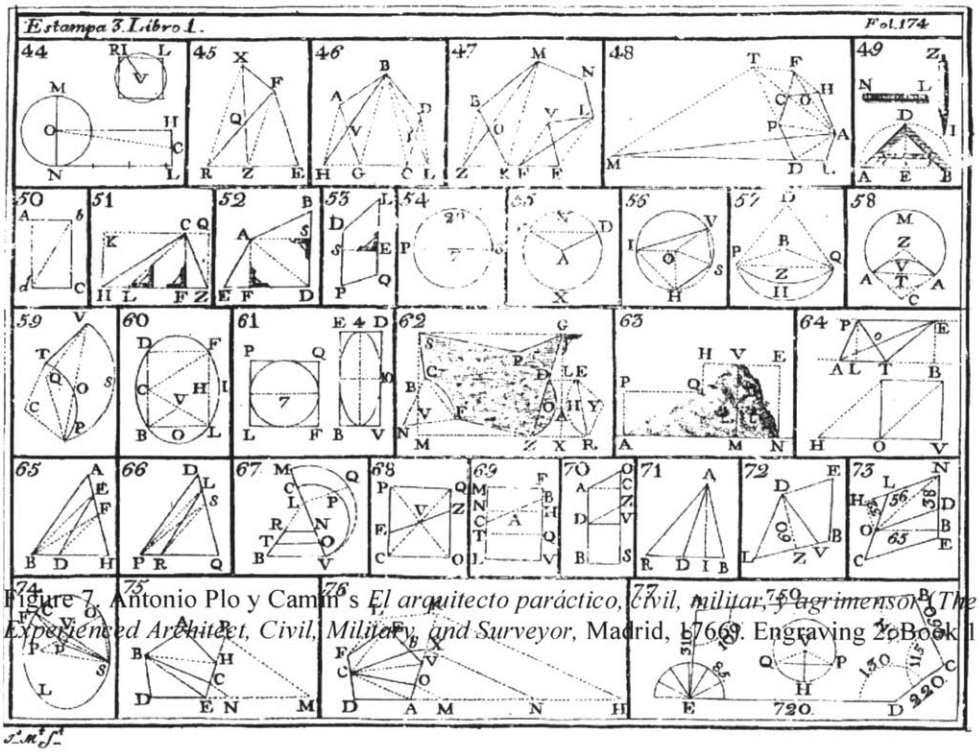

Figure 7. Antonio Plo y Camín's *El arquitecto paráctico, civil, militar, y agrimensor* (*The Experienced Architect, Civil, Military, and Surveyor,* Madrid, 1769. Engraving 2 of Book 1.

Figure 8. Antonio Plo y Camín. engraving 3, fol. 174, Book I from *El arquitecto paráctico, civil, militar, y agrimensor* (Madrid, 1766).

Ordenanzas in the Architectural Treatise

Architectural treatises—whether in an effort to amend abuses in practice or as an outcome of a confusion between architecture and the crafts—incorporated, from the seventeenth century onward, parts that addressed the *alarife*'s *ordenanzas.* An earlier treatise including the *ordenanzas* is *Arte y uso de arquitectura* (*Art and Use of Architecture*), written by the Augustine architect, Fray Lorenzo de San Nicolás (1593–1679). The first edition of this important work, published in 1639, includes 81 chapters treating architecture, arithmetic, and geometry. The second part was added in 1665 and consists of the *Ordenanzas de la Imperial Ciudad de Toledo*, a translation from Latin to Spanish of the fifty-seven books of Euclid, and a section on the measurements of vaults. Eclectic in character, the *Arte y uso de arquitectura*'s primary subject matter is the five orders and their proportions and elements as presented in major, mostly Renaissance, architectural treatises.[47] However, Lorenzo de San Nicolás presents the whole gamut of the architectural orders as theorized by authors such as Vitruvius, Serlio, Cataneo, Sagredo, Arfe, Vignola, Scamozzi, and others. From each author he chooses drawings of one architectural order. For example, the Corinthian he takes from Vignola and the Doric from Serlio. His treatise is more like a compendium of orders, presenting what has been introduced in terms of proportions and the associated meanings of the orders. Here, one cannot but recall Villanueva's criticism of Spanish architects combining ornament from different authors (producing an extravagant ornament), or avoiding to conceive the whole study of architecture.

[47] Vitruvius Chapter I, Book I, Sebastiano Serlio (Chapters. X, XIV), Andrea Palladio (Chapters. XV, XX), Vignola (Chapters. XXI, XXV), and Scamozzi (Chapters. XLVI-L). In addition he reflects on the works of Juan Antonio Rusconi, Juan de Arfe y Villafañe, Antonio Labaco, and Diego de Sagredo.

Lorenzo de San Nicolás claims to offer "knowledge of the causes in which consists the perfect construction of political fabrications."[48] The practicality declared by him conforms to his belief that "theory is not the most essential part of architecture; rather practice, as Vitruvius says in his first book."[49] Lorenzo de San Nicolás even "confess[es] that his purpose is to write for artisans, rather than masters [of works]."[50] His treatise will "teach the practical political architect the precepts, rules, and maxims appreciated by the most important architects."[51] He points out the Arabic origin of the title *alarife*: "in our language [the word] signifies a man who evaluates buildings." He writes that "[w]ell-governed republics, [for] the brilliance of their buildings and conservation of their masters' knowledge as well as antiquity, elect masters who accomplish this obligation, and these we call *alarifes* or *maestros mayores*. In old times, these [*alarifes*] were appointed by the crown because they were highly esteemed. [T]oday they are appointed by cities, archbishops, bishops, canonry, and particular men in Madrid.... I never knew who were the inventors of the ordinances."[52] Nicolás equates the *alarifes* with the *maestros mayores,* who

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[48] The material he collected from architectural treatises will benefit those who "wish to attain to the eminence of the political architecture.... so that they have access to the knowledge of the causes, in which consists the perfect construction of building policies." ["desean arribar á la eminencia de la Arquitectura política.... para que en algun modo puedan entrar en el conocimiento de las causas, en que consiste la perfecta construccion de las fábricas políticas."] Lorenzo de San Nicolás, *Arte y uso de arquitectura* (Madrid, 1639), p. 142.

[49] "y no es la parte mas esencial en la Arquitectura la teórica, que mas lo es la práctica; y de esto dice Vitrubio en su libro primero." Ibid., p. 125.

[50] He uses the word "*mancebos*" which means an auxiliary in practice.

[51] "Confieso que ha sido mi fin el escribir, mas para los mancebos, que para los Maestros, y ellos tambien hallarán algun bocadillo que acompañe á lo mucho que deben saber, y saben. De doce Autores he sacado lo que ellos dicen cada uno de las cinco órdenes, y pudiera valerme para instruir al práctico Arquitecto politico de los preceptos, reglas y maximas de que de valieron Jorge Agricola, Alconsio..." Ibid., p. 142.

[52] "Las Repúblicas bien gobernadas para el lucimiento de sus Edificios, y su conservación de los mejores maestros, asi en su saber, como en su ancianidad, eligen maestros que atiendan al cumplimiento de su obligacion, y á estos los llaman alarifes ó maestros mayores, que todo es uno: antiguamente se hacian estos nombramientos por la persona Real, porque eran puertos de mucha estimacion, hoy lo comun en nombrarlos lo hacen las Ciudades ó Villas, los Arzobispos, Obispos, Cabildos y Señores particulares en esta Villa, de Madrid; ha muchos años que he visto sus ordenanzas, aunque nunca supe ni hallé razon de quienes fueron sus inventores; mas esta noble Villa como las demás, nombra sus maestros, para que las guarden y hagan guarder, nombran dos o quarto, segun le parece con título y nombre de alarife; este nombre es Arabigo, y en nuestra lengua significa hombre, que tasa los Edificios: el Padre Pedro de Sales en su Tesauro Hispano folio 23." Ibid., chapter LXVI. In the sixteenth century Bartolomé Vázquez wrote "Alarifes must be men of good life and customs, fearful of God and their conscience, skilled in all arts, old Christians... skillful in measuring and assessing and giving everything its proper due, giving everyone what

usually had the highest rank and were appointed for royal projects. Moreover, he curiously begins his Book I with the statement that architecture's two sisters are arithmetic and geometry, contrary to what architectural theory of the seventeenth century had advanced on the unity of architecture with its two sisters (painting and sculpture)—an association ascribed to Michelangelo. We will discuss this connection of the three arts shortly.[53]

The inclusion of the *ordenanzas* in the architectural treatise encouraged their publication later as an independent treatise. This incorporation inadvertently added to the confusion between the architect and the *alarife*. The two best-known treatises, wholly dedicated to the *ordenanzas,* which Villanueva mentions, are: Juan de Torija's *Tratado breve sobre la Ordenanzas de la villa de Madrid y policía de ella* (Madrid, 1661) and Teodoro Ardemans's *Ordenanzas de Madrid* (Madrid 1720).[54] The *ordenanzas* continued to be published well into the eighteenth, and even the nineteenth centuries. This publication alerts us to the existence of members of the guilds who did not yet accept the Academy's authority. Even when the Academy thought these *Ordenanzas* were outdated, members of the guilds still held to them. The *Arte y uso de arquitectura*, for example, was republished in 1796 after the approval of the Academy in a Junta Ordinaria of May 3, 1795, signed by Isidoro Bosarte.[55] The Junta agreed to reprint Nicolás's book, including the *ordenanzas* of Toledo. It also added to this publication Teodoro Ardemans's *Ordenanzas de*

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is his, making peace among men, relieving disputes and sorrows [and ensuring] calm in the Republic." AMSev Sec. X, Actas, 2a. escr., vol. 120, 13 March 1636. Cited in Ruth Mackay, "*Lazy, Improvident People": Myth and Reality in the Writing of Spanish History* (Cornell University Press, 2006), p. 33.

[53] "Son tan hermanas estas tres artes (arquitectura, aritmética y geometría) que apenas se hallara que haya necesidad de la una, que inmediatamente de necesidad no se siga la otra, y a las dos acompañe la tercera. Que el arquitectura necesite de las dos es cosa asentada, pues vemos que se funda en demostraciones causadas de líneas y cantidades o números, que es lo mismo. Y pues la demostración es línea en este arte y la línea es del arte de la geometría y la línea numera el número, clara está su conveniencia y union." Fray Lorenzo de San Nicolás, *Arte y uso de arquitectura* (Madrid, 1639-1665), Book I, p. 1.

[54] Ardemans's *Ordenanzas* was first published in 1719 with the title, *Declaracion, y extension, sobre las Ordenanzas que escriviò Juan de Torija*). It was republished in 1664, 1728, 1754, 1760, 1763, and 1866.

[55] See, A.A.S.F.: sign. 3/86, fol. 11. The publication was underway after a request from Bartolomé Muñoz, who suggested reprinting it. Of the 1796 edition, the original pnly reaches chapter LI.

Madrid. However, it commented on the whole publication saying that "neither turned out to be useful, taking into account the vicissitude of the times and later customs."[56]

Torija opens his *Tratado breve* with a statement that "architecture is a science, adorned and accompanied by many other [sciences], with which one could examine works and buildings." In his discussion of the knowledge that the *alarife* should acquire, he assigns to the *alarife* the knowledge that Vitruvius recommends for architects.[57] Teodoro Ardemans's *Ordenanzas de Madrid* builds on and amends Torija's work. He criticizes him for having no distinction between the original *ordenanzas* and his own commentary, leaving out things unresolved. Ardemans, therefore, introduced four new chapters addressing "continuous questions."[58]

Ardemans was a practicing architect, trained as a painter under Claudio Coello (1642-1693), who was associated with baroque painting.[59] Ardemans argues that "Architecture does not lack solid documents or rules, but study (*estudio*)."[60] Hence the purpose of his work is to reduce to a brief compendium the main points patrons should take into account to preserve buildings

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[56] "pero que tampoco resultaba utilidad atendida a la vicisitud de los tiempos y las costumbres posteriores." A.A.S.F.: sign. 3/86, fol. 11.

[57] Relying on Vitruvius's recommendation that the architect should know other arts and sciences, Torija argues that the *alarife* in order to judge a work of architecture should know reading, writing, drawing, geometry, perspective, arithmetic, history, philosophy, music, medicine, understanding laws, and astrology, in addition to knowledge about public and private buildings. For Torija, a perfect architect knows practice as well as theory.

[58] These four chapters address these themes: "uno sobre las tassas, que deben guardar los que dán materiales para las Obras; otros en que se dividen los Arrabales de la Corte, poniendo en él los valores de los sitios, conforme cada classe en los general; otro, sobre lo que se debe observer en la Plaza Mayor para las fiestas de Toros; y otro, de lo que se debe hacer entre vecinos en la fuentes publicas, u particulares." Teodoro Ardemans, *Ordenanzas de Madrid* (Madrid 1720), p. 23. Ardemans maintans that his *Ordenanzas* are not legal documents. On 18 November 1660 Joseph de Villareal and Pedro Lazaro Goyti (*Artifices Arquitectos*) requested from the city of Madrid council to confirm Torija's as the Ordenanzas of the city.

[59] For bibliography on Teodoro Ardemans, see B. Blasco Esquivias, *Teodoro Ardemans y su entorno en el cambio de siglo (1661-1726)* (Madrid, 1991); F. De la Maza, *El churrigueresco en la ciudad de México* (México 1969), p. 7-12; Ribera, J. "Nuevos datos documentales de Teodoro Ardemans, José de Churriguerra y otros arquitectos barrocos cortesanos," *Boletín del Seminario de Arte y Arqueología* (Valladolid, 1982), p. 444-453. B. Blasco Esquivias, "Elogio del Barroco castizo: Ardemans, Churriguera y Ribera." M. Morán, *El arte en la Corte de Felipe V* (Madrid 2002), p. 257-288.

[60] These studies, for him, are found in the important works of Serlio, Alberti, Dürer, Scamozzi, de l'Orme, Andrea Gracia de Cespedes, Arfe, Lorenzo de San Nicolás (*Arte y uso de arquitectura*), and Pedro Gregorio Tolosano.

and resolve related conflicts. Moreover, he indicated scarcity in manuscripts written for the *Maestro Alarifes* in Madrid.[61] The *Ordenanzas* consists of twenty-seven chapters, addressing, at times very briefly, issues like advising on selecting the appropriate site to secure supply of air and water, or issues pertinent to the work of the *alarife* that may avoid conflicts between neighboring buildings and advice on regulations between neighboring properties (e.g., water irrigation), the right height of buildings for preserving a certain character of the city, as well as the manufacture of building materials such as plaster (*yesso*), wood, and bricks. Dealing with these issues and with other bureaucratic matters is the reason why historians mention a discrepancy in Ardemans's *Ordenanzas* between the erudite account in the "Preface to the Reader" and the rest of the chapters that deal with practical matters. But these historians fail to mention the content of this long Preface, which centers on the classification of the mechanical and liberal arts in relation to architecture. Addressing the division of the arts in a preface shows us that even when the treatise is taking the form of a practical manual, the division was clearly stated at the outset.

Architecture vs. Painting and Sculpture

When Ardemans talks about architecture, he uses the dual terms "artifice-arquitecto." As we saw in Chapter One, the term "*artifice*," which was used by the economic reformers in the second half of the eighteenth century, was associated with the mechanical arts. However, during the sixteenth and seventeenth centuries, this term only indicated a person involved in an

[61] According to Ardemans, Padre Lorenzo de San Nicolas (an "Artifice Arquitecto") was the first aspiring to print the ordinances in his work: "desistiendo de este intento, por haverse impresso, quando él deseaba publicarlas, como confiessa en el tomo Segundo del Arte, y uso de la Arquitectua, impress en esta Corte año de 1663. capitulo 68. Y sin duda entretexió su contexto, aunque sin la separacion, que debia, Juan de Torija, Artifice arquitecto de esta Villa, y Aparejador de las Obras Reales, en su libro impresso en Burgos año de 1664. con la inscripcion, ó rotulo de tratado sobre las Ordenanzas de Madrid, y Policia de ella, sin haver distinction del texto, y el comento." Teodoro Ardemans, *Ordenanzas de Madrid* (Madrid 1720), p. 22.

intellectual activity. The theory of architecture of the sixteenth century asserted that, to achieve beauty, the architect should know more than one of the fine arts.[62] Felipe de Guevara in his *Comentarios de la pintura* (1560) speaks about this strong connection between painting and architecture, almost transforming architecture into a spatial painting.[63] This connection between the arts became more pronounced in baroque architecture. Clearly Ardemans's training as a painter led him to use this composite term that expresses an intertwining relationship between architecture and the other fine arts. This relationship afforded the architect prestige; his knowledge of many arts most importantly distinguished him from the craftsman, who was prohibited by the guild from crossing the boundaries of his craft (as the *ordenanzas* clearly stated). Looking at the list of artists and architects that Ardemans offers at the end of his *Ordenanzas*, the use of this composite term becomes clearer as no name in the list is confined to one art. For example, he starts with the architect Alonso Berruguete, describing him as "an arrogant painter, sculptor, and architect," José Benito Churriguera, as an "architect, draftsman, and sculptor," and Borromini, as a "painter and architect."[64] This connection between the arts, which we will discuss shortly, was another reason for the ruin of architecture, according to Diego de Villanueva.

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[62] The architect in Serlio's book should be curious about ornament made in marble as well as painting that adorns walls or other parts of the building. He should know perspective, useful for decoration. Alicia Cámara Múñoz, *Arquitectura y sociedad en el Siglo de Oro* (Madrid: Ediciones el Arquero, 1990), p.78.

[63] "Así en nuestra España se podrían envestir las paredes de un gabinete de mármol blanco, o de alabastro, de que abunda más, perfilando y asombrando tan solamente las figuras, y las partes de arquitectura que en la tal pared o suelo se quisiesen obrar, con solas las cinceladas llenas de negro, al modo que se nos representa un debuxo bien obrado con la tinta en u papel. Un gabinete con estas paredes y suelo, y un techo bien labrado, ternía allende de la novedad, majestad y galanía." Felipe de Guevara, *Comentarios de la pintura* (Madrid, 1560) (edition of 1788, with preliminary notes by Antonio Ponz), p. 121.

[64] These names are mentioned in the section titled: "Nombres de los Artifices, Pintores, Arquitectos, Españoles, y Estrangeros." Ardemans, *Ordenanzas de Madrid,* p. 188.

The Preface to the *Ordenanzas* is an inquiry into the reasons that brought about the confusion of the liberal and mechanical arts. Ardemans had hopes to "banish the error with which ignorance has hurt the dignity of the arts."[65]

> The diversity of dictums produces a miserable obscurity of the arts, rendering only inconsistency consistent. There is no lack of authors who refer to the mechanical arts as architecture; they understand that by the part relevant to operation and practices of the hands of craftsmen or subordinates (*Fabros, Oficiales subalternos*), [as] they say clearly. Because these [practices] lack the doctrinal scientific speculation, which renders this profession a noble and liberal art, Artifices, Artists, men of letters, Architects, Principals, and Instructors of construction workers, reject these reasons.[66]

Studying Vitruvius, Ardemans reflects on whether and to what extent, the architect, whose work is primarily intellectual, should know how to work with his hands, and how much speculative knowledge should the artisan acquire. The "scientific architect," Ardemans writes, whispers: "one cannot be an artist [*artifice*] without being able to work [...which would help him] avoid false aspirations for buildings that are financially impossible to complete." Nevertheless, Ardemans insists on a hierarchy and separation of duties, claiming that the subordinate craftsmen (*fabros subalternos o oficiales*) degraded architecture's status by confusing the intellectual with the materiality of work; thus, "detesting the latter, we must vindicate the former."[67] Architecture is a noble, liberal, graceful art most useful to Republics,

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[65] "desterrar la equivocacion, con que la ignorancia havia procurado lastimar la decadencia del Arte." Ibid., p.19.

[66] "La variedad de dictamenes produce la miserable obscuridad de las Artes, haciendo solo constante á la inconstancia misma. No han faltado Autores, que refieran entre las Artes mecanicas las Arquitectura; y si esto lo entienden por la parte de operacion, y exercicios de manos en Fabros, Oficiales subalternos, dicen bien: porque en estos falta la cientifica doctrinal especulacion, que hace á esta Profession noble, y Arte Liberal: pero entendido de los Artifices Literatos, Arquitectos, Principes, y Instructores de los Fabricantes, repugnan las razones, y autoridades referidas." Ibid., p. 11-12.

[67] "Ha ocasionado esta como tumultuaria introduccion de Fabros Subalternos, ó Oficiales, á las primeras trazas artificiales la desestimacion de la Arquitectura; yá produciendose la desconfianza con la experimentada nulidad, falsedad de las fabricas: yá confundiendose la intellectual especulacion del Arte con la materialidad del exercicio, distando uno de otro, quanto dista lo noble del entendimiento, de lo material de las manos; yá por no ser practicable fee, de que pueda residir lo decoroso de esta Ciencia en lo indecoroso de los ignorantes individuos, que hacen profesion del atrevimiento, y el error, hallandose justamente castigados con una indecente pobreza, que suele ser regular fruto del engaño; pero como quiera que no puede ser culpa del Arte el abuso, detestando lo segundo, nos es preciso vindicar lo primero." Ibid., p. 4-5.

distinguishing the savages from the civil. It is "the cradle of rational politics... the conch of the precious pearl of religion...Being therefore a regulated intellectual, and a cultivated order of building, it is like a compendium, which includes many liberal arts." It is noble because of its end (purpose), effects, and public utility and because it is not contaminated by the mechanical arts.

Architecture's relationship to invention and the architect's status (title) depends on a hierarchy of labor and architecture being "a rational and intellectual order...a work of understanding and not materiality of (bodily) exercise [.T]he architect, sovereign (*principe*) of the subordinate craftsmen (*fabros subalternos*), [is the one who] instructs and gives rules of construction[.]"[68] Ardemans clearly articulates this hierarchy in the building tradition: "we call architect only [the person] whose precepts and rules are fabricated by the inferior artist (*artifice*) or craftsman... the *Artifice-Arquitecto* understands by reason the arts he executes, but the craftsman (*oficial*) executes without understanding."[69] Ardemans then curiously writes: "*Artifice-Arquitectos*, instructors, principals, who with rules and scientific proportion teach the inferior subordinates (*subalterns*) who work, cannot be denied from this class of the liberal arts."[70] In a sense, the liberal arts category has here already become loose enough to include not only the architects but others who know the doctrine and could teach it.

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[68] According to Ardemans, Vitruvius was in total agreement with Plato's postulation that the architect, with his speculative knowledge and doctrine, guided those who used their hands. Vitruvius added that the craftsman "without the arts (*letras*) and scientific rules, only works with the hands, and would never be able to have authority [over] his work." Ardemans also cites Alberti's claim that the hands construct the building, but reason demonstrates its proportions. Ibid., p. 8.

[69] "que solo llama Arquitecto, por cuyo precepto, y regla fabrica el inferior Artifice, ó Oficial; y que se diferencian, en que el Artifice Arquitecto entiende por la razon del Arte lo que se executa; pero el Oficial executa sin entender." Ibid., p. 9.

[70] "no se puede negar ser de esta classe la de los Artifices Arquitectos, Instructores, y Principes, que con reglas, y proporciones cientificas enseñan lo que los inferiores subalternos deben obrar." Ibid., p. 9.

The *Alarife, an author*

Villanueva mentions Diego Lopez de Arenas's book on Carpentry, *Breve compendio de la carpintería de lo blanco y Tratado de Alarife* (*Brief compendium of woodwork joinery and treatise of the alarife*) as the first "original" Spanish treatise. He misstates the date of its publication (1633) by a hundred years, ("1533") and describes it as leaving Spaniards in a vacuum for "a hundred years" until Arfe published his work in 1675.[71] However, he soon declares why it was inadequate for contemporary architects: "it is a work very confused in its terms (*voces*) [and] its doctrine...cannot be useful for teaching. The language used did not reach to us and the drawings that demonstrate this doctrine do not rectify this difficulty as they are extremely crude."[72] Villanueva saw language as a hindrance for the continuation of this tradition; he therefore does not see how the theory could be generated from existing models of *artesonados* found in abundance in Spain. Villanueva does not acknowledge the fact that the Academy had the original manuscript from which the book was made.

It might be surprising that Villanueva considered a work with clear Islamic origins as a Spanish work, but this is reminiscent of his view (addressed in Chapter Four) that Arab architecture could have been the conduit and medium by which the revival of classical knowledge could have happened in Spain.

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[71] "La primera obra que hallamos, y que podemos numerar entre las originales, fue la que dió á luz en Sevilla año de 1533." Diego de Villanueva, *Colección de diferentes papeles críticos* (Madrid, 1766), p. 155-156. Villanueva even misstates the date of publication of Juan de Arfe y Villafañe's *Varia comensuracion* (Seville, 1585), which was published in Seville in 1585. Juan de Arfe y Villafañe's *Varia comensuracion* (Seville, 1585). He also mentions Juan de Caramuel's *Arquitecturs Civil* (1678), Juan de Torija's treatise on stereotomy and the measurements of vaults and his other book on the bylaws of Madrid *Ordenanzas de Madrid,* and Fray Lorenzo de San Nicolás, and the translation of Henrique Woton's work into Spanish.

[72] "Es obra tan confusa en las voces con que se explica en esta facultad, que no puede server de utilidad su lectura. Las voces usadas en su tiempo no has llegado á nosotros, y nada deshacen esta dificultad las figuras que demuestran sus doctrinas, pues son sumamente rudas, y aun muchas letras fuera de su verdadero lugar." Ibid,. p. 163.

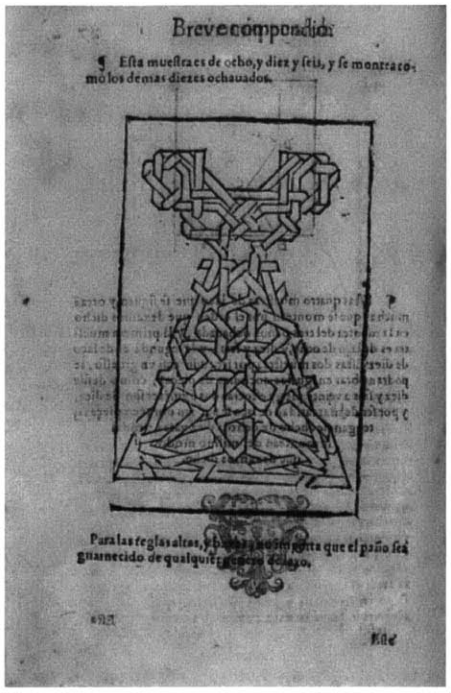

Figure 9. Diego Lopez de Arenas. *Breve compendio de la carpintería de lo blanco y Tratado de Alarife,* Seville, 1633.

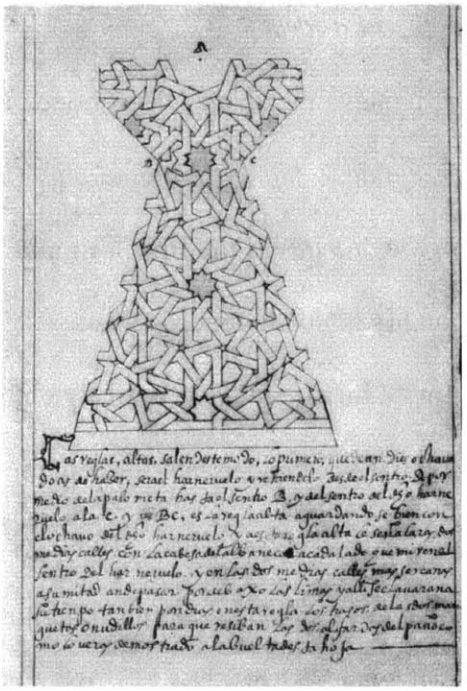

Figure 10. Diego Lopez de Arenas. Drawing of an octagonal *artesonado. Breve compendio de la carpintería de lo blanco y Tratado de Alarife,* 1613

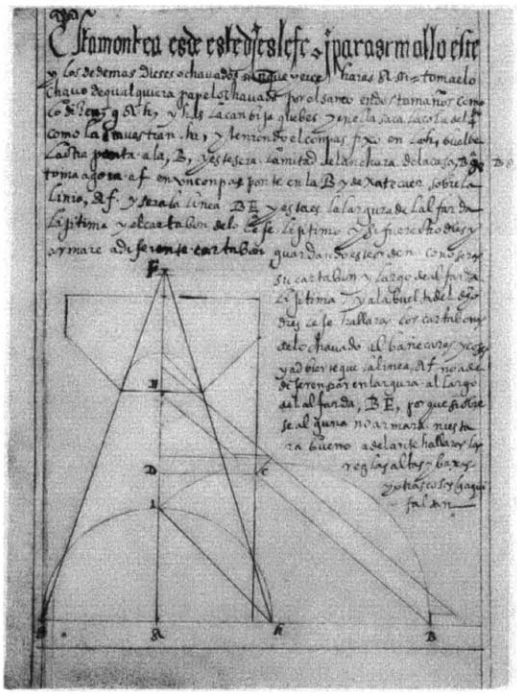

Figure 11. Diego Lopez de Arenas. Drawing of geometric lines generating an octagonal *artesonado. Breve compendio de la carpintería de lo blanco y Tratado de Alarife,* 1613 manuscript. manuscript.

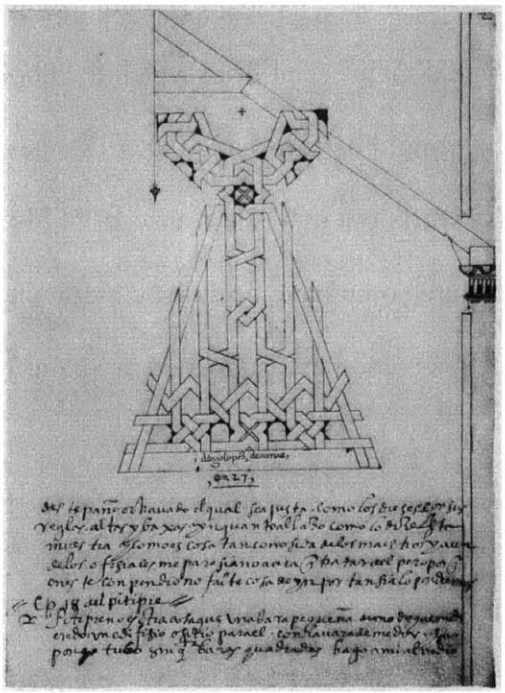

Figure 12. Diego Lopez de Arenas. Drawing of an octagonal *artesonado. Breve compendio de la carpintería de lo blanco y Tratado de Alarife,* 1613 manuscript.

The *Breve compendio de la carpintería de lo blanco* was republished in 1727. Historians of art rarely mention the important history of the book's publication. In fact, the book had two manuscripts (1613 and 1633). Now in the *Instituto de Valencia* in Madrid, the 1613 manuscript differs markedly from both the 1633 manuscript and the 1727 edition, comprising a larger number of accurate drawings demonstrating a serious attempt by Arenas to explain the construction method of wooden ceilings and their geometry (figs. 9, 10, 11, 12). For example, mounting an octagonal wooden ceiling, as shown in the original manuscript, is aided by a drawing explaining geometric operations generating the general composition, whereas this drawing is absent in the 1727 edition and the drawing of the *artesonado* is far from being sufficiently instructive regarding the construction method.[73] It is not clear why the second manuscript was chosen to be published, and not the first. It is obvious that the 1633 text is more elaborate; however, the drawings in the 1613 manuscript are more abundant, accurate, and easier to understand.

Arenas himself concedes the gaps in knowledge in his time of the construction of wooden ceilings as he writes that "the material of the measurement and rules of carpentry were not as well known as they were supposed to be, which continuously precipitated lawsuits."[74] He even confesses that the title "*alarife*" is not clearly defined. The inaccuracy of drawings is often ascribed by historians to the lack of skilled engravers at that period. This might be true, as a book often became the property of its publisher, who selected his engravers within a restricted budget;

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[73] Another edition of the same manuscript was published later in 1865 and reproduced in 1912 with a glossary and note by Eduardo Mariategui, who supposedly tried to clarify the most difficult aspects that hinder the understanding of the text. In 1982, the text was reprinted again, with a prologue written by Enrique Nuere.

[74] "Y haviendo assi mismo advertido en las veces, que he sido Examinador, y Alcalde Alarife, que en realidad de verdad, ó la material de las medidas, y reglas de la Carpinteria no está tan conocida, y apurada, como es necessario, ó los Maestros, y Oficiales della tan conformes entre sí para el executarla, como conviene, de que se originan pleitos, que siempre, hai en todos los Tribunales en material de casa: he querido tomar el trabajo de escribir este Compendio, en que he procurado tartar con la brevedad, y claridad possible todo los que he aprendido, y advertido." Diego Lopez de Arenas's *Breve compendio de la carpintería de lo blanco y Tratado de Alarife,* Prolog.

however, it is also true that precise and calculated drawings often indicated a higher status, or elevated the status of arts or crafts previously considered mechanical to the level of becoming liberal, or liberated, "noble" sciences.[75]

[75] What is noteworthy that the 1633 manuscript from which the book was printed was at the archive of the Academy of San Fernando when Villanueva was writing. Did Villanueva know this? This raises the important question of whether the Academy deliberately suppressed knowledge of Arab architecture and ornament, especially when locally these were considered crafts.

Section III: Attacking the Guilds: Attacking Ornament

Manifestations of the so–called baroque were dominant in the architecture of Spain from the third quarter of the seventeenth century to the mid-eighteenth century. With the establishment of the Madrid Fine Arts Academy of San Fernando in 1752, historians and academicians of architecture launched a unanimous attack on these styles. Churrigueresque architecture was at the center of these attacks.[76] This architectural style was named after José Benito de Churriguera (1665-1725), whose work was primarily focused on wooden retables decorating church apses. Those criticizing the Churrigueresque also called for the adoption of classical architecture as an alternative. Subsequently, architectural historians of the twentieth and twenty-first centuries contextualized this stylistic change (from the baroque to classicism) within an Enlightenment movement that sought to achieve a universalism in architecture by adopting rules of classical architecture to ultimately rationalize, unify, and neutralize ornament. However, these accounts have overlooked another story, which this chapter unearths: that the implicit reasons—though not explicitly stated—for these attacks on Churriguera were related to his association with the guilds (particularly, the carpenters' guild), as will be discussed below. As we have shown, up until the end of the eighteenth century the guilds were the main rival of the Academy, with which it vigorously struggled for control.

It is true that to assess the advent of neoclassicism in Spain during the eighteenth century it is unavoidable to reflect, as in other European cases, on the ancient/modern debate, which many historians contend had informed the transformations that architectural ornament underwent from freedom of expression to the application of classical rules. In 1678, Juan Caramuel questioned the authority of the ancients over the moderns and affirmed that "just as the ancients

[76] It seems that the term was used in the Academy earlier than those late eighteenth-century accounts because no author took responsibility for the term.

got license to carve the stones in their way, they also gave us [this license] in order to carve ours, without subjecting us to the laws and precepts of others."[77] Caramuel also gave agency to time in shaping the course of architectural theory and spoke about creativity of design. To this theme, he dedicated a whole article (number XVI), titled "Why in architecture there has been and always will be a notable variety of opinions."[78] Caramuel exhibits an ironic sense of humor. "I have a prejudice (shared by many)," he writes, "that the ancients knew everything; and so much so, that they left nothing for the moderns to learn... I also make the manifest error of thinking that only what is new is the best."[79] His divided sentiments on the issue of ancient vs. modern frees architects, to some extent, from the tyranny of classical rules, as he contends that "the first foundation of this science is that its judge should not be Vitruvius or any of the ancient or modern writers, only vision."[80] Caramuel's emphasis on vision as a subjective faculty did not align with the architectural theory advanced by the Academy, which regularized ornament according to a strict proportional system.[81] This system also claimed to have strong ties with vision—however, not changing, but fixed ones.

The main criticism against baroque architecture was that it was arbitrary and lacking in the rules of classical architecture. The words "confused" and "moving away from classicism"

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[77] "Porque como los antiguos se tomaron licencia para labrar las piedras a su modo, nos la dieron también a los modernos, para que las labremos al nuestro, sin sujetarnos a las leyes y preceptos de otros." Juan Caramuel, *Architectura, Civil Recta y obliqua* (Vegeven, 1678), Vol. 2, p.102

[78] "Articulo XVI: Cómo en la arquitectura ha habido y habrá siempre notable variedad de opiniones." Ibid., Vol. 2, p. 80.

[79] "Pero con todo esso tengo por prejuicio (y lo es de muchos) el pasar que los Antiguos lo supieron todo; y tan todo, que no dejaron nada que aprender a los Modernos...Y verdademante, como es prejuicio pensar, que lo supieron todo los Antiguos, y que no han dexado nada, que hallar, o decir de nuevo a los Modernos: assi también tengo por error manifiesto el suponer que solo lo Nuevo es lo Mejor. Ha havido en toda edad Ingenios cortos y arrojados (que los grandes, siempre proceden come Prudencia) Ingenios digo, que han pretendido gobernar y instruir con Novedades, sin exminar si era, o no, mas util y perfecto lo Antiguo." Ibid., Vol. 2, p.10.

[80] "Pongo por primer fundamento de esta ciencia que su juez no ha de ser Virtuvio, ningún antiguo o modern escritor sino solo la vista." Ibid., Vol. 2, p. 33.

[81] There was a stress on vision as an agency. Francisco Álvarez in *Breve tratado de Relojes solares y Architectura* (Madrid, 1727) says that the architect should adopt whatever is most convenient and agreeable to the eyes. ["lo que mejor conviene y fuese agradable a la vista."], p. 35.

were used to describe these styles, characterized by highly ornamental elements.[82] However, the debate over the authority of the ancients vis-à-vis the moderns, and the Academy's desire to reinstate classicism (leading to its attacks on excessive ornament) were not the whole story. In fact, the attack on the baroque from the advocates of classicism did not focus on the European debate of modern vs. ancient, as much as on the definition of what Spanish architecture ought to be and how it related to the essence of architecture.

Describing the Churrigueresque, Ceán Bermúdez (1749-1829) wrote that the "figures and forms of the good taste of architecture [had] disappeared from the country! Its deformity became such that one cannot distinguish which are pedestals, columns, capitals, cornices, and other main parts of the art."[83] Bosarte, in his *Disertacion sobre el estilo* (1789), warned of a plague he called "a modern gothic departing from antiquity, that has corrupted the ornament of architectural works as well as in furniture and art objects (*alhajas*)."[84] Joseph Ortiz y Sanz (1739-1822) claimed that "the architects of the last centuries, it seems, wanted to dethrone architecture anew and took revenge by overwhelming, disfiguring, burying it in an abyss of impertinence called ornament."[85] Jovellanos wrote, in his "Elogio de las Nobles Artes" (delivered in the Academy of San Fernando on June 14, 1781),

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[82] A similar characterization was used by Spanish historians and theorists to describe the poor manner with which baroque European buildings were executed. Diego Villanueva mentions Cochin's critique of artists moving away from classicism, specifically those creating rococo ornament.

[83] "desaparecieron del reino la figura, formas y el buen gusto de la arquitectura! Llegó a ser tal su deformidad que no se distinguía lo que eran pedestals, columnas, capiteles, cornisamentos y demás partes principlaes del arte." Eugenio Llaguno Amirola, Juan Agustín Ceán Bermúdez *Noticias de los arquitectos y arquitectura de España desde su restauración,* Vol. I (Madrid, Imprenta Real, 1829), p. xxxvii.

[84] " el progreso que ha hecho la plaga persistente de otro gótico modern distinto del antiguo, que en nuestro tiempo ha estragado y corrompido el aspect de la obras de la arquitectura en sus adornos, como en el de los muebles y algajas." Isidor Bosarte, *Disertacion sobre el estilo* (Madrid, 1789), p. 10-11.

[85] "Los arquitectos de los ultimos siglos parece quisieron destronarla de nuevo y se vengaron con ahogarla, desfigurarla, sepultarla en un abismo de impertinencias a nombre de ornatos." Juan Agustín Ceán Bermúdez, *Oración sobre las Nobles Artes,* 1787.

