

Juan Bautista de Toledo, Architect and Master Builder at the Monastery of Escorial (1563-1567)

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Regardless of the scale of the buildings, XVI and XVII century Spanish architecture shows a clearly traditional approach to the rules and regulations governing work as well as the functions and tasks assigned to the workforce.

As if it were some kind of unbreakable law, the organisation of building work undertaken at a site adhered to a strict hierarchical structure comprising a master builder, *aparejador* (architect), master masons, masons, carpenters, together with workers skilled in various trades and general labourers.

This general trend also seemed to apply to the Royal Works commissioned by the Royal Court authorities of the period. Although in the Court we may perceive certain innovative aspects in the modern architectural sense, such a paradigmatic example as the case of the Monastery of El Escorial (1562-1586), characterised by a fresh approach compared to contemporary building work (Cano de Gardoqui 2004, pp. 935-937) – regular transport of materials and supply of food for the workforce, tax benefits, legal protection, medical care for the building workers, regular payment of salaries and daily wages, which were higher than those paid elsewhere, etc. – inevitably leads us back to the traditional schematic arrangement in Spanish building of the time. This was dominated by a rigid organisational structure in which masters, officials and labourers performed purely routine functions, in accordance with the strict guidelines laid down by the Master Builder, Prior and Congregation, *aparejadores* and site managers, ensuring a fixed work schedule was adhered to and guaranteeing that deadlines were met, and that dismissals and wage penalties and so on were applied.

There were, however, many reasons that warranted such an organisational structure since:

No project on the scale of El Escorial could afford to forgo the need to organise its craftsmen, and Philip II wisely maintained the basic organisational structure. Indeed, the traditional organisation of a large scale building project was to remain unaltered in Europe throughout the XVII century.

(Wilkinson 1984, p.132)

Indeed the sheer architectural scale and complexity of the Monastery – the result of the ideological and multi-functional plan forged by Philip II – reflected the large sums of money involved in the undertaking, far higher than anything invested in other contemporary royal works of the period such

as the Alcázar de Madrid, Palacio de Aranjuez, Palacio del Pardo, and so on. (Cano de Gardoqui, 2002, pp. 123-174).

Only the continued presence of a considerable number of workers and public officials – between two and three thousand at the height of the work (1573-1586) – and the existence of a hierarchical organisational structure, could ensure that such a vast amount of architectural and decorative work was completed in such a short period of time, between 1563 and 1584, when the first and last stones were laid, and 1586, when the Basilica was consecrated.

Generally speaking, the administrative organisation of the work at El Escorial in terms of authority and responsibility was headed by the Monarch and the Prior of the Hieronymite Monastery, clearly reflecting the close relationship between royal and ecclesiastical power, which was so prevalent at the time. An intermediate group - *Congregation* – comprising various departments (*Contaduría*, (Accountancy), *Veeduría* (Overseeing), and so on, constituted the administrative apparatus of the Work charged with carrying out the instructions of King and Prior relating to any administrative, building or social matters. Finally, those involved in the actual building work, the organisation of which was highly structured, comprised *aparejadores* (*architects*), *tenedor de materiales*, (building materials manager) *mayorales de la Carretería* (transport manager), *sobrestantes* or *capataces*, (foremen) and temporary labour (masters and labourers), who formed the base of the organisational pyramid of the work, controlled by the figure of the *Obrero Mayor* (Master Worker). In addition, and answerable only to the Monarch was the *Maestro Mayor* (Master Builder), a post which was to disappear after 1567.

Despite this rigid arrangement, a series of events were to bring about a change in practice both at the Alcázar de Madrid and other royal works, leading to a flexible and adaptable organisational structure, reflected in the enactment of successive General Legislation in 1563, 1569 and 1572, and Private Legislation (Zarco 1916-1917). These events included the development of the building work itself, the death of Juan Bautista de Toledo, the *Maestro Mayor*, in 1567, the gradual technical improvement in organisational structure enabling financial and labour problems to be settled, the meteoric rise of the architect Juan de Herrera under the auspices of Philip II as supreme authority over this and other royal works, together with the usual administrative appointment of a Maestro for a particular work, and so on.

These and other factors hindered any single organisation of the intricate administrative structure of El Escorial. By contrast, the idea of condensing the organisational pyramid of the work at three specific moments corresponding to the drafting of the General Legislations, as we propose here, seems to reflect more closely the development of a process which lasted for over thirty years and which witnessed significant changes in the way various positions in the administrative structure and actual building work itself were established, merged or eliminated (**figs. 1, 2 and 3**).

