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RULES AND PRACTICES: BUILDERS' EXAMINATIONS IN EARLY MODERN LISBON (17TH-18TH CENTURIES)[1]

Reglas y prácticas: Los exámenes de los constructores en Lisboa durante la Edad Moderna (siglos XVII-XVIII)

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SUMMARY: This article explores the taking of examinations in Lisbon by those involved in the building trade in the early modern period. It contrasts rules with examination practices based on information gathered from regulatory documents and over two thousand records of craftsmanship examinations conducted between the mid-seventeenth and mid-eighteenth centuries. While the former documents are well known in Portuguese historiography concerning craft guilds, the latter were taken from two handwritten books which have not previously been researched. The quantitative and qualitative analysis of this data set shows that examination practices complied with the main rules and formalities, although there were exceptions resulting from historical circumstances. This analysis also reveals various aspects of the examination which are not possible to discover using only regulations, as well as offering an

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unprecedented insight into the characteristics and patterns of the masons and carpenters of Lisbon in the early modern period.

Keywords: builders; craftsmanship examination; rules and practices; serial data; Lisbon.

RESUMEN: Este artículo explora la realización de exámenes en Lisboa por parte de profesionales de la construcción durante la Edad Moderna. Confronta las reglas con prácticas de examen basadas en información recopilada de documentos reguladores y más de dos mil registros de exámenes del oficio realizados entre mediados del siglo XVII y mediados del siglo XVIII. Mientras que los primeros documentos son bien conocidos en la historiografía portuguesa sobre los gremios artesanales, los últimos fueron tomados de dos libros manuscritos que no habían sido investigados previamente. El análisis cuantitativo y cualitativo de este conjunto de datos muestra que las prácticas de examinación cumplieron con las principales reglas y formalidades, aunque con excepciones derivadas de circunstancias históricas. Este análisis también revela varios aspectos del examen imposibles de descubrir utilizando solo regulaciones, así como ofrece una visión sin precedentes de las características y patrones de los albañiles y carpinteros de Lisboa en la Edad Moderna.

Palabras clave: constructores; examinación gremial; reglas y prácticas; datos en serie; Lisboa.

1. INTRODUCTION

Taking a craftsmanship examination or producing a masterpiece, as a mandatory steppingstone for professional advancement within a European guild, was a phenomenon essentially linked to the early modern period. In fact, several researchers who have studied trade guilds state that such examinations appeared from the sixteenth century onwards, and were described in guild regulations that, in turn, resulted from the establishment of the guilds themselves, many of which were also formalised around this time. However, this was not a universal and uniform phenomenon, as examinations started to be required in some (rare) crafts as early as the thirteenth and fourteenth centuries, and during the entire early modern period there were crafts which never required their trained workers to undergo any kind of test or examination (Epstein, 1991: 125; Campbell, 2002: 221; Munck, 2007: 68-74; Ogilvie,

2019: 411-414). Nevertheless, when required, such examinations transformed journeymen from a particular craft into newly qualified master craftsmen and only then could they exercise their profession freely, set up a workshop, teach apprentices and enjoy professional privileges.

Such an examination, as seen from regulatory documents, has been interpreted historiographically as a means of restricting the access of new members to the guilds and thus limiting competition, forming part of the various obstacles that created the guild's «monopoly» (Ogilvie, 2019; see also Prak et al., 2020; Peña, 2022). But, recent quantitative studies, based on examination certificates, have nuanced this idea, to offer a much more complex view about the role of the examination in overseeing that profession (Nieto, 2013, 2018, 2022; Nieto and Zofío, 2016; Muñoz and Franch, 2020). However, there are still few studies that have analysed this type of data for most trades, probably due to the tedious work of gathering information spread throughout various documents, which are not always organised into specific collections. Of course, this situation is equally true for trades relating to building construction, i.e., masons and carpenters.

Nevertheless, analysing how builders were examined in the early modern period has shown itself to be indispensable, not only to help support the new revisionist approaches to craft guilds — a trend that has come to be referred to as «the return of the guilds» (Lucassen et al., 2008) — but also for recent Construction History, focused on the study of the agents, materials, practices, processes, networks and relationships established through and within the construction activities of the past (Summerson, 1985; Morley, 1987). Indeed, in the latter field, existing work on craftsmanship examinations for builders is based primarily on the clauses outlined in the guild regulations (Peña, 1984; Paz, 2004; Flexor, 2005; Morales, 2006; Fernández, 2007; Romero and Romero, 2017; Cortés, 2019; Domènech, 2019; Ruiz, 2019; Vidal, 2021). Scarcer are the studies that look specifically at examination practices, whether using examination register books (Molins, 1988), a set of examination certificates (Ripoll, 2000; Morales, 2006: 846-851), or just one of these (Díaz, 2002).