> [With the] many errors and licenses [...what] could occur other than barbarisms, insolence, and artistic heresies that we see at the beginning of our century? Fortunately it is not necessary to talk much about them, since they are all the time and everywhere in our sight. Curved, oblique, interrupted and undulating cornices; bellied, corrupt, obstructed, and thin and weak columns; inverse obelisks substituted by pilasters; arches without foundation, without a base, without ashlars, introduced in architraves...; metopes grafted on lintels, and triglyphs placed on doorposts: huge pedestals without proportion, without division, nor members, ... shells and corals, waterfalls and fountains, bows and ribbons...noise and nonsense[. This does not only apply to] the ornament of altarpieces and niches/alcoves, but also to doors, porches and gables, and bridges and fountains of the new architecture. This awful manner has been given the title "*churrigueresca.*"[86]

The attack on the Churrigueresque did not only concern those who were involved in the Fine Arts Academy and in rectifying Spain's image in the domain of art and architecture. It also played into the hands of those Enlightenment authors who were adamant to trace a line of progress in the nation's achievements in all the disciplines of the arts and sciences. In this case, however, Churrigueresque was portrayed as one instance of regress in this vigorous track going forward. The Enlightenment critic and censor of the theaters of Madrid, Santos Diez González (1734-1804), historicized this progress in his *Index or Brief apologetic account of the merit of Spaniards in the arts and sciences* (*Tabla, o breve relación apologética del merito de los españoles en las ciencias, las artes*, Madrid 1786).[87] In the first part of the book, Diez González discusses the current status and progress in belles-lettres, poetry, languages, history, theology, history, mathematics, physics, anatomy, surgery, and jurisprudence. The section that includes the

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[86] "A tantos errores y licencias como dejamos indicados en la nota precedente, qué podia suceder sino los barbarismos, las insolencias, y las herejías artísticas que se vieron á la entrada de nuestro siglo? Por fortuna no es necesario hablar mucho de ellos, puesto que están todas horas y en todas partes á la vista de todo el mundo. Cornisamentos curvos, oblicuos, interrumpidos y undulantes; columas ventrudas, tábidas, opiladas y raquíticas; obeliscos inversos, sustituidos á las pilasters; arcos sin cimiento, sin base, sin imposta, metidos por los arquitrabes, y levantados hasta los segundos cuerpos; metopas ingertas en los dinteles, y triglifos echados en las jambas de las puertas: pedestals enormes sin proporción, sin division, ni miembros; he aqui el ornato, no solo de los retablos y ornacinas, sino tambien de las puertas, porticos y frontispicios, y de los puentes y Fuentes de la nueva arquitectura. A esta pésima *manera* se ha dado el titulo de *churrigueresca.*" Gaspar Melchor Jovellanos, "Elogio de las Nobles Artes," *Obras de Don Gaspar Melchor de Jovellanos,* Vol. 3 (Madrid, 1845), p. 466-67.

[87] At the outset, the author clearly states that his mission is to "present the progress of Spaniards in the sciences, the arts, and other objects worthy of glory." *Tabla, o breve relación apologética del merito de los españoles en las ciencias, las artes* (Madrid, 1786), p. 1. His other objective is to prove the "noble and natural character of Spaniards" to foreign nations and show the history of Spain's leadership in all sciences and arts.

"noble arts" also includes industry and trade.[88] In this section, he praises the "dependence of these three arts on the Enlightenment," after which he shows how Spanish painters and architects ranked with the rest of Europe in these fields. He enumerates the greatest achievements of Spanish architects like Herrera in buildings like Alcazar in Toledo, el Escorial, and the Valladolid Cathedral, even praising the Gothic period expressed in the cathedrals of Toledo, Seville, Santiago, Burgos, and other places, which for him, surpassed in magnificence "German architecture," from where the Gothic originated.[89] "In the sixteenth century and a large part of the seventeenth, not only did Spain produce eminent sculptors and architects, but ones capable of competing with the foremost Romans and those of ancient Greece."[90] After tracing this very clear trajectory of success, the author mentions the Churrigueresque as a passing phase where the arts were temporarily disregarded: "It is true that as some dark clouds may hide the sun, in the same manner the Churrigueras and other equally extravagant and ridiculous men obscure the arts. But under the most happy reign of the great King Our Lord Don Carlos III and his august father and brothers, those clouds are gone, slowly dissipating."[91]

Most important buildings of the seventeenth and early eighteenth centuries had an element executed with the Churrigueresque style. Despite the fact that the Churrigueresque originated in retables and did not govern the whole design of a building, it was still described as

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[88] The second part of the book is an "Index of almost all works" ("Indice de casi todas las obras") of Spanish writers in these disciplines.

[89] "El Real Alcazar de Toledo, edificio del Escorial, y Catedral de Valladolid, que aun no está concluida, son unos clarísimos monumentos de la ventajas, que hacian neustros Pintores, Escultores, y Arquitectos á los demás de Alemania, Francia, Inglaterra, y otros Reynos. Y si retrocedemos algunos años, no hallaremos en estas Naciones una Arquitectos igual á la de los Alcazares Reales de Segovia, Granada, Iglesia de Cordoba, y otras partes. Las antiguas desmotanodas Fortalezas, Muros, y Castillos nos muestran bastantemente la sumptuosidad en la Arquitectura de los remotos tiempos. Aun la Arquitectura Alemana, llamada Gotica." Ibid., p. 86.

[90] "y en todo el siglo diez y sei[s], y gran parte del diez y siete, no solo produxo España Escultores, y Arquitectos insignes, sino capaces de ser comparados, y de competir con los primeros de Roman, y de la Grecia Antigua." Ibid., p. 87.

[91] "Es cierto que así como al Sol le oculta tal vez alguna oscura nube, del missmo modo oscurecieron despues las artes los Churriguera y otros hombres igualmente extravagantes y ridículos. Pero bajo el felicísimo reinado del magnífico Rey Nuestro Señor Don Carlos III y de su augusto Padre y hermanos se han ido disipando poco a poco aquellas nubes." Ibid., p. 88.

an architectural style. Historian Alfonso Rodríguez de Ceballos claims that "Churriguera was not the father, in the strict sense, of the so- called Churrigueresque style." Pedro de Ribera (1681-1742), Hurtado Izquierdo (1669-1725), or the Tomé family had a "sharper" and more elaborate use of the style, "from which results that Churriguera, paradoxically, was the least Churrigueresque of our artists of the first half of the eighteenth century."[92] Pedro de Ribera's Hospicio de San Sebastian in Madrid is always chosen as an example of this extremity, where sculptural molds decorate the portal entrance of the building (fig. 13).

Figure 13. Pedro de Ribera. View of the main portal. Hospicio de San Sebastian, early seventeenth century, Madrid.

[92] "Churriguera no fue el padre, en sentido estricto, del llamado estilo churrigueresco; ni siquiera, como saben hoy hasta los niños de escuela, su representante más agudo, pues en esto le llevaron ventaja los Tomé, Pedro de Ribera y Hurtado Izquierdo, por ejemplo. Resultaría entonces que Churriguera, por paradoja, es el menos churrigueresco de nuestros artistas de la primera mitad del siglo XVIII." Alfonso Rodríguez G. de Ceballos, *Los Churrigueras* (Madrid: Instituto Diego Velazquez, 1971), p. 10. Ceballos describes how Ardemans, whom eighteenth century neoclassicists (such as Llaguno) believed to be the enemy of Churriguera's style, was in fact a supporter of Churriguera's creations. Ardemans's desgins and drawings demonstrate his "baroque" composition.

Ironically, even eighteenth-century historians who attacked José Benito Churriguera confessed that he was not the most extreme in the application of ornament and was not the only one responsible for this phenomenon; yet they insisted on naming this style after him. This naming was not arbitrary, but stemmed from the fact that these historians associated his work with the materiality of the wood, the practice of craftsmen, and the authority of the guilds, specifically the carpenters' guild. Naming an architectural style after a family name also evokes the familial structure, very much in compliance with the guild system, where in many instances a craft is passed from father to son, contrary to what an institution, like the Academy, proudly claimed it stood for. This puts the whole discussion of the rejection of Churrigueresque in the broader context of the Enlightenment debate on high art vs. low crafts, and the secrecy of learning in a sect or a guild vs. the open learning in the academy.

One of the most representative of José Benito's works is the retable of the Convento de San Esteban in Salamanca, built for the Dominican Order (figs. 14, 15). I adduce this example also to show that the architecture built and furnished over long periods frequently display the many styles of their long histories. The front façade portrayed what eighteenth-century theorists described favorably as the "Plateresque" (silversmith-like) style, alluding to the sculptural ornament the architect could create that evoked the work of the silversmith.[93] The acceptance of the Plateresque style, during the eighteenth century, is curious because in the previous century it

[93] The term "Plateresque" was first used in 1677 by Diego Ortiz de Zúñiga (1633-80) in *Anales de Sevilla* (Madrid, 1677) and indicated the use of the term among craftsmen of the time. However, the Enlightenment thinkers were those who disseminated it and led to its common use. Zúñiga described the Casa de Ayuntamiento (town hall) of Seville as "The great building is all of stone masonry, and among the orders of architecture preference is given to the Composite, covered all over with foliage and fantasies of excellent design, called by craftsmen Plateresque [*Plateresco*], which has a most beautiful appearance, although the delicacy of the detailed work makes it much subject to the injuries of time." Diego Ortiz de Zúñiga, *Anales de Sevilla* (Madrid, 1677), p. 525. Cited in J. B. Bury, "The Stylistic Term 'Plateresque,'" *Journal of the Warburg and Courtauld Institutes*, Vol. 39 (1976), p. 200.

was considered to "violate the rules of Roman classical architecture."[94] One of the reasons why this ornament was viewed favorably is because these (same) eighteenth-century historians (who rejected the Churrigueresque) claimed that the Plateresque was a transitional style leading from the Gothic architecture in cathedral buildings to the classical period by assimilating elements of the Italian Renaissance.[95] This history of transitions, however, failed to explain the coexistence of highly ornamented with pure and unornamented architectural elements, at times even coexisting in the same building.[96] This kind of ornament (plateresque) appears in two architectural treatises written in the sixteenth century: Juan de Arfe's *De Varia Conmensuración* (Seville, 1585) and Diego de Sagredo's *Medidas del Romano* (Toledo, 1526). Both treatises claimed to adhere to the rules of classical architecture; however, they left the decision on ornament to the fancy of the craftsman.[97]

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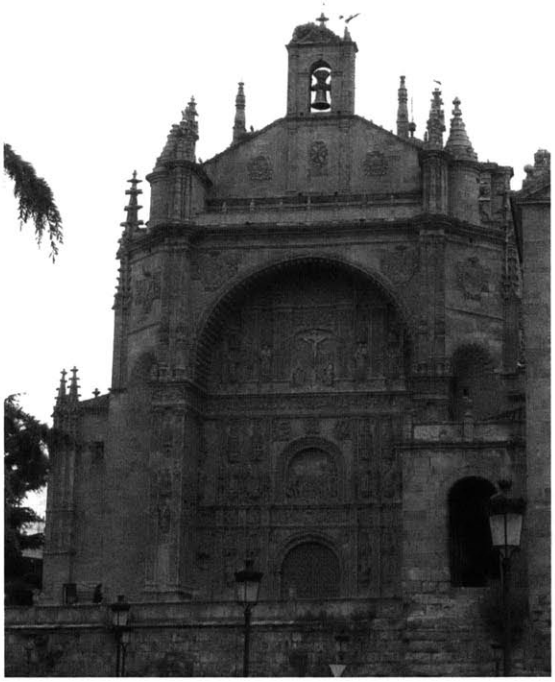
[94] When speaking about the builders of the chapel of the Reyes Nuevos in Seville Cathedral, Zúñiga saw that this style "violated in much of their ornament the rules of ancient Roman architecture with the plateresque fantasies, rendering the work, though indeed very pleasing and rich in beautiful things," but not encompassing the "majestic perfection" of Greek and Roman buildings. Diego Ortiz de Zúñiga, *Anales de Sevilla* (Madrid, 1677), p. 546-47. Cited in J. B. Bury, "The Stylistic Term 'Plateresque,'" *Journal of the Warburg and Courtauld Institutes*, Vol. 39 (1976), p. 201.

[95] Ponz called this ornament "*estilo medio*" or "*estilo Berruguete*," in reference to the architect, painter, and sculpture, Alonso Berruguete (1488-1561). Ponz also termed the hospital of Santa Cruz at Toledo "a daughter of the Gothic style" ("que es la hija de la llamada ulgarmente Gótica." Antonio Ponz, *Viage de Esapaña*, (Madrid, 1791), vol. XVI, p.137; vol. I (Madrid, 1772), p. 130. Ceán Bermudez maintained that the plateresque is "nothing else than the classical style in the early phase of its restoration... Pedro Machuca began in 1527 to dispense with these superfluous ornaments by designing and constructing in the Alhambra of Granada the palace called that of Charles V... Machuca separated himself from the plateresque style and taste." Ceán Bermudez also stressed that Enrique Egas was a transitional figure between the two phases.

[96] For example, the sacristy and library of the El Escorial are decorated with grotesque ornament.

[97] The full title is *Measurements of Roman Architecture: necessary for craftsmen who desire to undertake the making of Bases, Columns, Capitals and other members of ancient edifices.* Sagredo wrote that "all the members and moldings... can be carved with foliage, shells, niches, fish-scales, diamond-points, knobs and many other adornment, as the discreet master craftsman may wish... for it should be known that there is no art in which the works of nature and inventions of man can so well be employed as in the Roman." Diego de Sagredo, *Medidas del Romano* (Toledo, 1526), fol. Cvi (cited in Bury, "The Stylistic Term 'Plateresque,'" p. 209). Arfe's Part I, Book IV (*De Varia Conmensuración*) focuses on the five orders as established by Serlio and instructs on their decoration, where he diverts from classical authors. For example, regarding the fluting of the Ionic column he demands a "greater richness" than the Doric "one third of the shaft may be ornamented of the same kind as the frieze." The Corinthian order could demonstrate a richer ornament where the "middle third may be fluted obliquely and the other two-thirds covered with grotesque and foliage of the same kind as the frieze." He gave license to cover columns "entirely with sprays of leaves and grape vines and flowers and leaves of jasmine and ivy...the middle third and the other two-thirds could be adorned with oblique and perpendicular flutes." For the Composite order, he suggested



Figures 14. Juan de Alava, Exterior view showing the façade of San Esteban, 1524, Salamanca.

Figures 15. José de Ribera, Main retablo, 1692. San Esteban, Salamanca.

The church of San Esteban was designed by Juan de Álava in 1526; construction ended in 1610. In this process many architects were involved, such as Martín de Santiago, Rodrigo Gil de Hontañon, Juan Ribera Rada, and Pedro Gutiérrez. Echoing the Plateresque ornament on the outside, the inside retable occupies a hexagonal apse in plan and covers a half-cylindrical vault. Work on the retable, which was a collaboration of painters and sculptors, started in 1692, initiated by Fray Pedro Matilla, who hired Churriguera. The retable consists of three parts: a base; a middle part with six Solomonic columns on different levels in the plan, flanking a central space that holds the tabernacle; and a third attic level. Painter Claudio Coello revised the work

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Caryatids and Persians for the columns, as well as the baluster. Arfe was also the author of *Quilatador de la Plata, Oro y Piedras* (Valladolid, 1572). cited in Bury, "The Stylistic Term 'Plateresque,'" p. 204). On sixteenth century silversmiths in Seville, see Ruth Pike, *Aristocrats and Traders,* (Cornell 1972).

and was therefore not only responsible for the painting located in the attic level of the retable, illustrating martyr San Esteban, but for the whole artifact.[98] Later, in 1705, Palomino painted the lace curtain of the ostensorium.

The best demonstration of the academicians' concerted criticism of the Churrigueresque involves the façade of the Academy's headquarters. It was designed initially by José Benito Churriguera (a year before his death) for Juan de Goyeneche (1656-1735), a politician, banker, and minister of Felipe V, who owned the building in 1724 and commissioned Churriguera to design what used to be called "Mesón de la miel."[99] When the Academy decided to move its headquarters from the Casa de la Panadería, overlooking the Plaza Mayor, to Goyeneche's building on the Calle Alacalá (where it is located today), the academicians objected that "the old façade of the building did not correspond with what would become the home of the Fine Arts." They recommended "remov[ing] the extravagant ornaments and substituting others more dignified."[100] The Academy entrusted the task of rectifying Churriguera's façade to Diego de Villanueva, who in 1773 produced two drawings of the façade. The first drawing (fig. 16) shows the symmetrical façade divided in two parts: the left part shows the actual design by Churriguera, and the second part on the right illustrates Villanueva's intervention. The second drawing (fig. 17) is a representation of the final state of the "clean" façade after the eradication of Churriguera's ornament.

The first drawing shows how, in the portal entrance, Villanueva dispensed with the decorative elements like the two little angels holding the conch in the middle of the doorway.

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[98] Rodríguez de Ceballos, *Las Churrigueras*, p. 20.

[99] Goyeneche also created and owned the *Gaceta de Madrid*. Ceán Bermúdez wrote about him in his "Después se echó a hacer grandes obras, y errigió los eidifcios de la población de Nuevo Baztán a expensas de D. Juan de Goyeneche y su casa principal en Madrid, que es la que ocupa al presente la Real Academia de San Fernando." *Diccionario Histórico de los más ilustres profesores de Bellas Artes en España* (Madrid, 1800), vol. I. p. 329-330.

[100] "la antigua fachada del edificio no era correspondiente a la que había de ser morada de las Bellas Artes, y se tomó la plausible resolución de picar sus extravagantes ornatos, sustituyendo otros más dignos." As recounted in the *Distribución de los premios* (Madrid, 1778), p. 2.

Villanueva also replaced the curved moldings, framing the entrance opening, with straight ones, adding two Doric columns to hold the frieze supporting the balcony on the second level. He removed the triglyph molds from the center of all the windows and from the cornice of the upper floor. Finally, he dispensed with the busts decorating the balconies of the roof, and cleaned up what seems to represent amorphously shaped rocks on the street level of the Calle Alcalá.[101] Villanueva's design of the façade was approved by Marquéz Grimaldi in 1773. If we examine these drawings, we see that after Villanueva's cosmetic intervention the classical components of the façade become apparent. It now resembles Palladian palazzos, like Valmarana's, especially in the rough base on top of which the giant order extends for two stories. Comparisons could also be made with the entry portico and the balcony of the *piano nobile* of Bernini's Palazzo Berberini or Palazzo Odeschalchi (Rome). It is noteworthy how little had to be done to bring the old façade into compliance with the new order—that is, the underlying architecture was considered acceptable.

[101] Antonio Ponz described the new façade as "quando se construyó este edificio, reynaba en Madrid gusto tan perverso, que en materia de arquitectura no habia cosa que tanto se celebrase como la fachada del Estanco del Tabaco... pero al tiempo de prepararla para el uso que ahora tiene, se picaron todos aquellos soñados adornos, y se reduxo en lo posible á una forma que del todo no repugna á las mismas bellas artes que se alojan en él, mayormente habiendo adornado la puerta con dos columnas dóricas istriadas de piedra berroqueña, con su entablamento, y un balcon encima." Antonio Ponz, *Viage de España*. Vol. VI (Madrid, 1776), p. 282.

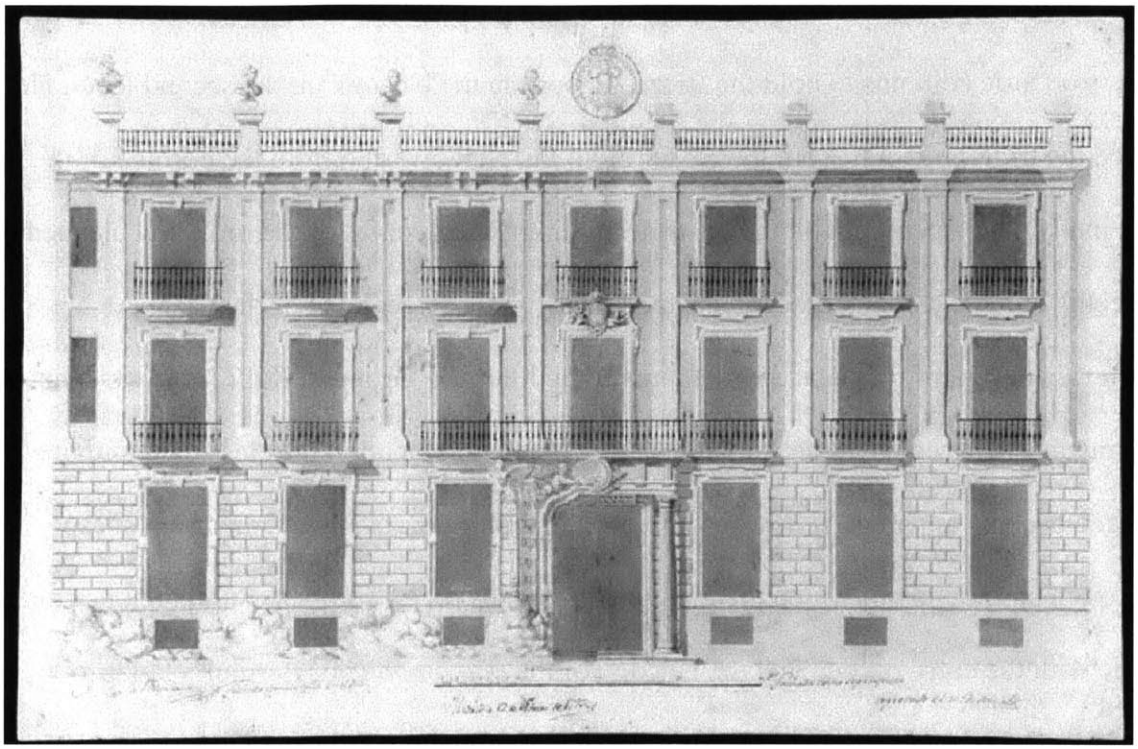

Figure 16. Diego de Villanueva. Drawing of main façade of the Academia de San Fernando (the left half of the drawing shows Churriguera's earlier design), 1773, Madrid.

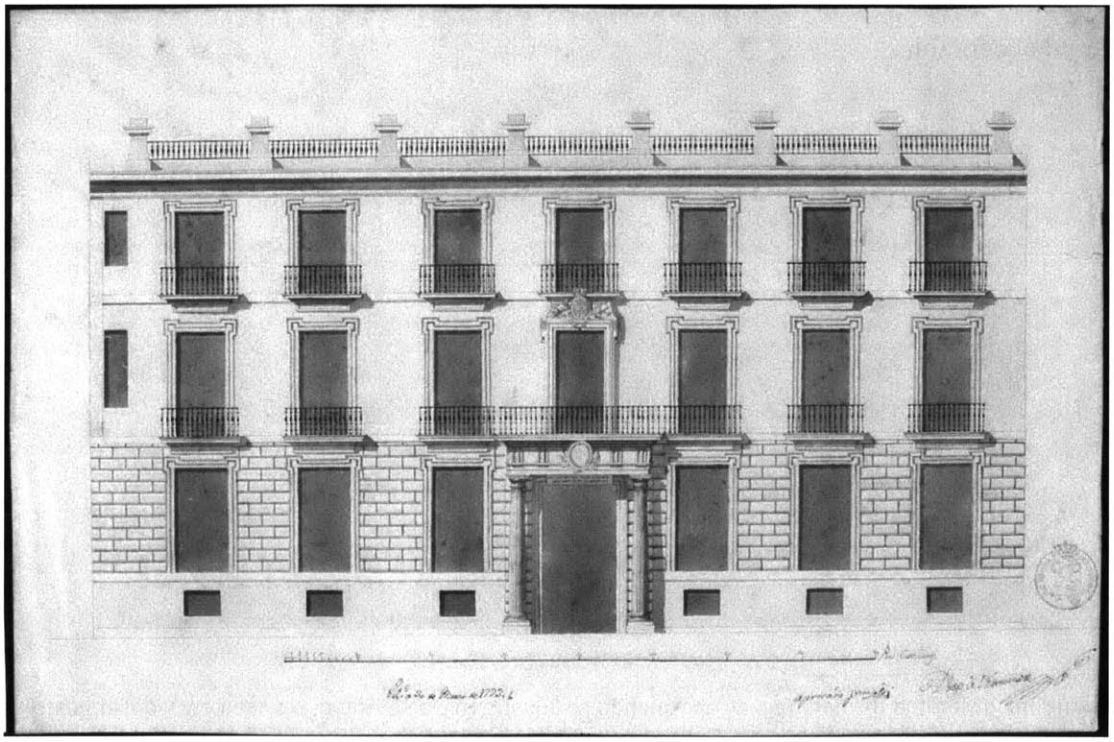

Figure 17. Diego de Villanueva. Drawing of main elevation of the Academia de San Fernando, 1773, Madrid.

Churriguera and the Guilds

Historians Frederico Pablo Verrié and Rodríguez de Ceballos indicate the Catalan origin of the Churriguera family and its association with the carpenters' guilds, as many of its members, especially José Benito's father, Josef de Churriguera, had his own *taller* (workshop) and practiced carpentry, woodcarving, and assembling *retablos* during the sixteenth and seventeenth centuries.[102] He moved to Madrid, where José Benito was born. Ceán Bermúdez indicated in his *Diccionario Histórico de los más ilustres profesores de Bellas Artes en España* (Madrid, 1800) that José Benito's "two sons, Jerónimo and Nicolás Churriguera were... those who most spread his bad taste in old Castile."[103] We do not know much about the education of Churriguera, but most historians surmise that he had an active *taller* together with José Ratés Dalmau in Madrid.[104] We know that Nicolás, the son, was a member of the Cofradía Belén in Madrid, which continued, as we have discussed, to be the main rival of the Academy.[105]

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[102] Frederico Pablo Verrié, "Los barceloneses Xuriguera" in *Divulgación histótica,* Barcelona 1947; A. Rodríguez de Ceballos, *Lo Churriguera* (Madrid, 1971). Ceán Bermúdez in his *Diccionario Histórico de los más ilustres profesores de Bellas Artes en España* (Madrid, 1800), like others, wrote mistakenly that Churriguera was born in Salamanca in the mid-seventeeth century. He added that "Carlos II le nombró ayudante de trazador de las obras de palacio sin sueldo en 8 de octubre de 1690." Juan Agustin Cean Bermudez, *Diccionario historico de los mas illustres profesores,* Vol. I, (Madrid, 1800), p. 329; A. García Bellido, *Estudios del barroco español: avances para una monografía de los Churrigueras* (Madrid, 1930), p. 21-86; A. Rodríguez de Ceballos, "Nuevos documentos sobre José de Churriguera." *Archivo Español de Arte*, 1985, pp. 10-16; Cobo, M. Agulló. *Documentos sobre escultores, entalladores y ensambladores de los siglos XVI al XVIII.* Valladolid 1978; Allo Manero, A. "El canto del cisne del Barroco efímero madrileño." *El Arte en la Corte de Felipe V.* Madrid 2002.

[103] "Falleció el año de 1725; y sus hijos D. Jerónimo y D. Nicolás Churriguera, fueron... los que más difudieron su mal gusto en Castilla la Vieja." Ibid. See Otto Schubert and Manuel Hernández Alcalde Schubert *Historia del Barroco en España* (Madrid, 1924), p. 200.

[104] Pablo Verrié, Federico. "Los barceloneses Xuriguera." *Divulgación histótica* (Barcelona, 1947), p. 214; F. Marías, A. Bustamante, "Apuntes arquitectónicos madrileños de hacia 1660," *Archivo Español de Arte*, 1985, January-March, pp. 34-43. Vega, M. Lasso de la, Marqués de Saltillo, "Los Churrigueras, Datos y noticias inéditos (1679-1727)," *Arte Español,* third quarter (Madrid, 1945), p. 83-106; George Kubler, *Arquitectura de los siglos XVII y XVIII, Madrid, Ars Hispaniae, XIV*, p. 143. Rodríguez de Ceballos, A. *Los Churriguera* (Madrid, Instituto Diego Velázquez del Consejo Superior de Investigaciones Científicas, 1971), p. 16-17.

[105] José Benito's son, Nicolás, belonged to the Real Cofradía de Nuestra Sra. Belén. He dedicated to the Cofradía Belén his treatise, *Tratado de curiosos gyros de quentas útiles a los Profesores de arquitectura y assimismo a los dueños de obras. Como tambien a los que vendan y compren granos y otros diferentes frutos y semillas* (Madrid, 1756).

At least from the point of view of craftsmen and economic reformers associated with the Economic Societies during the eighteenth century, Churriguera was considered part of a group that was tied to the guilds that practiced woodwork. The *Memoirs* (*Memorías*) of the Royal Economic Society of Madrid, published in 1780, evidently relate José Benito to these guilds. The *Memoirs* focus on three fields of the arts: "Agriculture" (first volume) and "Industry" and "Arts and Crafts" (second volume).[106] They treat practical matters and attempt to give a unified knowledge of the history and progress of each one of these fields. Among the subjects that the section on "Arts and Crafts" discusses is the ten artisan guilds that were devoted to woodwork in the Spanish court.[107] Each guild is discussed separately, including the history of its *ordenanzas*, their current status, and a brief description of the content of their chapters.[108] The discussion in the *Memoirs* recounts the inner conflicts between these guilds, each trying to achieve monopoly over the production of certain types of artifacts, preventing the other guilds from producing them. Interestingly, the argument that was made to justify the monopoly involved claims regarding a hierarchy among the guilds based on adopting a discourse on the liberal vs. mechanical arts.

The section, "*Ordenanzas de los maestros puertaventaneros*" (Ordinances of the masters of windows and portals) includes three chapters. They list the range of objects the craftsman (*puertaventanero*) can produce (e.g., doors, windows, confessionals, cabinets), highlight that these objects could be made only by a master (*maestro*), and explain that to become a *maestro*,

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[106] This publication precedes the series *Memorías económicas*, published with the support of the Academy of Science from 1789 onward for its motivation toward economics and politics. For bibliography on the Academy of Science see, [eds.] Massimo Augello, Marco Guidi. *The Spread of Political Economy and the Professionalisation of Economists* (Routledge, 2001).

[107] These include the "cabinetmakers and wood carvers (*ebanistas entalladores*), joiners (*ensambladores de nogal*), Carpenters (*capinteros de taller*), *puertaventaneros*, *torneros*, *maestros de hacer coches*, *maestros carreteros*, *silleros de paja y jauleros*, *cesteros*, *peyneros*." La Real Sociedad Económica de Madrid, *Memorias de la Real sociedad economica de Madrid* (Madrid, 1780), p. 45-46.

[108] It elaborates on the examination system for the craftsman, the number of apprenticeship years, the kind of artifacts the craftsman can or cannot make, materials that he can use, and criteria to judge his manufactures.

the craftsman should fulfill six years of apprenticeship and another four as an "*oficial.*" The *Memoirs* report that the carpenters' guild objected to the content of these *ordenanzas* of the *puertaventaneros* because they were missing a statement of their examination policy, which in their view was crucial.[109] In response to these objections voiced by the carpenters, members of the *puertaventaneros* guild replied, as the *Memoirs* report:

> The craftsmen of [wooden] doors and windows (*puertaventaneros*), insisting on the royal judgment of 15 December 1694, claimed among other things, that the exam was not applicable to their craft, because in the liberal arts there is neither exam nor regulation: these are requirements that could only correspond to the mechanical [art/part] of the carpenter. In this important distinction between liberal and mechanical arts, abundant yet shoddy erudition was wasted, resulting in the qualification as *liberal* of the art of the *puertaventaneros*, and as *materialistic* that of the carpenters.[110]

The author of the *Memoirs* immediately invokes Churriguera's name as an authority, which justified and facilitated the aspiration of the *puertaventaneros* to claim their art as liberal and as superior to those arts of the other guilds, like the carpenters, which they portrayed as mechanical. Churriguera, it seems, had created this division, even among the guilds. The author of the *Memoirs* (who is a member of the Economic Society) clearly does not agree with this division.

> This last statement strengthens the opinion of the eminent Churriguera, an opinion that strived to prove, if at all possible, that an art can be unworthy [of being considered an art] for the very same reason that makes it actually useful; because the theoretical part was constantly mistaken with the practical...[T]he fundamental knowledge that should be the content of the exam, which is the theoretical knowledge, was corrupted [being mistaken as practical], [rendered] outdated and inappropriate. [As a result] the carpenter's exquisite industry [came to be portrayed as rude]. This led the *puertaventaneros* to claim

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[109] "circunstancia precisa para que sus contrarios pudiesen estimarse maestros, como por ser la obra de los puertaventaneros en sus principios propia de los carpinteros."Ibid., p. 59.

[110] "Los puertaventaneros insistiendo en la real executoria de 15 Diciembre de 1694, alegaron entre otras cosas, que el examen era inadaptable á su oficio, por no darse en artes liberales examen ni regulacion: requisitos que solo podian corresponder á lo *mecánico* del carpintero. En esta importante distinction de artes liberales y mecánicas se derramó una copiosa, bien que malograda erudicion; consiguiente á la qual se calificaba de *liberal* al arte de los puertaventaneros, y de *materialísimo* al de los carpinteros." Ibid.

advantages for their guild by introducing banning prohibitions on the industry of others [the carpenters].[111]

What is noteworthy about this story, recounting the conflict among the guilds themselves, is first that the author suggests that José Benito Churriguera did not think an art is an art if it was useful, which is perhaps why the author rejects this assumption, as he was part of the Economic Societies that now advanced the idea that utility is even more valuable than speculative knowledge (see Chapter One). Moreover, among the guilds working with the same material (wood), one assimilated the division of the art into mechanical and liberal in order to seek control. The *puertaventaneros*' claim that only the carpenter's practice, which probably is what involves bodily activity, could be subjected to an exam, stems, as the author explains, from the fact that this practical part got mixed with the theoretical one (probably alluding to the practical geometry fundamental to the craftsman). This association of carpentry with the mechanical arts forced the *puertaventaneros* to alienate themselves from the carpenters, claiming their craft as liberal. This is very similar to Ardemans's claims that those laborers who practiced architecture with their hands contaminated it by confusing practice with theory, and thereby leading architects to instate a division between the two.

[111] "Fortaleciendo esta último dictado el parecer del insigne Churriguera, quien magistralmente fixó toda obra de carpinteria á unas tablas lisas con sus barrotes clavados. Esforzóse el pensamiento, en términos de persuadir, si dable fuese, que un arte llega á desmerecer por la misma circunstancia que le constituye propiamente util; y equivocando incesantemente la parte teórica con la práctica del arte, las noticias fundamentales en que debe versar todo examen, con la corruptela de aquellas piezas, ya antiquadas, ya inpropias, á que se entendia coartarle; y la exquisita industria que requiere el arte del carpintero, con la rudeza que se le suponia, ó á que se le pretendia sujetar; todo se reduxo por parte de los puertaventaneros á apropiar las mayores posibles ventajas á su gremio, á trueque de introducir prohibiciones impeditivas de la industria en el ageno." Ibid.

The drawings José Benito produced for his retables are a proof that he considered his art and architecture executed in wood to be liberal. I show here two drawings of retables designed by him held at the Archive of the Academy of San Fernando (fig. 18, 19). The retable of the Convento San Basilio Magno (Madrid), of which only the drawing survives, signed in 1717, shows the plan and elevation with the same type of spatial ornament as in San Esteban, where the retable consists of three horizontal parts and a central vertical space holding the tabernacle of the

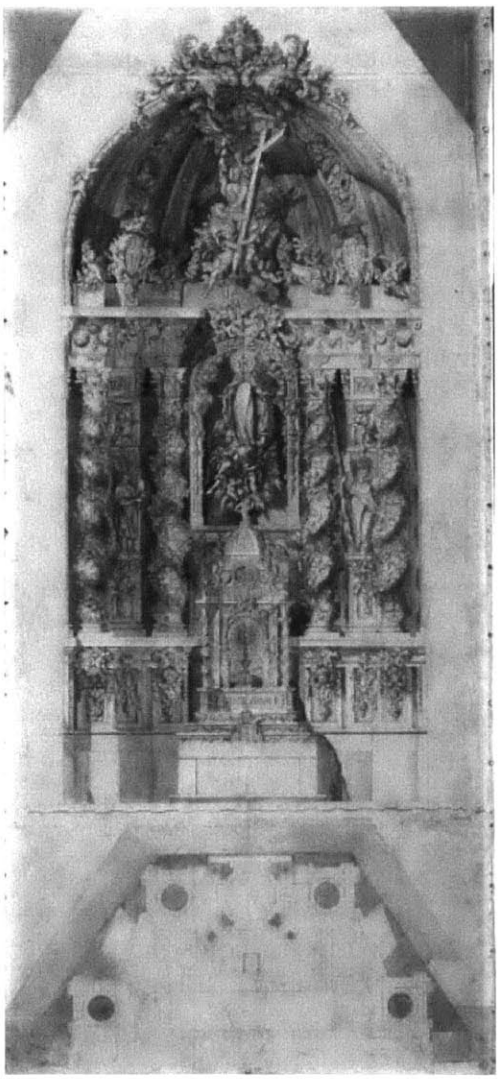

Figure 18. José de Churriguera, Retablo de la Merced, early seventeenth century, Madrid.

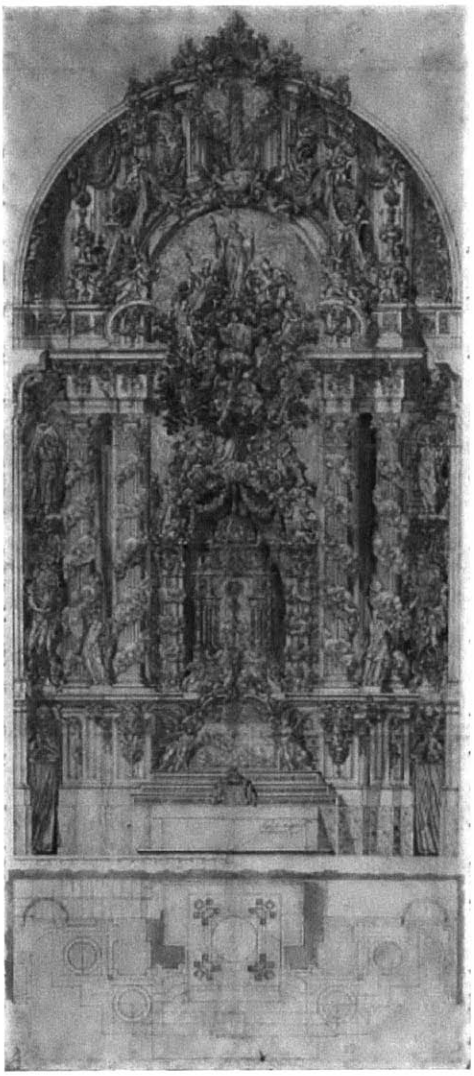

Figure 19. José de Churriguera, Retablo de San Basilio. 1717, Madrid.

altar's table. The other two drawings are of the retables de la Virgen de la Merced of the Iglesia de Mercedario Calzados in Madrid, which no longer exists. However, the production of drawings did not always guarantee the actual execution of the design because of economic factors. Hence ornament of these retables was often altered at the whim of craftsmen assigned to carry on the assembly of these retables. This was a concern José Benito himself had.

In May 1691, José Benito contracted an agreement with other "professors of the art and ingenuity of Architecture and Sculpture" in order to submit a "lawsuit that would lead to liberating them from paying to the guild in Madrid tribute for their work and to exempt their profession from its relations with the guilds or its consideration as a mechanical occupation."[112] Churriguera was struggling to prove his profession was a liberal one in need of being liberated from control of the guilds.

Another document we have, demonstrating the hierarchy among the guilds, is dated almost thirty years later. In 1720, the Real Consejo de Órdenes Militares (Royal Council of Military Orders), upon the recommendation of Teodoro Ardemans, entrusted José Benito to design the retable of San Raimundo Fitero to be built in the Church of Las Calatravas in Madrid (fig. 20). José Benito complained to Ardemans in a letter (May 23, 1721) that the Council was trying to auction the work and "distort" the drawing in order to execute it at a lower cost. In the letter he wrote,

> [I regret that] such a learned Senate, in this particular [case], would go along the same path as those who ... lack knowledge in this noble art.... Hence I wonder if a great painter made an excellent drawing for a painting, if it would be right to give this drawing to a painter, one of those who painted boards in bullfights [as a background]... There is no

[112] "Profesores del arte y ingenio de la Arquitectura y Escultura [para interponer pleito judicial conducente a] libertarlos del tributo y repartimiento que se pretende por Madrid paguen los otorgantes y los demás profesores de dicho arte de Escultura, considerándole por gremio y ocupacion mecánica." M. Lasso de la Vega, Marqués de Saltillo, "Los Churrigueras, Datos y noticias inéditos (1679-1727)" in *Arte Español,* third quarter, (Madrid, 1945), p. 98. Cited in Blasco Esquivias, B. "Ni Fatuos ni Delirantes". José Benito Churriguera y el esplendor barroco español," *Lexicón. Stirie e Architettura in Sicilia* ,2, Palermo, 2006, p. 9.