The importance of this kind of organisational chart does not hinge on absolute values but aims to guide and serve as a valuable tool to propose detailed analysis into architectural aspects in general, as well as the particular case in hand, in the broader context of Royal Works in Spain in the XVI and XVII centuries.

A comparison of these three structures highlights a clear turning point in the history of Spanish architecture; the disappearance of the figure of the *Maestro Mayor* in the management of a particular building in the area of royal building work under the auspices of Philip II, to give way to the emergence of the figure of the *Architect – Royal Architect* – reflected in the idea established by Vitrubio and Alberti as a profession distinct from the material and craftsmanship notion of building, and concerned more with a scientific - liberal and humanistic approach – in line with the new perception of *Architecture*, favouring the project together with a well-defined and rational geometric approach to building design.

Organisational charts 2 and 3, showing the General Regulations of 1569 and 1572 respectively, in contrast to chart 1 (Regulation of 1563), reflect the absence of the figure of the *Maestro Mayor* and demonstrate the emerging importance of the *Aparejador* (architect) – masonry, construction work and carpentry – and the increasing involvement in administration and construction of the Prior and Congregation, whose importance was established after 1572.

The first chapter of the General Regulation of that year established the figure of the Prior as the highest authority over the work at the Monastery of El Escorial. It was the Prior who delegated responsibilities in the building and administrative organisation: appointment of positions of responsibility – architects –; executive posts, and so on. The power of the Congregation was also strengthened, its various functions now clearly defined (Accounting, Overseeing). It is also significant to note that at around this period – the time of the Priorate of Fray Hernando de Ciudad Real (1571-1575) –religious rather than civil considerations prevailed in the organisational structure of the work (AGS CySR. 258, f.96, 108), despite the protests of Juan de Herrera, reflected in his annotations to the Regulations of 1572 (Cervera 1986, p.47).

The death of Juan Bautista de Toledo - *Maestro Mayor* of the work at El Escorial, the Alcázar de Madrid and Palacio del Pardo – on 19 May 1567, was to have an effect on organisational structure, as it led to the disappearance of this position at these works. It was a position which hitherto had been common in these as well as other areas of traditional Spanish architecture, although one which had been more closely linked to administrative and building affairs rather than the actual theoretical skills –as a designer – of the person himself.

It is significant that in no chapter of the Regulations issued in 1572 concerning El Escorial is there any mention of the *Maestro Mayor*. After the death of Toledo, this position remained vacant in the work at the Alcázar de Madrid (Barbeito 1992, p. 232-234). Neither Gaspar de Vega, responsible

after 1567 for the work on the Alcázar de Madrid in matters related to the actual design, nor Alonso Pimentel in 1573, skilled in design, architecture and sculpture, nor Juan de Valencia architect and pupil of Toledo, charged after 1577 with the administrative duties traditionally performed at the Alcázar by the *Maestro Mayor*, were ever to be appointed to the post of *Maestro Mayor*.

With regard to El Escorial, one might be tempted to think that this lack of any *Maestro Mayor* would lead to a slowing down of the work. Nothing could be further from the truth, as the years following the death of Juan Bautista witnessed a significant increase in the number of contracts and works undertaken (Kubler 1982, pp.199-205 and Cano de Gardoqui 1993, pp. 399 and ss.). This was thanks to the tremendous increase in the number of tasks traditionally assigned to the *Aparejador*, who rather than merely dealing with officials and labourers or the choice and distribution of materials (Cervera 1985, p. 47), became involved in providing basic design work – although this was executive rather than creative –, moulds and counter-moulds, the workforce, as well as drawing up contracts and working conditions for the piecework.

As regards the importance of the *aparejadores*, above all in masonry, the Hieronymite historian Fray José de Sigüenza points to how in the years 1569-1570:

(the work at El Escorial) "iba por cuenta del Rey; digo que no la tenían a su cargo destajeros ningunos, sino dos maestros o aparejadores que se llamaban Tolosa y Escalante; a éstos daba el Rey cierto salario, y ellos daban los modelos para sacar la piedra, recibían los sacadores de ella, y los que la asentaban, y eran el todo del negocio"

(Kubler 1982, p. 105).

Sigüenza makes no mention here of one significant aspect concerning the organisation of the work, namely the application of the piecework system to certain areas of the building work, which explains not only the increase in the amount of work carried out but also the fact that from 1567 to 1572 the tasks normally entrusted to the *Maestro Mayor* were undertaken without any difficulty by the *Aparejadores* and the Congregation.