The present study therefore seeks to contribute to the two fields of study mentioned, but manly to the history of early modern builders. It focuses on the masonry and carpentry craftsmanship examinations in Lisbon carried out between the mid-seventeenth and mid-eighteenth centuries. The mining of hitherto unexplored serial data, collected from two examination register books and organised in a database created for this purpose, as well the documentary sources of the period, particularly those of a regulatory nature, allows us to compare the rules established with actual practices and to ascertain their effective application[2]. Such analysis also

2. The aim of this work is not to carry out a comparative study with other cases, mainly because, as far as I am aware, the existing research based on builders' examination certificates

offers a more in-depth look at the characteristics and patterns of the builders in Lisbon in the early modern period. Given this, this study first presents the sources used, then breaks down the examination rules into their constituent parts, and finally analyses examination practices both quantitatively and qualitatively using various variables or parameters.

2. THE SOURCES

The main documentary sources for this study were produced by the mason and carpenter trade guild in Lisbon, which originated in the early sixteenth century, with their charitable association being the Brotherhood of Saint Joseph of the Carpenters [*Irmandade de São José dos Carpinteiros*], which began in 1537. The old documents of this institution still exist and were not very much affected by the 1755 earthquake and subsequent fire, which destroyed the city centre and the collections of so many other guilds, since their main location, the church of Saint Joseph, which was built in 1546, was located outside the city walls in the northern part of Lisbon[3]. When the trade guilds were dissolved following the decree of 7 May 1834 (*Collecção de Decretos*: 115), its documentation was transferred to the custody of an associative guild — the Brotherhood of the Former Guilds of the House of Twenty-Four [*Irmandade dos Antigos Ofícios da Casa dos Vinte e Quatro*] — located in the same building and this remained deposited there in an adjoining space to the church. In 2014, the 179 folders containing this documentation were

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does not allow for reliable comparisons, either in terms of quantity, time frame, or content. Molins, for example, carried out a very brief study of only two pages, as his goal was to catalogue the data on two hundred wood artists recorded in the first Pamplona examination book, which covers the years 1587 to 1650 (Molins, 1988: 363-380). Morales's analysis is based on the same list (Morales, 2006: 846-851). The rest of the examination books in the Pamplona Municipal Archive, which extend to 1897, remain to be studied. Ripoll's work encompasses only 59 examinations of masons between 1761 and 1830 in the city of Girona, with limited detail (Ripoll, 2000). However, even without taking into account the temporal disparity (the data for Lisbon cover exactly the years between 1650 and 1761), the examination records analysed here refer exclusively to builders (masons and house carpenters) who, due to the nature of their work, did not have a workshop or a fixed workplace, as opposed to other types of workshop carpenters. A similar association of masons and house carpenters (as builders) existed in Tortosa, but Vidal's study focuses only on regulatory aspects (Vidal, 2021). Furthermore, a comparison of builders with other trades and crafts does not provide insights relevant to the aims of this study. Nevertheless, where appropriate, reference is made to similar contexts, particularly in Portuguese and Spanish cities.

3. The church of Saint Joseph currently has two inscriptions on its façade. One mentions the dates of the origin of the Brotherhood and the church's construction (also Costa, 1712: 431); the other mentions that the earthquake only ruined the façade, which was rebuilt in 1757 (also Martins de Oliveira, 1757: 140-144).

transferred to the Lisbon Municipal Archive, through a 100-year storage agreement under a protocol between that institution and Lisbon City Council, with a view to their cataloguing, restoration of deteriorated documents and the preservation of information through digitalisation (Brochado et al., 2019: 98-102).

Although this task has not yet been completed, some documents have already been scanned and made available online[4], and researchers can also examine the books that have already been identified, in person, as is the case with the two-craftsmanship examination register books that form the subject of this study.

The first register covers the years 1650 to 1682. It consists of 91 originally numbered folios, although some numbers are almost illegible nowadays, due to the top of the book being severely damaged, as are the last six folios. It contains 639 examination entries[5].