> consolation left to those learned (*estudiosos*) other than lamenting...watching the audacity of ignorance undertaking to make what they do not know nor even see ... and what [occurs] afterwards is that a fortune is spent [to adjust] the work [executed] in a poor and bad [manner], [causing] foreigners to laugh (as I've seen) at the sight of temples full of gold chips without much reason other than throwing them ... [No craftsman] can do more than what he knows, even if the drawing [he is working from] is that of the Knight Bernini...[113]
>
> Anyway, my friend, you know my repugnance when you asked me to make this drawing, knowing the fate that the work would have...[but] finally I decided to make it (having consulted with you on its construction), judging that it is [an object] that has a more scientific part than a mechanical one ... its parts put together in such a way that only those whom God gave the ability to draw can execute it ...Few [are those] whom we can find that have the skill to make a drawing for a perfect execution of sculpture and ornament, the intelligence in mathematics in order to provide and adjust its parts in its totality, and the good taste in order to place in this and other works, which you know better I, [paintings of history and perspective].[114]

The analogy Churriguera draws, between the mere person who applies paint to wooden boards and a painter who executes a drawing for a painting, illustrates his belief that a hierarchy existed in the profession of retable design. His letter shows that the execution of retables was not under the control of the designer, even if he had prepared drawings for the task. There were many levels at which one could work with a material. Churriguera laments how his profession has been

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[113] "de que un Senado tan docto vaya en este particular por el mismo camino de los que no lo son por falta de conocimiento en esta Arte Nobles, porque siendo la Arquitectura, Pintura y Estatuaria tres hermanas tan unidas (como Miguel Angel las definió con los tres círculos unidos entre sí), puede ser la una parangón de la otra, y así pregunto que si un pintor grande hiciera un dibujo excelente para un cuadro, sería acertado que por este dibujo se diese la obra a un pintor de los que pintaban los tablados en las fiestas de toros, dejando lugar a estos cualesquiera para hacer posturas... no queda otro consuelo a los estudiosos que la lamentación de unos con otros viendo el atrevimiento de la ignorancia emprender a hacer lo que no saben ni aun mirar... y lo que resulta después de gastado el caudal en que ajustaron la obra es que han hecho poca, y mala, dando que reír (como yo lo he visto) a los extranjeros de ver los templos llenos de astillas dorados sin más razón que tirarlas a espuertas por las paredes, porque ninguno puede hacer más de lo que sabe aunque la traza sea del caballero Bernini..." The letter is published in A. Bonet Correa, "Los retables de la iglesia de la Calatravas de Madrid," *Archivo Español de Arte,* XXXV, 1962, p. 21-50.

[114] "En fin, amigo mío, sabe usted la repugnancia que hice cuando me mandó hacer esta traza, conociendo el paradero que la obra había de tener, que sería andar en posturas de unos y de otros, y por ultimo me determine a hacerla (habiendo consultado con usted su construcción), hacienda juicio que es una cosa que sin comparación tiene más parte científica que mecánica... donde para su ejecución se juntan tantas partes para lograr el acierto sobre las que puede ejecutar aquel a quien dio Dios la habilidad de trazarlos, porque ejecutándolos el que la dispuso se mejoran y ejecutándolos otro no suele entenderlas... la razón de esto es que son pocos los que se hallan con la destreza de dibujar para la perfecta ejecución de la escultura y ornatos, y la inteligencia en las matemáticas para proporcionar y ajustar las partes con su todo, el buen gusto para la colocación de ellas y otras que usted sabe mejor que yo, como la historia y perspectiva." Ibid.

hijacked by ignorant individuals, making high and low arts seem equals.

Ironically, as Churriguera viewed his art as liberal, in his "Elogio de las Nobles Artes," Jovellanos asserted that the churrigueresque confused the hierarchies in architecture. It was echoed in all major Spanish cities to the extent that all "the precepts and maxims of the art were abandoned at all levels: construction workers (*albañiles*) were converted into architects, and woodcarvers (*tallistas*) [were turned] into sculptors," giving way to "arbitrariness and caprice," because now "everyone could imitate, invent, and make irrational things."[115] Jovellanos mentions the great work of Juvarra and Sachetti on the new palace in Madrid, as well as the creation of the Academy of San Fernando, as two major events that mark the "rebirth of a fine and majestic architecture." He also highlights the role of Ventura Rodríguez in the teaching and criticism of architecture, as well as many other individuals assisting his mission, most importantly the director of architecture in the Academy, Diego de Villanueva. Villanueva, for Jovellanos, was "indeed worthy of praise for the courage with which he taunted and chased the remnants of bad taste, which were still hidden in the workshops of the silversmiths and the woodcarvers (*tallistas*) and some of their contemporaneous architects." Villanueva's praiseworthy *Coleccion de diferentes papeles*, as Jovellanos suggests, was a benchmark for rescuing architecture and banishing the monsters and ruin that controlled architecture.[116] In his "Elogio de Don Ventura Rodríguez"[117] (read in the Economic Society of Madrid on January 9,

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[115] "Abandonados de todo punto los preceptos y máximas del arte: convertidos los albañiles en arquitectos, y en escultores los tallistas: dado todo el mundo á imitar, á inventar, á disparatar: en una palabra, perdida la vergüenza, y puestos en crédito la arbitrariedad y el capricho, ¿cuál es el límite que podian reconocer los ignorantes profesores?" Gaspar melchor Jovellanos, "Elogio de las Nobles Artes," *Obras de Don Gaspar Melchor de Jovellanos,* Vol. 3 (Madrid, 1845), p.468.

[116] "Director de arquitectura en nuestra Academia, y digno por cierto de alabanza, por el valor con que zahirió y persiguió los restos del mal gusto, que aun se escondian en los talleres de los plateros y tallistas, y de algunos arquitectos sus contemporaneous...desterrando los *mónstruos* y *vestigios* que se habian apoderado de ella, y que echados de la corte." Gaspar melchor Jovellanos, *Elogio de D. Ventura Rodriguez Leida en la real sociedad de Madrid* (Madrid, 1790), p. 170.

[117] Ventura Rodríguez epitomized, for Jovellanos, the fine rules of classical architecture.

1788), Jovellanos emphasizes that the origin of Churriguera's work is in the workshop and in making of retables. Hence, the ruin brought to architecture originated in wood.

> Although [Juan de] Herrera ennobled architecture, spreading its fine maxims throughout Spain through his imitators and students since mid-sixteenth century; yet there remained in some professors a mania to load [architecture] with sculptural ornament, foreign to its purity and majesty. This mania was discovered [made] in wood: without doubt because the ease of engraving it lent itself to the conservation of ancient ideas. In a similar principle we [adorn] the fluted [column] shafts with grotesques in their upper third part, and use this ornament in pedestals, friezes, entablatures, and in other minor members. We encounter enough of this [ornament] in retables, pulpits, and choir stalls of the sixteenth century and much more in the seventeenth [century].
> But toward the middle of [the seventeenth century] not only did architecture lose its simplicity, but also it started to jeopardize its decorum, as many [elements] from these improper ornamentations were introduced to it, spurious and monstrous, that obscured and tarnished it.[118]

The Secretary of the Academy, Antonio Ponz (1725-1792), took a tour throughout Spain and wrote a series of books, *Viage de España* (*Travels in Spain*), consisting of eighteen volumes. The travel was initiated by the king's effort to arrange a documented account of the art and architecture in Spain, particularly after the expulsion of the Jesuits. The first volume of the *Viage* was administered by the Academy and had a crucial impact on the specialists as well as the public.[119] Ponz "proposes to mainly discuss buildings and public works that exist in Spain, illustrating the art, skill (*artificio*), and excellence of some, as well as the lack of intelligence and

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[118] "Aunque ennoblecida por Herrera la arquitectura, y difundidas sus buenas maxîmas en toda España por sus imitadores y discípulos desde la mitad del siglo XVI. todavia quedó en algunos profesores la mania de cargarla con adornos de escultura agenos de su pureza y magestad. Esta mania se descubre de madera: sin duda porque la facilidad de entallarla ayudaba á la conservacion de las antiguas ideas. A semejante principio atribuimos los fustes calzados de grotescos en su ultimo tercio, y el uso de este adorno en el vano de los pedestals, en frisos, entablamentos y otros miembros menores. De esta se encuentra bastante en retablos, púlpitos, y sillerías de coro del mismo siglo XVI. y mucho mas en el XVII. Pero hacía la mitad de este ultimo, no solo habia perdido su sencillez la arquitectura, sino que empezaba ya á peligrar su decoro, pues se habian introducido en ella, sobre aquellos adornos impropios otros, espurios y monstruosos que la obscurecian y mancillaban." Gaspar Melchor de Jovellanos, *Elogio de Don Ventura Rodríguez* (Madrid, Imprenta de la viuda de Ibarra, 1788), p.161-2.

[119] Daniel Crespo Delgado, *Un viaje para la Ilustración: el "Viaje de España" (1772-1794) de Antonio Ponz*, (Madrid: Marcial Pons Ediciones de Historia; Sevilla: Fundación de Municipios Pablo de Olavide, 12). p. 23.

propriety (*propiedad*) in others." At the end of his *Viage* Ponz writes that his work transcends aesthetic issues to also include geographic, social, and economic studies of the cities and towns of Spain. As an art and architecture critic, he attempts to rectify public taste on what constitutes good architecture worthy of public admiration. Due to his previous training in Rome and affiliation with neoclassical artists like Mengs, Ponz strongly advocated reinstating the rules of classical architecture in the Academy's teaching and curriculum, and supported the continuation of the Academy's program of the six-year student pension to Rome. Recourse to classical architecture complied with the Academy's pedagogical ideals and its aims to control architectural practice. Ponz, in addition, contributed to the creation of the aforementioned Comisión de Arquitectura in 1786 that censored architectural projects, fixing anew the hierarchy among architecture and crafts through classicism's prism.

Ponz identified a decline of Spanish architecture and a "corruption of the arts...from the previous century to the middle" of the eighteenth.[120] When talking about what came to be known as baroque architecture, he spoke of a "Churrigueresque sect" (*"secta churrigueriana"*), or "Churrigueresque madness" (*"locura churrigueresca"*). "Generally speaking, it is true that in the year 1722 architecture in Spain [was in] the hands of the ignorant, a period when the ludicrous Churrigueresque sect was flourishing, achieving the highest praise [...and introducing] more delirious [elements] to the art of building." This monstrous architecture "degraded all parts, sacred and profane, in public buildings."[121] Ponz wondered how it was "possible with this

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[120] See Antonio Ponz, *Viage de España* Vol. VI, Chapters 1 and 2. Ponz extended his criticism to foreign architecture, most importantly, of Brussels, Amsterdam, Lovain, London, the palace of Fontaineblau and Tulleriers (the facade facing the garden). He praised the facade of the Louvre by Perrault and considered it "would be one of the most magnificent of Europe when its finished" ["sera una de las mayores magnificencias de Europa por su término."] Antonio Ponz, *Viage fuera de España*, Volume 1 (Madrid, 1785), p. 114.

[121] "Es verdad que en el expresado año de 1722 y en los inmediatos habia llegado la arquitectura en España á para en manos de ignorantes, hablando por lo general; y que aquella fué la época floreciente de la disparatada secta Churrigueriana, logrando mayores alabanzas los que mas desfrentadamente deliraban en el arte de edificar; y en esa misma Corte se hicieron por entónces monstruosidades enormes, alcanzando miserablemente esta desgracia á toda la

Enlightenment and beautiful examples to degrade so much this art and reduce it to extravagant monstrosity."[122] He laments the visibility of these works, achieved by their use of "pine and gold," which belonged to what he calls "the Pseudo-Salamantine architectural school and their patriarchs Churriguera and Tome," who "have left no trace in the kingdom of what was done in the good times of the arts."[123] Critiquing the main portal of the Dominican church of San Pablo in Cordoba, Ponz writes that "One could put it in the catalog of delirious Churriguera; it was a shame to spend money on that messy work and on the grey and black marble."[124] "This depravation," which attacked the center of learning, "the most important and necessary of the noble arts"—that is, architecture—"extended so rapidly like a flood in all kingdoms and provinces of the monarchy."[125]

The major complaint against Churrigueresque ornament was that it confused the high art of the architect with that of the *albañil*, and the sculptor's with that of the woodcarver. Churriguera and the rest of the architects (as we saw in Ardemans), working in the seventeenth

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nacion con la turba multa de los ignorantes sequaces de Churriguera nacidos para ridiculizarla, y para emporcar en todas partes los edificios públicos sagrados y profanes." Antonio Ponz, *Viage de España,* Vol. XVII (Madrid, 1792), p. 332.

[122] "Como pudiese con aquellas luces y con bellos ejemplos degenerar tanto este arte y reducirse a la extravagancia y monstruosidad en que hemos visto." Antonio Ponz, *Viage de España,* Vol. VII (Madrid: Joachin Ibarra, 1778), p. 11.

[123] "De tal modo se dexó arrastar generalmente el Público de la Pseudo-Escuela arquitectonica Salamantina, y de sus Patriarcas Churriguera, Tome, y gran número de sequaces, que por poco no han dexado rastro en el Reyno de lo que se hizo en el buen tiempo de las Artes: consumidores de pinares y de oro para poner sus disparates á la vista de todos, y deslumbrar á un Público que no lo merecia." Antonio Ponz, *Viage de España,* Vol. XVII (Madrid, 1792), p. 352.

[124] "Vamos ahora á otra casa tambien de Padres Dominicos, una de la mas principales de Córdoba, y es el Colegio de San Pablo. La portada principal que corresponde á la calle puede ponerse en el catálogo de los delirios Churriguera, y fué lástima gastar el dinero en aquella obra desarreglada y en los mármoles pardos, ó negros que se emplearon." Ibid., p. 49.

[125] "el décimo D. Joseph Gallego, que vino de Salamanca, trabajó en las bóvedas, y fué autor del pésimo ornato del Coro que ahora exîste. Sin duda fué este un sectario de la ridícula escuela de churriguera. !Cosa extraña que tuviese principio en el centro de la instruccion, y buen gusto literario una enseñanza depravadora de la mas importante y necesaria de las nobles artes, qual es la Arquitectura; y que esta depravacion se extendiese tan rápidamente como un diluvio por todos los Reynos y Provincias de la Monarquía!" Antonio Ponz, *Viage de España,* Vol. XVI (Madrid 1791), p. 172.

century, took pride in practicing more than one fine art.[126] Diego de Villanueva, surprisingly, contended that this was another reason behind the ruin of architecture. He thus aimed to sketch clear boundaries between, on the one hand, architecture, and painting and sculpture, on the other.

> This ruin was inflicted largely by having introduced painters and sculptors to form architectural projects, while ignorant of the essential principles of the art. Hence without insulting them, when they were instructed more in the proportions of the orders, with which they dared [to draw] misplaced and ridiculous lines and ornament, of which I could cite for you many examples that the public ignorance viewed as miracles of the arts. [These] bad examples have taken root. [Their architects] view the erudition of antiquity as ridiculous and out of fashion and their construction as barbaric productions.[127]

The separation of the fine arts by eighteenth-century advocates of classicism in the Academy went, in fact, against humanism's main ideals, as most important architects were in addition painters or sculptors. The Academy's war against the guilds and their associated ornament seems to have been gradually successful. Jovellanos celebrates this victory that reinstated classicism in Spanish architecture.

> Happy to be born in a time when the sublime principles of the arts are now generally recognized, and when proponents of preoccupation and ignorance flee the field of good taste. Happy to have studied on a soil in which you can observe, day and night, Greek models ... A continuous vigilance in establishing and spreading the good maxims, [waging a] bloody war on works of barbaric and depraved taste.[128]

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[126] See Churriguera's letter to Ardemans (note. 113 above) in which discusses the three sister arts. The making of retables was usually a collaboration between the three arts. A. Bonet Correa, "Los retables de la iglesia de la Calatravas de Madrid," *Archivo Español de Arte,* XXXV, 1962, p. 21-50.

[127] "Esta ruina vino en gran parte de haverse introducido Pintores, y Escultores ...á formar proyectos de las obras de Arquitectura; los que siendo por la mayor parte ignorantes de los principios essenciales del arte, pues sin hacerles agravio, quando mas estarian instruidos en la proporcion de los ordenes, con lo qual se atrevieron de lineas, y adornos desplasados, y ridiculos, de que pudiera citar á Vm. muchos egemplares, que la ignorancia publica miró Milagros del arte, fiandose en los demás de qualquiera constructor en la egecucion de las obras, cuyos malos egemplos han arraigado, y á mirar la docta antiguedad como ridicula, y fuera de moda, y á sus construcciones, como producciones de Barbaros..." Diego de Villanueva, *Colección de diferentes papeles críticos* (Madrid, 1766), p.157-8.

[128] "Felices por haver nacido en un tiempo en que los sublimes principios de la artes estan ya generalmente reconocidos y en que los partidarios de la preocupación y de la ignorancia huyen desde su campo a las banderas del buen gusto. Felices por haber estudiado en un suelo en que podeis observar de noche y dia los ejemplares griegos... Un continuo desvelo en establecer y propagar las buenas maximas, en hacer sangrienta guerra a las obras de barbaro y depravado gusto." Gaspar Melchor Jovellanos, "Notas al Elogio de Bellas Artes," *Obras publicadas é inéditas de d. Gapsar Melchor de Jovellanos* (Madrid, 1858), p. 360.

Professor of architecture, Pedro de Silva, similarly declared the end of Churrigueresque in Spain:

> Far, then, from us [are] those abominable fancies disfiguring parts of the building trying to confuse them with each other; far from us [is] that lack of intelligence with which the temple has the form of a theater and a habitation the form of a temple; far from us [are] those outrageous ideas that hide the solidity, capriciously seeming to threaten to ruin the building.[129]

Professors of the Academy and Spanish policy makers could declare their triumph. However, this war on irrationality and barbarism entailed an erasure of important ornamental elements of Spanish architecture. In this return to a universal classicism, even Herrera's classicism was considered to be deviating from the mainstream classicism adopted in Europe. Mengs remarked that the Escorial was a "solid and immense building, where good maxims of construction are used, however without elegance or beauty."[130]

In this chapter, I have demonstrated that the attack on the baroque did not only express a desire for stylistic change to replace fancy and extravagance with the rationality and rules of classical architecture. It was more than that. The impetus for this stylistic transformation was the debate over the division of the arts that reflected the conflict between their respective institutions—the Academy and the guilds. Hence, by focusing on what came to be known as "Churrigueresque" style, I have shown, in fact, that embedded in the attack on excessive ornament was an attack on the guilds' control over architectural practice. José Benito

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[129] "Lejos, pues, de nosotros aquellos caprichos abominables que desfigurando las partes del edificio intentan confundir las unas con las otras; lejos de nosotros aquella falta de inteligencia con que al temple se da forma de teatro y a la habitación forma de temple; lejos de nosotros aquellos extravagantes ideas de ocultar la solidez aparentando caprichosamente que amenaza ruina el edificio." Pedro de Silva, "Oración pronunciada en la Junta Pública de la Real Academia de San Carlos de Valencia" (Madrid, 1792), p.37.

[130] "eidficio solído e inmenso, donde se usaron buenas máximas de construir, pero sin verdadera elegencia ni belleza." Anton Raphael Mengs, *Obras de d. Antonio Rafael Mengs: primer pintor de cámara del Rey.* Published Joseph Nicolas de Azara (Madrid: Imprenta Real, 1780), p. 188.

Churriguera (1665-1725) was portrayed by eighteenth-century academicians as belonging to the guilds, forming a sect (as Ponz described him), and his art seen as confined to the materiality of gold and wood, departing from the rules and precepts of good and solid architecture. But as documents show, ironically, Churriguera himself struggled to free his art from its association with the mechanical arts, as well as from the tyranny of the guilds. When Diego de Villanueva blamed Churriguera for conflating the architect with the *albañil*, and the sculptor with the mere woodcarver, Churriguera had already insisted earlier that it is not materiality that determines the status of an art but the manner in which it is practiced: applying paint does not make one a painter, just as Gutiérrez de los Ríos emphasized that to be a silversmith is contingent upon what he creates, even if silversmithing was already established as a liberal art.

The criticism of the Churrigueresque style emphasized its arbitrariness and confusion of the architectural elements; yet, as Villanueva's own drawings demonstrated, to render the Academy's façade classical, little had to be done. Further undermining the critique of Churrigueresque was that the Plateresque style was praised, considered a transition from the Gothic into the Renaissance—even though it was scarcely less ornamental than the Churrigueresque.

Churriguera insisted that knowledge of drawing and design must be a prerequisite for those who would sculpt his designs. Villanueva shared this view and claimed that the ruin of architecture was because architects were reduced to either construction workers or draftsmen who did not know how to design buildings. Evidently, the Academy had a keen desire to demarcate clear boundaries not only with the crafts, but also with painting and sculpture. These divisions supported its agenda for control. Consequent on this reassessment of the profession, the Academy dispensed with many positions related to construction, like the *alarife* and the *maesto*

de obras, keeping only the *albañil* as a subordinate to the architect. The Academy also produced treatises that address the art of the *albañil*.

The aspiration of architects to be included within the liberal arts goes back to the Renaissance. However, as this chapter shows, with the establishment of the Academy of San Fernando in Madrid in 1752, this status was documented in state regulations, royal decrees, statements by partisans, and theoretical writings. The Academies represented the intellectual ambition of the professionally trained who regarded the practice of those architects and craftsmen associated with the guilds as ignorant and their art subordinate and mechanical. The hierarchy which the Academy strived to establish was meant to rectify the state of affairs of architecture and give architects the upper hand on all decisions, thereby establishing clear distinctions between who designs and who constructs with the hand. Although the battle with the guilds would persist for decades to come, their power vis-à-vis the Academy (and the rising institutions) was unmistakably waning.

CHAPTER THREE

Secrets Revealed: Codifying Ornament

In 1734 Bernardo Montón, a Spanish priest and a university graduate, published in Madrid his *Secretos de artes liberales y mecánicas*—an encyclopedic book, treating physics, painting, architecture, optics, chemistry, gilding, and glazing (fig. 1). This hitherto unstudied "book of secrets" (secrets now made public) endeavored to reconcile empirical knowledge and mathematical rigor. Although *Secretos* is a descendant of a well-established medieval tradition of the genre of books of secrets, nevertheless, this chapter argues, it is the perfect lens through which to look at the degree of affinity with rationality of the early Enlightenment.[1] The book comprises two parts. The first part presents a hybrid collection of writing about varied arts and crafts, including mechanical and optical devices and even formulas for pigments and other artistic materials. In its second part, which is the focus of this chapter, *Secretos* also introduces a "treatise," illustrating a "new method" for the design of infinite drawings of *azulejos* for tiling walls and floors—a long-established Spanish tradition originally brought to the Iberian Peninsula through Muslim conquest. Montón's new method derives its laws from the theory of probability, developed by Jacob Bernoulli, Blaise Pascal, Pierre Simon Laplace, and others (Montón cites Jean Prestet), which was a celebrated product of Enlightenment thinking. As such, the book speaks to the broader reaches of the European Enlightenment. It embodies the quest for social collaboration and grapples with the problem of tying together empirical knowledge of the

[1] Neil Kenny, *The Palace of Secrets: Béroalde de Verville and Renaissance Conceptions of Knowledge* (Oxford: Clarendon Press; New York: Oxford University Press, 1991); Mahmoud Manzalaoui, *Secretum Secretorum: Nine English Versions* (Oxford: Published for the Early English Text Society by Oxford University Press, 1977). Steven J. Williams, *The Secret of Secrets: The Scholarly Career of a Pseudo-Aristotelian Text in the Latin Middle Ages* (Ann Arbor: University of Michigan Press, 2003); William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton, N.J.: Princeton University Press, 1994).

different activities of human life—the crafts and arts—in accordance with a rationalizing mathematical rigor.

Between 1734 and 1814, *Secretos* went through at least twelve editions and changed substantially during its century-long publishing history.[2] Historians number *Secretos* among the books that most influenced architects working in Spain.[3] Yet the book's contribution to the architectural discourse of the Spanish Enlightenment remains largely unexplored. The few discussions of *Secretos* treat only limited parts of the text, reflecting its hybridity and the difficulty posed by its scope.

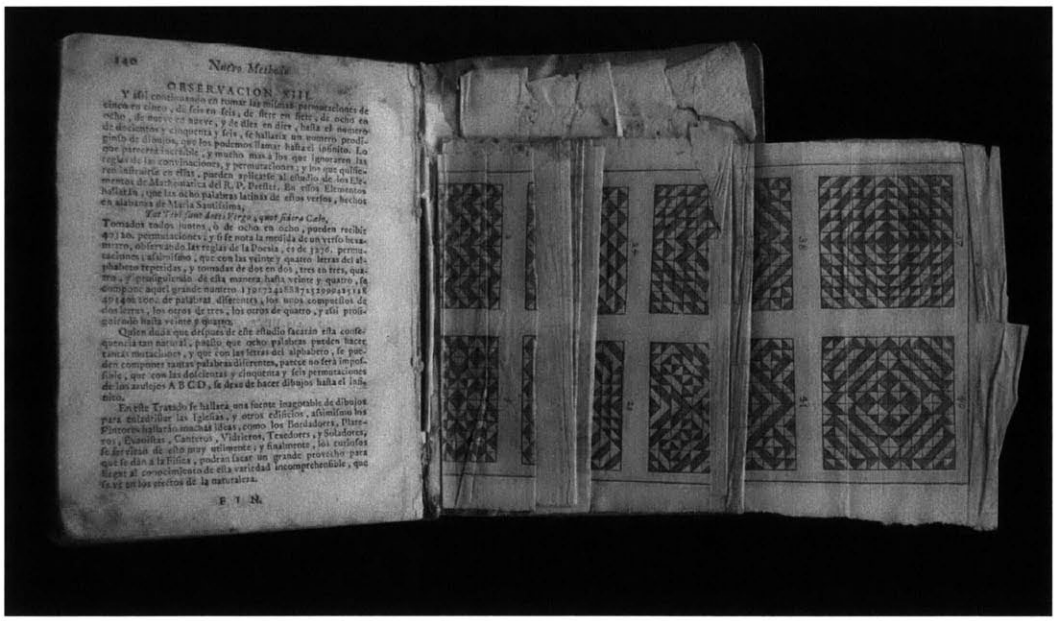

Figure 1. Bernardo Montón, *Secretos de artes liberales, y mecánicas* (Madrid, 1734).

[2] *Secretos de artes liberales y mecanicas* was extensively published: six times in Madrid, twice in Pamplona, twice in Valencia, twice in Barcelona, and more than twice in Portugal.

[3] In *Filippo Juvarra, 1678-1736: de Mesina al Palacio Real de Madrid* (1994), *Secretos* is enumerated among the most influential books read by architect Juvarra to acquaint himself with the Spanish milieu. In *El Poder de los Colores,* Gabriela Siracusano examines some of the book's recipes on colors important for the practice of painters; Jean Charlot's *El Renacimiento del Muralismo Mexicano, 1920-1925* (1985) assesses its influence on twentieth-century Mexican murals; and *Relojes españoles* (1968) by Luis Montañés and Camilo José Cela highlights its mechanical ingenuities.

This chapter focuses on the second part of *Secretos,* which treats *azulejos.* Although this part is omitted from later editions, it is nonetheless a noteworthy example of an intellectual activity in response to the new mathematical science. By studying this portion of *Secretos*, I show how probability theory is used to deny or obscure the *azulejos* tradition's Islamic origin by giving it a Western rationale. This erasure or obscuring of Islamic origins is seen not only in the introduction of a new mathematical rule to rationalize a craft tradition, but also this rationalization severed ornament design from its visual agency, which ultimately led to its loss of materiality, concurrent with an eclipse in the use of *azulejos* in Spanish architecture. (This eclipse seems consonant with the fact that the section on *azulejos* was omitted from *Secretos* after 1734.) By tracing the history of *Secretos'* method back to medieval Iberian philosophy with its Islamic and Jewish influences, this chapter challenges *Secretos'* postulation that the new method stems from the mathematical probability theory of the Enlightenment, and shows how the new effort to theorize ornament design ultimately not only de-Islamized but virtually de-Iberianized this tradition. Certain architectural examples I have been able to discover in Spain, executed in the same manner described in *Secretos,* but preceding it, further indicate that here a craft tradition is being theorized.

A New Method: Applying the Theory of Probability to Design *Azulejos*

Montón describes the new method as one that "many would admire, seeing that with only one tile divided diagonally in two colors[, . . . this] method would produce infinite distributions and drawings."[4] For Montón, the method also illustrates that if one looks closely "all sciences

[4] "Puede ser que muchos queden admirados de ver que con un solo azulejo dividido diagonalmente de dos colores, quiera dár un method para hacer reparticiones, y dibujos hasta infinito." Bernardo Montón, *Secretos de artes liberales, y mecanicas, recopilados, y traducidos de varios, y selectos authores, que tratan de phisica, pintura,*

have very basic principles." According to the new approach, the construction of tile patterns is based on arithmetical, not geometrical, principles, whose underlying unit is a symbol. Arithmetic, he wrote, "applies no more than a few symbols [*cifras;* cf. "cipher"] to represent all imaginable numbers" (and an analogous truth holds in music and language).[5] This new approach, as explained in the introduction, considers one tile A, taking different positions through its rotation, each time by 90 degrees, as four distinct tiles (A, B, C, D) (fig. 2). Through the law of combination A, B, C, and D could be combined in various ways (ABDC, ACBD, ACDB, etc.) or according to the law of variation (AAAA, AAAB, AAAC, etc.), which does not necessarily use

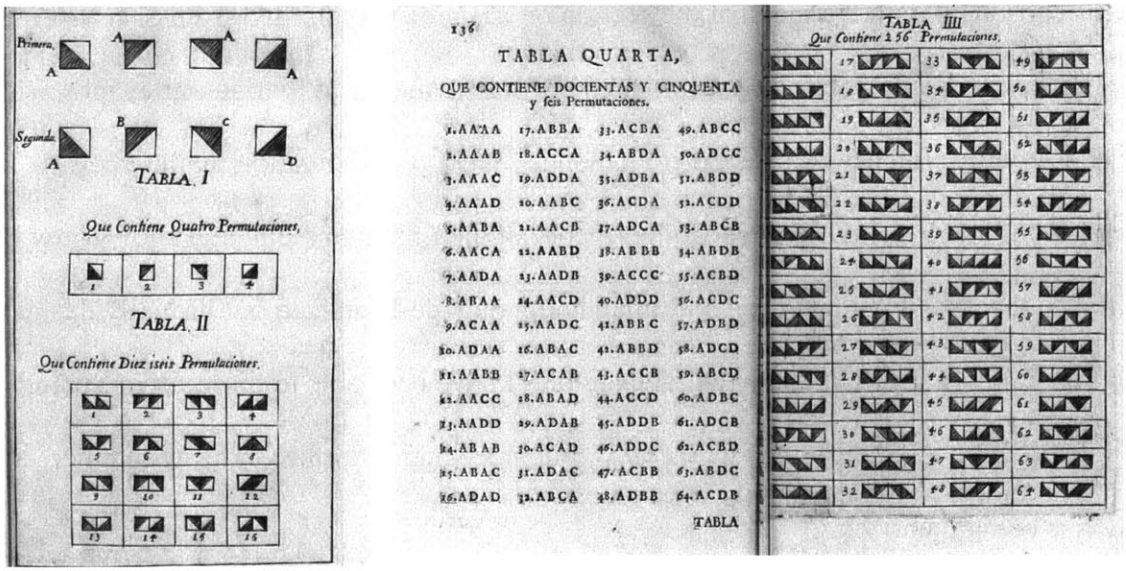

Figure 2 (left). Bernardo Montón, "Tabla I" and "Tabla II" explain the permutation method, *Secretos de artes liberales, y mecánicas* (Madrid, 1734). Figure 3 (right). Bernardo Montón, "Tabla Quarta" of letters combinations, *Secretos de artes liberales, y mecánicas* (Madrid, 1734).

all the four letters in a specific combination. When repeated and permuted it makes 256 patterns (fig. 3). Generating these lists of letters (signifying tiles positioned differently) and assembling them results in the production of infinite possibilities for ornament design. This method, as

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arquitectura, optica, chimica, doradura, y charoles, con otras varias curiosidades ingeniosas (Madrid: En la oficina de Antonio Marin, 1734), p. 125.

[5] "La Arithmetica tan util en todas las partes de la Mathematica, no emplea mas que nueve cifras significativas, para exprimir, y representar todos numeros imaginables, observando el orden, ó el lugar de sus posiciones; y la musica no necessita mas que de siete notas, para hacer tanta diversidad de cantos." Ibid., p. 126.

Secretos shows, could be expanded indefinitely (fig. 4). Visually, we see this infinity achieved by mirroring an original pattern both horizontally and diagonally. Montón writes that this method is useful for the application of tiles in churches and other buildings, and that it is also valuable for the "ideas it presents to painters, as well as embroiderers, silversmiths, cabinetmakers, stonemasons, glaziers, weavers, and persons who lay tiles [in buildings]."[6] By asserting the applicability of this method of generating patterns to different crafts, *Secretos* assigns a level of generality and abstraction to ornament. Pattern becomes the unifying element for the crafts.

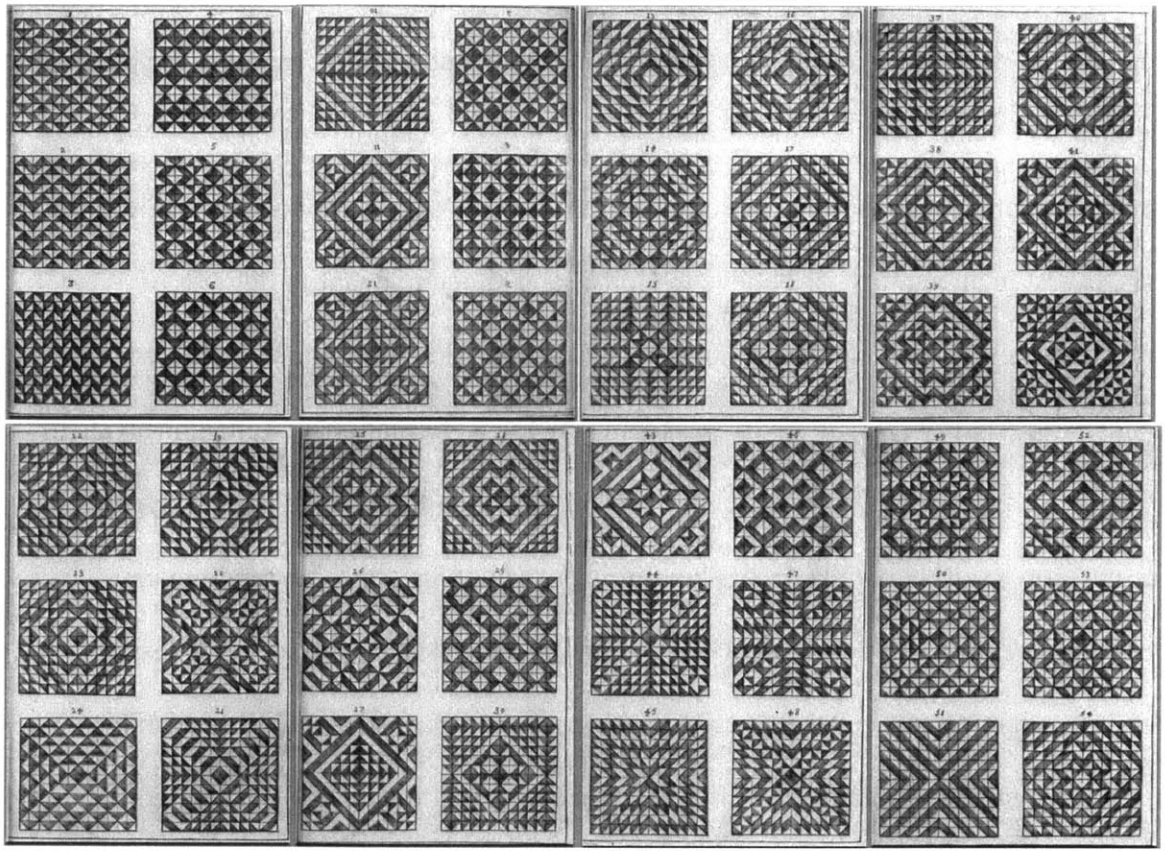

Figure 4. Bernardo Montón, drawings of *azulejos* patterns 1-54, *Secretos de artes liberales, y mecánicas.* Biblioteca Nacional, Madrid

[6] "En este Tratado se hallará una fuente inagotable de dibujos para enladrillar las Iglesias, y otros edificios, assimismo los Pintores hallarán muchas idéas, como los Bordadores, Plateros, Evanistas, Canteros, Vidrieros, Texedores, y Soladores, se servirán de esto muy utilmente; y finalmente, los cuiriosos que se dán á la Fisica, podrán sacar un grande provecho para llegar al conocimiento de esta variedad incomprehensible, que se vé en los efectos de la naturaleza." Ibid., p. 140.

To study the laws of mathematical combinations and permutations, Montón cites *Elementos de Mathematica* (*Elemens des mathématique,* 1675), written by the French Mathematician Jean Prestet (1648-1691). Indeed, Book II of the second part of Prestet's *Elementos* does discuss combinations and permutations; however, it does not display lists showing all possibilities for letter combinations, as does *Secretos*.[7] *Secretos'* new method belongs to the stream of the theory of probability that treats permutation, combination, and variation, elaborated by mathematicians like Prestet, Blaise Pascal, Pierre Simon Laplace, Christiaan Huygens, Pierre de Fermat, and Jakob Bernoulli, among others. These mathematicians, deeply invested in the idea of rationality, were working in a changing world that they recognized as presenting more than dichotomous relationships of clear and sharp contrasts. They grappled with concepts like randomness, probability, expectation, and chance. The new rationality dealt with decisions ranging from when to "buy a lottery ticket, accept a scientific hypothesis, invest in an annuity, or believe in God,"[8] and aimed to quantify degrees of uncertainty. This new rationality was concurrent with the erosion of religious belief, especially with the sixteenth-century revival of Greek skepticism, the Reformation, and the upheavals of the Counter-Reformation. As would-be quantifiers, probability theory's advocates believed in determinism (more consistent with God's law-giving) and not the opposite, randomness. Historians such as Lorraine Daston, Ian Hacking, and Keith Baker have seen the theory of probability's emergence as a consequence of eighteenth-century needs to address problems in Newton's mathematized, mechanical world.[9] The theory aimed to quantify the range of

[7] Ibid., p.140; Jean Prestet, *Elemens des mathématique* (Paris, 1675), p. 337, 349.
[8] Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton University Press, 1988), p. xi.
[9] Ian Hacking, *The Emergence of Probability* (Cambridge University Press, 2006); Keith Michael Baker, *Condorcet: From Natural Philosophy to Social Mathematics* (Chicago: University of Chicago Press, 1975). Baker traced, in the writings of Condorcet, Diderot, and Hume, the discussion on causality and development of probability theory that challenged mathematical certainty. On the power of numbers and demonstrative mathematics, see Ian Hacking,

probabilities of phenomena, lying between absolute certainty and utter doubt. As Daston shows in *Classical Probability in the Enlightenment*, legal problems were at the core of the theory, even when dealing with games of chance or annuities.