Indeed, the piecework system, in contrast to the valuation system for determining the cost for a specific piece of work to be undertaken – a fixed rate subject to a reduction offered by those bidding for the work – and of a stipulated deadline for completion, led to more intense building work in comparison to *Tasación* (valuation system), since with the piecework system craftsmen were spurred on by the incentive of a contract and specific conditions. They were forced, for instance, to work, shape and set a certain amount of stone for a specific part of the building work – for which they had bid a fixed price, a price acceptable to them as well as to *Aparejadores* and Congregation, through successive orders of payment during the process of execution. Pieceworkers were thus

bound by a fixed price and deadline and not, as was the case in the valuation system, by a mere estimate or quote on the part of the *Maestro Mayor* for the amount of stone to be worked, a system which might have created uncertainty as to how many days workers might need to be paid depending on the nature of the work – number of craftsmen, materials, tools, and so on, and one which occasionally led to the work of *maestros* and officials not being proportional to their pay. By contrast in the piecework arrangement, the greater the amount of work and the more quickly this was completed, the higher the pay.

The financial incentive inherent in piecework entails a faster pace in the building work, which was the Philip II's wish, and that of his *Consejo de Arquitectura* (Architectural Advisory Committee), Prior and Congregation during the course of the work.

The debate between supporters and opponents of applying one system or another – Piecework and Valuation – was one of the reasons that led in 1565 to a split in the executive commission overseeing the work on the monastery (Cervera, 1986, p. 37; Cano de Gardoqui, 1993, pp. 30-31; Bustamante, 1994, p. 101 and ss.), and between the two *aparejadores* involved in the masonry work. The Prior and Vicar of the Monastery with the aid of the *aparejador* Pedro de Tolosa took over the work on the Main Cloister (ABE Carp. II, legs. 39 and 40) At this time, no plans for the Main Cloister existed as yet, its execution being left open to the possible appointment of a master builder by the King. No such appointment was made, however, and in 1569 the first work corresponding to the western section of the Cloister, split into two parts – ten arcades with their vaults – was put out to public tender with the design and conditions laid down by Tolosa and Escalante as *aparejadores*, to be charged to whichever Master Pieceworker tendered the lowest offer: the four Lower Cloisters, the offices in the North east of the Monastery (the present day Colegio and Seminar) and the *Corredor de Enfermos* or *Galería de Convalecientes* (Hallway of the Convalescents). Juan Bautista de Toledo together with his *aparejador*, Lucas de Escalante, took charge of the main church, la *Iglesia de Prestado*, Philip II's Royal Chambers, the walls of the Niches as well as the windows and the tapestry, Mediodía and Levante vaults. This conflict also led to the gradual removal of the *Maestro Mayor* from control over building and administrative affairs related to the work.

Although the new organisation of the work in 1565 in theory led to *aparejadores* following the orders of the Prior and Maestro Toledo respectively, in reality the repeated absence of the Maestro from the work and how he dealt with his *aparejador* – issuing spoken rather than written instructions -, led to the Prior and Vicar becoming involved in areas of the work entrusted to the Maestro, as was the case in 1565 with the distribution of officials and money for the work on the Royal Lodgings (assigned to Toledo) and the Lower Cloisters (assigned to the Prior), one third being given to Escalante and the other two thirds to Tolosa as *aparejador* to the Prior (AGS CySR. 260 f. 447).

The problem was not only the unfairness of this distribution but also the fact that henceforth the piecework system was to be applied, as was the case in 1567 for the work on the Lower Cloisters – when Juan Bautista was still *Maestro Mayor* – and which was by extension to be applied following his death.

The ninth provision in the Regulations of 1563 (Cano de Gardoqui 1993, p. 29) left the decision of what was to be piecework and what not to the Prior and *Maestro Mayor*. The authority of Juan Bautista initially determined that work on the more important sections of the Monastery – the Second Cloister, *Claustro de la Enfermería*, the Main Cloister – should be undertaken using the valuation system and the daily rate of pay. In other words, no specific fixed price was to be set for the work until it was concluded. The Maestro was thus able to assess the professional skill of the official in charge – the most qualified and not the one who had set the lowest initial bid (Piecework) -, and payment made to the builders would reflect the quality of the work carried out.

As the valuation system reflected what was a *fair price*, it proved the best way of ensuring quality in the work and was the system Juan Bautista sought to apply (AGS CySR. 261 f.4 and 258 f. 296), thus establishing a perfectly coordinated team composed of *Maestro Mayor* and *Aparejadores*, capable of taking on tasks ranging from design to choice of builders, and including evaluation and rates of pay for the work, thereby avoiding any intervention from Master Pieceworkers.