The second register covers the years 1703 to 1761. It consists of 178 numbered folios, preceded by an index, currently of about 26 folios, although the initial folios for the letters A, B and C have been lost, as well as folios 42, 63, 82 and 88, some of which must contain information now lost as shown by the data contained in the index. It contains 1,449 examination entries[6].

Surely there must have been other similar registers, but they have either not been preserved down to the present day or have not yet been identified. This can be inferred from the fact that the first book mentioned contains an initial note stating that it is the «third book of examinations», and that there must also have been a book for the period between 1682 and 1702, as well as another one, or others, for the decades after 1761 until the abolition of this procedure in 1834.

In turn, the documents describing the regulations for the Lisbon construction guilds were published quite some time ago in two works widely known by Portuguese researchers. The first work, published by Correia (1926), transcribes almost

4. Lisbon Municipal Archive – Historical Archive [AML-AH], Irmandade de São José dos Carpinteiros [ISJC], available online at https://arquivomunicipal3.cm-lisboa.pt/X-arqWEB/Result.aspx?id=1583713&type=PCD.

5. AML-AH, ISJC, *Livro de Examinação da Irmandade do Patriarca São José* [MS 111]. This book also has 20 blank pages, a pasted folio (duplicating folio 29), a numbering error (omitting folio 55) and a loose sheet with undated notes about two carpenters, which correspond to examinees from 1708. The last two entries (from 1682) were deliberately crossed out by the registrar «because this book is at the end», eventually recording them again in a new book. This source was mentioned, but not analysed, in an article about the religious side of the Brotherhood of Saint Joseph (Coutinho, 2019).

6. AML-AH, ISJC, *Livro de Exames de Ofícios da Irmandade de São José dos Carpinteiros* [MS 41]. This book also has 23 blank pages, two folios with the same number (14), a numbering error (omitting folio 117), and four entries (not accounted for in this study) whose registrar either crossed out or annotated their duplication. This source was sparsely used in a study on Valério Martins de Oliveira (Pinto, 2018: 84).

entirely the book made by Lisbon city council in 1572[7], which brings together in one volume a collection of the regulations for various trades in the city. It is divided into two parts: the first contains the rules specific to each trade, in particular the examination clauses; the second consists of general rules for all trades. The second work, published by Langhans (1943-1946)[8], transcribes information gathered in other books from the city hall[9], containing rules before and after 1572, of note for this study being the 1709 regulation.

However, before proceeding to analyse the data contained in the examination registers, it is first necessary to consider what the guild regulations and other additional documentary sources[10] tell us about the builder examinations in Lisbon.

3. THE RULES

The first documentary reference stating that apprentice masons and carpenters in Lisbon had to undergo an examination to exercise their trade, dates back to 1499.

Indeed, there is no data or any other mention indicating the use of examinations to assess the competence of builders or even for other trades in previous centuries, whether in Lisbon or in other towns in the kingdom of Portugal (Melo, 2009(I): 262-263). It is true that some medieval tables of prices and services differentiated builders through the amounts they could earn daily [*jorna*], showing that there was a professional hierarchy, most likely established through the quality of the service produced, and this, it is assumed, would depend on the knowledge and experience which had been acquired[11]. Yet, nothing is stated about any examina-

7. AML-AH, Casa dos Vinte e Quatro [CVQ], *Livro dos regimentos dos oficiais mecânicos da cidade de Lisboa reformados por ordem do Senado*.

8. This work contains an introductory study by Caetano (1934) which provides a summary on the topic and is still required reading.

9. For builders, mainly: AML-AH, CVQ, *Livro 1.º do acrescentamento dos regimentos dos oficiais mecânicos*; *Livro 4.º de registo dos regimentos dos oficiais mecânicos*. The regulations of the masons and carpenters, contained in *Livro 1.º do acrescentamento...*, were also recently published by Loureiro (2014), and a handwritten copy still exists in the documentary collection of the Brotherhood of Saint Joseph of the Carpenters (AML-AH, ISJC, *Livro de regimento e compromisso da bandeira do bem-aventurado São José dos ofícios dos carpinteiros e pedreiros*).

10. The documents used are mainly from the collection of the Brotherhood of Saint Joseph of the Carpenters, but also from the collection AML-AH, *Chancelaria da Cidade* [CC], taking advantage of the fact that most of the latter have already been transcribed and published by Oliveira (1882-1911).