The term "theory" should be used with caution when describing probability because the theory exists only in, and is contingent on things happening in, the external world. This contrasts with geometry, which is abstract in its nature and belongs to "pure mathematics." Probability theory relies on empirical applicability, and hence belongs to applied or "mixed" mathematics. Most historians of science postulate that the theory of probability originated from the non-demonstrative "low sciences," such as alchemy, astrology, geology, and medicine, which do not depend on mathematical demonstration (unlike optics, astronomy, and mechanics), but on opinion that uses experiment rather than evidence.[10] Newton introduced the term "mixed mathematics," which brings the speculative and abstract to the realm of the practical and particular, because it always needs to be applied in a concrete problem, rationalizing its chances and causalities. "Mixed mathematics" brings mathematics to the realm of the practical, but in so doing it also renders the practices more theoretical. One good demonstration is *Secretos* and the author's assumption that the possibilities of composing ornamental patterns of tiles could be generated by an abstract mathematical theory, a theory that to a great extent dematerializes ornament.

Taming of Chance (1990); T. M. Porter, *The Rise of Statistical Thinking* (1986); *Trust in Numbers* (1995); M. Poovey, *History of the Modern Fact* (1998).

[10] Daston best explains how opinion used to be linked to the notion probability: "According to Hacking, astrologers, physicians, alchemists, and other sixteenth century practitioners of the nondemonstrative 'low' sciences evolved a new concept of diagnosis that linked overt 'signs' to hidden properties, and at the same time associated these natural signs with an authoritative text, the 'book of nature.' Thus the old, epistemic meaning of probability as belief or opinion warranted by authority merged with the new, aleatory idea of observed (if unexpected) correlation between events (e.g., between fever and disease, comets and the death of kings) to create the concept we still recognize as probability," Daston, *Classical Probability in the Enlightenment* (Princeton, 1988), p. 11.

Bernoulli's *Ars Conjectandi* (1713), according to Daston and Hacking, "was the most important mathematical work on probability until Laplace's treatise on the subject a century later." The second part of the *Ars Conjectandi*, on which *Secretos* relies, treats combinations and permutations. Daston contends that this stream of probability theory (combinations and permutations) "became the mathematical backbone of the theory in the eighteenth century."[11]

Toward the end of the eighteenth century probability is introduced to the public domain with regard to its potential to gain economic profit. As probability theory was being utilized to promote public participation in the state's economy, the same lists Montón had presented (ABCD, ABDC, etc.) appeared in a book on lotteries (*Tratado Teórico-Práctico-Demonstrado de la reglas de combinacion en general y de sus aplicaciones al juego de la real loteria,* Madrid, 1796) printed by the royal press to explain the laws and rules of gambling to the common people.[12] Games of chance and dicing were the first to be analyzed in terms of probability. Both historians Oystein Ore and Ian Hacking suggest an Arabic origin for these speculations on expectations in games of chance. Hacking states that "hazard" is an Arabic word—"as Arabic as 'algebra.'"[13]

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[11] Daston, *Classical Probability in the Enlightenment* (Princeton, 1988), p. 34- 35. Ian Hacking, *The Emergence of Probability* (Cambridge, 2006), pp. 50, 94. Hacking explains games of chance (and lottery) as analyzed by Huygens. Christiaan Huygens' *De ratiociniis in aleae ludo* (1657) was included in Part I of the *Ars Conjectandi.*

[12] The royal decree also indicated the place to purchase tickets and the royal treasury where to redeem the gain. A lottery was first introduced in Spain in 1763 by Charles III, communicated through a royal decree, which was distributed to the different provinces of Spain, stressing that lottery revenue would be allocated to "hospitals, hospices, and public and pious works." See, *Fray Dn. Manuel de Sada y Antillon... Por cuanto el Rey ... se ha dignado a establecer en Madrid una loteria a imitacion de la Corte de Roma* (Valencia, 1763), B.N.E sign. VE/1329/6. *Tratado Teórico-Práctico-Demonstrado de la reglas de combinacion en general y de sus aplicaciones al juego de la real loteria* (Madrid, 1796), B.N.E. sign. 2/33875.

[13] Hacking writes that "[t]he first European probabilists were Italian, solving North African problems in hazard at the same time as they were advancing algebra." He also points out the role of Indian probability, much of which is unknown to us (the Mahaviracarya is an example of a text on conjectures). *The Emergence of Probability,* p. 6. The works of medieval Arab philosophers, such as Gaber ben-hayyan and Al-Kindi, on cryptology and the cipher (in Arabic, *'Ilm al-ta'miya*), importantly relate to the theory of combination and permutation and deserve further exploration by historians of science. Oystein Ore, *Cardano, the Gambling Scholar* (Princeton, Princeton Univ. Press, 1953).

In *Secretos'* application of probability theory there are two processes going on: theorization and codification. Theorizing ornamental patterns first provides it with a text, which is an unprecedented act, considering that ornament construction and composition in Spain had been passed on orally from one generation to the next through familial lineage or by means of apprenticeship through institutions such as the guilds, which were the main bodies responsible for architecture and the arts and crafts at the time of the publication of *Secretos.*[14] Second, this theorizing process renders ornamental tile patterns, which started in Iberia, *abstract*—and thereby applicable throughout Europe by means of a consensus over a shared new science. Theorized, the laws of ornament become applicable to all crafts. Ornament loses any intrinsic materiality inherent in the process of making. *Secretos* hints at this abstraction in its introduction: the construction of these patterns or designs could lead to either "theoretical or practical drawings." By "practical," Montón means an actual application of ornament in architecture; by the "theoretical," a mere abstract drawing that would nonetheless afford the reader "great entertainment and benefit."[15]

The codification of ornament provides it with the same rationale or system as music and language: the latter two both emerge from a system whose trajectory proceeds from a meaningless symbol such as musical notation or alphabetic letters, to a meaningful construct that engages the senses. The construction of ornament out of symbols or signs dissociates the design process from any visual judgments on the part of the maker. This arithmetical logic, obscuring the agency of vision, contrasts with earlier Western treatises, which theorized classical ornament

[14] One exception to that is Diego López de Arenas's treatise on *artesonados* (1633), discussed in Chapter Two of this dissertation.

[15] On the relationship to entertainment through learning see Barbara Maria Stafford's *Artful Science: Enlightenment, Entertainment, and the Eclipse of Visual Culture* (MIT Press, 1994). It portrays an eighteenth-century shift from a visually/orally-oriented culture to a textual, print-based one. Enlightenment culture, for Stafford, rationalized the visual entertainments of the High Baroque (e.g., spectacles, exhibitions, and magic lanterns) by merging them with science and pedagogy (e.g., books of mathematical recreations).

by relying on geometry and a proportional system that assured visual commensurability and a relationship between the parts and the whole of a building. As I will show shortly, the existence of Islamic or *mudéjar* ornament incised and drawn on walls with the aid of a grid and compass lines demonstrates that geometry underlay such Islamic design, even in the absence of any treatise or procedural guide.

Western treatises likened divergence from the proportional system of the architectural orders and their spatial composition to musical dissonance. Deviations from this proportional system are a departure from beauty. While Montón draws comparison between his method and music, he does not elaborate on what dissonance in music would equal dissonance in ornament; and these compositions, despite their declared association with arithmetic, not geometry, still adhere to the laws of symmetry, as shown in his final patterns. However, as we saw from the patterns introduced in *Secretos*, this claim to utter rationality is unconvincing. It is clear that the compositions start, first and foremost, from the visual: these patterns always have symmetrical mirroring axes that render their distribution visually acceptable as ornament. Which came first: the design or the mathematical rule?

The book of secrets was a genre with medieval origins and associations with hermeticism and Islam. Montón's *Secretos* distanced itself from alchemy, magic, and the belief in the occult properties of nature. By applying the new science of the theory of probability, the tome elevated itself to the realm of the rational, the practical, and of "know-how." This was aided by maintaining the format of an encyclopedic book, making popular and available to the literate public recipes and keys to a wide array of knowledge of "curious" aspects of physics, chemistry, mechanical and optical devices, gilding and glazing of artifacts, and other arts pertinent to architecture and painting.

Such was the logic behind placing this knowledge in a book of secrets, whose agenda was to reveal esoteric knowledge, especially during the sixteenth century. *Secretos* was published when most of the architectural crafts were still viewed as belonging to the hand, not the mind. They were thus construed as inferior to the liberal arts, the domain of intellectual activity. By applying to ornament construction the laws of mathematics—a science emerging in the eighteenth century as one of its most important achievements—ornament becomes tacitly reclassified as a liberal art. *Secretos* is unprecedented (in Spain and elsewhere) in the inclusion of "liberal and mechanical arts" in its title. Although the title makes the distinction between the two kinds of arts, the content of the book does not; it thereby puts all these arts on the same footing.

Books of secrets advanced the Enlightenment agenda. By presenting an underlying logic (even one problematically imposed), they promoted learning: they went beyond the merely manifest aspects of a phenomenon in order to explain the mechanism by which the final product was attained. In contrast, magic was attacked for offering a spectacle without providing understanding of its underlying mechanisms.[16] Ironically, as we saw in the case of *Secretos*, this attempt to downplay visual spectacles (mere entertainment) and instead "give insight" into the logic behind the mechanism had the effect of dissociating (at least in theory) the construction process of ornament from any visual considerations.

[16] Barbara Maria Stafford, *Artful Science: Enlightenment, Entertainment, and the Eclipse of Visual Culture* (MIT Press, 1994).

New Mathematics, Old Origins: Lull and Herrera

Although the introduction to *Secretos* clearly associates itself with the theory of probability developed in the eighteenth century by citing Prestet's work as a source, neither Bernoulli's *Ars Conjectandi,* nor Huygens' *De ratiociniis,* nor Prestet's *Elemens* has the lists of variations of combinations displayed in *Secretos*. Probability theory was not a new construct created *ex nihilo*, but one that had particular theological and mystical Iberian roots extending back to the works of the thirteenth-century Catalan Neoplatonist philosopher Ramón Lull. Ian Hacking briefly mentions Lull in relation to early theories of chance and conjecturing in his *Emergence of Probability.* He points out that not until the seventeenth century did combinatorics become emancipated from its alchemical associations with occult properties found in the "book of nature"—only then did it become a matter of purely mathematical calculations.

> Roughly speaking, combinatorial problems remain thoroughly in the league with the alchemical magic of signs until the sign itself is liberated from that background in the seventeenth century. The great alchemist Raymond Lulle (1234-1315) is usually cited as the founder of the theory of combinations. He hoped to represent all the elements of the world by their true signs and then, by generating all possible combinations of signs, to produce true signs for all possible compounds in the universe. The great combinatorial work follows this tradition.[17]

In the *Ars Magna* (1305) and *Ars Brevis* (1308) Lull sketches the main elements of his Art that could ultimately be applied to all sciences to arrive at their truths. However, Lull's interest resided in resolving and demonstrating theological matters, as he developed and utilized what he called his "Art" with the intent to convert both Jews and Muslims to Christianity.[18] Frances Yates and R. D. F. Pring-Mill saw Lull's "universal system" from the perspective of

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[17] Ian Hacking, *The Emergence of Probability* (Cambridge, 2006), p. 50. Daston however contests attribution of the origins of mathematical probability theory to "astronomy, fine arts, gambling, medicine, alchemy, and the insurance trade," as these did not "[pass] through the strait and narrow gate of quantification." Daston, *Classical Probability in the Enlightenment* (Princeton, 1988), p. 8-13.

[18] On Lull's Art as a conversion method see, Harvey J. Hames, *The Art of Conversion: Christianity and Kabbalah in the Thirteenth Century* (Leiden; Boston: Brill, 2000). Also by Hames, "The Language of Conversion: Ramon Llull's Art as a Vernacular," in *The Vulgar Tongue: Medieval and Postmedieval Vernacularity,* Fiona Somerset and Nicholas Watson, eds. (University Park, PA: Pennsylvania State University Press), p. 43-56.

medieval cosmology, in which the four elements (which Lull referred to as ABCD) and divine principles played a central role.[19] Other historians like Charles Lohr traced some of Lull's ideas back to Muslim philosophers such as Al-Ghazali, Ibn Hazm, and Avicenna, and suggested resemblance between Lull's *dignitates* and the ten subjects of Al-Asha'ari's (c. 935) followers.[20]

Twentieth-century scholarship renewed interest in Lull and assisted the rescuing of his art from the obscurity into which it had descended because of the scientific revolution and the discourse of the Enlightenment. In Spain, however, Lull had always been present in theological discussion.[21] During the first half of the eighteenth century, there was an open debate about the value of Lull's art, most prominently between the Dominican Enlightenment philosopher, Benito Jerónimo Feijóo and the Cistercian monk Antonio Raimundo Pascual.[22] This debate emerged from the Enlightenment's suspicions of magic, alchemy, and visual illusions, and the questioning of the economic and empirical utility of Books of Nature or Secrets altogether. Feijóo, in "Secretos de naturaleza" (*Teatro critico universal,* Madrid, 1726-1740), decried these books as useless, dismissed their medicinal recipes as being without method, order, or knowledge, and railed against recipes that promoted spectacles "that deceive the eyes with various fantastic

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[19] In Lull's *Tractatus de Astronomia*, ABCD represents the four elements (Air, Fire, Earth, and Water). Each of these elements has two qualities: air is warm and moist; fire is hot and dry; earth is dry and cold; and water is cold and moist. The twelve zodiac signs are grouped into four groups. The three signs in each group belong to one of these four elements. In addition, the astrological planets are also categorized, each belonging to one of these four elements and their associated attributes and qualities. For example, Saturn is earth, Jupiter is air, and so on and so forth. When a certain planet converges with another zodiacal sign, the influence is determined upon the increment of these qualities. Francis Yates, "The Art of Ramon Lull. An Approach to it through Lull's theory of the elements," in *Journal of the Warburg and Courtauld Institute* 17: 115-173. Reprinted in Yates 1982: 9-77; Yates, *The Art of Memory.* London: Routledge, 1978; Robert D.F. Pring-Mill, *Ramón Llull y el número de las dignidades en el "Arte general,"* Oxford: Dolphin, 1963; "The Trinitarian World Picture of Ramon Lull," *Romanticism Jahrbuch* 7:229-256; "La estructura del *Liber de natura* del Beato Ramon Llull," *La Filosofia della natura nel medieveo. Atti del terzo Congresso Internazionale di Filosofia Medioevale.* Milan: 566-575.

[20] Charles Lohr, "Les fondaments de la logique nouvelle de Raymond Lulle," *Raymond Lulle et le Pays d'Oc.* Cahier de Fanjeaux Book 22. (Toulouse: Privat, 1987), p. 233-248.

[21] For eighteenth-century Spanish works discussing Lull, see: Juan Bautista Roldan, *Sermon apologetico panegirico que à honor, y en desagravio de el B. Raymundo Lulio* (Madrid, 1699); Jaime Custurer, *Disertaciones historicas del culto inmemorial del B. Raymundo Lullio Dr. iluminado, y martir, y de la inmunidad de censuras, que goza su dotrina; con vn apendiz de su vida* (Mallorca, 1700).

[22] Pascual wrote *Examen de la crisis de el R. mo Padre maestro don Benito Geronimo Feijoo monge benedictino sobre el arte luliana* (Madrid, 1749).

representations."[23] He also lamented the fact that many who aspired to transmute metals into gold nevertheless remained poor. For him, Lull was the principal alchemist. The only recipes Feijoo approved of were those treating dioptric and catoptrics, most famously the magic lantern, which is included among the curiosities in the first part of *Secretos.*[24] These curiosities were explained by the mechanisms of vision and of optics, accepted scientifically when Montón and Feijóo were writing.

Another instance of an important engagement with Lull, this time on the higher level of the Spanish administration, is in the work of statesman and philosopher Gaspar Melchor Jovellanos. In 1783 Jovellanos announced the discovery of a manuscript authored by the sixteenth-century royal architect, Juan de Herrera, who based his treatise *On the cubic figure* (*El Discurso de la figura cubica*) on Lullian art.[25] The recent discovery of this text, for Jovellanos, explained why it had not previously been cited in literature. Stressing an agenda that advocated learning, Jovellanos (who acknowledged his inability to fully understand Lull's text) argued that Herrera was trying to simplify a complex art that had hitherto been inaccessible to the common people.[26] Herrera's doctrine, for Jovellanos, "is not only mathematical, combinatorial and

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[23] "Sin embargo estos son los libros mas inutiles, y juntamente los mas costosos. Los mas inutiles, porque en el efecto nada se halla en ellos de lo que se busca. Los mas costosos, porque no solo custan aquello en que se venden, pero muchisimo mas que se gasta en hacer esta aquella, y la otra expriencia [...] se dán muchas recetas para engañar los ojos con varias representaciones fantásticas." Benito Jerónimo Feijoo, "Secretos de naturaleza" in *Teatro critico universal,* Madrid, *Teatro crítico universal, ó Discursos varios en todo genero de materias para desengaños de errors communes,* vol. 3 (Madrid: Imprenta Real de la Gaceta, 1765), p. 23; 25.

[24] "El uso es en esta forma. El que tiene la Linterna ofrece á los concurrentes hacer parecer de repente, en qualquiera parte que le señalen de las paredes de un edificio, la figura de un Leon, ú de un Elafante, ú de otra qualquiera cosa; y al instante que le designan el lienzo para la pintura, solo con encarar á aqualla parte la Linterna, parece en la pared la efigie ofrecida." Ibid. p. 28. The section on the magic lantern in *Secretos* was omitted in the editions subsequent to that of 1734, which is symptomatic of developments taking place in science.

[25] Gaspar Melchor Jovellanos, "Notice regarding the manuscript of Juan de Herrera," [written in 1783] *Obras publicadas e ineditas.* (Madrid, M. Rivadeneyra, 1858-59). Herrera's manuscript, as reported by Jovellanos, was discovered in the Biblioteca del Monasterio de Santa María de la Real Órden del Cister in Palma de Mallorca by the aforementioned Antonio Raimundo Pascual, who nevertheless, Jovellanos contends, did not penetrate the Lullian art he passionately defended.

[26] Ibid. p. 494

Kabbalistic, but also [...] metaphysical, logical, and dialectical."[27] Herrera demonstrated Lull's art through the figure of the cube, its three-dimensionality showing the different possible combinations of letters.

Although Jovellanos declines to judge the value of Herrera's application of Lull's method, he reports that Herrera was convinced of the possibilities of the great discoveries Lull's art could open up.[28] His discussion of Herrera's manuscript, which fails to explore in any detail Herrera's contribution, is nevertheless an important historical document that recounts the history of Lullian thought, its expansion, and its transformation, which started in Spain in the thirteenth century and was disseminated across Europe through institutions like the Florentine school, notably by Pico della Mirandola.[29]

After protesting against the indifference with which Lull's work had been received, especially when he regards it as a great discovery for "our literary history,"[30] Jovellanos turns the reader's attention to the Kabbalistic influences on Lull and to Lull's knowledge of the science developed by the Arabs and their role as inheritors of classical science of the Hellenistic school. Jovellanos explains that Lull's method arrives at natural and abstract truths.

> Philosophy was harnessed among the Arabs who inherited the Alexandrian school; it was therefore Aristotelian. However, the fervent imagination of the African [Arab]

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[27] "El discurso de Juan de Herrera no nos deja dudar que se aplicó con cuidado, no solo al studio de este artificio, que además de set matemático tiene mucho de combinatorio y cabalístico, sino tambienal de la primera parte del sistema que se puede llamar metafísico, lógico, dialectico." Ibid. p. 498.

[28] Ibid. p. 498.

[29] Pico della Mirandola was the first to make the connection between Lull's *Ars combinandi* and the Kabbalah. Historian Harvey Hames contends that this affinity between the two cannot be denied, especially when both doctrines, the Kabbalah and Lull's art, emerged from the same geographical location (i.e., Iberia) and at the same time period, targeting a hidden theological conflict, and promoting a religious scheme to attain the truth of their corresponding faith. According to Hames, Lull combines the two Kabbalistic systems that give access to divine knowledge leading to performing the commandments: the *Sefirot* and *Gematria.* In the Kabbalah, God's immanent presence is in the *Sefirot*, which give access to divine knowledge; the *Gematria* is based on an affinity established between words that have equivalent numerical value resulting from summing up their letters. Whereas in Lull's system knowledge of the meaning of the concepts/letters is prerequisite to attaining answers to posed questions, in the Kabbalah, each letter of the Hebrew alphabet has the "potential to reveal the truth." Hames, *The Art of Conversion* (Brill, 2000), p. 147.

[30] Jovellanos, "Notice regarding the manuscript of Juan de Herrera," p. 492.

> philosophers, had elevated this philosophy to the highest level of subtlety and rendered it more and more abstract, and with this fault/imperfection it had been adopted and cultivated then by European scholastics. Lull, who knew both [and] did not ignore either the principles of Pythagoras or those of Plato, was also versed in Hebraic or Kabbalistic philosophy.... [He possessed] a vast and profound genius, and [an] imagination which is perhaps more passionate than the imagination of all the Arabs put together. Therefore [this leaves us no doubt of] his grand projects, his continuous travels and the immense variety of objects and materials that he embraces in his writings.[31]

"Neither my age nor my [physical] state allows me to compel myself to master the ingenious [and] herculean method" of its author, Jovellanos confesses.[32] Nonetheless, here it is worth citing Jovellanos's description of the method comprising the "alphabet, figures, and tables whose manipulation according to the rules and conditions of the Art will provide answers to any particular question... [and] attain ultimate truth."[33]

> In order to compose this art (*artificio*), the profound genius of Lull invented circles, which he divided in nine parts or chambers, and placed and distributed in them the various terms of his system..., he formed different tables, applicable to the different scientific trees embraced in his universal system, and established an art, by which [anything] could be found or demonstrated, from the primary truth of the Catholic dogma to the most hidden [truth] of nature.
>
> To perfect his art two essential things would be missing; one, to well determine the value of his terms, and the other, is to indicate the manner/mode for their combination. Lull does both things. For the first, he not only defined his terms, but also presented meticulously the synonyms which each embraced, [...] for the second, he gave necessary rules to make all possible combinations, and taught and simplified the use and application of these in his different works.[34]

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[31] "La filosofia estaba refugida entre los árabes, que la habian heredado de la escuela de alejandria, y era por tanto artistotélica; pero la ardiente imaginacion de los filósofos africanos la habia levantado aun á mayores sutilezas, y héchola mas y mas abstracta, y con este defecto habia sido adoptada y era cultivada entonces por los escolásticos de Europa. Lull, que conocia una y otra, que no ignoraba ni los principios de Pitágoras ni los de Platon, y que además estaba enterado, y por decirlo así, metido en la filosofía hebrea ó cabalística... Lull, que sobre todo se hallaba dotado de un ingenio castísimo y profundo y de una imaginacion mas ardiente acaso de la de todos los árabes juntos, pues que tampoco de esto nos dejan dudar sus grandes proyectos, sus continuos viajes y la inmensa variedad de objetos y materian que abrazó en sus escritos." Ibid., p. 497.

[32] Ibid., p. 498.

[33] Harvey J. Hames, *The Art of Conversion,* p. 20.

[34] "Para componer este artificio, el profundo genío de Lull inventó circulos, los dividió en nueve partes ó cámaras. Y colocó y distribuyó en ellas los vaios terminos de su sistema, ...Por ultimo, con las mismas catorce letras y las restantes del alfabeto, variamente combinadas, formó diferentes tablas, aplicables á los diferentes árboles cientificos que abraza en su universalísimo sistema, y completó un artificio por medio del cual creyó que podrian ser halladas y demostradas, desde las primeras verdades del dogma católico, hasta las mas escondidas de la naturaleza... Ya se ve por lo dicho que para perfeccionarle faltaban dos cosas muy esenciales; una, determiner bien el valor de sus

A prolific writer who wrote about two hundred and sixty works, Lull expanded and developed his art with each work, dividing it into two phases: the quaternary followed by a more simplified ternary phase for easier use. Indeed, as Jovellanos explains, Lull created a universal system and an art that is general and applicable to all arts and sciences.[35] Lull's art is complex and incremental; hence we will briefly explain how it operates through one of his later and more simplified works, the *Ars Brevis.* Because Lull's art, as he states, is not theoretical but practical, and because he examines theological questions, which usually involved discussion with people whom he was trying to convert, he uses visual aids, such as figures, tables, matrices, graphs, and drawings and sometimes colors to illustrate the logic of his answers to these questions.

In its reliance on combination, the main principles by which Lull's art operates resemble those of *Secretos*. There are three principal constituents in Lull's art: concepts, combinations (the different ways these concepts are combined), and use (the discourse or answers generated by the questions posed by the combination of concepts). Lull illustrated his argument using letters as symbols. These letters appear in circular figures where they stand for various categories like concepts, subjects, questions and rules, virtues, or vices, and Lull determines their value or what they stand for beforehand (as noted by Jovellanos). The combination of any of two or more categories may yield either a logical argument or a definition. If combined with a question, Lull provides the logical answer. Like *Secretos'* claims to produce infinite numbers of combinations of letters and hence infinite numbers of designs and drawings, Lull had claimed to produce

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términos, y otra, señalar los procederes para su combinacion. Uno y otro hizo Lull. Para lo primero, no solo definió los términos, sino que expuso menudamente los sinónimos que cada uno abrazaba... Para lo segundo dió las reglas necesarias para hacer todas las combinaciones posibles, y enseño y ejemplificó el uso y aplicacion de ellas en varias de sus obras." Ibid., p. 498.

[35] The [human] intellect requires and desires one science which is general to all sciences, one with its own general principles in which the principles of the other individual (*particularium*) sciences are implicit and contained, like any particular in a universal." Cited in Anthony Bonner, *The Art and Logic of Ramon Llull* (Brill, 2007), p. 127. Lull wrote, "a person must have knowledge and a foundation in logic and in the natural sciences, and only then will he be able to comprehend the Art, both in theory and practice." Cited in Harvey J. Hames, *The Art of Conversion,* p. 120.

infinite number of combinations that would cover infinite topics and answer infinite ontological questions. These answers generate a discourse that ultimately would demonstrate the truth of the Catholic faith and facilitate the conversion of Jews and Muslims into Christianity through these convincing demonstrations.

Figure 5. Raymond Llull, "Prima Figura," *Ars brevis* (1511).

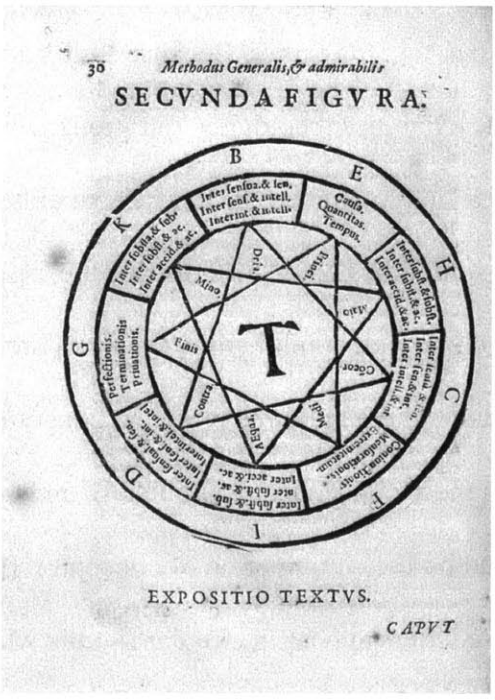


Figure 6. Ramón Llull, "Secunda Figura," *Ars brevis* (1511).

In the *Ars generalis ultima*, and its companion work, *Ars brevis,* Lull sets up four figures, a table, and nine terms. These terms correspond to nine letters: B (goodness), C (greatness), D (eternity or duration), E (power), F (wisdom), G (will), H (virtue), I (truth), and K (glory)—illustrated in the First Figure (fig. 5). These letters may also refer to nine principles, demonstrated in the Second Figure (fig. 6), or to nine Questions and Rules, nine Subjects, nine Virtues, and nine Vices. The Questions and Rules, for example, include: B (whether?), C

(what?), D (of what?), E (why?), F (how much?), G (of what kind?), H (when?), I (where?), K (How? and with what?).[36] The Third Figure (fig. 7) is a half matrix and gives us a binary combination of BCEFGHIK. It is called a half matrix as it avoids repetition (BC exists but CB is omitted, also BB, CC etc., are omitted). However, Lull allows this repetition to take place if the letters combined come from two different Figures. For example: B that means Good (First Figure) and b that means different (Second Figure) will yield the combination Bb: Goodness is different, for which Lull provides a logical explanation.[37]

Ad omnes Scientias facilius addiſcendas. 49

TERTIA FIGVRA.

BC	CD	DE	EF	FG	GH	HI	IK
BD	CE	DF	EG	FH	GI	HK	
BE	CF	DG	EH	FI	GK		
BF	CG	DH	EI	FK			
BG	CH	DI	EK				
BH	CI	DK					
BI	CK						
BK							

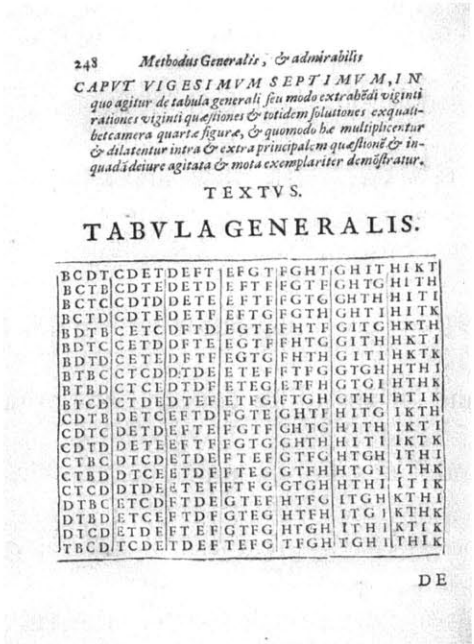
EXPOSITIO TEXTVS.

CAPVT VNDECIMVM, IN QVO EXplicantur tres principales vſus tertiæ figuræ, & in quæſtione vtrum perfectior ſit vita contemplatiua, quam actiua, ſatisſimè demonſtrantur.

TRIA, ſicut in alijs præcedentibus figuris, erunt in iſta a luertenda, mathematica ſcilicet delineatio; contenta in figura, & eiuſdem figuræ vſus. Primum notatur conſiderando hanc figurã eſſe triãgularem; in quo ſignificatur ab vno angulo ad alium fieri poſſe progreſſum; ſecundum eſt, intra eádem figuram cõtineri, triginta ſex cameras ſeu loca diuerſa, in quorũ vno quoque ſunt duæ literæ alphabeti, primę & ſecundæ figurę; & ſub qualibet earum ſunt duo principia, alterum abſolutum, & alterum reſpectiuum, vna quæſtio, tria ſubiecta, vnum naturale aliud virtuoſum morale, & tertium vitioſum, quod itidem conſi-

D deratur

Figure 7. Ramón Llull, "Tercera Figura," *Ars brevis* (1511).



248 *Methodus Generalis, & admirabilis*

CAPVT VIGESIMVM SEPTIMVM, IN quo agitur de tabula generali ſeu modo extrahẽdi viginti rationes viginti quæſtiones & totidem ſolutiones exquattbetcamera quartæ figuræ, & quomodo hæ multiplicentur & dilatentur intra & extra principalem quæſtionẽ & inquadã deiure agitata & mota exemplariter demõſtratur.

TEXTVS.

TABVLA GENERALIS.

BCDT	CDET	DEFT	EFGT	FGHT	GHIT	HIKT	
BCTB	CDTE	DETD	EFTF	FGTF	GHTG	HITH	
BCTC	CDTD	DETE	EFTI	FGTG	GHTH	HITI	
BCTD	CDTE	DETF	EFTG	FGTH	GHTI	HITK	
BDTB	CETC	DFTD	EGTE	FHTF	GITG	HKTH	
BDTC	CETD	DFTE	EGTF	FHTG	GITH	HKTI	
BDTD	CETE	DFTF	EGTG	FHTH	GITI	HKTK	
BTBC	CTCD	DTDE	ETEF	FTFG	GTGH	HTHI	
BTBD	CTCE	DTDF	ETEG	ETFH	GTGI	HTHK	
BTCD	CTDE	DTEF	ETFG	FTGH	GTHI	HTIK	
CDTB	DETC	EFTD	FGTE	GHTF	HITG	IKTH	
CDTC	DETD	EFTE	FGTF	GHTG	HITH	IKTI	
CDTD	DETE	EFTF	FGTG	GHTH	HITI	IKTK	
CTBC	DTCD	ETDE	FTEF	GTFG	HTGH	ITHI	
CTBD	DTCE	ETDF	FTEG	GTFH	HTGI	ITHK	
CTCD	DTDE	ETEF	FTFG	GTGH	HTHI	ITIK	
DTBC	ETCD	FTDE	GTEF	HTFG	ITGH	KTHI	
DTBD	ETCE	FTDF	GTEG	HTFH	ITGI	KTHK	
DTCD	ETDE	FTEF	GTFG	HTGH	ITHI	KTIK	
TBCD	TCDE	TDEF	TEFG	TFGH	TGHI	THIK	

DE

Figure 8. Ramón Llull, "Tabla Generalis," *Ars brevis* (1511).

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[36] The principles include: B difference, C concordance, D contrariety, E beginning, F middle, G end, H majority, I equality, K minority). The nine Subjects are: B God, C angel, D heaven, E man, F imaginative, G sensitive, H vegetative, I elementative, K artifice. The nine virtues are: B justice, C prudence, D fortitude, E temperance, F faith, G hope, H charity, I patience, K pity. The nine vices: B avarice, C gluttony, D lust, E pride, F accidie, G envy, H ire, I lying, K inconstancy.

[37] "Goodness is different.
It is asked whether goodness is different? To which one must answer "yes".... For goodness would not be the reason for good producing good unless it were different, or had natural difference, nor could difference cause natural relations with its own natural passive qualities. It is asked: what is differing goodness? To which one must answer... that differing goodness is the reason for which the bonifier distinguishes itself from the bonified and the act of bonifying. Moreover... differing goodness is diffused in many habits which differ in species, for one is in gold, another is in ruby." Cited in Anthony Bonner, *The Art and Logic of Ramon Llull* (Brill, 2007), p. 148.

The Fourth Figure (fig. 9) demonstrates ternary combinations derived from the three circles. Here Lull arranges three circles. On each circle's circumference he distributes the letters BCEFGHIK. Lull here introduces an unprecedented novelty. He allows the reader to manually rotate the two inner circles or disks (attached to the book as paper cutouts) in the book to generate the combinations we find in the Tabla Generalis (fig. 8).

> The middle circle revolves on top of the outer fixed circles, so that, for instance, C can be put opposite to B. The innermost circle revolves on the middle circle, so that, for instance, D can be put opposite to C. And in this way nine compartments are formed at a time, one being B C D, another C D E, and so on.[38]

Each rotation of only one disk would yield nine new combinations. For example, if we continue the combinations that Lull started, the other seven combinations, besides BCD and CDE, would be DEF, EFG, FGH, GHI, HIK, IKB, and KBC. Another rotation of only one disk would yield nine new combinations, and so on and so forth.

What do these combinations mean? In this Fourth Figure (fig. 9), Lull states that the letters could stand for any of the concepts and principles from the first and second figures, or for the Questions and Rules. For example, the combination of BCD, all coming from the First Figure, would be goodness, greatness, and eternity. In these ternary combinations, the first letter, B in this case, always determines the Question (B "whether"). BCD would generate the question: "whether goodness is so great that it is eternal?" The combination BCb (a lower-case b refers to the Second Figure, meaning "different") means "whether there is some goodness so great that it contains within itself different things coessential with itself?" The lists of combinations, which illustrate the combination of the two figures, are similar to those in *Secretos.*[39] Consequently,

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[38] Cited in Anthony Bonner and Eve Bonner, eds., *Doctor Illuminatus. A Ramón Llull Reader* (Princeton University Press, 1993), p. 306.

[39] Here, for example, we are aided by the list, which Lull provides. To determine what the three letters stand for we should know which Figures (and therefore, concepts) they refer to—this is determined by the placement of the letter T. The letters preceding the T always belong to the first figure; the letters coming after, to the second figure.

Lull not only combines words but also figures. Ultimately, he introduced a hundred concepts (including concepts from the fine arts) about which questions could be asked and answered. As Lull writes, mixing (*mixito, mescal*) "is the center and foundation of all sorts of propositions, questions, middles, conditions, solutions, and even objections."[40]

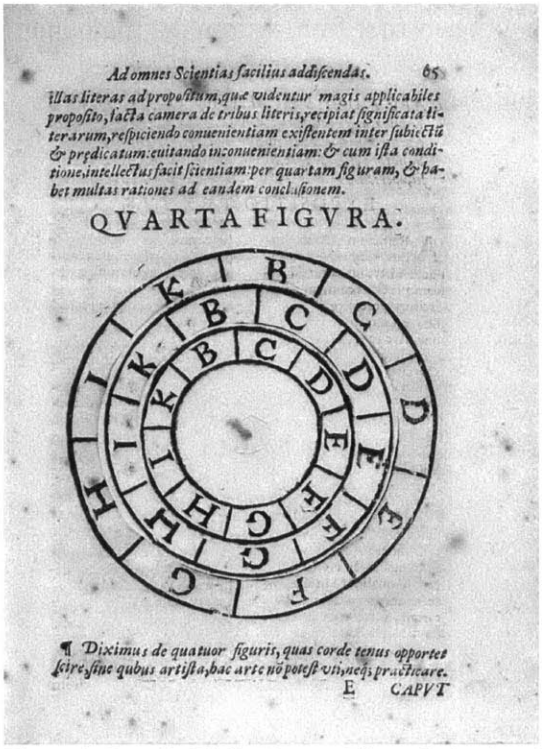

Figure 9. Ramón Llull, "Quarta Figura," *Ars brevis* (1511).

It is uncertain whether Montón was aware of this genealogy of the mathematical theory of probability, extending back to Lull, although one would assume that he was, being a priest. He presents ornamental patterns with rules that originated in astrology and mysticism where the underlying structure of a religious conversion system, and that later were applied in mixed mathematics and theories of chance. This last application, especially useful to maximize

[40] Anthony Bonner, ed., *Selected Works of Ramon Llull (1232-1316),* vol. I (Princeton University Press, 1985), p. 603.

economic gain, was disseminated in Spain through royal decrees to the public on the theory of the lottery. The similarity between Montón's lists and those of Lull on the one hand, and the fact that neither Prestet's nor the other probabilists' works have these lists because they had already ascended to the realm of theory and mathematical quantification, on the other—these facts lead us to believe that Montón's source was Lull, rather than Prestet. The obscuring of the medieval Iberian origins in *Secretos,* therefore, happened first from within the mathematical method itself, and separately from its relationship to pattern design.

Aesthetics Before Logic

A set of sixteenth- and seventeenth-century tile projects in Zaragoza[41] and the Province of Valencia testify to the fact that the tiling method based on square tiles divided into two triangles in two colors, introduced in *Secretos,* existed before *Secretos* was published. The existence of examples of pre-1734 projects brings us back to our initial question: what came first, the design or the mathematical rule? Aesthetics or logic? These pre-existing models clearly demonstrate that Montón was imposing a mathematical logic on preexisting tile design.

These specific tiles have been largely overlooked by historians and, when mentioned, they are briefly discussed in a broader context of tile use of a certain time period and geographical area (e.g., in the sixteenth century in Aragon). Their Islamic origin, later use, and architectural settings have received little attention. Their relationship to the treatment of tiles in *Secretos* and the total eclipse of the tile tradition in the eighteenth century has received none.[42] This neglect must be traced to the fact that *Secretos* has not been studied as a totality. That the section on *azuléjos* was omitted after 1734 doubtless contributed significantly to this obscurity.

This chapter does not claim to offer a comprehensive study of the buildings in Zaragoza and Valencia, presented here, or the contexts for their use of tiles. The archive of buildings I have assembled illustrates a tradition existing before *Secretos,* and thus gives insight into the process of theorizing ornament. Most importantly, the architectural examples show that the tradition brought by the Arabs to Spain in the seventh century continued to be associated with an

[41] Despite its proximity to France, Zaragoza has a clear Islamic influence, especially the Palace of the Al-Jafería, left behind by the Arabs in 1118, after the city was re-conquered from the Muslims by Alonso I (El Batallador). Hence, Islamic architecture and ornament have persisted in a very forceful manner.

[42] José Gestoso y Pérez, *Historia de los barros vidriados sevillanos desde sus orígenes hasta nuestros días* (Seville, Typografía La Andalucía Moderna, 1903), p. 329-346. Josep Pérez Camps and Josefina Catalá Carpintero, eds., *Arqueología del pavimento cerámico desde la Edad Media al siglo XIX* (Alicante: Asociación de Ceramología, 2003). Basilio Pavón Maldonado considers tiles divided diagonally in the manner of *Secretos* among the visual repository of *mudéjar* forms ubiquitous in Aragon. "La Decoración geometrica hispanomusulmana y los cimborrios aragoneses de tradicion islamica," *Actas del I Simposio Internacional de Mudéjarismo*, (Madrid; Teruel, 1981), p. 179.