Since the valuation system lacked any set deadline for the execution of the work and any financial incentive for the workers undertaking it, unaware of the final cost, this procedure led to a slowing down in the pace of the work, contrary to the wishes of the King and the Prior, and less involvement for the Congregation in the construction process.

This would account for the disputes that led to the gradual separation of Juan Bautista from the position of master builder at El Escorial, and indeed the actual disappearance of the position of *Maestro Mayor* following his death.

With the widespread application of the piecework system at El Escorial and with the work having been widely distributed, it is hardly surprising that the *Aparejadores* were able to combine the traditional tasks related to their position with those of a *Maestro Mayor* without any official qualification, both in terms of building – drafting plans, conditions and valuation (AGS CySR. 260 f. 600) – and administrative concerns. The pieceworkers controlled by the *Aparejadores* take on the task of contracting the respective work, acting as *maestros mayores* over the teams of officials and labourers under their charge, as well as *administrators* of their workers' salaries.

The importance of the *Aparejadores* soon grew and in 1568 and 1569 serious problems were to arise concerning their compliance to the guidelines laid down by the Congregation, as they tried to ensure the piecework was allocated to the *maestros* who were their friends by revealing to them the

total cost of the work to be carried out prior to its being publicly tendered (AGS CySR. 258, f. 193 and Kubler 1992, p. 60). This clashed with the wishes of the Prior and the Congregation who were keen to award the piecework themselves (AGS CySR. 260 f. 112). This led to the *aparejadores* either delaying or occasionally even failing to draw up and hand over to the Congregation the designs, conditions and valuations of the piecework to be carried out. This information was crucial in order for the Congregation to know costs – offers and bids – and when a section of work could be finished, as the rates for piecework included the cost of the work and the price and quality of the materials to be used. This was based on a series of reports drawn up by the *aparejadores*, in turn based on reports issued by permanent public officials resident in the areas from which the raw materials were extracted.

An effort was made to resolve this situation in the successive Regulations drafted in 1569 and 1572, at the same time as the duties of a new branch of organisation – *Veeduría (Overseers)* – were laid down and which saw the setting up of a new administrative body which after 1572 became a fully fledged member of the Congregation with the same decision making capacity as that allocated to the post of *Contador (Accountant)*.

The absence of any *Maestro Mayor* and the need for a person to safeguard the progress of the work and exercise control over the *Aparejadores* gave rise to the setting up of the post of *Veedor (Overseer)*, initially 1570 to 1572 – linked to the *Contaduría (Accounting)*, a role filled by the Accountant Andrés de Almaguer himself and later by Gracia de Brizuela, who was now given independent powers reflected in the 1572 Regulations (Cano de Gardoqui 1994, p.29): " El oficio de veedor y proveedor parece que es tener cuenta con ver cómo se trabaja en la fábrica y cómo andan y asisten los aparejadores y sobrestantes y mayores de la carretería...y hacer maherir carretas y bestias y oficiales y peones... y los que no asistieren en la Fábrica, así como aparejadores y sobrestantes, apartarlos como les pareciere; y asistir en la Congregación, y tener cuenta con hacer proveer los materiales...y dar recaudo a los destajeros." A short time afterwards, a document signed by Philip II himself established the position of Overseer as having power over the *Aparejadores* and *Superintendentes (Supervisors)* even during the absence of the Prior and the Curate (ABE Carp. III l. 58).

This situation clearly reflects to what extent the administrative and building tasks involved in the work at this period were fulfilled without the presence of any *Maestro Mayor*, culminating in the Royal Warrant of September 14, 1577 (Llaguno 1829, vol. II, pp. 269-270) in which Juan de Herrera's salary as an architect was increased to 800 ducats "upon condition and obligation that he undertake all duties related to the work and architecture, and any other tasks which may be attributed to his profession". 400 of these were paid by the Paymaster of the work at the Alcázar de Madrid and the Casa Real del Pardo, the remaining 400 ducats being paid by the Paymaster at El Escorial, without specific mention being made of Herrera as *Maestro Mayor* for any these works, although he was referred to as architect.

This represented the final separation of the *Architect* from the position of craftsman builder, Juan de Herrera being the first representative in form and content of what might be termed *Architect*, although this had in fact existed since March 14, 1567 (Iñiguez 1948, p. 159) when two months on from the death of Juan Bautista, Herrera, who for some time had been serving as Toledo's assistant in drawing up the plans for the monastery, was awarded an increase which took his salary to 250 ducats per year on condition that he "serve and follow the orders which We or our ministers may issue him with and which relate to his profession, and that he be obliged to reside wherever we shall require and that he discharge those duties wherever they shall be necessary". In addition to the Royal Warrant, one significant aspect was a footnote stating: *Juan de Herrera, architect*.