11. For example, Évora by-laws from 1375-1395 distinguished between two types of carpenters, the «good» ones and those who «are not so» (Pereira, 1998: 159). In price lists for Porto from 1413, a distinction is made between «the best» and those «who are not so», both for carpenters and masons (Cruz, 1943: LXXXVI). Finally, in the price lists for Loulé in 1403, masons and carpenters were paid higher wages than «apprentices and others sharing their condition» (Duarte et al., 1999-2000: 128-129).

tion. The earliest known evidence of trade examinations in Portugal dates from the mid-fifteenth century.

The first evidence is provided by the caulkers in the Royal shipyards in Lisbon[12]. Their examination, to be carried out by the royal master of that trade, was mandated by King Afonso V (r. 1438-1481), in 1455, and would serve to choose the best 40 nominally identified caulkers in the city, who would then enjoy a series of privileges in relation to their other colleagues. The same order, and consequent examination, was granted at the end of the fifteenth century to shipwrights (30 from Porto, 20 from Vila do Conde, 20 from Viana and 20 from Faro in 1491; 60 from Lisbon in 1492), as well as to artillery carpenters (20 from Lisbon in 1492), all assigned to the royal shipyards[13] (Gomes, 1931: 50-92).

Another historical element originates from the city of Évora and results from a complaint that this municipality made to the new king, João II (r. 1481-1495). According to this, the previous king (Afonso V) had granted the privilege of being able to choose the examiners who conducted the trade examinations. However, one royal official — the *almotacé-mor* — did not comply with this privilege, either by choosing to be the examiner himself or by appointing people «who know nothing» to the post (Pereira, 1998: 365-366). The answer given by the king is not known, but what is, is that the matter was discussed again at the *Cortes* — an assembly of representatives summoned by the king — of Évora and Viana in 1481 and 1482.

This debate may explain why there were no trade examinations in medieval Portugal: royal consent was needed for their establishment and the king did not authorise them. Indeed, in addition to other aspects related to the activity of such trades, the representatives of the municipalities reported to the king that several individuals had set up workshops and called themselves «masters» without ever having been «good apprentices», knew little or nothing about their trade, which harmed the people, and this happened because no punishment had been established for these «ignorant» individuals. They then asked that these craftsmen be required to be examined by «experts». They proposed that examiners should be elected by members of the craft and approved annually by the municipal councillors. They also recommended that craftsmen should not be allowed to open workshops as masters until they were examined and should pay a penalty if they did so. The

12. Portuguese historiography usually dates this case to the end of the fourteenth century, in line with that determined by Marques (1964). However, it is thought that there must have been a typographical error in the date of that work, since the documents that support this historian's argument — published by Gomes (1931) — are from the fifteenth century, and mostly refer to the end of that century.

13. As a matter of curiosity, it should be noted that the number of privileged shipbuilders in Lisbon increased considerably, within a noticeably brief period, becoming 300 shipwrights in 1499 and 200 caulkers in 1503.

king's decision, however, must not have pleased the petitioners, as he ordered that no innovations were to be made. According to him, habits and customs regarding access to trades should be maintained, even stating that «people should not be prevented from having the freedom to have and use the trade they have learned» (Sousa, 1828: 235-236).

If this kind of change did not happen under King João II, the same cannot be said for the following monarch. In fact, on 21 April 1499, King Manuel I (r. 1495-1521) confirmed a by-law made on 3 March by the members of Lisbon city council, with the support of certain masons and carpenters from the city (Rodrigues, 1974: 229-238). Among other aspects, it stipulated that

> every apprentice, whether following a mason's trade or a carpenter's trade, should be examined by two craftsmen of each of the said trades, sworn in at the city council, to examine the said apprentices faithfully and thoroughly. And following the decision a certificate would be issued by the city council of the amount to be earned daily in the year they were examined. And this was to be entered into the book of the city council so that those who had been examined and the amount they would earn would be known.