Islamic aesthetic after the reconquest and into the seventeenth century. These tiles were either added to a building Islamic in origin or function, or responded to *mudéjar* architecture, that is,

Figure 10. View of central patio, Palacio de los Condes de Morata (Palacio de la Luna), 1551, Zaragoza.

Figure 11. Detail of portal entrance, Palacio de los Condes de Morata (Palacio de la Luna), 1551, Zaragoza.

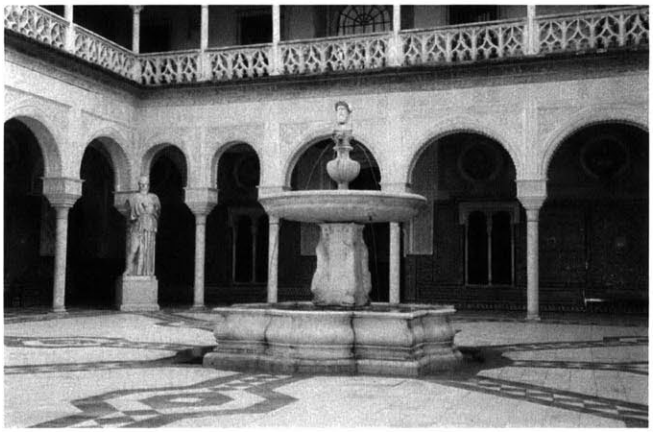

Figure 12. View of central patio, Casa de Pilatos (the residence of the Conde de Alcalá), sixteenth century, Seville.

post-reconquest Christian architectural elements built by Muslim masters in the same building. Alternatively, they represented a revival of an Islamic tradition within a new context, one attentive to Western classical art and architectural typologies.

Tiling walls of central patios with *azulejos* became ubiquitous among noble families in early modern Spain—an activity that continues an Islamic tradition manifest in buildings like the Alhambra and the Alcázar of Seville. However, this tradition underwent many changes in technique, which replaced the use of small pieces of glazed terracotta stones to generate tile patterns with square glazed tiles. Many art historians described this evolution in the tradition, which dispensed with Islamic practices in favor of a method facilitating mass production. However, the main changes occurred when patrons of these palaces began to assert their ties with the aesthetic of a Greco-Roman past.

The sixteenth-century Palacio de los Condes de Morata, in Zaragoza, also known as the Palacio de la Luna, is one such building that associates the Islamic tradition with antiquity (fig. 10). *Secretos*-like tiles, divided diagonally in white and green and forming diamond-shaped ornamental patterns, cover the walls of the large central patio of the Palacio. Today the headquarters of the Supreme Court of Justice in Aragon, the Palacio was built in 1551 and is considered one of Zaragoza's most sumptuous palaces, constructed for Don Pedro Martínez de Luna (Señor de la Baronía de Illueca and first Conde de Morata).[43] The central patio is enclosed by Ionic columns; its upper story displays a series of arched openings with medallions between them.

The classical elements of the Palacio appear on the exterior façade, as the main arched portal displays sculptural elements of Roman and Greek mythical figures (fig. 11). It is flanked by two statues of gigantic representations of Hercules (on the right) and Theseus (on the left), carved by Guillaume Brimbez in 1552. The frieze of this portal depicts a triumph of Caesar. The figures in the tympanum represent Helios (Sun) and his crown of rays and Aurora who lifts the

[43] The Luna family, known for its power and loyalty to the crown, held the title "Virreinato de Aragón" (the representation of royal power). Architect Martín Gaztelul designed the building; construction was started in 1551 by stonemasons Juan de Albisru and Juan de Amezcueta.

blanket of night from his face, and the Moon. At the extreme edges of the tympanum, to the right is Amorcillo (Cupid) with a vase of truth and to the left two fauns escaping from it.

The references to antiquity on both the exterior and interior of these residential palaces through the use of Italian architectural elements also reflected an interest in private collecting of Roman and Greek objects, as in the case of Casa de Pilatos in Seville (the residence of the Conde de Alcalá) (fig. 12). In this residence tile panels cover almost all its interior walls with various *mudéjar* geometric patterns, juxtaposed with an intricate work in plaster of *mudéjar* ornament, resembling that of the Alhambra. These panels, however, differ in technique from those executed for example on the wall of the Alhambra, as they are composed of square tiles, rather than small stones used in the Islamic tradition. These tile compositions form the background for the display of Roman sculpture, busts, portrait sculptures, and paintings brought from Italy by the Conde de Alcalá during his service as the ambassador of Spain in Naples in 1563. In a similar manner, the application of the mosaic floor in the patio of the Palacio de la Condesa de Lebrija (Seville) inevitably makes an association with archaeology and with Roman antiquity.[44] The coexistence of styles and different cultural associations obscures the Islamic origin of the tradition when the Greco-Roman past is accentuated.

Figure 13. View of central vault with a geometric pattern in stucco, Iglesia de Santa Teresa (or Las Fecetas), interior view of the main nave, 1623.

[44] The Palacio de Polentinos in Avila (specifically its patio de armas) is another example of mosaic floor applied in the building's patio.

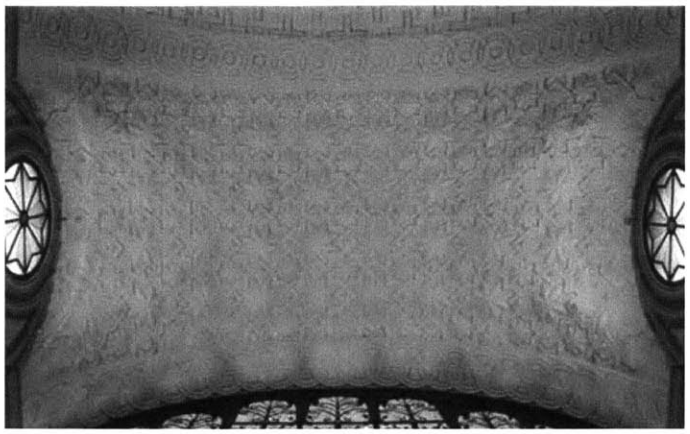

Figure 14. View of the main nave, Iglesia de Santa Teresa (or Las Fecetas), 1623, Zaragoza.

The use of tiles covering the lower part of walls was not exclusive to civic buildings but was also a feature of religious structures. The Iglesia de Santa Teresa (or Las Fecetas) of the Carmelite order in Zaragoza is a building unremarkable from the outside, but revealing inside surprising baroque *mudéjar* ornamentation consisting of highly detailed and geometric patterns in plaster. Construction of the church was begun in 1623 by architects Pedro de Ruesta and Clemente Ruiz.[45] The church has a Latin-cross plan, its crossing surmounted by a dome. The presbytery and transepts are covered with barrel vaults. All these patterns in plaster are executed with highly geometric decorative motifs using straight and curved lines in stucco of the *mudéjar* tradition, manifested, for example, in one of these vaults that comprises geometric octagonal shapes forming a net of stars of eight points; their juxtaposition creates crosses in between each of four octagons (fig. 13). All these forms are sculpturally three-dimensional. Tiles executed in the manner described in *Secretos* cover the lower parts of all walls of the church, forming a zigzag pattern in white and green (fig. 14). These tiles are described by art historians as "'*Cuenca*' or '*arista*', typical of Aragon during the sixteenth century and beginning of the

[45] Fatás. S, Guillermo [ed.,]. *Guía Histórico-Artística de Zaragoza*, (Zaragoza, 1982), pp. 227-8.
María Isabel Oliván Jarque. *El convento de las Fecetas de Zaragoza. Estudio histórico-artístico*, Zaragoza, Caja de Ahorros de Zaragoza, Aragón y Rioja, 1983.

seventeenth century."[46] The tiles were probably executed around 1636 together with the other ornament in plaster. The juxtaposition of *Secretos*-style tiles and richly ornamented architectural elements in the *mudéjar* tradition is the hallmark of this style.

The Monasterio de Resurrección de la Canonesas de Santo Sepulcro in Zaragoza, founded by Doña Marquesa Gil de Rada in 1306, is another religious building that has ceramic tiles that anticipate the method in *Secretos*. These tiles were added at the end of the sixteenth century or the beginning of the seventeenth century and were applied to the floor of the Sala Capitular of the monastery.[47] Many art historians consider this monastery an exemplar of medieval *mudéjar* architecture (especially in Aragon) for its cloister and other decorative elements, most prominently the ornament and inscriptions, some of which are in Kufic. To understand the nature of the coexistence of Islamic and Christian architectural elements that at first glance might seem illogical, it is important to highlight these *mudéjar* Islamic elements, especially in the Sala Capitular, where *Secretos*-like tiles were later added to the floor to frame the two tombs, one of which belongs to Fray Martín de Alpartir—the Canon of the Holy Sepulchre known for his role in the fourteenth-century construction of the monastery.[48]

Fray Alpartir wrote a chronicle of the construction project that reports its inauguration in 1361 and its constitution until the end of the century under the Moorish master of works (*maestro de obras*) Mahoma Calahorra, who, Fray Alpartir states, was "generously rewarded" for his work.[49] What is significant about this monastery is that ornament is executed in a semi-

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[46] Gonzalo M. Borras Gualis. *Arte mudéjar Aragonés* (Zaragoza 1985), Vol. 2, p. 473.
[47] The monastery consists, as well, of a cloister and a church.
[48] The other tomb belongs to Doña Aldonza de Reus, who was the prioress of the monastery between 1595 and 1602.
[49] Fray Alpartír's testimony is conserved in the archive del Monasterio de la Resurrección de Zaragoza and is cited in Carlos de Odriozola y Grimaud, *Monasterio del Santo Sepulcro de Nuestro Señor Jesucrusti de Zaragoza, Memorias históricas* (Zaragoza, 1908), pp. 23-27; Wifredo Rincón García, "El Monasterio del Santo Sepulcro de Zaragoza: el edificio medieval," *Jornadas de Estudio de la Orden del Santo Sepulcro* (4th: Zaragoza, 2004), p. 284. Andrés Álvarez García, "Reformas en las fachadas del Monasterio del Santo Sepulcro de Zaragoza llevadas a cabo

two-dimensional manner, either as a shallow relief in plaster with guiding lines incised directly into the wall in stucco, or merely painted on the wall. This treatment of ornament not only renders ornament abstract and flat; it also accentuates the instrumentality of drawing for Muslim and later *mudéjar* artisans in the construction of ornament both in matter and in geometry.

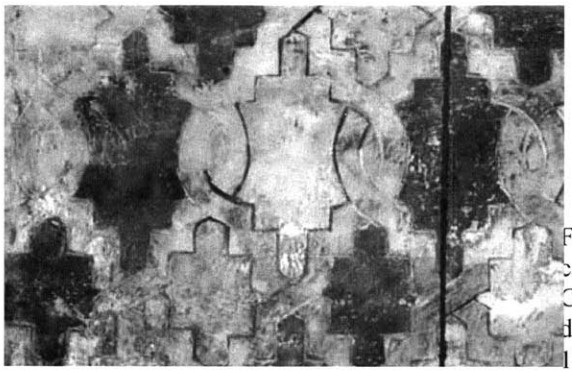

Figure 15. *Paños de sebqa* ornament carved in stucco on the wall of the Sala Capitular, Monasterio de Resurrección de la Canonesas de Santo Sepulcro, 1361, Zaragoza.

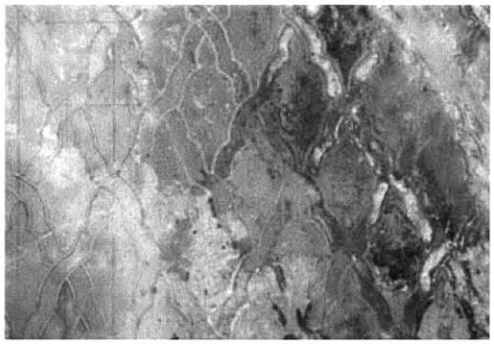

Figure 16. *Paños de sebqa* ornament incised in the wall of the Sala Capitular, Monasterio de Resurrección de la Canonesas de Santo Sepulcro, 1361, Zaragoza.

The Sala Capitular, square in shape, holds the crypt of the holy sepulcher in a recessed plane. The Sala is accessed from the cloister through a pointed-arch portal, flanked by two arched windows. These three openings are decorated on their circumference with two painted bands in white and red. The exterior band has a vegetal decorative element; the inner band

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por Ricardo Magdalena y Luis de la Figuera," ibid., pp. 349-365. Also by Álvarez García, "La azulejería del monasterio del Santo Sepulcro de Zaragoza," *Jornadas de Estudio de la Orden del Santo Sepulcro* (3th. Zaragoza. 2000), pp. 253-262.

comprises a series of quadrangular frames delineating an imitation of a voussoir layout. Most of these voussoir frames contain vegetal motifs. One even has a Kufic inscription. More Kufic inscriptions are found in the (better preserved) painted voussoirs of the two windows flanking the portal; others are carved on the columns' capitals as well as on stone plaques. For the modern reader, it is surprising that a Catholic monastery would adopt such clearly Islamic decorative elements. We must suppose that, at this point, in the fourteenth century, these elements bore only cultural, not religious, meanings. In other words, they signified part of what Spanish architectural identity embraced. However, during the end of the sixteenth century when religious differences were accentuated, at a time of great enmity towards the Arabs, ending with their expulsion, we can only be grateful there was no attempt to erase such Islamic marks.[50]

Geometric ornament, a combination of a shallow relief carved in stucco and drawing, adorns the lower part of the wall up to the point from which the vault rises, and although not well preserved, they reveal the use of polychromy (red, green, blue, and white). These patterns are an imitation of a dado of a tiled wall executed with *azulejos*. They depict the pattern known as *paños de sebqa*. It belongs to the fourteenth-century Nasrid tradition or *mudéjar*, where it was often executed in brick to decorate towers like the Alminar of Seville's Mezquita and the tower

[50] Art historian Alexander Nagel points out to the prevalence in Italian art from the thirteenth to the fifteenth centuries of ornament derived from objects and textiles that reached Italy from contacts with the eastern Mediterranean or from Muslim Spain. He calls this ornament "pseudoscript," an illegible script that looks Arabic or oriental in origin. The representation of these objects is more predominant in Italian than in Iberian art. However, Nagel mentions painter Fernando Yañez de la Almedina's *St. Catherine of Alexandria* (1510, now in the Prado Museum) where the pattern on the sleeves of St. Catherine resembles that of a Nasrid textile from the fourteenth century (now in the Metropolitan Museum of Art). These patterns however were never actually executed on garments. In fact, this pattern is very close to the decoration found on the voussoirs decorating the arched portal of the Sala Capitular. Nagel advances several distinct argumentative explanations for this phenomenon and the deliberate rendering of a script that is unintelligible. I suggest that these Spanish examples, representing a coexistence of Kufic scripts within a Christian religious setting, led to the existence of pseudoscripts in religious painting. Alexander Nagel, "Twenty-five notes on pseudoscript in Italian art," *Res: Anthropology and Aesthetics,* 59/60 Sprint/Autumn, 2011.

of the Iglesia de San Miguel de los Navarros in Zaragoza, a building that is decorated with *Secretos*-like tiles on its façade (fig. 15).[51]

The level of abstraction goes one step further when part of the ornament on the wall is merely executed as a mural painting. The grid lines that generate these patterns were incised in the wall and are still extant (fig. 16). We find this decorative *mudéjar* technique in other churches built in the fourteenth and fifteenth centuries in the areas of the archdeacon of Calatayud under the patronage of Pope Benedict XIII.[52] Earlier we discussed Islamic and *mudéjar* ornament construction and its relationship with vision and geometry, from which *Secretos* tried to dissociate ornament by recourse to arithmetic. This ornament of *paños de sebqa* is an excellent example of the interconnectedness between ornament, geometry, drawing, manual activity, and vision. The artisan had first to draw the geometric guidelines on which he would construct, or, in this case, draw his pattern using paint instead of *azulejos*.

The crypt, located at the center of the northern wall in a recessed level from that of the Sala, is the most important element and was covered in the fourteenth century with *azulejos* from Manises (Valencia). These are square tiles on which is painted an octagonal star-shaped figure. Every two tiles form together a diamond-shaped figure (fig. 17). Upon their deterioration, at the end of the sixteenth or early seventeenth century, these Manises tiles were replaced by *Secretos*-like tiles, tiling the majority of the floor with a complex geometric pattern. These tiles were in turn replaced with other square sixteenth-century tiles of a floral pattern of "*cuenca y arista*"

[51] Similar examples of *azulejos* are found in the Museo José Lázaro Galdiano. One is thought to belong to Nasrid fourteenth-century architecture; the second comes from the fourteenth-century wall of Iglesia San Esteban in Seville. Other examples of towers with *paño de sebqa* brick ornament include the Torre de la Iglesia de El Salvador in Teruel and the Iglesia de la Asuncion in Villamayor.

[52] Most prominent among these examples where ornament is painted on the wall are: the Iglesia Santa Tecla in Cervera de la Cañada (Zaragoza), Iglesia de Robres in Los Monegros (near Zaragoza), the monastery Santa Clara in Tordesillas, the Iglesia San Pablo in Zaragoza, and the Iglesia de la Virgen de Tobed.

("rope and edge"), even when their pattern clashed with the existing (*Secretos*) ones. In other words, all generations of tiles survive on this site.

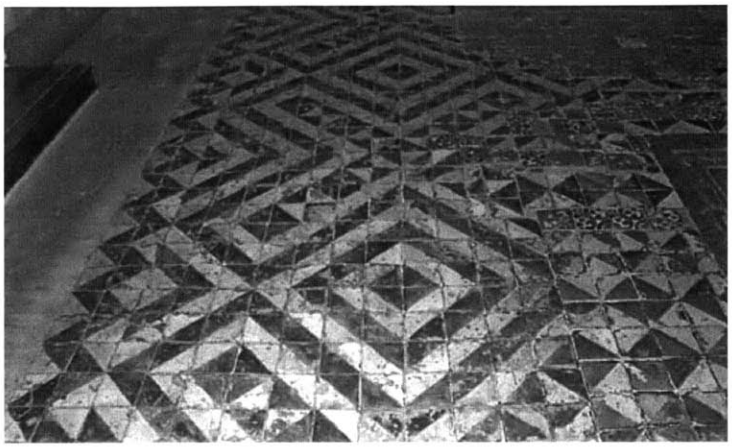

Figure 17. *Azulejos*, Sala Capitular, end of the sixteenth or early seventeenth century. Monasterio de Resurrección de la Canonesas de Santo Sepulcro, 1361, Zaragoza.

La Seo, one of the major churches of Zaragoza, functioned first as a mosque in the eighth century (*mesquita blanca*) before it went through a series of expansions in different architectural styles over six centuries. Many elements (chapels, tower, baroque facades, etc.) were added, before it reached its last, baroque phase. Construction started in 1189 under Bishop Pedro de Librara. During the fourteenth century *mudéjar* master builders were involved in its construction, most prominently Juce de Gali, Ibrahim de Pina, Mahoma Rami, and Muza el Calvo. Their influence is most vivid on the façade and the cupola tower.[53]

[53] The building went through different stylistic phases from Romanesque, Gothic, *mudéjar*, renaissance, to baroque. Architect Enrique Egas was involved in the construction of the dome during the sixteenth century. In 1680 Architect Juan Bautista Contini designed the tower; Julian Yarza designed the façade in 1786 (described as "moderate baroque"). Francisco Abbad-Jaime de Aragón Rios, *La Seo y El Pilar de Zaagoza* (Madrid: Editorial Plus-Ultra, 1948), pp. 9-30.

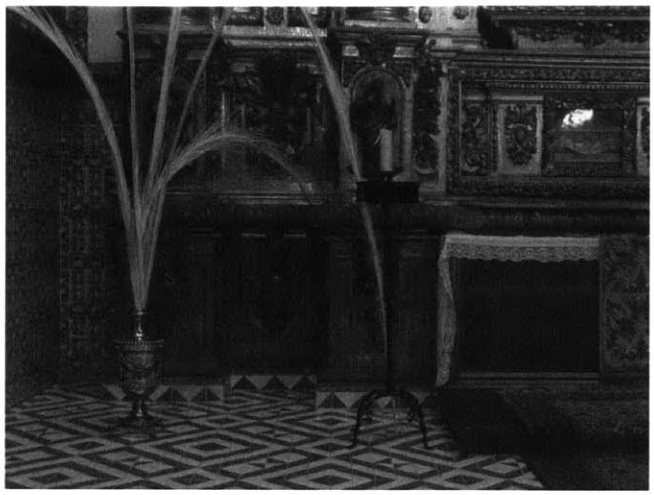

Figure 18. *Azulejos* at the Capilla Santo Dominguito, La Seo, seventeenth century, Zaragoza.

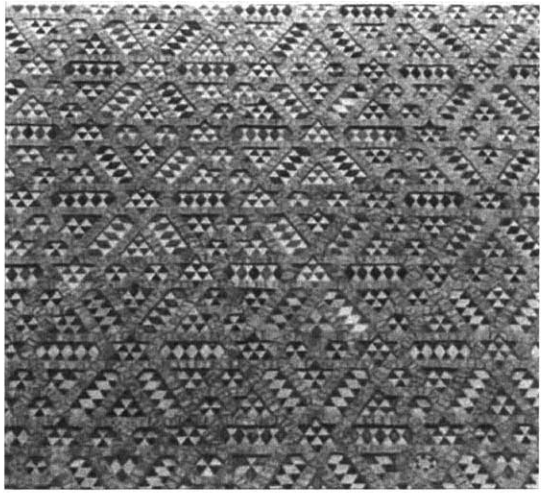

Figure 19. Glazed terracotta of the exterior façade. La Seo, fourteenth century, Zaragoza.

Glazed square tiles divided diagonally into white and green triangles, in the same manner as in *Secretos,* were applied to the floor of the Capilla Santo Dominguito during the seventeenth century (fig. 18). As we see, these tiles, thought to date from around the time the chapel was constructed (mid-seventeenth century), visually respond to the tilework executed by Muslim artisans on the fourteenth-century *mudéjar* façade. The facade has glazed terracotta in white and green to ornament the façade on the background of highly deliberate brickwork, illustrating what is usually referred to as one of the main characteristics of *mudéjar* aesthetics (fig. 19).[54]

Other examples with tiles similar to those in *Secretos,* displaying *mudéjar* elements, include the Iglesia de Nuestra Señora del Castillo (Aniñón, Calatayud), the Monasterio de Nuestra Señora and the monasterio cisterciense de Santa María, both in Veruela; the Iglesia de San Pablo Apóstol in Zaragoza, where tiles decorate the façade of the tower; and the Iglesia San Miguel de los Navarros (Zaragoza), among many other examples.

[54] Anselmo Gascón de Gotor Giménez, *La Seo de Zaragoza*; estudio histórico-arquelógico; Amtonio Magaña Soria, Zaragoza monumental (Zaragoza: Artes Gráficas Gregorio Casañal, 1919).

Figure 20. García del Barco. Triptych of a Nativity. 1475.

Many fifteenth-century examples of altarpieces in monasteries like Toledo, Ávila, Seville, and other cities, depict tiles similar to those in *Secretos*. One example is a triptych of a Nativity painted by García del Barco (Maestro de Ávila), now in Madrid's Fundación Lázaro Galdiano (fig. 20). It is thought to have been executed in 1475.[55] On the right side of the altarpiece, in the plane closer to the viewer, the painting shows the three magi conversing with Herodotus, standing on a layout of a tiled floor made of an array of tiles divided diagonally into two triangles in white and black. These tiles, however, immediately invoke floor depiction in construction of Renaissance perspective, helping to achieve the sense of depth through the converging lines of the floor towards the vanishing point. This association with vision, as we have shown, was ignored in *Secretos*. The depiction of these tiles mostly in altarpieces points out their religious setting.

[55] Before arriving at this museum it was an acquisition of the Convento de la Concepción in Ávila. M. Gómez Moreno and E. Tormo, "Sobre Fernando Gallego," *Archivo Español de Arte y Arqueología,* 1927, pp. 350-351.

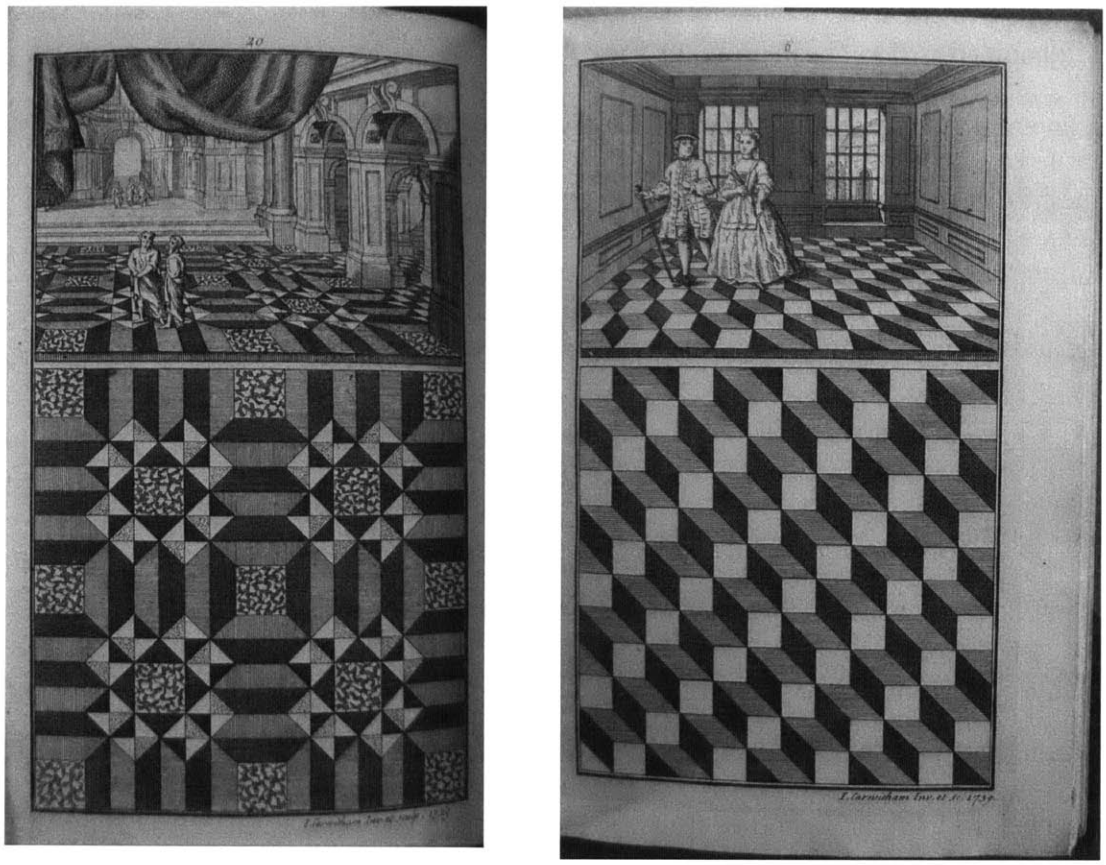

Figure 21. John Carwitham, *Various Kinds of Floor Decoration represented both in Plano and Perspective being useful Designs for Ornamenting the Floors of Halls. Rooms. Summer Houses. & c Whither in Pavement of Stone of Marble or in the Painter Floor Cloths in Twenty four Copper Plates* (London, 1739).

Even though Montón's claims to generate these composition based on a mathematical rule are not quite credible, *Secretos* is unprecedented in its effort to theorize ornamental patterns. Other treatises, or more accurately, pattern books, of the seventeenth and eighteenth centuries that treat ornament mostly depict existing models of tiles, and lack the theorizing text. One such example is *Various Kinds of Floor Decoration represented both in Plano and Perspective being useful Designs for Ornamenting the Floors of Halls. Rooms. Summer Houses. & c Whither in Pavement of Stone of Marble or in the Painter Floor Cloths in Twenty four Copper Plates* (London, 1739), "designed and engraved" by John Carwitham. Many of the patterns introduced

are familiar examples from earlier models of tiles, especially those used to create a three-dimensional illusion (fig. 21). The engravings show both a plan and a perspectival view of the floors within an architectural setting that clearly assigns these patterns to buildings of the nobility, as the title of the book suggests.[56] However, there is no text explaining these patterns. *Secretos* therefore belongs to a different genre of books, one that is concerned with art classifications and with reclaiming a place for the decorative arts within the category of the liberal.

After Montón: Colegio del Arte Mayor de la Seda

The examples we have discussed preceding *Secretos* use the same method (tiles divided diagonally into two colors), but do not necessarily display the same patterns presented in *Secretos*. Montón developed a substantial number of new pattern designs with the same method. The disappearance of this section on tiles from the later editions of *Secretos* (after 1734) is reflected in the scarcity of models that imitate these patterns in actual buildings. This lacuna corresponds with the stylistic change taking place in Spain when classicism was beginning to witness resurgence in the art and architecture after the establishment of the Academy of San Fernando in 1752. Although the Academy had a large collection of books among its acquisitions then, its inventory indicates that *Secretos* was not among these books. One may contend that this absence was not a coincidence, as this book was more categorized as a manual on crafts rather than an architectural treatise. Despite Montón's insistence that this method was useful to architects *Secretos* did not belong to the kind of books the Academy thought its students should read in the process of their formation. However, I have been able to find one building, where it is

[56] Other examples include, Walter Gidde and Henry Shaw, *A Booke of Sundry Draughtes principaly serving for glasiers: and not impertinent for plasters, and gardiners: besides sundry other professions. Whereunto is annexed the manner how to anniel in glas: and also the true forme of the fornace, and the secretes thereof* (1615). D'Aviler's *Cours Complet d'Architecture* (1691).

certain from the date and patronage that *Secretos* was the model after which the floor was executed: the College of the Silk Guild in Valencia (Colegio del Arte Mayor de la Seda) (fig. 22).

Figures 22 (above left). Street façade. Colegio del Arte Mayor de la Seda, 1756. Valencia.

Figure 23 (above right). Ignacio Vergara, Bas-relief of San Jerónimo, Colegio del Arte Mayor de la Seda, 1756. Valencia.

Figure 24 (bottom right). *Azuléjos* of Ceremony Hall, Colegio del Arte Mayor de la Seda, 1756, Valencia.

Figure 25. *Azulejos* of the main Chapel, Colegio del Arte Mayor de la Seda, 1756, Valencia.

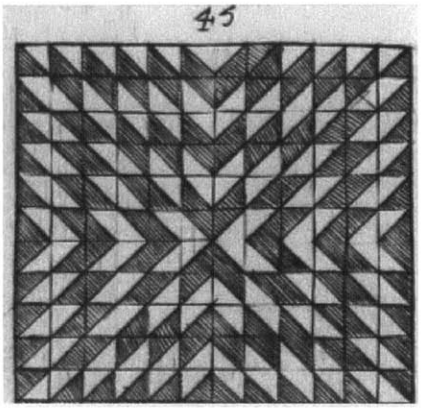

Figure 26. Bernardo Montón, Drawing no. 45, *Secretos de artes liberales y mecánicas* (Madrid, 1734).

Valencia was the place where the massive expulsion of the Arabs occurred in 1609. It was also known for its burgeoning silk trade, which the Arabs had a vital role in cultivating. Its famous *Lonja* (a building where major commercial activities took place) was even named "La Lonja de la Seda" (the *Lonja* of Silk), indicating the importance of this trade to the city. In 1474 the silk guild was created after a set of ordinances that also created the craft of the "*vellutero*" (a person who works with silk), approved by the city council and King Fernando, and founded by the Cofradía de San Jerónimo—the patron of both the guild and the college. The site was acquired by the Valencian silk makers in 1492, as documented by the notary Luis Gasset.[57] In 1686 Charles II gave the guild the title "Colegio del Arte Mayor de la Seda." In the 1770s, upon the establishment of the Economic Society of Valencia, the Colegio became under its supervision to elevate its declining industry. According to a royal decree issued by Felipe V, guilds and

[57] [Source: brochure distributed by the Colegio del Arte Mayor de la Seda of Valencia, obtained July, 2010]. See original in the Archivo de Protocoles de San Juan de Ribera.

colleges lost their representation in the city council. The dissolution of the Colegio happened later in 1813, following the decree of the liberty of industry, approved by the Cortes de Cadiz).

The façade of the Colegio's building testifies that it was built in 1756. The building has a trapezoidal plan and consists of two stories. It has clear baroque elements such as the bas-relief of San Jerónimo executed on the street façade by Ignacio Vergara (fig. 23). The ceremony hall behind the vestibule is the most sumptuous for its floor pavement in *azulejos* with allegorical representation (fame and wise women in carriages led by animals, representing four continents: Africa represented by lions, America by alligators, Europe by horses, and Asia by elephants) (fig. 24).[58] In contrast to these allegorical representations, in the chapel of the colegio, we find a geometric pattern derived from Montón's book, depicting drawing number forty-five (figs. 25, 26). Situating the tiles in the most religious space of the colegio continues the tradition we have seen thus far. The book must have been in the possession of the guild's library or of members of the Cofradía de San Jerónimo when the building was built. In fact, the renowned publisher of *Secretos* in Pamplona, Miguel Antonio Domech, alerts us to the success the book had in Valencia as it was published three times by 1757, which motivated Domech to publish the fourth edition of the book.[59] He adds a curious note in the preface, connecting the expulsion of the Arabs from Spain to a potential state of prosperity: "this is the occasion to earn money, given that when more Moors are dead, more profit [could be made], as the enemies are less. I became determined to reprint the fourth edition."[60] Domech specifies his readers. *Secretos* serves as a

[58] This hall has 4 balconies, two facing the street and two the back patio. These balconies have azulejos that continue the same theme of the main floor: fight between horses or elephants etc. The painting of the ceiling is by José Vergara representing San Jerónimo, holding in one hand a stone, in another a crucifix. A skull (a symbol of life's temporality), a lion (power), two angels holding the cardinal's hat (symbol of San Jerónimo) while another plays the trumpet. [Source: brochure distributed by the Colegio del Arte Mayor de la Seda of Valencia, obtained July, 2010].
[59] In 1981 the building of the Colegio del Arte Mayor de la Seda was announced a historic and artistic monument, and in March 16, 1995 the Generalitat Valenciana gave it the title "Colección Museística Permanente" (a permanent museum collection). Ibid.
[60] Bernardo Montón, *Secretos de artes,* (Pamplona, 1757), preface.

model for a gentleman (*cavallero*) who "escapes idleness, like a good citizen... honoring the *patria*...and who frequents libraries more than tragedies...ceases to imagine [and instead] acquires stature (*figura*)."[61]

The tradition of ornamenting walls and floors with tiles was already in eclipse by the mid-eighteenth century. At the end of his account, Montón writes that his method is not exclusively beneficial for the "perfection of architecture, but also to the other arts, although it is true that all of those who wrote about architecture spoke very little about this material."[62] Montón's frustration emerges from the separation between architecture and its crafts that he aspired to reconnect. Despite his attempt to revive this tradition, *Secretos* did not arrest the eclipse that was already under way. Montón had argued for the applicability of his method to all crafts. But these hopes notwithstanding, after *Secretos*, the pattern construction method that had elicited this intellectual endeavor was largely severed from its traditional ties.

As our discussion of *Secretos'* second part demonstrates, Montón strived to elevate the crafts—the low and mechanical arts—to the status of the liberal arts, through its claimed application of the mathematical theory of probability to the generation of decorative patterns. The chosen medieval genre of "book of secrets" is where *Secretos'* contribution to the Enlightenment coincided with its agenda to theorize ornament and make public an Ibero-Islamic craft knowledge: tiling walls and floors with *azulejos.* However, with this effort came many elements, inherent in the seemingly new method, which clashed with the ideals of the

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[61] "Conociendo su notoria virtud, que los tales mas son de carga, que de honor á la Patria; y que ocupan como por demás la tierra, sinedo esta su entierro en vida, y eterno vida en muerte. Es pintado caballero, pues frequentando mas la Libreria, que el trage, deja de figuarse, por adquirir mas figura, y es ya tan de vulto, que pueden mirarse en v.s. los que quieran conocerse, como en espejo de cuerpo entero: cuya clara Luna levanta tan de punto sus brillantes, que hace ver á buenas luces hermanados con justo titulo tantos, que á la vista padecen repugnancia."
[62] Bernardo Montón, *Secretos de artes liberales, y mecanicas,* p. 127.

Enlightenment. These elements, with cultural, social, artisanal, and religious significances, specific to Iberia and its Muslim and Jewish legacies, and crucial to the inner constructs of this craft tradition, were forcefully suppressed by the secularizing rationale of probability theory, ultimately leading to the elimination of this section from the book's successive editions.

The elimination of *azulejos* from *Secretos* was concurrent with the disappearance of tile use from architectural practice as a new Academy of San Fernando was advocating the return of classicism, gradually pervading the different parts of Spain. This stylistic change condemned the Arab heritage of Spain, as well as other Iberian ornamental expressions like the Churrigueresque, as irrational, confused, or arbitrary (as discussed in Chapters Two and Four). Their relationship to crafts was also another factor for their occlusion. This was despite the strong ties these patterns have not only because of their Islamic origins, but because of their use in Spanish architecture. As we have shown, these tiles were strongly associated with a *mudéjar* aesthetic. Therefore their elimination from practice was also evidenced in *Secretos*. Moreover, as we have shown, Montón incorporates lists of letter combinations rather than the mathematical calculations that are found in Prestet or Bernoulli; hence the theory he is presenting has occult, Islamic, Jewish, and Iberian roots, extending back to Lull. These roots, discordant with Enlightenment thought, doubtless served to justify the elimination of the section on tiles from *Secretos*.

Aesthetics existed before logic: the tile patterns in the method presented in *Secretos* preceded the book. Given the ambitions behind the book to appeal to a wider audience, it is little surprise that the new method ignored tiles' association with the geographical and cultural specificities of this tradition. Now it could be adapted to any place and to any craft. The fact that these buildings with tiles resembling those in *Secretos* were always linked to an Islamic or

mudéjar art and architecture or to a religious setting suggests that any attempt to implement Enlightenment ideas in art and architecture will eventually encounter this architecture's Islamic, Jewish, Christian, and Iberian elements.

CHAPTER FOUR

Enlightenment Spain Considers Its Arab Heritage

"What do we owe to Spain?" thundered Nicolas Masson de Morvilliers in the *Encyclopédie méthodique* of 1782. "What [knowledge] has Spain [contributed] to Europe in the past two, four, ten centuries? Where are their mathematicians, physicists, naturalists, historians, and philosophers?" According to Morvilliers, "the expulsion of the Moors, in 1609, was a political mistake bigger than the revocation of the Edict of Nantes, an irreparable fault by Spain, because the Moors were an active, industrious nation, who excelled in the mechanical arts that Spanish haughtiness scorns."[1]

This attack was not passively accepted. The Spanish writer and legislator, Juan Pablo Forner, responded in his *Oración Apologética* (1786):

> Spain had produced neither a Descartes nor a Newton; however, it had nurtured wise legislators and excellent practical philosophers, who had preferred the ineffable pleasure of working for the benefit of humanity to the lazy task of constructing imaginary worlds in the solitude and silence of a study.[2]

With even greater vigor, Antonio Ponz, Secretary of the Royal Academy of Fine Arts of San Fernando in Madrid, replied in his *Travels Outside Spain* (1785) in detail, and denied that Spain was a uniquely backward zone of Europe.

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[1] "Mais que doit-on a l'Espagne? Et depuis deux siécles, depuis quatre, depuis dix, qu'a-t-elle fait pour l'Europe? Elle ressemble aujourd'hui à ces colonies foibles & malheureuses, qui ont besoin sans .....[L]'expulsion des Maures, en 1609, faute politique aussi goussière que celle de la revocation de l'édit de Nantes, faute á jamais irreparable pour l'Espagne, parce que ces Maures ètoient une nation active, industrieuse, qui excelloit dans les arts mécanique que déteste la fièrte Espagnole." *Encyclopédie méthodique ou par ordre des matières*: *Géographie moderne*, vol. I (París, Panckoucke, 1782), p. 565. Masson also claims that due to the decadence in the arts, sciences, and commerce, Spain "needs our artists for their manufactures."