This raises another final matter of interest, namely that the question of the plans for the design of the Monastery may to a certain extent, together with the administrative and building concerns already addressed, account for the gradual disappearance of the of the figure of *Maestro Mayor* at El Escorial.

Here the unusual position of Juan Bautista de Toledo within the context of Royal Works is worth highlighting. He was appointed *Royal architect* after 1559 (Barbeito 1992, p. 226 and Bustamante, 1994, pp. 17-18), a position hitherto absent from contemporary Spanish architecture, a position which was for life and which focused on the tasks of design and planning, yet without officially being assigned to any specific work, for which the corresponding *Maestros Mayores* continued to be in charge - Alonso de Covarrubias at the Alcázar de Toledo; Luis de Vega at the Alcázar de Madrid, the Palacio del Pardo and Aranjuez, and his nephew Gaspar de Vega at the Palacio de Valsain. As of 1562, Juan Bautista also became *Maestro Mayor* of the Alcázar de Madrid and of the Monastery of El Escorial.

In practice the dual nature of the work led to clear priority being given to the task of designing, thus leaving aside any legal, administrative and financial concerns. At El Escorial, in line with the opinion of Philip II, these duties were entrusted to two *Aparejadores*, answerable to Juan Bautista and charged with carrying out the responsibilities formerly assigned to the *Maestro Mayor*, unable as Toledo was to devote his attention full time to the design and planning of the Monastery.

Toledo's salary - 500 ducats per year - saw the end of the daily rate of pay which *Maestros Mayores* had usually been receiving through their involvement in day-to-day work.

Indeed, the traditional position of Juan Bautista, both in terms of planning and involvement in executive and administrative affairs was far removed from the duties formerly assigned to the *Maestros Mayores* in Spain at the end of the XV as well as during the whole of the XVI and part of the XVII centuries (Marías 1983, vol. I, pp. 77-78).

Responsible for the presence of the workers and ensuring they fulfilled their duties, charged with valuations and assessment of the work, drafting plans for various sections of the work as it

progressed, the traditional *Maestro Mayor de Obra* contracted the execution of the work, regardless of whether or not he had actually drawn up the plans himself. Absence from the building site meant losing a day's pay, and he was thus forced to be present there every day. This was very much in line with a legal system for the workforce of *rendering of services or medieval system of Maestria* whereby a worker – a master or official – rendered his services for a day's work without being under the obligation to complete any particular task (Cano de Gardoqui 1993, p. 28).

Although during the early stages of the work at El Escorial (1562-1567) supervised by Juan Bautista, the system of *rendering of services* was used for the bulk of the tasks which involved basic locating, preparing and extracting stone from the quarries, felling wood in forests near the monastery, construction of limestone and brick kilns, laying of foundations and so on, for the most crucial parts of the building process, as pointed out, Toledo attempted to implement a system of valuation, - not a fixed price for the work – based on a day's pay. This system of valuation or appraisal together with piecework is one which is reflected in modern-day contractual agreements.

However, it should be noted that during the first third of the XVI century Spain had, on one isolated occasion, already witnessed a change from a strict system of *Maestria* to an intermediate arrangement, merging the latter with architectural organisation based on a contractual agreement (Hoag 1985, p. 45). Such a significant arrangement had been reached for the Royal Work carried out on the Alcázar at Seville, as well as Toledo and Madrid (Llaguno 1829, vol. I, p. 304 and vol. II, pp. 166-168).

Indeed, when in 1537 Charles V appointed Alonso de Covarrubias and Luis de Vega as *Maestros Mayores* of these works, they were paid an annual salary of 25,000 *maravedies* in addition to four *reales* for each day's work. Yet, what might be seen as a clear example of the system of *Maestria* or rendering of services is open to question due to several unusual factors. Firstly, no specific work was assigned to any one particular *Maestro*, three works in fact being entrusted to two master builders, both of whom were under the obligation to take up permanent residence for only six months *as a result of having to oversee and design the plans*. No mention is therefore made of taking charge of the workforce, although there is a six-month period in which the *maestros* are given a free hand to contract their own work - *maestrias* -, at the same time as they become "*payroll*" architects, swelling the number of official Court workers.

The freedom of the *Tracista* (designer) in his work as a craftsman, his separation from the actual execution of the work, here hinted at, was to be confirmed later by the fact that neither Covarrubias nor Vega contracted the work for which they were directly responsible, a responsibility which now focused on the drafting of plans and designs rather than concerns for materials and the execution of the buildings, this work being left to *maestros*, contractors and pieceworkers. The application of the modern contractual system for this architectural work reflects the increasing appreciation of the *Maestros Mayores* for their design and planning skills.