3.1. *The examiners*

From then on, apprentice masons and carpenters in Lisbon were examined by two examiners, which meant these had to be chosen. As such, the city masons and carpenters met on 24 August 1501 to establish an agreement which, along with the royal confirmation of 26 April 1503, became the first guild regulation for the construction trades in Portugal[14]. It laid down the process for the election of the highest offices of the guild and specified the functions of each post. Thus, whether through viva voce or secret ballot, on the evening of the day of Corpus Christi, the following officers were chosen. Two stewards [*mordomos*], one being a mason and the other a carpenter, who were responsible for organising the guild's participation in processions (especially that of Corpus Christi), and for financial income and expenditure. Two craft-judges [*juízes-do-ofício*], one being a mason and the other a carpenter, who were responsible for resolving conflicts among themselves and other parties, with powers to apply financial penalties. Finally, a registrar [*escrivão*], who was responsible for producing a written record of all procedures and payments. The chosen craft-judges and the registrar then organised another election for the four examiners, consisting of two carpenters and two masons «to examine the

14. For Porto, the first regulation on the building trades is for carpenters and dates back to 1548, dealing mainly with the examination of journeymen (Cruz, 1943: 72-73).

journeymen and judge the works that are undertaken according to that which the king has determined and is specified in the relevant by-law of the city council»[15] (Langhans, 1943-1946(I): 258-261).

This electoral system was modified on 27 July 1514 from a direct to an indirect choice. The members of the guild were to choose twenty persons each year, ten masons and ten carpenters, from the best or «principal» members, who would then choose from among themselves six persons who, in pairs, would occupy the three highest positions in the guild, that is, two overseers [*vedores* — literally, those who see, responsible for checking the quality of their colleagues' work], two examining judges, and two stewards. Those who had been elected would have to go to the city council to be approved and take the respective oath[16] (Langhans, 1943-1946(I): 261).

In the following years, masons and carpenters began to demand a greater separation between trades, and specialisms within each trade also emerged, which affected the choice of examiners. In 1529, it was determined that carpenters could not participate in the elections of masons and vice versa and, in relation to the two masons who were examiners, one should be a stonemason [*canteiro*] and the other

15. It is difficult to establish when the apprentice-journeyman-master hierarchy was clearly established in the Lisbon building trade, for two reasons: many documents are ambiguous and the three words are polysemic (on these problems in the Portuguese context, see especially Melo, 2009: 161-164). In any case, the above-mentioned documents of 1499 and 1501 seem to indicate that this professional hierarchy was being established at the time. In addition to the article cited in the text on the examination of apprentices [*aprendizes*], there are two others that define the daily rate for the different positions. They appear in the following order, which itself reflects a hierarchy (from the most qualified to the least): the master in charge of the work [*mestre que tijuer carreguo dobra*] (paid at 60 *reais*, minus 20 if meals were provided); the journeyman who accompanied the master in charge of the work, even if he was already a master [*ofiçiaaes que com elle andarem casso que mestres seJam*] (paid at 50 *reais*, minus 20 if meals were provided); the examined apprentice (value not fixed); the worker [*braçeiro*] (paid at 35 *reais*); and the apprentice (value not fixed, but less than 35 *reais*, depending on performance, minus 15 if meals were provided) (Rodrigues, 1974: 230-231). The 1501 document not only stated that the examiners would «examine the journeymen», but also that no journeyman should teach an apprentice who had begun training with another journeyman. So, it seems that the examination was first imposed on apprentices and then, two years later, on journeymen, making a clear distinction between the two positions. However, none of the Lisbon regulations of 1572 and 1709, where such a tripartite hierarchy is evident, specify the minimum period that someone had to serve as an apprentice and then as a journeyman in order to take the examination. In the Portuguese building trade, such an aspect appears only in the 1785 regulations for carpenters in Porto, which required six years of training, two as an apprentice and four as a journeyman (Cruz, 1943: 79).

16. This last practice appears documented in the books of the city council the very next year, with Pero Vicente and Pero Afonso, the examiners for the masons; João Vaz and Fernão de Avis, the examiners for the earth masons; and Estevão Fernandes and Estevão Godinho, the examiners for the workshop carpenters (AML-AH, CC, *Livro 1.º da Vereação*, fl. 21).

a bricklayer [*alvanel*] (Langhans, 1943-1946(I): 262). In 1548, it was ordered that carpenters were not to do masonry work and vice versa, with each group required to work exclusively in the trade for which they had been examined (Langhans, 1943-1946(I): 262-264). On 31 December 1549, the rules for the examination of fine woodworking carpenters [*marceneiros*] — including wood joiners [*ensambladores*], wood carvers [*entalhadores*] and imagers [*imaginários*] (sculptors of statues of holy saints) — were laid down in writing (Rodrigues, 1974: 342-352), separating carpenters who worked in a fixed place, their workshop, from those who worked on building sites. In 1551, it was determined that the workshop carpenters choose one steward, with the other being chosen by the masons and house carpenters together (Langhans, 1943-1946(I): 264-265).