[2] "No hemos tenido en los efectos un Cartesi, no un Neuton: demoslo de barato: pero hemos tenido justisimos legisladores excelentes filosofos practices, que han preferido el ineffable gusto de trabajar en beneficio de la humanidad a la ociosa ocupacion de edificar mundos imaginarios en la soledad y silencio de un gabiente." Juan Pablo Forner, *Oración apologética por la España y su mérito literario, para que sirva de exornacion al discurso leido por el Abate Denina en la Academia de Berlin respondiendo a la question Qué se debe á España?* (Madrid, Imprenta Real, 1786), p. 12.

> The [Encyclopedists] should know that while Ferdinand threw the Saracens out of the Kingdom of Granada, his wife, Isabel the Great, [supported] Columbus's discovery of the New World; and that while Charles V triumphed in Pavia . . . Magellan navigated the strait named after him, examining the coasts, rivers, and ports of South America; Elcano was the first to tour around the world, observing its extension and figure . . . .
>
> [The Spaniards] conquered, populated, and secured for Europe precious fruits from both Americas; the Spaniards brought to that hemisphere domestic animals; the use of iron and the industry utilized today by the nations that gained the good fortune of acquiring and conserving some colonies in those climates; [the Spaniards] analyzed the productions of the diverse countries; established the cultivation of sugar that has produced commerce for France and England; disseminated the cacao, indigo, cochineal, tobacco, cotton; experimented with the cinchona, balsams, sarsaparilla, and all other medicinal plants—if this is not something, Masson [should tell us] what more does Europe owe to the other nations?[3]

Because it was regarded by its neighbors as lagging behind in the Enlightenment, during the eighteenth century Spain sought a prestigious place among European nations, laying claim to making a vital contribution to the advancement of the arts and sciences. European Enlightenment critics of Spain often ascribed the country's backwardness to the expulsion of the Arabs from Spain in 1609, which was claimed to have left the country depopulated and ignorant. From this rhetoric, there emerged a recurring literary motif emphasizing a void left in the domain of the crafts and the mechanical arts, consequent on the Arabs' departure from Spain, which could only be filled by borrowing foreign artisans.

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[3] "Debían saber, sin tocar en siglos remotos, que mientras Fernando el Católico arrojaba los sarracenos del reino de Granada, su esposa, la grande Isabel, protegía con mano franca a Colón (despreciado por entusiasta de varias naciones) en el descubrimiento del Nuevo Mundo; que mientras Carlos V triunfaba en Pavía y los tercios españoles enseñaban con su ejemplo el arte de la guerra, navegaba Magallanes el estrecho a que dio nombre, y examinaba las costas, ríos y puertos de la América Meridional; Elcano daba el primero la vuelta al mundo, observando su extension y figura; Cortés en México y Pizarro en Lima descubrían, conquistaban, poblaban y aseguraban a la Europa los preciosos frutos de ambas Américas; los españoles llevaban a aquel hemisferio los animals domesticos; el uso de hierro y la industria de que se aprovechan hoy las naciones que han logrado la dicha de adquirir y conservar algunas colonias en aqullos climas; analizaban las producciones de los diversos países; establecías el cultivo del azúcar, que tanto ha producido y produce al comercio de Francia e Inglaterra; extendían el del cacao añil cochinilla, tabaco, algodón, etc.; experimentaban la quina, los bálsamos, la zarzaparrilla y todas las demás plantas medicinales; si esto no es algo, me dirá Masson, ¿qué más debe la Europa a las demás naciones?" Antonio Ponz, *Viage Fuera de España* (Alicante: Universidad de Alicante, 2007), p. 539-40.

In response to such scathing European criticism, leading Spanish artists, architects, and policymakers engaged in a reevaluation of Spain's literary and artistic production.[4] The founding of the Academy of Fine Arts of San Fernando in 1752 in Madrid was one such event; it provided an arena for this reevaluation. The Academy, which was granted control over Spanish artistic and architectural works, was intended to reinvigorate the "high" arts, including the three "noble" arts of architecture, painting, and sculpture.[5]

Spain's Enlightenment involved a reassessment of prevailing classifications of the arts as liberal or mechanical, high or low, intellectual or manual. Because Spain's Islamic heritage was important for both its natural science and craft traditions, that heritage was also subject to reconsideration. The quest for recognition as a contributor to the Enlightenment, I suggest, compelled Spain to confront its long-standing ambivalence toward its Islamic past, which represented both a source of artistic prestige and a discordant element in its national identity.

An emphasis on noble arts would surely imply downplaying crafts, together with their Arab residues. Yet in its first project, *Antigüedades Árabes de España,* the new Fine Arts Academy undertook to document Spain's Arab heritage through paintings and drawings, focusing primarily on the Alhambra. In the circumstances, that decision may seem unlikely. The Academy could have chosen to document Spain's Roman ruins, and thereby would have guaranteed strong ties to the classical world and immediate access to the European institutional

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[4] The ascension of the Bourbon dynasty, replacing the Habsburgs in 1700, had recently led to ongoing economic and social reforms, along with institutional changes.

[5] The Academy was a hierarchical institution with a state minister as its head, acting as a liaison to the king. The structure of the Academy comprised a general director, six deans (directores) of painting, sculpture, and architecture who, with another six noble councilors, served on the ruling council. Bédat, Claude, *Los académicos y las juntas, 1752-1808* (Madrid: Real Academia de Bellas Artes de San Fernando, 1982). Between 1744 until the inauguration of the Academy in 1752, Italian and French professors dominated the teaching of the fine arts. Slowly, Spanish artists and architects began to take over major teaching positions. Ventura Rodriguez and José de Hermosilla were appointed deans of architecture in 1752. See Catherine Whistler, "On the Margins in Madrid," *Art and Culture in the Eighteenth Century: New Dimensions and Multiple Perspectives*. Elise Goodman, ed. (Newark: University of Delaware Press, 2001), p.81. See also, Carlos Sambricio, "Jose de Hermosilla y el ideal historicita en la aqruitectura de la illustracion," *Goya* 159 (1980): 140-51; *Renovación, crisis, continuismo: la Real Academia de San Fernando en 1792* (Madrid: La Academia, 1992).

and intellectual communities. However, it chose the legacy of the mechanical arts, which Europeans believed Spain not only scorned but had already lost with the Arabs' departure.

That the Academy chose to seize on the Islamic legacy as its own can best be seen as a bold effort at appropriation aimed at countering the European assumption that expelling the Arabs had irrevocably deprived Spain of Islamic achievements as part of its tradition. Through *Antigüedades,* the young Academy and the Spanish court endeavored to gain legitimacy as a collaborator in the Enlightenment by adopting an encyclopedic stance, and promised to theorize all knowledge of Arab architecture and its methods of building. This choice was also justified by the claim that Arab architecture was a knowledge that Europe did not possess and whose lessons it could only learn by way of Spain. The Academy's project was the first Western attempt to systematically document, in the form of architectural drawings, Arab architecture and ornament in Spain—indeed, it was the first such attempt in any region with Arab architecture.[6]

By tracing the successive stages of the project and its many internal contradictions, this chapter aims to show two things. First, that the different stages reflect an Enlightenment enterprise: a highly selective construction of knowledge, transcending mere depiction, translation, or editorial comment. The delays and phases are indicative of a self-reflexive construction process, one in continuous flux. Second, each stage involves decisions that together touch upon many subjects: how the Academy of San Fernando saw the stakes of a fine arts institution in terms of the architecture taught and built; what it classified as "Spanish" architecture; what the relationship was between history and pedagogy; and what constituted a fine art and good taste and what did not.

[6] It is true that foreign travelers who visited Spain wrote about Arab architecture and art in Spain, but these accounts from the early seventeenth century were predominantly narrative and reportorial in manner, and when they included drawings, they never attained the level of detail and accuracy characteristic of those produced by the Academy.

The project's trajectory reveals conflicting attitudes toward Arab architecture and ornament stemming from a tension that was present in both intellectual and government circles. On the one hand, there was the Academy's advocacy and practice of classical architecture, and, on the other, its acknowledgment, by its choice of initial project, of the importance of the Arab legacy. Likewise, in the court, a parallel ambivalence existed in the king's and nation's pride in its unique heritage of Arab monuments—which were the work of people the regime had triumphantly expelled less than two centuries earlier.

The Academy San Fernando and the Arab Legacy: False Starts and Changing Plans

To produce *Antigüedades* was not without its difficulties. The saga of this project, surprisingly enough, ultimately extends over half a century. A detailed investigation uncovers recurrent changes in its subjects of representation and the people involved—evidence of conflicting agendas. Among the host of artists and architects called on and the royal personnel involved, there were conflicting visions of what "Spanish" stood for, or at least could fit into its precincts from the reservoir of the full breadth of the Iberian artistic heritage.

With the support of King Ferdinand VI, in the Junta Ordinaria session of October 1756, the Academy approved documenting Arab monuments in Spain; it is no surprise that it began with the Alhambra. This was hardly the first sign of high-level Spanish interest in the Arab heritage. Upon the fall of Granada in 1492, and in an act symbolizing the Christian conquest, Ferdinand and Isabella claimed the Alhambra a royal residence, and requested its maintenance.[7] A further architectural manifestation of domination and conquest followed in 1533, when their grandson, the Habsburg King Charles V, began to build a palace, aggressively different in its architecture, adjacent to the Alhambra compound. The earliest proposal requesting the renovation of the buildings of the Alhambra was by Pedro Machuca who designed Charles V's

[7] Ferdinand and Isabella's wish to preserve and maintain the Alhambra, which they designated as *casa real*, is preserved in the decree issued by their daughter Queen Joan on 13, September 1515: "The Casa Real, this sumptuous and excellent edifice, shall so remain because the wish of my lords the said king and queen [Ferdinand and Isabella], and my own, has always been, and is, that the said Alhambra and Casa be well repaired and maintained, in order that it stand forever as a perpetual memorial ... and that such an excellent memorial and sumptuous edifice as this not fall into disrepair and be lost." Cited in Leopoldo Torres Balbas, "Los Reyes Católicos en la Alhambra," *Al-Alndalus* (1951): 185-205. For bibliography on the Alhambra and the palace of Charles V: Earl Rosenthal, *Palace of Charles V* (Princeton University Press, 1985), p. 46-47; Dario Cabenelas Rodriguez, "The Alhambra: An Introduction," *Al-Andalus: The Art of Islamic Spain*, Jerrilynn D. Dodds, ed. (New York, 1992), p. 132; Cammy Brothers, "The Renaissance Reception of the Alhambra: The Letters of Andrea Navagero and the Palace of Charles V," *Muqarnas*, Vol. 11 (1994), pp. 79-102; Seco de Lucena Paredes, *La Alhambra, como fué y como es* (Granada, 1935); R. Delfín-Ruiz, *La memoria fragil* (Real Academia de Bellas Artes de San Fernando, Madrid, 1992), p. 55.

palace (1528-1533) and made a plan for the whole compound—which is the earliest documentation we have of the Alhambra (fig. 1).[8]

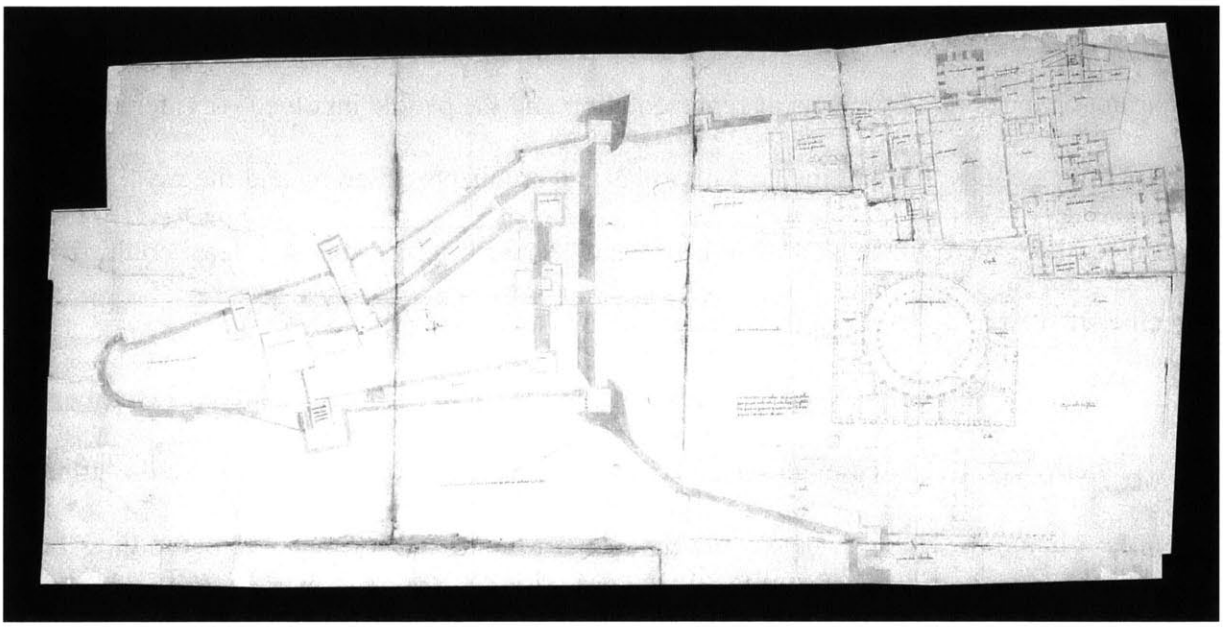

Figure 1. Pedro Machuca, Plan of the Alhambra compound, including the Nasrid Palace and the Palace of Charles V (east), and the Alcazaba (west), 1528-1533.

In 1750, the governor of the Alhambra reported to the Academy the ruinous state of parts of the Nasrid palace. But the Academy showed no sign of wanting to stop the Alhambra slow decay. Its goal remained in the realm of representation, as it proclaimed in 1752 the desire to "conserve"—in the form of drawing—"and spread the news of [Spain's] antiquity and monuments, especially those that are susceptible to perish through the course of time."[9]

[8] Machuca's plan includes the Nasrid Palace on the east, the newly-designed palace of Charles V to the southwest, positioned in a different angle, and the Alcazaba to the west of the whole compound. The first approved project executed within the precincts of the Alhambra was the addition of six rooms, *cuartos nuevos*, on the northern side of the Hall of the Two Sisters (Sala de las dos Hermanas), giving access to the Court of Lions (Patio de los Leones).
[9] "Conservar y propagar la noticia de nuestras Antiguedades y Monumentos singularmente de aquellas que estan mas expuestas a perecer con el transcurso del tiempo. Y haviendo yo hecho presente que son de esta naturaleza varios Retratos de los Reyes Moros de Granada, que estan pintados al fresco en algunos techos del Castillo de la Alhambra, con los rages propios de sus tiempos." Junta Ordinaria, 14.10.1756: A.S.F., sign.: 121/3. On the excavations of the Alcazaba see Gómez Moreno, *Monumentos Romanos y Visigóticos de Granada* (Granada, 1890);

Strangely enough, the Academy first chose the artwork covering the oblong vaults of the three major spaces of the Alhambra's Hall of Justice on the eastern arm of the Court of Lions. These paintings are believed to have been executed in the fourteenth century, when the Nasrid monarch Muhammad V converted the Alhambra into a sumptuous palace in 1354. Today under conservation, these paintings were applied on a layer of gesso (3 millimeters thick), attached to a leather skin, which in turn is attached to the actual ceiling (figs. 2).[10]

Figure 2. Three vault paintings of the Alhambra's Hall of Justice (Sala de Justicia), mid-fourteenth century.

The painting on the ceiling of the central vault portrays a gathering of ten Arab men seated against a golden unornamented background, conversing and gesturing. The two lateral vault paintings (northern and southern) depict romantic chivalric scenes on a blue-green background choreographed with vibrant movements and dense with natural elements of

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J. M. Roldán Hervás, *Juan de Flores y las excavaciones de Albayzín. Arqeologia y fraude el la Granada del siglo XVIII,* (Madrid, 1985).

[10] Jesús Bermúdez-Pareja, *Pinturas sobre piel en la Alhambra de Granada* (Granada: Patronato de la Alhambra y Generalife, 1987), p.18.

vegetation and animal life, characterized by inconsistencies in scale of the depicted figures and discrepancies in perspective of the architectural elements such as fountains and castles. These lateral paintings incorporate Christian and Muslim figures—some historians have contended, they represent contradictory relations of enmity and alliance between Christians and Arabs—thereby contributing to the confusion surrounding the identity of their painter and author. The scenes, wrapping around the vaults, portray a Moorish knight piercing a wild animal with a spear; a Christian woman receiving a trophy or gift from an Arab warrior; two women playing chess; and another Moorish knight wounding a Christian knight with his spear in what appears to be a battle for the woman in the *Torre del Peinador* (Boudoir Tower).

This choice of the paintings prompts a series of questions. Why were these paintings the first subject of representation chosen by the Academy, especially when they stand out as anomalous or contradictory to the predominant ornamental treatment of the Alhambra—i.e., the geometrical patterns covering almost all surfaces of the building? Perhaps painting was the closest medium from the Academy's repertoire to what the Alhambra offered. Or perhaps painting as a medium was distinctive of the Christian artistic identity and history in contrast to that of the Muslim. It was widely thought at that time that the Koran prohibited the depiction of the human figure. This would seem however contradicted by the iconography of the paintings, which depicts ambiguous relationships between Christians and Arabs and raises important questions regarding authorship. Was that the reason behind this choice?

The authorship, patronage, and date of the actual paintings—themes that concerned and perplexed the Academy in the eighteenth century—are still debated by art historians.[11] The

[11] Cynthia Robinson and Simone Pinet, eds. *Courting the Alhambra: Cross-disciplinary Approaches to the Hall of Justice Ceiling* (Brill, 2008); Jerrilynn D. Dodds, "The Paintings in the Sala de Justicia of the Alhambra: Iconography and Iconology," *The Art Bulletin*, Vol. 61, No. 2 (June, 1979), pp. 186-97; J. Bermúdez Pareja and M. Maldonado Rodriguez, "Informe sobre las técnicas, restauraciones y daños sufridos por los techos pintados de la

iconography of the two lateral vaults, and the paucity of comparable Islamic wall paintings of the thirteenth and fourteenth centuries, has prompted some art historians to suggest they belonged to a Christian Gothic painter, probably an Italian or a French war prisoner.[12] However, the technique of painting on leather was used in the Islamic world, not in the medieval West.[13] Based on this observation of technique and style, Basilio Pavón-Maldonado was the first to suggest Muslim (*mudéjar*) authorship.[14] He further postulated that these scenes may have circulated in Christian courts such as that of Don Pedro in Toledo, where *mudéjar* craftsmen and painters may have been borrowed from him by the ruler of Granada. In a 1979 article, agreeing with Pavón-Maldonado's postulation of *mudéjar* artisans, Jerrilynn Dodds has drawn comparisons between these paintings and medieval French Romance models of chivalric and courtly scenes from Arthurian tales, such as the "Tryst Beneath the Tree," the "Fountain of Love," the "Wodehouse," the lion on the chain, the chess game, and Lancelot with the lion. These courtly scenes may have arrived to the court of Granada through luxury objects such as ivory caskets.[15]

Sala de los Reyes en el Palacio de los Leones de la Alhambra," *Cuadernos de la Alhambra*, Vol. I, pp. 11-18; J. Gudiol Ricart, "Pintura gótica," *Ars Hispaniae*, IX (Madrid, 1955), p. 48; E. Lafuente Ferrari, *Breve historia de la pintura espanola* (Madrid, 1946), p. 81-84; L. Torres Balbás, *Ars Hispaniae*, Vol.4, 1949, p. 120; A. Calvert, *The Alhambra*, (London, 1906), p. 40; p. 141-275; M. Gómez-Moreno, *Guia de Granada* (Granada, 1892), p. 72-79; R. Contreras, *Estudio descriptivo de la Alhambra* (Madrid, 1878).

[12] Among those who postulated a Christian author (because of the paintings' divergence from Christian works) are: J. Bermúdez Pareja and Maldonado Rodriguez, "Informe sobre las técnicas," pp. 11-18; Contreras, *Estudio descriptivo de la Alhambra*; Gómez-Moreno, *Guia de Granada*, p. 72-79; Torres Balbás, *Ars Hispaniae*, p. 120; A. Calvert, *The Alhambra*, p. 40.

[13] This technique, Dodds argues, is similar to that used in the main dome and ambulatory area of the Dome of the Rock in Jerusalem, which "were ordered, restored, and painted in 1327/28 under Sultan al-Nasir Muhammad." Dodds, "The Paintings in the Sala de Justicia of the Alhambra," p.188. See K. A. C. Creswell, *Early Moslem Architecture* (Oxford, 1932), p. 63, 67.

[14] Basilio Pavón-Maldonado postulated that the coat-of-arms belongs to Muhammad V, resembling that of Don Pedro but with Arabic inscriptions, therefore, he suggested that the mudéjar slaves of Don Pedro executed the paintings of the vaults of the Alhambra—a claim also based on the historical alliance between Don Pedro and Muhammad V. Pavón-Maldonado, *Arte Toledano: Islamico y Mudéjar* (Madrid: Ministerio de Asuntos Exteriores, Instituto Hispano-Arabe de Cultura, 1973), p. 141-275.

[15] Dodds elaborates on the resemblance of these paintings to the paintings of the Palais des Papes at Avignon, especially in the depiction of the natural setting. Although minute detailing is absent in the Alhambra paintings, she still purports these paintings were the source of inspiration. Dodds searches for examples in the Semenario Menor of Toledo (former palace of Don Pedro) and in the Syrian copy of the *Mukhtar al-Hikam* leaf that includes gesturing figures, now at the Topkapi museum. Besides resemblance to *Mukhtar al-Hikam*, the ten Arab men are usually

These *mudéjar* painters, Dodds argues, executed these paintings in a mere "selective" act of copying, coupled with an "artistic freedom" characterized by misreading or misunderstanding Christian themes and iconography. The existence of other scenes that highlight Muslim power over Christians, Dodds explains, may have been an attempt by Muhammad V to "create a fashionable ambiance ... based on imported taste" while preserving both his national and religious identities. These contradictory themes may reflect the oddity and contradiction of the political scene of Granada: on the one hand, the last and only surviving Muslim stronghold in Spain, and on the other, a kingdom living at the mercy of, and having to cooperate with, a Christian enemy. To bolster their arguments, both Dodds and Pavón-Maldonado cite Ibn Khaldun's commentary on Arabs in Spain imitating Christian customs (he reports) in "paintings representing figures on the walls of their buildings and homes."[16] Dodds herself has written a further study (which appears in a comprehensive 2008 volume, *Courting the Alhambra*, devoted solely to these vault paintings) revisiting and supplementing her earlier account by a new consideration of the ceiling's imagery as a hunting cycle—an imagery representing domination and sovereignty but hiding the tenuous alliance and symbiotic interaction of the two.[17]

In light of this complex iconography, was the Academy's choice of these paintings triggered by their thematic depiction of a historical period of relatively amicable Christian and Muslim coexistence? Or was the choice related to a pedagogical objective to historicize painting and show differences between old and new models or between Christian and Muslim painters?

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interpreted as the ancestors of Muhammad V and compared with the "Family of Kings" of the eighth-century painting in Qusayr Amra.

[16] Cited by Dodds based on Pavon Maldonado, *Arte Toledano,* cited above, p.264.

[17] Cynthia Robinson and Simone Pinet consider these paintings a product of a place of encounter with conflicting messages—questioning the notion of "convivencia" and the postulation that the three religions lived in harmony in Spain. Robinson and Pinet read these images in comparison to Castilian, not French, models: "these images are the result of a very careful and creative appropriation of Castilian versions of these Arthurian tales – specifically *Flores y Blancaflor* and *Tristan de Leonis.*" *Courting the Alhambra,* p.153-163. On the concept of "convivencia, see Thomas Glick, *Islamic and Christian Spain in the Early Middle Ages,* (Princeton, 1979), p.13-15.

Figure 3. Diego Sánchez Sarabia, oil paintings depicting the three vault paintings of the Alhambra's Hall of Justice, 1760.

The Academy arranged to entrust this task of documenting the vault paintings to the Granadine Diego Sánchez Sarabia, described by the Director of the Academy, Ignacio de Hermosilla, as "a professor of painting and architecture, who is well-educated in antiquity."[18] Sarabia began to depict these representations of the vaults and produced oil paintings (fig. 3). His method in all depictions was to divide each vault into two halves across the long axis and then create a flattened image of half a vault. Sarabia's oil paintings were hardly a copy of the original ones. In the painting showing a battle between a Muslim warrior and a Christian warrior, presumably to win the woman in the castle, Sarabia, who was supposed to accurately depict the original painting, could not resist his Western training and tried to rectify the perspective and the scale of the figures and structures. The differences between the original paintings and Sarabia's copies are most evident in the figures at the foot of the castle, where the painter emphasized the signifying detail (e.g., the escutcheons, the birds of the garden). Sarabia played these down in exchange for a spatial unity. He also used shadows instead of a black contour, as shown, for example, in the body of the knight's horse (figs. 4, 5). Thus Sarabia was confronted by a number of decisions. But perhaps the most pressing question we can ask is: What was Sarabia's role? Was it to rectify these paintings and bring them to the level of Western (eighteenth-century) representation? And what was the purpose of producing a representation of a representation if the newly produced artifact diverged markedly from the original, as evident in Sarabia's rectified paintings?

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[18] Junta Particular 18.08.1766: A.S.F., sign.: 121/3. This was arranged with the Councilor of Granada, Manuel de Villena, and the Alcayde (mayor) of the Alhambra, Luis Bucareli. Hermosilla's association of Sarabia with antiquity stems from the latter's involvement with the excavations at the Alcazaba, under the supervision of Juan de Flores, which began in 1754. Sarabia was known as being the painter of a collection of paintings in the hospital and church of San Juan de Dios and the church of San Jose (both in Granada). He was the director of the Escuela de Bellas Artes de Granada, established in 1776. For more biographical accounts on Sarabia: E. Isla Mingorance, *San Juan de Dios en Granada* (León, 1979); J.M. Larios, *El Claustro del Hospital de San Juan de Dios en Granada* (Granada, 1979).

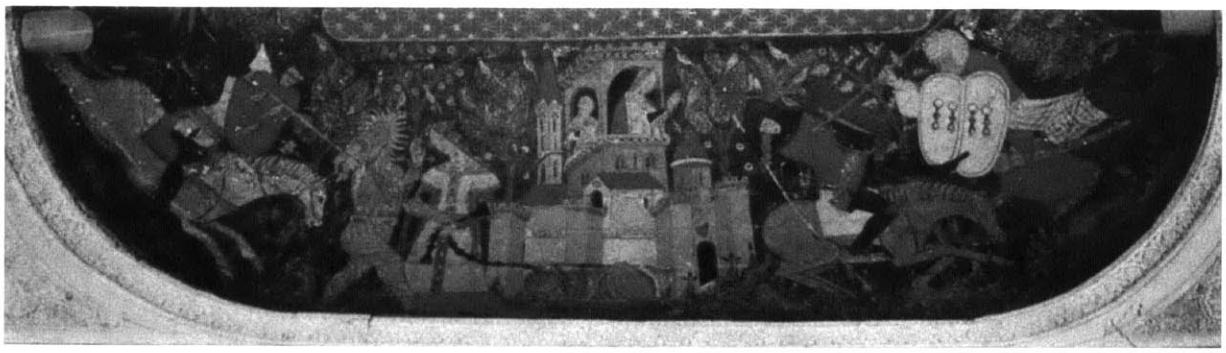

Figure 4. Eastern vault painting of the Alhambra's Hall of Justice (Sala de Justicia), mid-fourteenth century, Granada.

Figure 5. Diego Sánchez Sarabia, oil painting depicting (part of) the eastern vault painting of the Alhambra's Hall of Justice, 1760.

Expanding the Project: Sarabia's work

After the Academy had received Sarabia's work with great approval, it decided in a Junta Particular (Special Committee), in December 1760, to expand the project to include architectural monuments and ornament.[19] The committee gave instructions to Sarabia that had a clear mandate to differentiate, when making architectural drawings, between what was Arab and what was Christian, either through a separate representation of each or through highlighting in a different color "all parts added or repaired by the Christians." The palace of Charles V was supposed to be represented on a separate sheet. In all examinations of the vault paintings, a textual explanation should be added to indicate size, scale, technique and material (oil, tempera, or fresco), and when "these paintings were made [...] if by Arabs or by Christians; if they were all made at the same

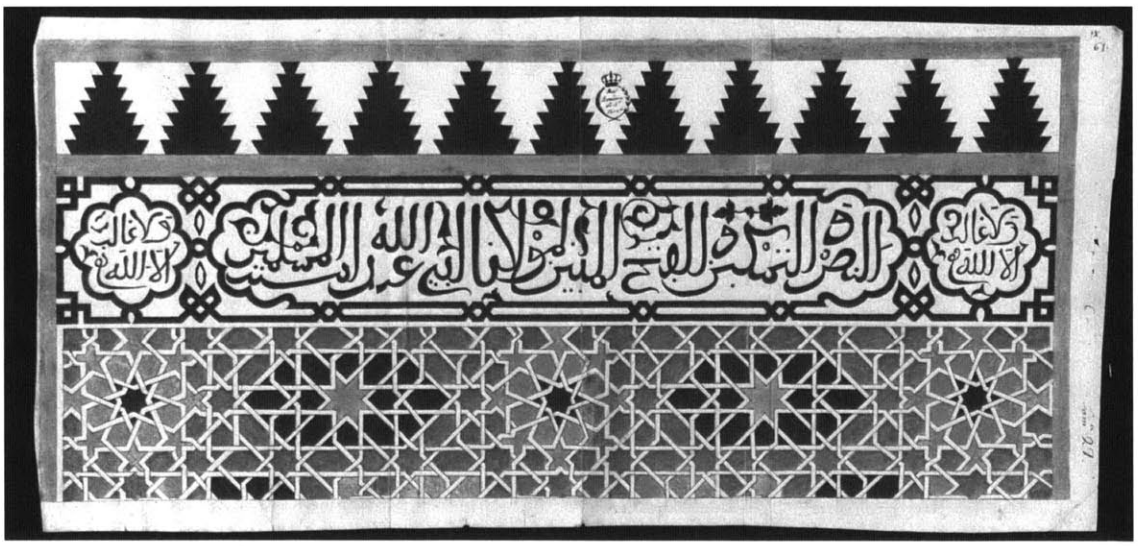

Figure 6. Diego Sánchez Sarabia, drawing of azulejos at the Mirador de Daraxa, Alhambra, Granada, 1760.

[19] In 1760 three oil paintings (out of six) depicting the vaults of the Hall of Justice and three inscriptions of the same location, were sent by Bucareli to the Academy. Junta Particular 15.09.1760. A.S.F., sign.: 121/3. According to the document, Sarabia sent his *Of the form and material of the ornament and stuccos that are underneath the vaults and their particular method dividing the rooms.* This report did not survive the Academy's archive.

time, hand; [the] quality of colors and [their manner of] preparation." Questions were raised regarding "whether the coats of arms" in the central vault "were painted later [during the reign of the Catholic kings] to express the time to which they belonged."[20] At this point, in 1760, these paintings and drawings were intended to be framed and made available for the examination of "curious and erudite persons, allowed to copy them, but without letting them leave the Academy."[21] In 1762, the Academy received Sarabia's collection, which comprised six canvases with sixty-four colored drawings, granting him the title "Academician of merit" and praising him for the intelligence and precision of his work. The surviving colored drawings in the Academy's archives depict inscriptions in stucco on the different Salas or geometric decorative patterns of tiled walls (fig. 6).[22]

The use of the word "Arab," not "Muslim," reflects certain Enlightenment trends, especially when considering that the Academy used the term "Christian" to describe authorship of certain parts of the architecture in the Alhambra. French Enlightenment encyclopedists and *philosophes* such as Voltaire, Rousseau, Diderot, D'Alembert, Chevalier Louis de Jaucourt, and Joseph Lalande, among others, made a clear distinction between Arab culture and the religion of Islam. For them, "Arab Enlightenment" happened when Arab science's alliance with antiquity led to the revival of classical knowledge by medieval Arab natural scientists and philosophers, who brought major advances in the sciences to Christian Europe, living then in the "Dark Ages." The religion of Islam, for most of these thinkers, had a clear association with irrationality, superstition, backwardness, oppression, and tyranny. "Irrational Islam" and "glorious Arab

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[20] *Instrucciones de la Academia a Diego Sánchez Sarabia,* Madrid. *Actas de la Junta Particular* of December 13, 1760 A.S.F., sign.: 121/3. In addition, materials and the characteristics of architectural elements or knowledge of stereotomy were to be assessed if they led to a "worthy judgment of the method of building practiced by the Arabs."
[21] Ibid.
[22] None of the eleven architectural drawings made by Sarabia survive in the archive.

science" were both found in d'Alembert's and Diderot's *Encyclopédie.*[23] De Jaucourt, for example, holding similar, if not exactly the same, views as those in Voltaire's *Essai sur les Moeurs*, talks about Arab science infiltration to Europe as the greatest revolution "that has thus far occurred in sciences as much in theory as in practice."[24] Highlighting the role of Arab Enlightenment and Spain as the locus where most Greek works were translated and transmitted to Europe also made it easy for thinkers to compare and criticize the current state of affairs of the declining science of Spain. Spanish intellectuals paralleled the French in distinguishing sharply between Islam and Arab culture.[25]

Looking closely at one of Sarabia's drawings of a tile pattern detail, *azuléjos*, at the Sala de Comares (fig. 7), we see that he uses a grid drawn in pencil to construct his drawing. This fact is seemingly very natural due to the geometric nature of the patterns and the appropriateness of the grid to such geometry. Yet the drawing becomes puzzling when one notices that Sarabia

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[23] The entry, "*Sarrasines ou Arabes, philosophie des,*" (Hist. de la Philosophie), describes the Prophet Muhammad as "the greatest enemy that human reason has ever known." 30:45, *Encyclopédie, ou Dictionnaire raisonné Des Sciences, Des Arts et Des Métiers Par Une Société de Gens des Lettres,* Denis Diderot and Jean Le Rond d'Alembert, eds. (Geneva: 1777-79). This entry was attributed to Diderot in John Lough and Jacque Proust, eds. *Oeuvres Complètes,* (Paris: Hermann, 1975).

[24] De Jaucourt, "*Mahometisme,*"*Encyclopédie*, 20:754-55; See also "*Bibliothèque,*" ibid., 5:22-23, "*Medécine,*" ibid., 21:337-56; "*Géometrie,*" ibid., 16:45; D'Alembert "*Astronomique,*" ibid., 3:730-31. Lalandes writes that when Christians were overwhelmed by ignorance, "the Arabs embraced on an examination of the writings of Aristotle," ibid., 3:708-30. François Henri Turpin explained the Arab's contribution to the revival of classical knowledge: "At a time when the rest of the planet was plunged again in barbarism, the court of the Abbasids gathered together literary figures and philosophers who made Arabia the rival of knowledge and polished ancient Rome and Athens. Arabia spawned mathematicians and doctors who became the tutors of the nations," "*Abbasides,*" (Hist. Des Califes), *Encyclopédie,* 1:42-44; 1:43. See Syrine Chafiq Hout, *Viewing Europe from the outside* (New York: P. Lang, 1997); Norman Daniel, *Islam and the West* (Oxford; Chatham: Oneworld, 1993); Rebecca Joubin, "Islam and Arabs through the Eyes of the *Encyclopédie*: The 'Other' as a Case of French Cultural Self-Criticism," *International Journal of Middle East Studies*. Vol. 32, No. 2, May, 2000, pp. 197-217.

[25] See, for example, the entry "*Astronomie*" by Joseph Lalande.

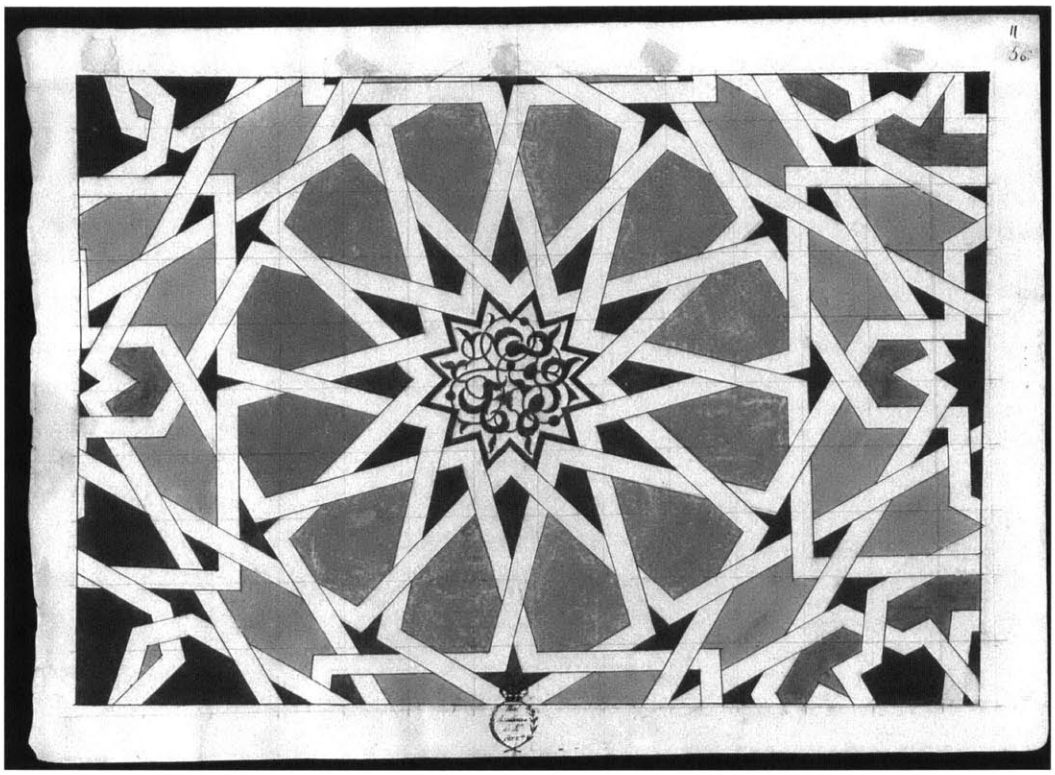

Figure 7. Diego Sánchez Sarabia, drawing detail of *azulejos* at the Sala de Comares, Alhambra, Granada, 1763.

follows the classical tradition and uses the grid merely as a measuring tool to scale his drawing. The lines of the actual ornament and the grid do not overlap; at times they do not even parallel each other. The grid has no geometrizing function here; it only accentuates how the lines of the geometric pattern itself do not belong to a larger schema of a geometric "order." The drawing is not even positioned on the paper in a way that conveys symmetry or a repeating pattern, contrary to what we are accustomed to see in nineteenth-century and contemporary art-historical accounts of Islamic decorative arts that have clear geometric operations generating these patterns as mass-

produced objects (fig. 8).[26] If the grid symbolized Western principles, the Arab ornament did not fit in it; and if geometry and proportions ruled architecture, then this instance of ornament fell outside of this category.

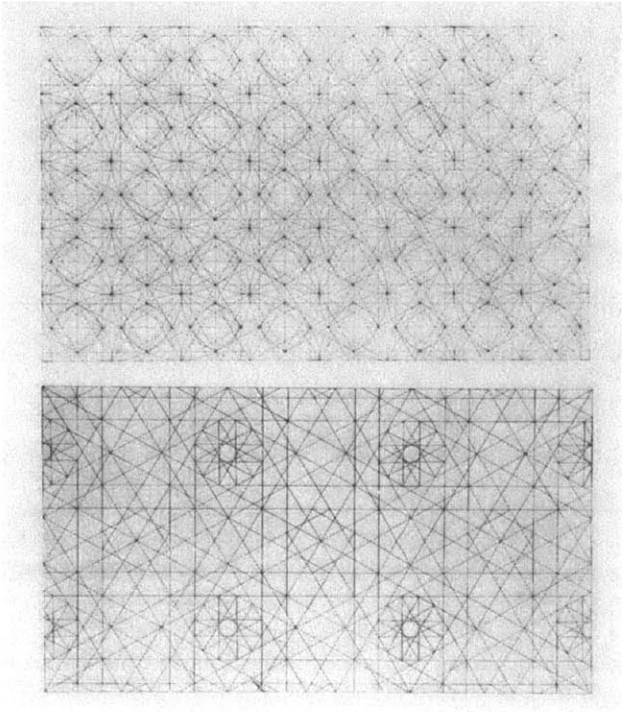

Figure 8. David Ramsay Hay, *The Geometric Principle of Beauty* (Edinburgh and London, 1843).