Henceforth, the training given to the *Maestro-Tracista* (builder-designer) – geometry, mathematics, designing – would be a factor to be considered in their choice as architect or public official in the Court. Master builders involved in the Royal Works during the first third of the XVI century began to take on a role more in accordance with the progressive ideas put forward by Italian and French architects such as Alberti or Delorme, ideas which were to reach Spain some time later under the Court patronage of Philip II, the true promoter of a modern system for organising building work (Bustamante 1976, pp. 227-250 and Marías 1983, vol. I, pp. 72 and ss.).

The position of Juan Bautista de Toledo as *Maestro Mayor* at El Escorial and the architectural organisation of the building itself reflect this background and the series of events which occurred during the first half of the XVI century.

The type of design drawn up by the traditional master builders (Hoag 1985, p. 45) generally corresponded not to an overall concept reflecting the whole of the work to be built but rather to small-scale designs – basic and individual plans – serving as a kind of guide for *aparejadores* and officials, and providing rather too general an idea of dimension and form.

This was a far cry from the approach to design adopted by XV and XVI century Italian architects (Rosenthal 1988, p. 26) who, when drawing up a project, began by tracing a general outline of the building "in order to determine geometric features and scale for the ground plan, prior to subsequently adding rooms or specific functional areas". The question of whether to adopt one approach or another was addressed in 1528, when Hurtado and Pedro Machuca were designing the Palace of Charles V at La Alhambra in Granada where the pragmatism of the Emperor was applied more to distribution and arrangement of the building, in the location and specific placement of various chambers - *utilitas* -, rather than any approach to an overall plan - *dispositio*.

The same debate was to emerge years later in the building of El Escorial, although involving different protagonists. The general, overall ground plan conceived by Juan Bautista de Toledo in 1562 – a basic four-sided design divided into three parts using an axial approach (Sigüenza, 1963, pp. 30-31); Checa, 1992, p. 205 and Bustamante, 1994, p. 31), the middle section given over to the church and main entrance, the south divided into five cloisters, one large and four small, the north split up into patios – reflects a Renaissance design, which is Italian in origin and which no doubt evidences the predominance of the *dispositio*, of proportion, order and symmetry of the various parts of the ensemble, over the *utilitas* or practical arrangement of the building in its various chambers, for which Philip II, the Prior, Curate and Congregation were responsible.

Numerous authors (Checa, 1992; Cano de Gardoqui, 1994; Bustamante, 1994) have analysed in detail how on the one hand the ground plan or *cuadro* designed by Juan Bautista de Toledo for El Escorial was to remain unaltered to the end, whereas the *montea* or drawing of the work, was modified for various reasons, such as the decision in 1564 to double from fifty to one hundred the number of monks or the distribution and final use of the rooms as new needs emerged.

These changes evidence how far removed the master builder Toledo was from the actual execution of the work, a distancing which, it must be said, was very often due to the unusual situation of Juan Bautista, wholly dependent on the Monarch, but clashing with an organisation in which the Prior, Curate and Accountant played a key role in the running of the Monastery, reflected in the ceaseless confrontations between the two parts.

A significant example of this is the criticism levelled by Prior Fray Juan de Huete at Juan Bautista's plan for the Lower Cloisters in 1564:

"a lo que yo entiendo ella (la obra) va tan falta de aposentos que muchas casas de nuestra orden, y aun de las que no son muy principales, le harán ventaja porque ver ahora los claustricos que ya como van subiendo las paredes se va mostrando la forma de ellos, son tan pequeña cosa que no son nada, ni tienen autoridad ninguna consigo."

(Bustamante 1994, p.69)

More documents of this nature exist, which we will not dwell on here, but which serve to highlight that Juan Bautista's approach to design, following the Renaissance principles of stressing *dispositio*, in practice not only aid rearrangement of the building but also emerge as one of the factors behind the creation of the modern figure of the *Architect*, as distinct from the craftsman, and of the concept of new *Architecture* based on a rational and objective approach to design.

There are, however, many factors and details which may have escaped our notice. The position of Philip II himself, for instance, a perfectionist concerned with the finer points, proves somewhat ambiguous vis-à-vis the question of the *Maestro* and the Architect. On certain occasions he adhered to the idea that Juan Bautista should free himself from any executive concerns, releasing him from any obligation to contract the work and reserving him as designer; yet on other occasions he engaged his *Maestro* in the execution of the *monteas* (drawings), in determining the use of materials, and so on. (Portabales 1945, p. XXII. AGS CySR. 259 f. 155 and 260 fs. 494 and 503). This wavering on the part of the Monarch often responded to pressures from the Architectural Advisory Committee, the Prior and the Accountant.

It is impossible to specify here the basic reasons why Juan de Herrera was never employed as *Maestro Mayor* on the work at El Escorial. Was it perhaps, as Wilkinson points out, as a result of his practical training in the building aspects and involvement in actual construction work as opposed to theoretical knowledge and application of architectural techniques? (Wilkinson, 1984, p. 134). Herrera was, however, thoroughly familiar with design and models for monasteries, having assisted Juan Bautista de Toledo in this area in cooperation with Juan de Valencia. Herrera was also endowed with tremendous organisational and administrative skills, as evidenced by his annotations to the sections in the General Regulations of 1572 (Cervera 1985, pp. 46-49) or his handling of the building of the main church at El Escorial (Cano de Gardoqui, 1993, pp. 38-39).

Juan de Herrera's involvement as a designer at El Escorial remains unclear. In his well-known *Memorial* of 1584 (Llaguno, 1829, vol. II, pp. 332 and ss. Rivera, 1986, p. 74) the architect himself makes no reference to any specific prolonged contribution to the design work at the Monastery, apart from the plans for the roofs. Sigüenza mentions the alterations made by Herrera and the *Obrero Mayor* (head builder) Fray Antonio de Villacastín at the Work, although no specific mention is made of the nature of the alterations (Bury, 1986, p. 332). Portabales completely dismisses Herrera's involvement in the Work, while Rubio points to how on the death of Juan Bautista most of the designs for the Monastery (Church) had not been completed or at least how various chambers had not been finalised (Rubio, 1964, pp. 11-70).

Whatever the case may be, and upholding Bury's opinion based on the information provided by Wilkinson (Wilkinson 1976) concerning Sigüenza's acceptance of the work attributed to Juan de Herrera and the need to adopt a cautious approach to any possible analysis of Herrera's involvement at El Escorial, what does seem to be clear is Herrera's contribution to the management and execution of the Monastery until its completion. Based on and respecting the general design laid down by Juan Bautista de Toledo (Rubio, 1949, pp. 157-215), Herrera introduces the idea of *utilitas*, in other words the specific organisation of the building into its various rooms, an element of planning which was absent in the designs and models of Juan Bautista de Toledo.

By way of a conclusion we may cite an extremely enlightening comment made by the contemporary builder Juan de Arfe:

"Murió Juan Bautista, con el tiempo que se comenzaban a subir las montañas de este famoso edificio, y causó su muerte mucha tristeza y confusión, por la desconfianza que se tenía de hallar otro hombre tal, más luego sucedió en su lugar Juan de Herrera... en quien se halló un ingenio tan pronto que, tomando el modelo que Juan Bautista había quedado, comenzó a proseguir, y levantar toda esta fábrica con gran prosperidad, añadiendo cosas al servicio de los moradores necesarias que no pueden concebirse hasta que la necesidad las enseña."

(Iñiguez 1965, pp.48-49)

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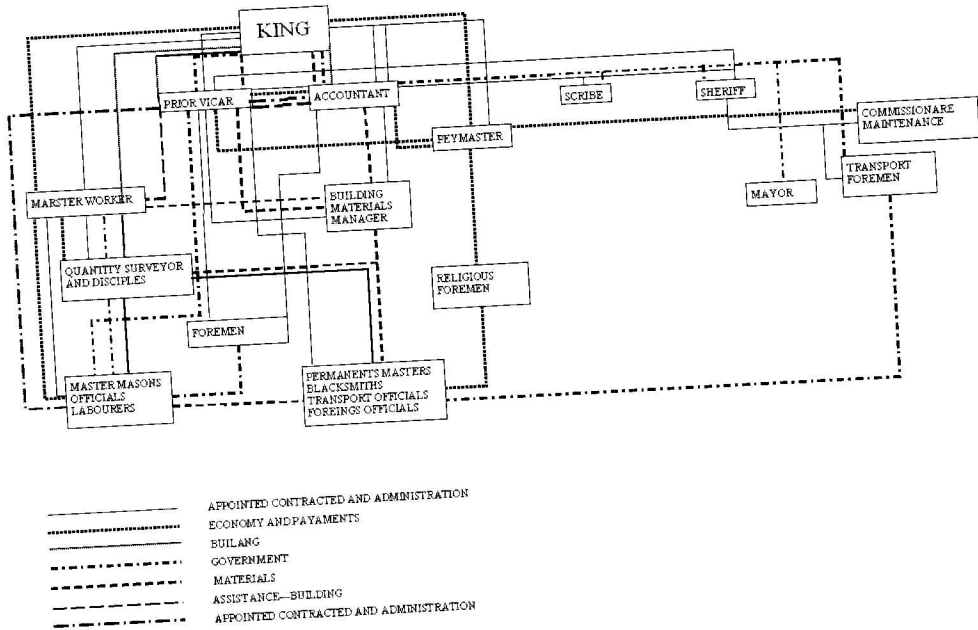