[26] For example, the documentation of the Alhambra by Owen Jones, the work of Viollet-le-Duc, and David Ramsay Hay, among others.

A Change in the Project: Engravings

In 1763 the Academy reconsidered the project and enlarged its scope. It decided to engrave Sarabia's work in order that it later be a published book, "bound for the most convenient use and conservation," with ordered pages of equal size, and accompanied by in-depth explanations.[27] A new task was at hand. The director of the Academy, Ignacio de Hermosilla, asked for a copy of the inscriptions and a Castilian translation to be made, which, according to him, would "very much contribute to illustrating the history of the nation."[28] In December, Marqués, Protector (equivalent to patron) of the Academy, announced that Charles III had "looked at the work with great pleasure."[29] Although this new switch in the project rendered Sarabia's drawings unavailable for display to its students, the Academy later declared, "this work would give credit to the Academy and the nation, [and] there is no doubt that it would be appreciated across Europe."[30]

Despite royal support and internal Academic approval, the transition of the project from the colored drawings and paintings, earlier made by Sarabia, to a set of engravings to be bound was facing difficulties. In 1764 the Spanish diplomatic representative in France, Fernando Magallón, had proposed, via Marqués Grimaldi, that "the Academy should send drawings of our ancient monuments to be engraved in Paris and to be published by the [Royal] Academy of Inscriptions."[31] This proposal was rejected by Madrid's Academy, which stated it lacked the means, both economic and technical (a skilled engraver), to execute this work. But, claiming this

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[27] Junta Particular 13.12.1760, A.S.F., sign.: 121/3.
[28] Junta Particular 13.12.1760, A.S.F., sign.: 121/3. These translations would be made by Luis Francisco Viana of the Abadia del Sacromonte of Granada.
[29] Junta General, 12, December, 1763, .S.F., sign.: 121/3.
[30] "Además de que esta obra daría crédito a la Academia y a la Nación, no duda que sería apreciable en toda la Europa."*Actas de la Junta Particular,* 18.8.1766.
[31] "dibujos de los monumentos de nuestras antiguedades, a fin de que grabandolos en aquella Corte, se incluyesen en una coleccion general que iba a publicar la Academia de la Ynscripciones." Junta Particular, 18, March 1764, A.S.F., sign.: 121/3.

project had both national and economic value, the Academy consequently refused to give this project to foreigners with the capability to engrave these drawings because it would enable them "to make profit at [the Academy's] expense."[32]

Suddenly, in 1765 the Academy wanted to suspend the entire project. The painter Vicente Pignatelli, appointed to examine Sarabia's work, had "opened the eyes of the Academy," and found Sarabia's drawings of the Alhambra's views to be "deficient in the intelligence of perspective." In general he found all the drawings and paintings "to be lacking the taste and grace of shadows."[33] He also criticized the absence of a drawing showing the main façade of the Palace of Charles V, "which would play off [the façade of the Arab palace]."[34] Based on this criticism, the Academy decided to undertake a new project: to document the late baroque Royal Palace of La Granja, whose construction was finished during the first half of the eighteenth century, and therefore the first architectural manifestation of Bourbon rule in Spain.[35] Despite the importance of La Granja for the Bourbons, a royal response came quickly, and Grimaldi, on behalf of the king, insisted on the completion of the documentation of the Alhambra:

> The king [Charles III] supports the continuation of the documentation of the Arab Palace of the Alhambra of Granada as well as the designs of the palace built by Charles V; he thinks that the proposal to document the *Real Sitio de San Ildefonso* (although a very pleasant idea) could be deferred, and instead, the Academy should first dedicate its praiseworthy efforts to the magnificent buildings that show and disseminate the *ancient* perfection of architecture and other arts in Spain, worthy of the multiplication of the engraver's chisel, offering their students notable models of imitation, and [offering] foreign nations a view of *our ancient*

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[32] "a los extranjeros tendrian ese medio mas de enriquecerse a costa nuestra." Junta Particular 14, August 1764 A.S.F., sign.: 121/3.

[33] Junta Particular, 18.8.1766. A.S.F., sign.: 121/3. In 1786, Gaspar Melchor Jovellanos explained that the Academy's initial [hasty] commendation of the project was something "common among men as they become lazy when dealing with great and extraordinary efforts, approving the easy and mediocre, only to avoid insisting on the best and most difficult." Jovellanos, *Informe sobre los Monumentos de Granada y Córdoba* (Madrid, 1786).

[34] Ibid.

[35] Junta Ordinaria 18.12.1764. A.S.F., sign.: 121/3. In the Junta Particular of August 1766, the Palace of La Granja was discussed again and Diego Villanueva and Isidro Carcinero were entrusted to elaborate the drawings of La Granja in the same manner as those of the Alhambra of Granada.

architectural monuments, which are generally far remote from their attention.[36] [emphasis added]

The royal decree now claims the Arab heritage as its "own," contrary to the Academy's previous directives to Sarabia to delineate differences between Arab and Christian elements in representation. In addition, seemingly from a desire to assert Spain's status as modern, the decree oddly calls a monument built in the mid-fourteenth century—barely 300 years earlier—"ancient." This term at once exaggerates the historical distance and evokes a comparison with the Greco-Roman past. Needless to say this was the time when the ancient/modern debate, prompted by archaeological discoveries, was at its zenith in European academies.[37]

While the King and his minister saw in these Arab monuments "models of imitation," the Academy, to the contrary, clearly intended to disseminate classical taste among its students. Documenting the Alhambra, however, is a clear recognition of Arab architecture's indispensability to Spanish architectural history.[38] The resolution of this conflict between the Academy and the Crown over issues of identity, pedagogy, and prestige—with each of these bodies having different concerns—was to consider Arab architecture to be "antiquity."

The ambivalence toward the Arab heritage was often expressed among the Academy's professors, and even in the writing of a single author. In 1766, when the Academy was

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[36] "El Real Sitio de San Ildefonso aunque á S.M. le ha sido muy grata esta obsequiosa idéa de su Academia, contempla puede diferirla por ahora, dedicando primero sus loables esfuerzos a los magnificos edificios que cerca y lejos de la Corte publican la antigua perfeccion de la Arquitectura y demas Artes en España, dignos de que el buril los multiplique... ofreciendo á la imitacion de sus Alumnos modelos insignes, y a la consideracion de las Naciones extrañas una luz de nuestros antiguos monumentos de Arquitectura, de que generalmente ni remota noticia tienen." Letter of Marqués de Grimaldi to Aguirre and Ignacio de Hermosilla, 2.9.1766, A.S.F., sig,: 37-1-/1.

[37] In this debate was embedded an advocacy of neoclassical architecture, influenced by the dissemination of the teachings of the Abbé Laugier and Johann Joachim Winckelmann, whose views were transmitted in the Academy by the latter's collaborator, Mengs. The Abbé Laugier proposed (in 1753) the primitive hut as the origin for architecture, highlighting the notion of stylistic progression, which was also manifested in the writings of Winckelmann, who idealized the Greek order and was critical of the excessive use of ornament as signifying a decline in taste, coming at the expense of proportion as the source for beauty. Laugier denounced both Gothic and "Arabesque" architectures and praised their replacement by the Doric, Ionic, and Corinthian orders.

[38] See *Descripcion de los ornatos públicos con que la corte de Madrid ha solemnizado la feliz exaltacion al trono de los reyes nuestros señores Don Carlos III. Y Doña Luisa de Borbon* (Madrid, 1788).

contemplating suspending the project, Diego de Villanueva, then dean of architecture, and in charge of the Plan of Study, articulated this ambivalence in *Colección de diferentes papeles críticos sobre todas las partes de arquitectura.*[39] This work critically surveys architectural books and treatises available in the Academy at that time; it also, most ambitiously, contains an effort to diagnose and offer solutions to all the abuses infiltrating Spanish architecture and its pedagogy, highlighting the value of local over architectural foreign agency. At first Villanueva celebrates Spain's departure from Arab taste and its choice to pursue classical architecture. However, he soon declares, that despite its persistence in "foreign" texts (i.e., Vitruvius, Palladio, and Serlio), classical architecture died in Spain because its particularity there was never theorized. Theory, for Villanueva, is what keeps architecture alive. In his statement there is an emphasis on a Spanish contribution to an architecture that is constantly evolving—a contribution that is culturally specific, and becomes stagnant without an active role in writing its own theory.

> The Arabs introduced a lighter taste in decoration, but very exact in construction; however always departing from Greek and Roman taste. The construction of their buildings, although it does us credit, we did not imitate up till the present time. [Ancient] architecture could have resurged in its entire splendor at the time of the Catholic Kings and their successors up until Philip II, when we had architects who knew the good taste of ancient architecture, and who endeavored to depart from Arabic taste, which with many years of occupation became deeply entrenched in Spain. But architecture died with those who worked at San Lorenzo del Escorial and other buildings, leaving a legacy of some translations of foreign authors (Vitruvius, Palladio, and Serlio), either in whole or in part, but none of our works, neither [concerning] our construction nor utility. [These Spanish works] could [have given] us the fertile seed of a doctrine to promote good taste [and] construction; but we do not have anything from their time or the time of their successors from which to study their practices.[40]

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[39] Diego de Villanueva put this plan together with José de Castañeda in 1766.

[40] "Los Arabes, que les sucedieron, introdugeron un gusto en la decoracion mas ligero, solo muy exacto en la construccion; pero apartando siempre del gusto Griego, y Romano, la construccion de sus Edificios aunque nos suspende, no imitamos, ni hasta el presente no tenemos donde instruirnos de su practica. Pudiera en tiempo de los Reyes Catolicos, y successivos hasta los de Felipe II. la Arquitectura haver buelto á parecer con todo sue splendor, pues tuvimos Arquitectos, que conociendo el buen gusto de la Arquitectura Antigua, procuraron salir del gusto Arabe, que con tantos años de possession estaba arraigado en España. Pero con los que trabajaron en San Lorenzo del Escorial, y otras obras murió la Arquitectura dejandonos por herencia algunas traducciones [Vitrubio, Paladio, y Serlio] ya enteras, ó ya partes de Autores estrangeros, pero nada de nuestras obras ni en su construccion, ni

Moving away from Arab architecture's "lighter" taste was not sufficient to revive knowledge of classical architecture. Ironically, this failure was a direct outcome of the Arabs' departure from Spain, which was a mixed blessing: good, as it rid Spain of this kind of architectural taste, yet bad, because with their departure, a working knowledge of classical architecture died out.

> The lack of documents where we can learn [the architecture] of the Romans, Goths, and Arabs, one cannot attribute to ignorance of the [architectural] elements that are necessary for good proportion and construction. Their own works prove the opposite. If we carefully examine their constructions we will find an exact execution in all their parts, and a wise proportion, impossible to obtain without the help of physics and mathematics, and impossible to arrive at simply through practice. It is natural to think that although the Directors [of architectural works] were foreigners, the workers were natives of the country, and since those were not versed in all practices of good construction, they obeyed and operated poorly.... They could not find other [places to learn from] since these doctrines were lost and since the Arabs took this knowledge with them. The truth is that since their departure from Spain while we returned to see some light of the Greek and Roman architecture, it has been confirmed that we lost and moved away from the wise architecture which they had applied in their buildings.[41]

As the sole bearers of the knowledge of classical architecture, the Arabs (in Villanueva's view) were the only ones who could have saved Spanish architecture and given impetus for the continuation of its classical architecture. Once they had left, Spain's architectural practice witnessed an eclipse, exemplified by the existence of ignorant architects, who often were

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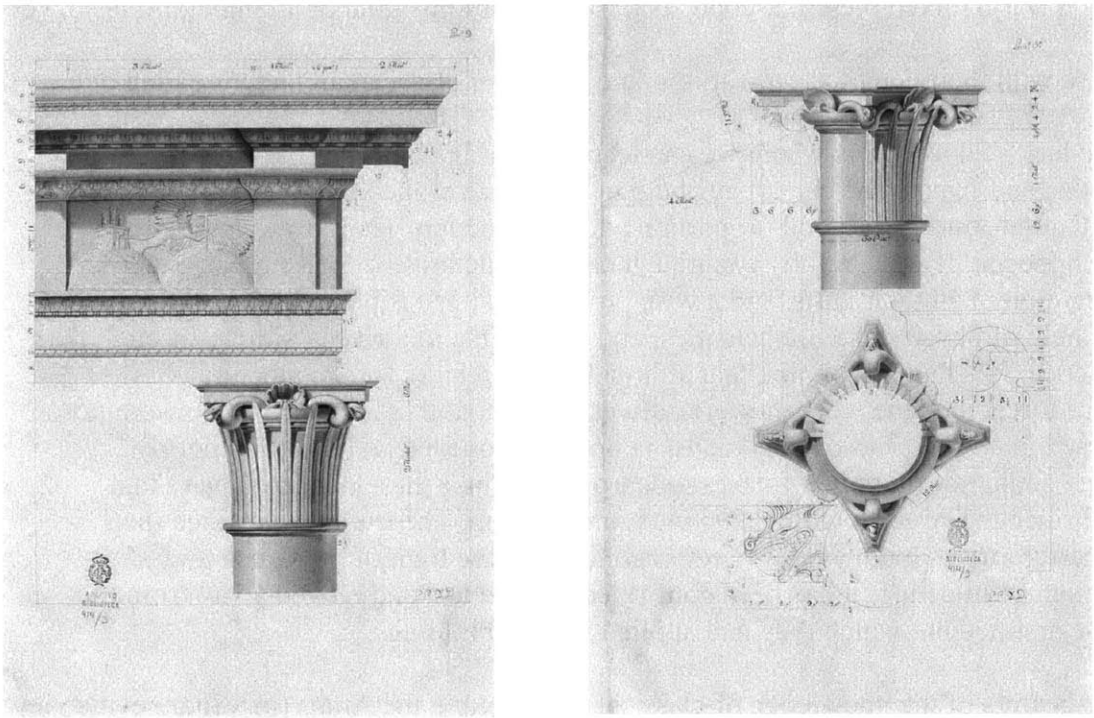
comodidad; estas pudieron darnos una semilla fecunda de doctrina, y fomentar el buen gusto, como assimiso las partes de la construccion; pero no tenemos de sus tiempos, ni de los anteriores nada por donde estudiar sus practicas." Diego de Villanueva, *Colección de diferentes papeles críticos sobre todas las partes de arquitectura* (Madrid, 1766), p. 154-155.

[41] "La falta de documentos por donde instruirnos de la de los Romanos, Godos, y Arabes, no se puede atribuir á ignorancia en las partes que son necessaries para una buena proporcion, y construccion: sus mismas obras convencen de lo contrario, si examinamos con reflexion sus construcciones hallaremos una exacta egecucion en todas sus partes, u una sabia proporcion imposible de conseguir se sin el socorro de la Fisica, y Matematicas, á la que nunca puede llegar una simple practica. Es natural pensar, que aunque los Directores fuessen estrangeros, los operarios serian naturalmente del pais, y á no ser estos inteligentes en todas las maniorbas de una buena construccion, mal pudieran obedecer, y operar, siendo esto inegable, pues la experiencia diaria lo convence; no se pueden hallar otras causas; que la perdida de estas doctrinas, ó que los Arabes se llevaron estos conocimientos; lo cierto es, que desde su salida de España assi como bolvimos á ver alguna luz de la Arquitectura Griega, y Romana, hemos conforme nos apartamos de ellos perdido[s], no sé si diga enteramente la exacta, y sabia construccion, que ellos emplearon en sus obras." Ibid., p.156.

"painters and sculptors taking on architectural projects [; they] introduced bad taste, considering ancient doctrine as ridiculous and ancient buildings as the productions of the barbaric."[42]



Figures 9. Luis de Lorenzana, *Sobre el orden Español,* Madrid, 1766.

Villanueva's struggle to claim Spaniard theorists as both inheritors of and contributors to the classical tradition, reflects a desire to locate the "Spanish" within the larger category of the "classical." Attempts to articulate this "Spanishness" were at times literal. In this same period, Luis de Lorenzana (Academician and mariner) submitted to the Academy his two-volume manuscript *Sobre el Orden Español* (*On the Spanish Order*) (fig. 9). Recalling Louis XIV's

[42] Ibid., p.160-161. These were divided into two types: those who were solely versed in practical geometry without conception of what suits good construction; and "pure delineators," only copied models from treatises like Vignola's or Michelangelo's and knew little or nothing about mathematics or physics. For a lengthy discussion of Villanueva, see Chapter Two of this dissertation.

failed attempt to create a French architectural order "to add glory to his nation,"[43] Lorenzana claims to construct his architectural order based on the "discovery, conquest, and conversion of America, the most illustrious, notable, and extraordinary enterprise."[44] Lorenzana hopes the Academy's "constant effort to make national glories eternal" would make it approve of his Spanish Order, which he describes with the following words:

> The feathers of this capital represent the head of an American, and [therefore represent] America, [...] The conch pours water, which clearly and legitimately alludes to Baptism we brought to America; [...] The serpent with the apple is a well-known hieroglyph of the original sin coiling up and violently attacking the interior of the capital in the same place where the mysterious water is introduced; the explication of this clear allusion does not need more words [...] [the frieze in] *bas-relief* is filled with the heroic and extraordinary successes of the discovery, conquest, and conversion.[45]

"Discovery, conquest, and conversion" were literal themes or marks, unique to Spain, carved into the classical order. Ultimately, the Academy did not adopt Lorenzana's manuscript, but it shows an attempt to load ornament with iconography that portrays Spain as a colonial Christian power, responsible for the conversion of the natives of the Americas to Christianity. The rhetoric of Spanish conquest and conversion of the New World was still current, as we saw with Ponz, to refute such criticisms as those of Masson. By not publishing Lorenzana's

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[43] Luis de Lorenzana, *Sobre un orden español de Arquitectura*, A.S.F. sign. 3-412, 3-413 (two volumes).
[44] "Mas para ver si alguno de los ordenes Gentiles puede disputarle la nobleza de su origen, basta considerer que el descubrimiento conquista, y combersion de la América, es la mas ilustre, la mas notable, y extraordinaria empresa de los hombres: pero no hay prendas que basten sin el fabor de la docta Academia." Ibid. See Carlos Sambricio, "La tentative del orden español de Arquitectura que invento don Luis de Lorenzana en la segunda mitad del siglo XVIII," *Academia: Boletín de la Real Academia de Bellas Artes de San Fernando,* no. 60, 1985, p. 263-286.
[45] "Las plumas de este capitel representan la cabeza de una americana y en ésta la América; la concha vertiendo agua, que con clara y legítima alusión representa al Bautismo llevada por nosotros a la América [...] La serpiente con la manzana es conocido jeroglifico del pecado original y viéndola violentamente enroscada lanzarse de lo interior del capitel por la misma parte que el agua misteriosa se introduce, la explicación de una alusión tan cabal y patente no ha menester más palabras. Muy propias por ser tendidas para esculpir en ellas con bajo relieve los heroicos y extraordinarios sucesos del descubrimiento, conquista y conversion de la America..." Ibid.

manuscript, the Academy was promoting another kind of architectural practice.[46] Instead of an order that would become an icon for conquest and national glory, the Academy sought an order that would be a standard for Spanish architectural practice by which the architect could enhance his profession and architectural compositions, as articulated earlier by Villanueva. For that purpose, design with the classical elements was the solution, and Lorenzana's proposal was not accepted.

In 1766, the Academy sent to Granada a team of architects who began to make the preparatory drawings from which the engravings would be made.[47] Despite the clear divergence of its classical Italianate style from the Nasrid palace, new instructions were given to include the Palace of Charles V in all architectural drawings.[48] This was contrary to the earlier instructions to Sarabia to distinguish between what was Christian and what was Arab. Perhaps making such distinctions as Christian or Arab to define Spanish had come to seem fruitless. The Academy suggested engraving everything sent by Sarabia, except those drawings representing architecture, which were to be done anew.[49] In the new architectural drawings there was a clear intention, aided by a unified method of representation, to portray the architectural monuments as highly symmetrical. This is evident, for example, in the drawings that depict a column and four capitals

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[46] There were attempts in other parts of Europe to establish a national order. Perhaps most pertinent is James and Robert Adam's Britannic order. Their national order, although having the English coat of arms (a crown flanked by a lion and a unicorn), it does not necessarily imbue the order with iconography of national achievements. The Britannic order (only represented in one engraving out of the many in this publication), celebrates the symbiotic relationship between nation and the architectural profession. As Adam affirms: the order shows "novelty and variety of designs." It "communicates to the world" originality, "a revolutionary work" that made it mandatory for the architects (Robert and James) "to collect and engrave [their] works...[that] would afford both entertainment and instruction." James and Robert Adam, *The Works in Architecture of Robert and James Adam (1773-79)* (London, 1778-1779). Similarly in France, Jacques-François Blondel's *L'Architecture Française*, published between 1752 and 1756, shows such national wealth of architectural works without a clear delineation or definition of a specific architectural order representing the "French." See also Chamoust Ribart, *L'Ordre François trouve dans la Nature* (Paris, 1776).

[47] The architects (professors) were José de Hermosilla, Juan de Villanueva (Diego's younger brother), and Pedro Arnal.

[48] In the same guidance, although there was a clear emphasis on the Arab monuments of Granada, besides the palace of Charles V, the Academy decided to include the Cathedral of Granada and the Mosque in Cordoba.

[49] 18.8.1766, A.S.F., sign.: 37-1/1.

(fig. 10), a plan, elevation, and a section through the Court of Lions fountain (fig. 11), and a section through the tower and the Patio de los Comares (fig. 12, 13).

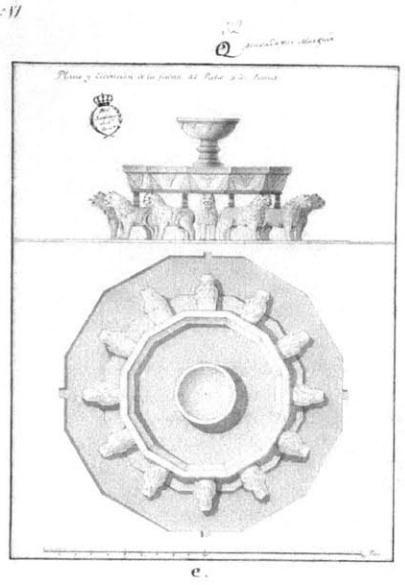

Figure 11. José de Hermosilla, Plan and elevation of the fountain in the Patio de los Leones, 1766, Alhambra, Granada.

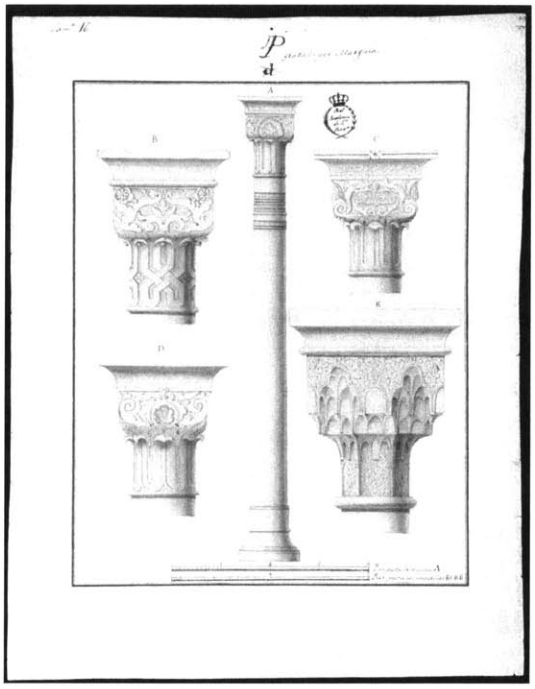

Figure 10. José de Hermosilla, Columns and four capitals from the Alhambra, 1766.

Perhaps the best way to illustrate the attempt to reconcile classical ideals with the representation of the Alhambra is the plan drawing of the Nasrid palace prepared by José de Hermosilla, who clearly struggled with the irregularity of the plan inherent in Machuca's earlier drawing of the compound (figs. 14, 15). Instead, he invented a subterranean plan of the palace, to which made-up spaces were deliberately added, referred to in the legend at the bottom of the drawing as "fragments together with what actually exists [*sic*] have been used to deduce the figure [or shape] of [the plan]."[50] This was an effort to restore the monument to its supposed—

[50] "Fragementos de que, con lo que actualmente existe, se deduce su figura." This text appears in the drawing of plan of the Nasrid palace (See Figure 15) prepared by Hermosilla (1766).

but clearly fictitious—original shape in order to complement the existing plan and make it one ruled by symmetry and proportions.

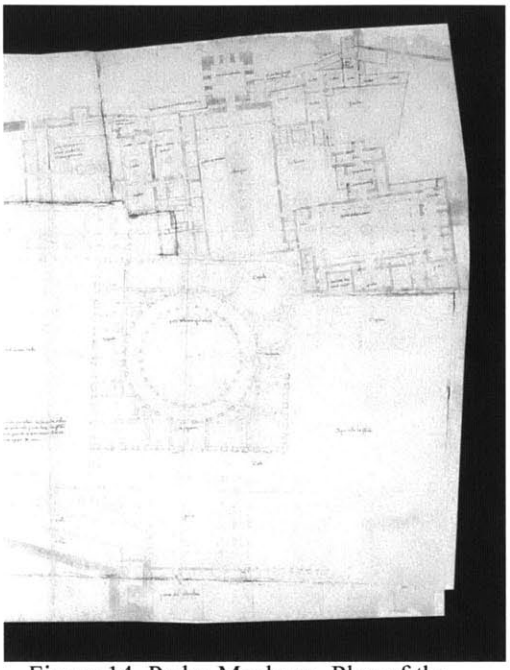

Figure 14. Pedro Machuca, Plan of the Alhambra compound (left),1528-1533.

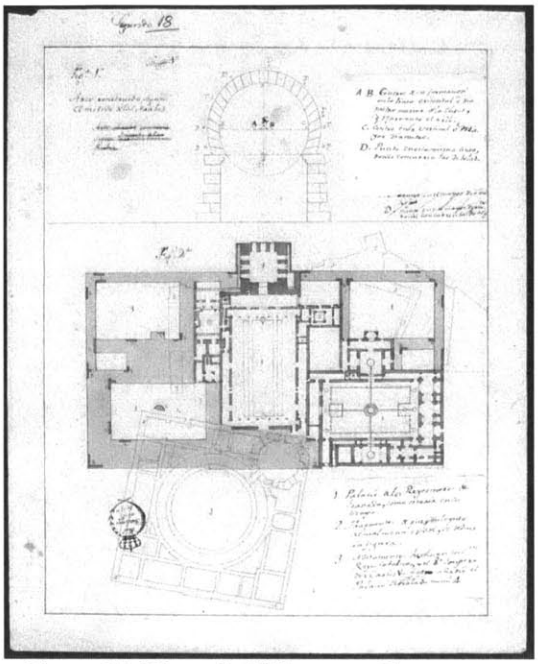

Figure 15. Diego de Villanueva, Plan of the Nasrid Palace (right), 1765, Alhambra, Granada.

These made-up remains, however, were not randomly invented only to classicize the plan of the Nasrid palace. They supposedly relied on the myth of origins of the city of Granada, which sought to affirm its ancient Christian origins—not an easy task considering the city's several mosques, the survival of Moorish customs, and the presence of a sizable Morisco population. In 1763, Sarabia was engaged in the excavations taking place at the Alcazaba and served on its Junta de Excavaciones (Excavation Committee). He shared the belief with other people involved in the diggings (e.g. Juan de Flores, Medina Conde, Echevarría), that these excavations had yielded authentic Roman and early Christian objects, and tried unsuccessfully to get both the Academy of History and the Academy of San Fernando to authenticate and approve of these excavations. Their request to the Academy of San Fernando to acquire eighty-two drawings of

these findings was rejected with the claim that these are "incapable of giving practice (*exercicio*) to the Academy's students... because they lack design or any kind of skill or other motive relevant to our institution."[51]

These findings are related to earlier diggings in other two locations in the city surrounding the myth, which happened back in 1588 and 1595 when sacred relics, saintly remains, plaques, and lead books were discovered upon demolishing the tower of Turpiana, and after diggings in search for lost Moorish gold at Granada's hillside of Sacramonte. These objects, which came to be known as the *plomos* of Granada, had Arabic, Castilian, and Latin texts that recounted the journey of St. Cecilio, Granada's first bishop, who was heading to the Roman town of Eliberri (Granada today), where he found his martyrdom and was buried.[52]

Archbishop Pedro de Castro approved and authenticated these remains as part of the foundational myth of Christian Granada and the *plomos* were received with enthusiasm and veneration from both the Moriscos (descendants of Muslims converted to Catholicism) and the new Christian settlers of the city. Ultimately, suspicions regarding the *plomos'* authenticity were confirmed at the declaration of Pope Innocent XI, who after examining them in Rome in 1682 proved their anachronism, confiscated and condemned them as forgeries. His verdict was that Moriscos created or forged these documents to undermine the Catholic faith. Despite the

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[51] "Capazes de dar exercicio a los Discipulos de la Academia... por no haber en ellos diseño, primor alguno ni por motive que tenga conexión con nuestro Ynstituto." Las Actas de las Juntas Ordinarias, A.S.F. dated 3.10.1765. Cited in R. Delfin-Ruiz, *La memoria fragil*, (*La memoria fragil.* Real Academia de Bellas Artes de San Fernando, Madrid, 1992), p. 63.

[52] One of the objects found was a box, with a text, signed by St. Cecilio himself, explaining that he entrusted this box to one of his followers and asked him to hide it from the Moors. The box included a written prophecy of St. John the evangelist and other saintly relics (e.g. the handkerchief with which Mary dried her tears when Jesus was crucified, relics of St. Stephen). The prophecy foretells the advent of two phases of darkness alluding to the prophet Muhammad and to Luther, from which the world would be purged with the coming of the Antichrist and the Last Judgment. The plaques and two lead books written in Arabic found in the caves of the Sacramonte recount the martyrdom of Saint Cecilio himself and his six companion evangelists. (other names for the mountain is Iliberri, Iliberia, or Iliberis). Katie Harris. *Muslim to Christian Granada: Inventing a City's Past in Early Modern Spain.* Baltimore: Johns Hopkins University Press, 2007.

controversy they stirred and despite proof they were forgeries, people of Granada, nonetheless, continued to venerate them.[53] But why did the *plomos* appeal to both new Christians and Moriscos?

The *plomos* gave legitimacy to the new Christian settlers and rendered them part of the lineage of the old Christians. According to recent scholars, they also gave impetus to the city's metamorphosis and urban transformation into a Christianized, Counter-Reformation city.[54] On the other hand, the *plomos* were a hybrid of Christian and Muslim practices, which recent scholars interpret as an attempt made by the Moriscos to "remake Spanish identity around a Muslim core."[55] Here we see Spanish identity being contested from the other side. St. Cecilio and his disciples are portrayed as Arabs (according to the myth), by whom the Moriscos having been converted. In the texts found, Christian rituals were Islamized; the Gospel was interpreted in conformity with Muslim practices. For the Moriscos, the *plomos* reaffirmed the city's cultural and religious diversity, which they hoped would guarantee their survival and rescue their deteriorating political and social status.[56] Despite that veneration, the expulsion of the Moriscos of 1609 was imminent.[57]

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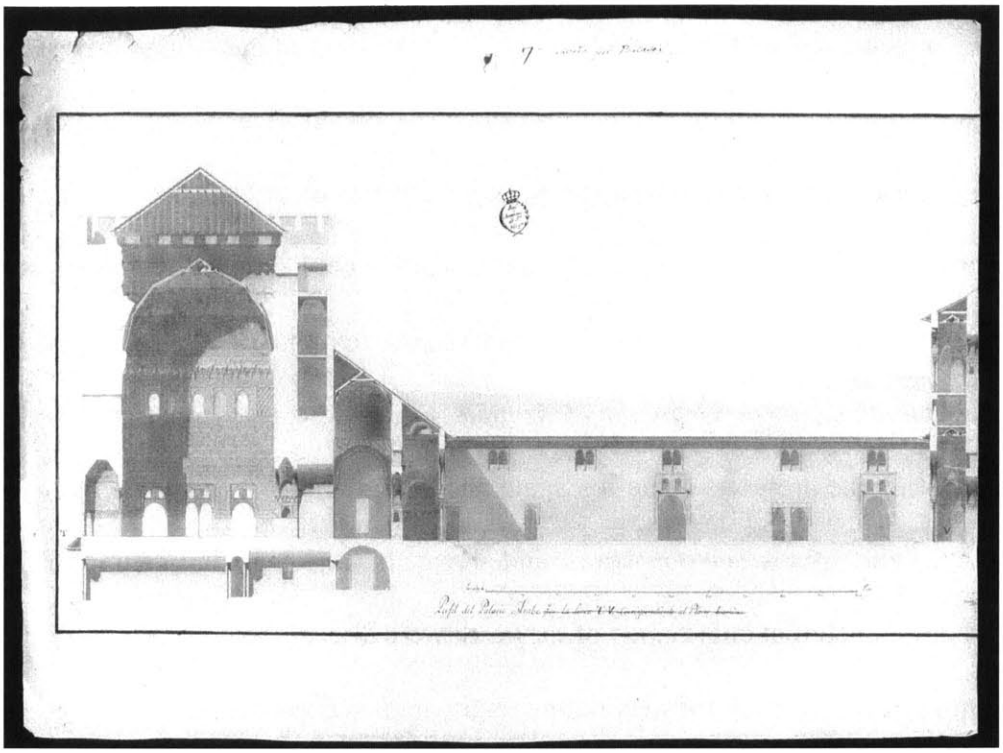
[53] Although Spain was an imperial power in the sixteenth century, these objects aligned with the ongoing discourse regarding the threat of infidels and heretics (e.g., the Muslim Ottoman Empire, the Calvinist Dutch rebels, wars with Calvinists in France, coastal attacks by Berbers).

[54] On the subject of these findings and the Christianization of the city, see T. D. Kendrick, *St. James in Spain*, London, Methuen, 1960; José Luis Orozco Pardo, *Christianópolis, urbanismo y contrarreforma en la Granada del 600* (Diputación Provincial de Granada, 1985); Antonio Bonet Correa, "Entre la superchería y la fe: el Sacramonte de Granada," *Historia 16* 16 (1981): 43-54.

[55] Barbara Fuchs, *Mimesis and Empire: the new world, Islam, and European identities*, Cambridge University Press, 2001. L.P. Harvey suggests those who forged these objects aspired to "transform basic Christian doctrine along Muslim lines." *Muslims in Spain, 1500 to 1614.* Chicago: University of Chicago Press, 2005, p.264-90.

[56] The Holy Office of the Inquisition became active in the mid-sixteenth century, giving more penances to the Moriscos. Tensions increased in the city and taxations on the Moriscos' silk industries were applied. In 1565, archbishop Pedro Guerrero issued a provincial synod enforced later in Madrid to take further measurements to suppress the Moriscos. In response, in 1568, the Alpujarras revolt took place and was followed by a drastic political and demographic changes happened: between 1569 and 1574, 80,000 Moriscos were forcefully deported to Castile, many of whom died on the way. What remained in Granada was 30% of the initial Morisco population; 35,000 new settlers were brought by the Council for Repopulation of the Kingdom of Granada into the city. See Katie Harris. *Muslim to Christian Granada,* p. 8-27.



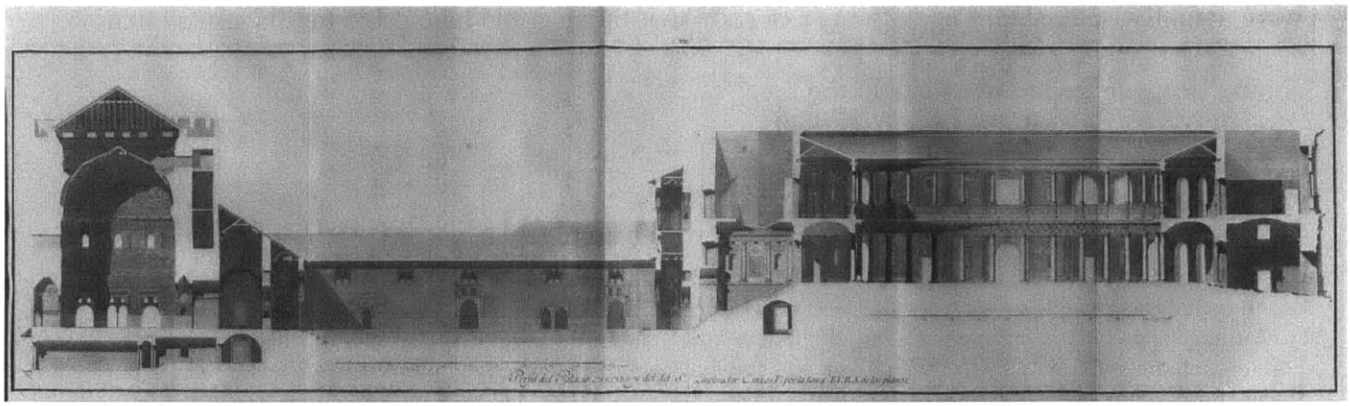


Figure 12. José de Hermosilla, Section through the tower and the *Patio de los Comares,* Alhambra, 1766.
Figure 13 (bottom). Engraving of a section through the tower and the *Patio de los Comares, Antigüedades árabes de España* (Madrid, 1804).

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[57] This expulsion of the Moriscos however did not resolve the relationships between the departed and the conquerors regarding the legacy left behind. In fact, in 1766, the Moroccan ambassador Al Ghazzal, who led a delegation to release Moroccan prisoners in Spain, visited the Alhambra while the team of architects was preparing the new architectural drawings. Hermosilla guided Al Ghazzal in his tour. As reported by the former, Al Ghazzal searched in vain for the façade of the Alhambra complex. He also returned a few days later to write down various notes regarding the inscriptions of the Sala de Comares and the Patio de los Leones, and praised the building, claiming that "nothing in the world is more magnificent."[57] Perhaps one can read into this Muslim experience a certain poignancy. In any case it demonstrates that not only Spaniards and other Europeans were drawn by the Alhambra's splendor, but that a representative of the Arab world strove to take away what he could of his people's legacy.

After the team of architects had finished their preparatory drawings, the Academy planned to engrave them, and sent to Granada five of its professors of engraving.[58] By 1775 all the engravings were complete; but the project was again suspended. Because of this hiatus in the project, in 1786, the Academy recruited Gaspar Melchor Jovellanos (1744-1811) to put forward a plan with recommendations that would accelerate the book's publication. Jovellanos, then councilor at the Academy, was a celebrated Enlightenment writer and jurist.[59] In his report, *Informe sobre los Monumentos de Granada y Córdoba* (1786), he voiced impatience with the delay, while reiterating the project's value for Spain and other nations: "The public is in a state of expectation, it has the right to see our works, and above all, the King would enjoy them." Jovellanos also complained that engravings of the work were already being sold separately and insisted on accompanying texts for these unbound engravings in order "to give to the public an idea about the arts of the Spanish Arabs." Clearly, his postulation that the Arabs and their legacy were actually Spanish aligns with his assertion that Spain could take pride in this legacy that should bring an end to bad taste in the arts.[60]

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[58] The team included engravers and professors: Manuel Salvador Carmona, Jerónimo Antonio Gil, José Murguía, Joaquín Bellaster, and Juan Moreno.