Figure 1. Chart 1 (Regulation of 1563)

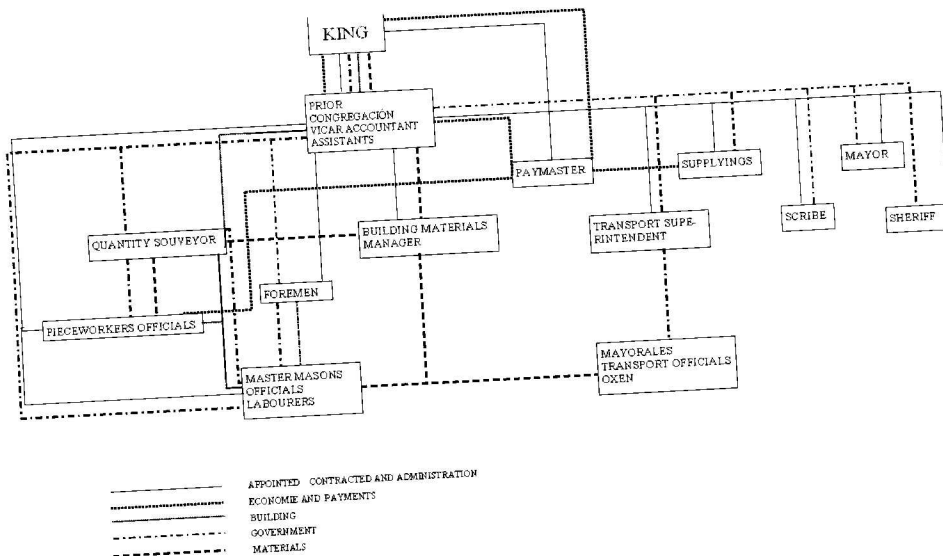


Figure 2. Chart 2 (Regulation of 1569)

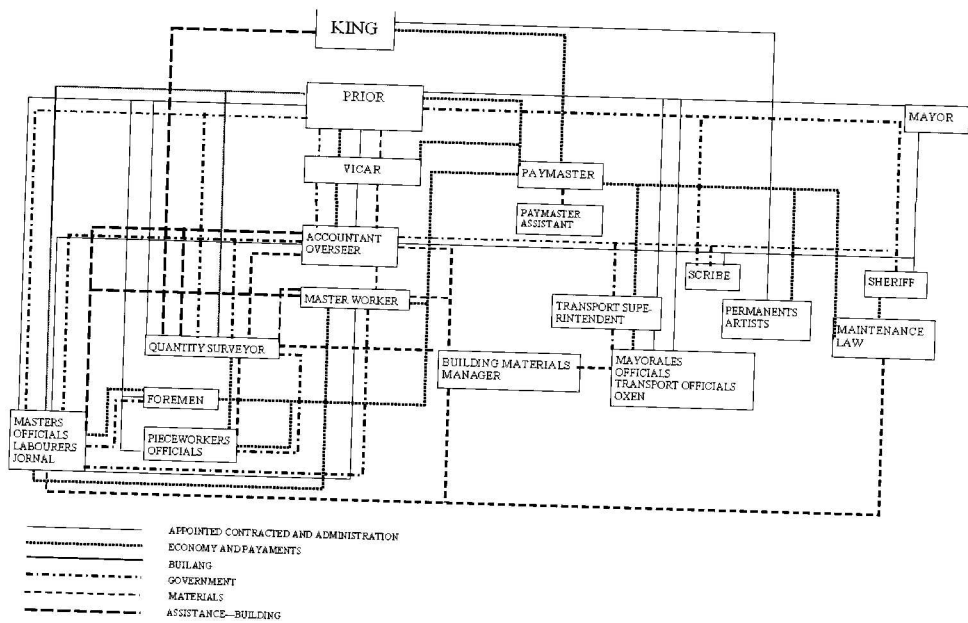


Figure 3. Chart 3 (Regulation of 1572)