[59] Matilde Mateo claims that Spanish Enlightenment intellectuals, involved in the Academy's decision making, were neither architects nor artists. One of these groups to which Jovellanos belonged was the *consiliarios*. These defined themselves as "the healthiest, most intelligent, and most original." In "Medievalism and Social Reform at the Academy of San Fernando in Spain (1759-1808)," *Medievalism and the Academy* (Cambridge; Rochester: D.S. Brewer, 1999), pp. 123-147. Serving as a councilor of the Academy, Jovellanos was highly passionate about the fine arts, and was involved in artistic circles such as those including figures like Pedro Gonzalez de Sepúlveda, Francisco Goya, Antonio Ponz, Felipe de Castro, and Ventura Rodriguez, who were friends with Mengs and convened regularly at the house of the Conde de Campomanes. Jovellanos was also actively engaged in the works of the recently authorized Economic Society in Seville and Madrid and in the Academy of History. He also briefly served as the minister of Justice and Grace in 1797 and was involved in the redaction of Ponz'a *Viage de España,* providing some architectural descriptions of buildings such as, the Cathedral of Oviedo and the Convent of San Marcos of León. Claude Bedat, *La Real Academia de Bellas Artes* (Madrid: Fundación Universitaria Española: Real Academia de Bellas Artes de San Fernando, 1989), p. 185.

[60] "Opinion que tienen los socios acerca del merito de a literatura y artes de los arabes, la moviese a examinar los monumentos que esta nacion habia dejado entre nosotros, ellos es que ya desde la mitad del presente siglo pensaba la Academia en recoger noticias y dibujos relativos a estos monumentos." Gaspar Melchor Jovellanos, *Informe sobre los Monumentos de Granada y Córdoba,* Madrid, 1786.

> [I]t was very natural that a body [like the Academy], determined to banish bad taste introduced to our arts and to bring [these arts] to the highest level of perfection under its learning and auspices, would aim to examine all the models that could contribute to this objective [... M]embers of the Academy, thinking highly of the merits of Arab art and literature [i.e., the inscriptions], were supportive of this examination of the monuments this nation had left among us.[61]

The rationalizing convention of representation adopted by the team of architects conforms with how Jovellanos envisioned the final publication as a "rational catalog" that should contain a "scientific idea of a system of construction" based on the Vitruvian triad of "solidity, commodity, and beauty." The publication should also provide "a particular analysis of the parts and members of ornament of this architecture, exactly measured and understood, and concluding from this operation architectural proportions of each: column, base, capital, cornice, arches, windows, etc."[62] Jovellanos continues,

> It is undeniable that between all the parts of these buildings there is a visible proportion and commensuration, and there is a method, and these are enough to understand that there are principles. The aim of the proposed analysis is discovering and demonstrating [these principles]. The literary world knows nothing about this [architecture]. Why not aspire to be the first teachers of a point very important in the history of our arts?[63]

Jovellanos ends this section on architectural analysis and the need to theorize Arab architecture with a very revealing remark on the relation between the latter and Gothic architecture.

> In this analysis a parallel should be made between Arab proportions and that of the Greek and Roman in order to see in what they agree and in what they are distinct.... If we would know the proportions of the architecture called Gothic, I

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[61] "Era muy natural que un cuerpo dirigido a desterrar el mal gusto introducido en nuestras artes al llevarse al mayor grado de perfección bajo de su enseñanza y auspicios, quisiese tener a la vista todos aquellos modelos que podían contribuir a este objecto [...] opinion que tienen los socios acerca del merito de a literatura y artes de los arabes, la moviese a examinar los monumentos que esta nación habia dejado entre nosotros, ellos es que ya desde la mitad del presente siglo pensaba la Academia en recoger noticias y dibujos relativos a estos monumentos." Ibid.

[62] "Un análisis particular de las partes o miembros del ornato de esta arquitectura, midiéndolos y comparándolos exactamente, y deduciendo de esta operación las proporciones arquitectónicas de cada uno, a saber: columna, base, capitel, cornista, arcos, puertos." Ibid.

[63] "Es innegable que entre todas las partes de estos edificios hay una proporción y conveniencia visible; hay una mitad y esto basta para conocer que tenían principios. El objeto del análisis propuesto debe ser descubrirlos y demostarlos. Nada de esto conoce el mundo literato; ¿por qué hemos de aspirar a ser los primeros ilustradores de un punto tan importante en la historia de nuestras artes?" Ibid.

> propose that we also draw a parallel between it and that of the Arabs, and that would perhaps confirm my conjecture, which I formed a while ago, that the (*tudesca*/German) Gothic is the legitimate daughter of the Arab, from which she immediately took her principles.[64]

In asserting that all Gothic architecture, not only that confined to the boundaries of Spain but everywhere in Europe, is the daughter of Arab architecture, Jovellanos makes a far-reaching claim about the prominent role of Arab architecture in the origins of Europe's Gothic architecture, and about the genealogy and evolution of Western styles. His views on the Gothic were most memorably formulated in his *Eulogy to Ventura Rodríguez* (1788), when he described the Gothic, a "revolution in the Spanish character," as an outcome of the crusaders' encounter with the Orient. The Gothic sought "in its forms not regularity, but rarity; in its proportions not the beautiful and great, but the daring and marvelous; in its decoration not convenience and taste, but profusion and delicacy."[65]

> Europeans defeated the Orientals in ornament and decoration. Persians, Arabs, and Oriental Greeks corrupted the ancient majesty of the art, transmitted it to the Germans, French, Italians, and Spaniards, who observed these during the crusade, and transplanted them in Europe, suddenly disseminating them to all its borders. Spain wholly adopted its luxury and defects. Robust and simple in its fortresses, light and sumptuous in its temples, bold and lavish in the palaces...[66]

Having proclaimed a genealogy between Gothic and Arab architecture, Jovellanos clearly considers Alhambra's monuments to be Oriental. And just as clearly, Jovellanos has a different

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[64] "En este análisis no se debe olvidar el paralelo de las proporciones árabes con las de griegos y romanos, para que se vea en qué convienen y en qué se distinguen; nada contribuirá tanto a ilustrar este punto. Si nos fuesen más conocidas las proporciones de la arquitectura llamada gótica, yo propondría también un paralelo entre ella y la de los árabes, y de él resultará acaso la confirmación de una conjetura, que he formado mucho tiempo ha, por razones que no son de este expediente, a saber: que la arquitectura tudesca o gótica es hija legítima de la árabe y que tomó de ella inmediatamente sus principios." Ibid.

[65] Gaspar Melchor de Jovellanos, "Memorias histórico-artísticas de arquitectura" *Obras publicadas e ineditas.* (Madrid, M. Rivadeneyra, 1858-59), vol. 1, pp. 391-423.

[66] "En esta última parte la Arquitectura européa venció la de los orientales. Corrompida la antigua magestad del arte por los Persas, por los Arabes y por los mismos Griegos en el oriente, pasó sin ella á los Alemanes, Franceses, Italianos y Españoles, que observándola allí durante las Cruzadas, la trasplantáron á Europa y la difundiéron de repente por todos sus confines. España la adoptó con todo su luxo y sus defectos. Robusta y sencilla en las fortalezas, liviana y suntuosa en los templos, osada y profuse en los palacios." Ibid.
Gaspar Melchor de Jovellanos, *Elogio de D. Ventura Rodríguez leído en la Real Sociedad de Madrid* (1788), p. 390.

opinion on the Arabs in the *Eulogy*: now they are included among those who corrupted ancient art, whereas initially, in *Antigüedades,* their architecture "banished bad taste brought to Spain."

Jovellanos's complex and conflicted views on the Arab heritage, mirroring the ambivalence in the Academy and the court vis-à-vis this heritage, are directly related to the issue of "style."[67] The Gothic, the descendant (in his view) of Arab architecture, encapsulates Spain's architectural character, symbolizing both its religious and architectural triumphs, and, through its ornament, is recognizable as "Spanish."[68] However, its corrupt oriental origins and excess of ornament set it apart from the classical models of antiquity.

As he continues to discuss the vault paintings of the Hall of Justice, Jovellanos insists on including Arab painting in the final publication, especially "when nothing is known about this [matter]... and because a person who has never drawn the human body, the original type of beauty and the principle for all proportions, cannot make a considerable progress in this art."[69] Despite the lack of progress, engravings representing Arab painting "would have revealed a different kind of methods and use of materials, colors and metals used to gild and paint, and the use of shadows and tints among other curious things."[70] If Jovellanos was indeed convinced that Arab painters executed the vault paintings, it is unclear why he does not discuss the contradiction regarding the human and animate beings in these paintings, if these were prohibited in the Koran. One would also expect that Jovellanos would have addressed why Sarabia rectified the paintings, and how Sarabia's paintings, while markedly departing from the originals, could still be

[67] Jovellanos's reasons to adopt or reject this heritage are related to the history of Spain in general and the history of its art and architecture in particular. For him, the history of Spanish arts itself is reflected in the various phases of the history of Spain, manifested in the standing examples of the built architecture of Spain by the Romans, Visigoths, Arabs, etc.

[68] For example, the Cathedrals of Toledo and Segovia, and the University of Salamanca built in the late Gothic "Plateresque style." As discussed in Chapter Two, the Plateresque is a stylistic term coined in the eighteenth century to denote a silversmith-like ornament executed on the façades of these monuments.

[69] Jovellanos refers to the file initially sent by Bucareli to the Academy including three copies (paintings) in 1760 and another three in 1762, all executed by Sarabia.

[70] Gaspar Melchor Jovellanos, *Informe sobre los monumentos de Gradana y Córdoba* (1786).

considered an authentic account of Arab painting or teach anything about method, authorship, and style. Jovellanos's efforts to include knowledge about these paintings in the final publication failed: a study drawing of the main vault with the ten Arab men prepared by José de Hermosilla in 1766 and an engraving executed by Manuel Salvador Carmona in 1767 were never included in the final publication.

As Jovellanos proceeds to discuss inscriptions and ornament, his objective of discovering principles or rules becomes more and more difficult. Nevertheless, he postulates that "a brief analysis . . . would be very easy [to accomplish], assuming that these people could not imitate living things, being forbidden by the Koran. [Their] sculpture has to be reduced to the purest caprices; but since these could as well abide by rules arbitrarily established on a principle, following a system, this object is worth discussing."[71] In other words, even if Arab art and architecture are based on an underlying arbitrary rule, they are nonetheless generated by principles or a system.

Jovellanos borrows the concept of "arbitrariness," introduced by Claude Perrault, to theorize the Arab artistic heritage, which, although under the religious tyranny of Islam, is nonetheless appealing to the eye. "Arbitrary beauty" was articulated in Perrault's *Abrégé des dix livres d'architecture de Vitruve* (1674) and became available in Spain in 1761.[72] Perrault claimed

[71] "Un breve análisis de la escultura de los árabes. Este sería muy fácil, suponiendo que estos pueblos no podían imitar ningún ser viviente, por estarles vedado por el Acorán, y que por lo mismo dejaron de imitar los demás objetos de la naturaleza. Su escultura debió reducirse a puros caprichos; pero como éstos pueden también sujetarse a reglas arbitriarmente establecidas al principio, y seguidas después por sistema, también este objeto sería dino de alguna discussion." Ibid.

[72] Deputy dean of architecture at the Academy, José Castañeda, translated the *Abrégé* into Spanish, published as *Compendio de los diez libros de arquitectura de Vitruvio.* The original frontispiece of the *Abrégé* was replaced with a drawing of the Escorial as an epitome of (and for) Spanish classical architecture. On the knowledge of Vitruvius in Spain, see Carmen Blanco Sanchez, "La Edicion Vitruviana de la Imprenta Real," in *Goya,* (181-2), 1984, pp. 68-74. The first translation into Castilian of Vitruvius was made by Miguel de Urrea in 1583, after which comes Perrault's translated version, followed by Ortiz y Sanz's 1787 edition of the Imprenta Real.

to develop Vitruvius's ideas. In the *Abrégé* he set the stage for his later contestation with Vitruvius's theory of proportions in which he drew comparison between musical, architectural, and visual proportions and declared that, while musical proportions ought to be precise, this same rule does not apply in architecture because when measurements are slightly altered in a building, or even in the human face, the overall beauty is untouched. Perrault was rigorous about finding rules and called for human agency to "furnish" rules "when nature failed to provide them." He paired "positive" beauty with "arbitrary" beauty; the former is ruled by mathematical proportions and distinguishable by mere common sense, the latter is discerned by the good taste of architects.[73]

It is evident that when Jovellanos discusses Arab architecture he also examines Arab painting and sculpture—a classification reflecting the Academy's three fine arts, and not necessarily one by which the Arabs classified their artistic production and practices. This classification imposes a Western lens: Arab architecture, like Western architecture, is to be examined according to a proportional system; Arab painting is to be evaluated based on Western ideas about the imitation of nature and proportions of the human body; and wall inscriptions (likened to sculpture), when it proved difficult to find a rule generating them, were ultimately to be described as "arbitrary." Jovellanos's contradictory ideas also stem from his commitment to knowledge-making practices of the Enlightenment: Spain's prestige is implicated in

[73] The "arbitrary" was used in Spanish theoretical works to designate—either negatively or favorably—a style existent on its own terms with no evident geometric rule. Perrault's ideas were expanded in his *Ordonnance des cinq espèces de colonnes selon la méthode des anciens,* published in 1683. The positive, "must have the same character as musical harmony," in the sense that it must be obvious and equally please everyone. The arbitrary, highlights human agency and associates beauty with custom and fancy: "Good taste is based on the knowledge of one and the other of these beauties; but it is certain that the knowledge of arbitrary beauties is more proper to the formation of what is called taste, and that it is this which alone distinguishes the true architects from those who are not so; since to know most positive beauty, it is enough to have common sense... true architects, as has been said, do not approve any (among buildings of differing proportions) but those which are in the middle between the two extremes..." Claude Perrault, *Ordonnance for the Five Kinds of Columns after the Method of the Ancients* (University of Chicago Press, 1993). See Antoine Picon, *Claude Perrault, 1613-1688, ou, La curiosité d'un classique* (Picard, 1988); Wolfgang Hermann, *The theory of Claude Perrault* (London, A. Zwemmer, 1973); Joseph Rykwert, *The First moderns* (MIT Press, 1983).

disseminating to the "literary world," as Jovellanos calls it, a unique architectural knowledge of the "mother of all Gothic;" however, this novel knowledge is resistant to Western classifications and artistic ideals. Jovellanos nonetheless ultimately favors its dissemination.

The Book

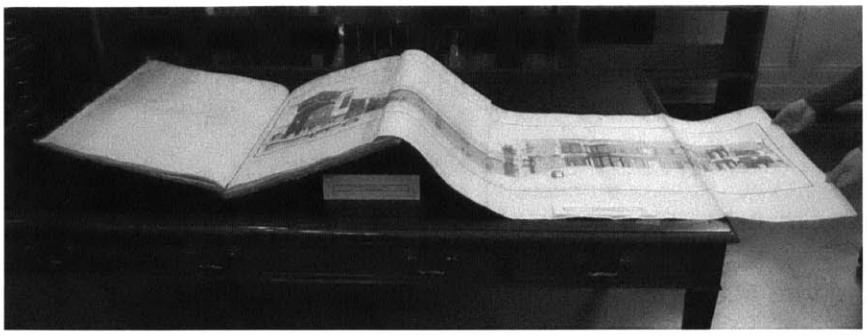

Figure 16. *Antigüedades Árabes de España* (Madrid, 1775).

The recruitment of Jovellanos proved successful. The first part of *Antigüedades Árabes de España* was published in 1787 at the royal press and was monumental in size (fig. 16). However, it only included the engravings, not a "scientific" or theorizing account of Arab architecture. In the introductory remarks, the Academy's Secretary, Antonio Ponz, praised this pioneering effort, and discussed the reasons for the delay, the earlier decision of the Academy to suspend or terminate this project, and the resolve to publish it despite all obstacles. Ponz even reported the project's initial (unfulfilled) stakes—to construct a theory of Arab art and architecture.

> Those who promoted these monuments, residues of Berber domination in Spain, have thought to accompany these engravings with various dissertations and lectures explaining the manner of construction that the Arabs adopted in different times, the origin of their architecture, proportions, analogy which could be made with the Greco-Roman and with other styles: extending also to the decoration of foliage, inscriptions, and other things with which they ornamented their buildings.[74]

[74] "...habiendo sido una de ellas el haber pensado las personas que promovian estos monumentos, residuos de la dominacion Berberisca en España, acompañarles con unas ó varias disertaciones que explicasen el modo de construir que los Arabes tuviéron en diferentes edades, el origen de su Arquitectura, la proporciones que se observan en ella, la analogia que pudo tener la misma con la Greco-Romana y con las de otros estilos: extendiéndose tambien á la decoracion de follages, letreros y otros cosas con que adornaban sus obras." Antonio Ponz, *Antigüedades Árabes de Granada y Córdoba,* Madrid, 1787.

When this "erudite discourse on architecture, its proportions, origin and similarity to ours," was not achieved, Ponz claimed that these drawings were "enough to please and satisfy the curiosity regarding the style and form given by the Arabs to their most sumptuous edifices." The theory was ultimately unavailable, although the aim of attaining this knowledge was one major reason for the series of delays.[75]

The only text appears in the second part of the book, published in 1804. It includes engravings of the inscriptions and ornament details, previously drawn in color by Sarabia, as well as Latin and Castilian translations and a rather lengthy historical account contextualizing the inscriptions' significance and providing their sources, whether they derive from a specific poem or verse from the Koran, or whether they merely describe an architectural space in the Alhambra. Prepared by Miguel Casiri, the official interpreter of oriental languages at the court in Madrid, these translations and commentaries show a keen literary effort and a deep knowledge of the Koran and of the writings of medieval authors such as Ibn Al-Khatib and Al-Maqqari.[76] A representative example of commentary concerns engraving IX, which depicts two rectangular-shaped inscriptions on marble with excerpts from the Koran (fig. 20). The first verse says,

> God is the light of the heavens and the earth; a likeness of his light is as a niche in which is a lamp, the lamp is in a glass, (and) the glass is as it were a brightly shining star, lit from a blessed olive-tree, neither eastern nor western, the oil whereof almost gives light though fire touch it not, light upon light, God guides to

[75] "This undertaking which gained much energy and heat remained forgotten for many years [...] At times new ideas attack and warm up, and even works that extremely occupy us often move away from the imagination [...] But it is certain that [these drawings] were never forgotten and curious persons were always present to gradually solicit and cry out for their publication, regardless of the shape of the work at that specific moment. They thought these drawings were enough to please and satisfy the curiosity regarding the style and form given by the Arabs to their most sumptuous edifices, like the palace of the Alhambra and the mosque at Cordoba." Ibid.

[76] Casiri (or al-Ghaziri) was a Maronite priest born in Tripoli (modern Lebanon) who became the principal librarian of the Escorial in 1763 (after he had served as one of the assistant librarians)—a post he held until his death in 1791. Casiri's major publication was the *Bibliotheca Arabico-Hispana Escurialensis*—two substantial volumes printed in the Imprenta Real (Madrid, 1760–1770), in which he catalogued all Arab manuscripts at the Escorial library (more than 1800 works), many of which recount the history of Moors and Christians in Spain.

His light whom he pleases, and God sets forth parables for men, and God is cognizant of all things.[77]

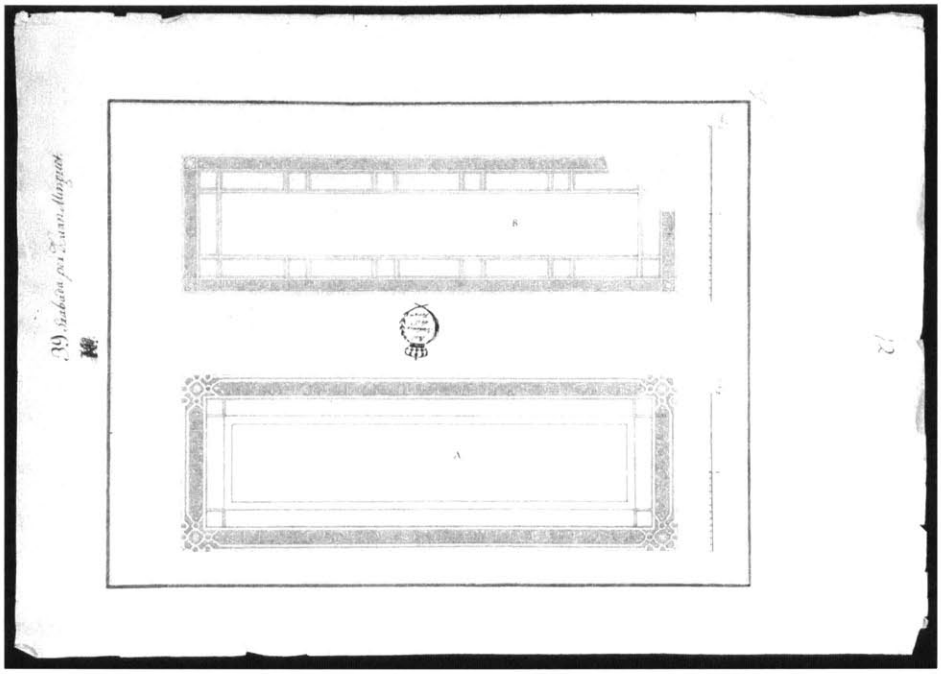

Figure 17. Pedro Arnal, Drawing of an inscription detail in marble (preparatory drawing for Engraving XI), 1766, Alhambra, Granada.

After providing the Castilian translation, the commentary in *Antigüedades* explains: "both [of these inscriptions] are as ridiculous as the rest of the verses which the Koran contains."[78] Nonetheless, *Antigüedades* provides a long account explaining the context and meaning of the two, especially the cosmological metaphors they invoke, for example, the reference in the Koran to the prophet Mohammad's belief that God created an infinite number of worlds that only he could count—which was also the belief of "the Manicheans, Demócrito, Metrodoro, Anaxímandro, and other ancient philosophers."[79] The text continues,

[77] Koran. "*Surat al-Nur*," 24, Verse, 35.
[78] Engraving IX in *Antigüedades Árabes de España* (Imprenta Real, Madrid: 1787).
[79] Ibid., p.6.

> These fables [about infinite worlds,] perhaps derive from the Hebraic Cabalists' 'Kol Ha-Olamim' mentioned in psalm cxi.v, v.15, maintaining that God is the King of fifty or fifty thousand worlds because the two letters 'KL' that mean 'all,' numerically amount to the number fifty. The content of the second [marble] inscription also derives from the Koran and is not as ridiculous as the first, because the objective is limited to praise of God, common to all creatures...[80]

This was the nature of the texts of *Antigüedades.* There was no systematic explanation of the architecture, methods of construction, materials, dates, rules of proportion, etc. The Alhambra spoke for itself. The "Preliminary Notice for the Reader" states clearly: "The impetus for this project is the Academy's intention to promote the Fine Arts."[81] If Arab architecture were to be considered a fine art, then based on what criteria? And how could it be considered as such without its intrinsic mathematical principles (or any other principle, even an "arbitrary" one) having been explained? How could the Academy regard its reproduction and presentation of Arab architecture as promoting the fine arts without also incorporating it into its curricula and architectural practice? Clearly, these contradictions reflect the Academy's indecisiveness over how this heritage should first be classified, later to be theorized. On the one hand, the relationships established between Arab and classical architecture, highlighting mutual origins and epistemic transmissions, contradicted the association made between Arab and Gothic architectures, regarding style, excess of ornament, and corrupt oriental origins. The decision to claim Arab architecture as part of Spain's heritage and regard it as a source of national pride did

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[80] "Estas fabulas, dice el P. Luis Marracci, son quizá tomadas de los cabalistas hebreos, que exponiendo las palabras de salmo CXIV, V.15: Tu reyno, reyno (kol olamim) de todos los mundos (ó siglos segun la Vulgata), deducen por la cabala que Dios es Rey de cincuenta ó de cincuenta mil mundos, porque los dos caractéres primeros (kol) sumados componen el número cincuenta; y si á cada uno se le ponen dos puntos en cima así (kol, with dots on top) harán cincuenta mil. Acderca de estos delirios y otros semejantes véase el Prodromo al Alcoran del citado P. Luis Marracci, parte IV, cap. 27, pág. 76 y si. de la impresion en fol. Padia 1698." Ibid., Engraving IX, p.6.

[81] "Ansiosa la Real Academia de S. Fernando del fomento de las Bellas Artes, y de proporcionar á qualquier costa de los medios para lograrlo resolvió años pasados sacar las vistas del alcazar de Granada, llamado la Alhambra, y unas quantas de Córdoba, y no se limitó tan solo á la parte artística, sino que extendiendo su zelo á favor de la literatura, quiso que se copiasen tambien todos los letereros y inscripciones árabes que de paso se hallasen; lo que executaron con bastante puntualidad los diestros Profesores que para ello destinó: despues de lo qual, grabadas que fueron las laminas, se pasaron las estampas para su interpretacion al erudito D. Miguel Casiri, Bibliotecario que fue de S. M., y Intérprete de Lenguas orientales ; pero como sus ocupaciones no le permitiesen atender á este trabajo, que ne realidad es de los mas ímprobos, y por otro lado..." Ibid., "Advertencia Preliminar."

not fit with the Enlightenment project that Spain sought to join. It conflicted, above all, with the Academy's pedagogical ideals and advocacy of classical architecture. As a result, the Academy had to constantly reclassify and modify its subjects and methods of representation and redefine what was Spanish and its relationship to Enlightenment rules and ideals.

We have shown through discussion of repeated changes—e.g., from paintings to drawings to engraving to texts—the meaning of the selective construction of knowledge referred to at the outset, and have amply illustrated Spain's ambivalence about its Arab legacy and the numerous issues regarding the relation of the classical, the Arab, and the Spanish. This chapter does not dwell as much on the end product, the published book of *Antigüedades,* as it does on the project's different stages and trajectory. Nevertheless, the final form of that publication raises important questions regarding the purpose of documenting the cultural legacy of the expelled within an Enlightenment framework that seemingly aspires to make all knowledge available. Does this documentation—this knowledge construction in a post-Reconquest setting—allow for an eventual revival of this ornamental tradition or herald this legacy's erosion and final demise? Subsequent history provides an answer.

The mid-nineteenth century saw a revival of this legacy in architecture. The earliest and most noteworthy example of this influence is James Murphy Cavanah's *The Arabian Antiquities of Spain* (London 1809). Murphy visited Spain in 1802. He writes with regrets about the hostility that long left the works of the Arabs in obscurity.

> The antiquities of the Spanish Arabs have, for many ages, continued unheeded or unknown. The annals of past centuries scarcely deign to mention them: and the descriptions of modern pens but imperfectly supply the place of the pencil. Accurate delineations, so essential to render them intelligible, might have been expected from the

> enlightened natives of the Peninsula, whose artists and antiquarians have vied with the most celebrated of other countries. The task, however, was supinely deferred, or feebly attempted, while prejudice, the sad inheritance of nations, was actively employed in demolishing the works of infidels, whom it was accounted both pious and popular to deride. [82]

Despite his admission of knowledge of the Academy's first publication, his personal acquaintance with Casiri, and the evident resemblance between his engravings and those of the Academy (he even adopted the same title), Murphy insists that the influence on him came from elsewhere: "the imperfect inscriptions of the remains of the Arabian Art, exhibited in the volumes of some modern travellers, as existing in the once renowned Mohammedan cities...excited in the author an ardent desire to visit them."[83] Perhaps the only traveller whom we know did make a few engravings of the Alhambra was Henry Swinburne. However, these engravings are far from resembling those made by the Academy—they are very schematic and inaccurate in terms of their rendering of ornament or inscription details. Swinburne's engravings, which are only seven in total, are mostly perspectival views and refrain from any detailed measured accuracy of drawing.

At the end of his account, Murphy echoes the encyclopedists' claims regarding the role of Arab "Enlightenment" in transmitting classical knowledge to medieval Europe. He wishes his engravings would "enable the reader to form an accurate estimate of the very high state of the excellence to which the Spanish Arabs attained in the Fine Arts, while the rest of Europe was overwhelmed with ignorance and barbarism."[84] Thus, as we have seen, the roller-coaster history of the *Antigüedades* convincingly demonstrates the ambivalence of eighteenth-century Spain toward its Arab and Islamic legacy. From the Academy's establishment in 1752 to the final

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[82] James Murphy Cavanah, "Introduction," *The Arabian Antiquities of Spain* (London 1809).
[83] Ibid.
[84] Ibid.

publication of *Antigüedades Árabes de España* in 1804 there extends a struggle to come to terms with a conflicted heritage.

Conclusion

In the eighteenth century, Northern Europeans perceived Spain as intellectually lagging behind. Among other things, they argued that the expulsion of the Arabs in 1609 had left a void in the arts and crafts. In response, the leading Spanish institutions and thinkers sought to claim a place of honor among European nations by making known the country's contributions. This undertaking, however, entailed a problematic reevaluation of Spain's heritage—a heritage that included Islamic, Jewish, and occult elements hardly consonant with either the triumphant reconquest of Spain for Christianity or the new scientific attitudes that were diffusing southward.

The Spanish architects, artists, and policymakers I discuss were committed to the Enlightenment project of spreading knowledge, and, simultaneously, to Spain's economic advancement, but they found it necessary to return again and again to questions of identity and definition. What was fine art? What was a craft? Were there elements of any art or craft that could raise it to the highest level of achievement? More particularly, the Spanish intellectuals faced the question of how, internally, to negotiate what was Spanish, when what was chosen to be first presented internationally ("Arab antiquities"), from Spain's most broadly conceived heritage, conflicted with its hegemonic national Christian identity. And how to reconcile architecture with economic reform that sought to erase distinctions among the arts and crafts? In the eighteenth century, architecture's prestige (as in the Italian Renaissance, under the influence of Alberti) stemmed from its association with the liberal arts. Architects achieved social recognition when they affirmed the intellectual status of architecture as an art of design, separate from the mechanical arts, which were viewed with low regard because of their association with manual labor. Would the economic reformers' arguments jeopardize this status? In other words, how could the new institutions—Spain's academies of fine arts (including architecture) and its

economic societies—be enlisted to foster, and elevate the status of, the crafts and mechanical arts, and at the same time maintain their own prestige?

The discussion of the arts' division into liberal or mechanical, and the inquiry into their relative status, was not unique to the eighteenth century. Already in 1600, Gaspar Gutiérrez de los Ríos devoted his book *General Note on the Valuation of the Arts* to giving guidance on how decisions on art classifications should be made. His account made strong connections between the arts and crafts: he added crafts like silversmithing, tapestry, and embroidery to the category of the liberal arts because, he contended, they were "arts of drawing." Ríos's conceptualization of drawing coincided with the Italianate *disegno*, which privileged the work of the architect as intellectual, not servile or mechanical, activity. It was drawing, as stated in Alberti's *Della Pittura*, that unified the three supreme fine arts of architecture, painting, and sculpture.[1]

However, Ríos's argument regarding the mutability of artistic hierarchies implicitly invited craftsmen into the realm of the liberal by proving their art to be "architectonic."[2] He included the crafts among the liberal arts by noting their common applications of drawing, and ultimately his adoption of the Vitruvian model tied architecture to the applied sciences and demanded interdependence among the various arts, sciences, and crafts. This was manifested on many levels in disciplines outside of architecture: Lorenz de Rada's 1705 *Nobleza de Espada* exemplifies this interplay between drawing and mathematics that helped a "mechanical art" (we would say "sport") like fencing, despite its corporeal association, to alter the artistic ranking it previously had.

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[1] Leon Battista Alberti, *Della pittura,* L. Mallé, Florence, ed., 1950; and *On Painting and Sculpture*, Cecile Grayson ed. London, 1972.

[2] Ríos had already used Vitruvius's argument in Book I to prove that architecture is a liberal art because it subordinates other sciences—from which emerged the concept "architectonic."

The impact of the shifting artistic hierarchies on the crafts that were associated with architectural practice is most evident in Bernardo Montón's *Secretos de artes liberales y mecánicas* (Madrid, 1734). Through both mathematics and drawing, Montón aspired to include the craft of tiling with *azulejos* under the rubric of the liberal arts, and enhance the craftsman's social standing. Montón conflated the arts and crafts by claiming drawing as their common denominator. But most importantly, *Secretos* synthesized the various themes the Spanish architectural tradition was facing in the late-seventeenth and early-eighteenth century: examining the internal organization of the architectural profession through reevaluation of its arts and crafts; negotiating national heritage and its different elements relative to the local, as well as a broader European context; and defining the architectural expression of Spanish identity. Montón's application of the new science of probability theory to this Iberian tiling tradition forced him to confront the Islamic, Jewish, and occult elements inherent in both the craft tradition itself and the rational method he was applying—and ultimately, his endeavor purged and erased the elements that did not align with the new science. Likewise, when Montón stated that his method could equally benefit "painters, as well as embroiderers, silversmiths, cabinetmakers, stonemasons, weavers, and persons who lay tiles [in buildings]," ornament at once lost any intrinsic materiality inherent in the process of making.[3]

The new method in *Secretos* can be traced back, as we have seen, to the medieval Iberian philosophy of Raymond Lull. Lull, a proto-*philosophe*, desired to classify and systematize knowledge—but his thought had significant Islamic and Kabbalistic influences. The visual consequences that Montón drew from Lull were not unknown to earlier, post-reconquest Spanish design. Examples of tiling from the sixteenth and seventeenth centuries, like the tiling of the

[3] Bernardo Montón, *Secretos de artes liberales, y mecanicas* (Madrid: En la oficina de Antonio Marin, 1734), p. 140.

Monasterio de Santo Sepulcro in Zaragoza, apply patterns very similar to the ones illustrated in *Secretos*, and reflect the theological complexities embedded in the Spanish visual tradition. This tradition's strong ties with the Islamic heritage and its continued existence in Christian religious edifices stirred issues of identity. Montón's abstraction of ornament universalized it. In his hands tiling became less Islamic, but it also became less Iberian.

As these examples demonstrate that Montón imposed a new logic on Iberian craft, we may ask: what did rationality mean in the eighteenth century? What purpose did rationality serve if, in practice, it did not generate new patterns? If Montón's method is superfluous for architects and craftsmen as a composition tool, what was he actually providing architects and craftsmen with? It was the higher social status for both the craft and the craftsman that Montón was seeking. But by the time of his writing, architectural tiling, opposed by the classicists in the Academy of Fine Arts, was already in decline. The elimination of the section on *azulejos* from *Secretos*' later editions sounded the death knell for Montón's project of unifying architecture and the crafts.

At the same time that Montón was toning down his argument for unity, the economic policies proposed by the Economic Societies called for the valorization of the mechanical arts. These policies derived from Ríos's art division, as well as from the centrality of drawing to his argument. The economic reformers interpreted Ríos's argument to mean that the mere use of drawing could elevate any craft to the level of the fine arts. To encourage industry and manual labor, they claimed drawing to be the tool to stimulate economic recovery and perfect manufactures; however, they overlooked the intellectual arguments inherent in Ríos's view of drawing. The Academy still considered drawing to be what distinguished the architect from the degraded labor of the craftsman. In response to the Societies' program, the Academy was torn

between two goals: on the one hand, its commitment to support the crown's agenda for economic reform and the reinvigoration of national crafts, and on the other, its desire to maintain its prestige, which was being threatened by the popularization of drawing. To accomplish both goals, the Academy had to proclaim itself as the main guardian for the Drawing Schools associated with the Economic Societies, and for the teaching of drawing nationwide. Artistic hierarchy was still embedded in these claims; however, the importance of crafts was nonetheless highlighted as a crucial asset to the nation's progress vis-à-vis foreign industry and manufactures.

Artistic hierarchy became increasingly debated among architects of the eighteenth century as they were witnessing a crisis in their profession. Early in the century, José Benito Churriguera and Teodoro Ardemans were already probing reasons for the confusion between the liberal and the mechanical arts in architecture. Their discussion of art distinctions expressed a desire to rectify a growing tendency of craftsmen (*albañiles, alarifes, maestros de obras*) to take on architectural projects, or even write architectural treatises. Their questions clearly addressed the identity of the architect. Who can design buildings? Who designs ornament? Is it the architect, who prepared the drawings? Or the craftsman, assigned by the guilds to execute it? Does drawing have any authority and control over the final materialization of design in ornament or building? Clearly, when drawing no longer guaranteed architects social recognition or control over their profession, as well as the other associated crafts, they looked for other means to secure it.

Ornament bore the imprint of this control. As advocates of classical architecture, the Academy's architects insisted that excessive ornament, which they associated with the crafts and the mechanical arts—and most prominently manifested in the Churrigueresque style—should be

repudiated. In revisiting the reasons for the stylistic shift from "Spanish baroque," or Churrigueresque, to classicism, I have argued that it harbored the political conflict between Academy and guilds. That conflict led to a theoretical dialogue among the academicians, policymakers, and economic reformers, who allied against the guilds, which at the time of the establishment of the Academy had *de facto* control of the architectural profession. Their dialogue also associated the guilds with the crafts and excessive ornament. Ironically, the harshest opponents of the Churrigueresque were the economic reformers, who simultaneously called for the revitalization of the crafts and a raising of their status. The systematic institutional consensus against the guilds inadvertently proscribed important ornamental constituents of Spanish architecture. In rejecting the Churrigueresque, eighteenth-century historians, despite acknowledging that José Benito Churriguera was not the most extreme in his application of ornament, associated his work with the materiality of wood and gold, the practice of craftsmen, and the authority of the guilds—all things they esteemed relatively less.

While Churriguera insisted at the beginning of the century on the union of the three fine arts, exemplified by the title "artist-architect" ("*artificio-arquitecto*"), architects of the Academy, like Diego de Villanueva, felt the need for architects to separate themselves from painters and sculptors. Churriguera himself lamented how his profession had been hijacked by ignorant craftsmen who neither knew how to draw nor how to design; but Jovellanos, fifty years later, asserted that the Churrigueresque style confused the hierarchies in architecture, allowing construction workers (*albañiles*) to be converted into architects, and woodcarvers into sculptors. Thus the strong connection among the arts, which Ríos insisted on almost two centuries earlier, was eroding. Architecture was becoming its own discipline—as is illustrated by the emergence of the Escuela de Arquitectura de Madrid (1844-1914).

What the Academy perceived as fine art worthy of being included in the architectural canon, that is, international classical architecture, clashed with the Spanish crown's agenda. This was especially evident in the *Antigüedades* project, which illustrated Islamic monuments. The project started at a time when similar endeavors to define national heritage (including those informed by the new archaeological excavations) were underway in other European locales. *Antigüedades* began in 1756 and went through different phases, with changes in scope, media, and subjects of representation during nearly half a century, until it took the form of a book of engravings of the Alhambra and Granada in 1804. Charles III, through his reforming ministers Jovellanos and Campomanes, who were members of the Economic Societies, endeavored to gain prestige as a participant in the expansion of European knowledge by promising to theorize all knowledge on Arab architecture, something hitherto unavailable to Europe. However, the Academy's professors delayed the publication and resisted embracing their medieval Islamic heritage. They settled on calling it "ancient," as well as "Arab," but not "Muslim." As a response to Europe's valorizing of the artistic and scientific "enlightenment" achievements of the Arabs in Spain, that the Academy chose to seize on the Islamic legacy as its own can best be seen as a bold effort at appropriation aimed at countering the European assumption that expelling the Arabs had irrevocably deprived Spain of Islamic achievements as part of its tradition. Although the ambition to attain this knowledge was one major reason for the series of delays the project encountered, when *Antigüedades'* first volume was published (in 1775), it lacked any theorizing text.

Through these explorations I have probed how the construction of Spanish architectural identity was conditioned by economic agendas and political conflicts, as well as by the nature of the Spanish architectural tradition, with its multifarious contending influences. The constant

questioning of what would satisfy Northern European critics of Spain, or what would conform to a new view of culture as understood in Spain, prompted different responses and architectural interventions among social groups and institutions. They produced contradictory and complex theories and practices. Ironically, many elements one could define as Spanish disappeared indefinitely from the approved canon of Spanish architecture. There was unavoidably a tension, even a dilemma, between expanding knowledge, on the one hand, through an embrace of Spain's rich but problematic heritage; and, on the other, a defining and delimiting endeavor that would exclude the discordant. Thus the concern to contribute to a universal pan-European reservoir of knowledge compelled the Spanish cultural establishment to wrestle with questions of perennial importance—of hierarchy, classification, and prestige—that recur throughout the history of art and architecture.

List of Illustrations

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Figure 13. J. B. Piranesi, engraving of "Veduta di Piazza Navona sopra le rovine del Circo Agonale," second half of the eighteenth century. School of Drawing, Zaragoza. Reproduced in *Fondo de pintura aguafuerte: Dibujos de Academia de la Real Sociedad Economica Aragonesa del País* (Zaragoza, Real Sociedad Económica Aragonesa de Amigos del País, 1995), p. 109.

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