The trades were thus joined through the work they performed and not through the nature of the material they used, which, in fact, was clearly laid out in the structure of the 1572 regulation, where the various types of carpenter appear in different chapters: masons, earth masons [*taipeiros*] and house carpenters in chapter 34, fine woodworking carpenters in chapter 35, workshop carpenters [*carpinteiros de tenda*] in chapter 36, and wood turners in chapter 38 (Correia, 1926: 105-125).

The latter regulation also specified that the examining judges and registrars of each trade would be barred from exercising the same office for three subsequent years, counting from the last day of their year in office, unless the guild did not have many members or if there were no members who knew how to write. No examiner could act alone, as the presence of both examiners was required, together with the registrar, otherwise the examination would be invalidated. Furthermore, the examiners could not favour or prejudge the examinees, nor examine children, relatives, brothers-in-law, or servants[17]; in the event of a conflict of interest, the examiner prevented from examining had to be replaced by another from the previous year, chosen by the city council (Correia, 1926: 238-240).

New formalities for the higher positions of the masons' and carpenters' guild were included in the 1709 regulation. At this time, the elections were held in two consecutive stages. The first took place on the morning of the first octave of Christmas (that is, on 26 December — a day that had long been used for elections), when ten masons and ten carpenters were elected, and were named those «elected», who would form part of the guild's board, and after this the date of the next election was

17. The Lisbon regulations were silent on whether religious and racialised minorities could participate in the trade, unlike others that explicitly prohibited them. These include the 1695 regulation of Murcia (Peña, 1984: 143) and the 1780 regulation of Salvador da Bahia, Brazil (Flexor, 2005: 379-380), as well as many others referenced by Domènech (2019: 288). Thus, in Lisbon, New Christians and builders from racialised minorities could take examinations and become masters, although they could not join as members of the Brotherhood of Saint Joseph (Pinto, 2024).

chosen. On the chosen date, the upper ranks of the guild were elected, namely: two board-judges [*juízes-da-mesa*], one a mason and the other a carpenter; a general registrar (a post alternately held by masons and carpenters); a steward; two mason craft-judges (maintaining the rule that one was a stonemason and the other a bricklayer); and two carpenter craft-judges. The latter were the ones who acted as examiners and in each pair one of them should have held the position previously and was called the senior-judge [*juiz velho*] (through being more experienced), and the other was the novice-judge [*juiz novo*]. The examination took place at the main premises of the guild, at the board of the trade, with the respective board-judge and two other «elected» members being present, who would act as assistants (Langhans, 1943-1946(I): 274-282).

3.2. *The examination*

As previously mentioned, the first rules for trade examinations in Lisbon were recorded in 1572, with chapter 34 concerned with building construction trades (Correia, 1926: 105-109). There were three types of exams: for masons, for earth masons and for house carpenters.

The masons' examination was subdivided into two specialities, stonemasonry [*cantaria*] and brickwork [*alvenaria*]. In the first speciality, the examinee had to know how to make a staircase along with the corresponding handrail, a square portal with its arch, and a Doric column with base and capital. In the second speciality, the examinee had to know how to make foundations, courses of bricks for walls, lime mortar (knowing the proportions of each material), and a series of specific parts: chimney, brick doorway, window, shelf, roof eave, parapet, sill, and corner.

Earthwork examinees had to know how to make a brick corner, a rammed earth wall and a foundation, as well as knowing how to prepare the earth.

The house carpentry examinees had to know how to make the structure of a gable roof, a double-leaf door, a door with a built-in window, clad a wooden house, a cornice, and a staircase, and, if they wanted to be examined for fine carpentry work, they had to know how to make a worked ceiling with entablature and other decorative pieces.

The clauses of these examinations did not undergo major changes over time and continued in use into the eighteenth century. They were also included with almost no changes in the only book dedicated to the literary genre of the construction trade guild in Portugal, published by a master mason from Lisbon, Valério Martins de Oliveira, in 1757[18]. The main differences can be seen in the updating of certain

18. This book had two previous editions, in 1739 and 1748, but it was not until the third edition, in 1757, that the author included this topic (Pinto, 2018: 84).

technical terms, in the sequence presented, with the examination of bricklayers first, followed by the examination of earth masons and then the examination of stonemasons. It was only the examination of house carpenters that had been altered and which had become more difficult. The examinee had to know how to build the wooden casing for the roof of a house with skewed sloping areas, not that of a regular house with four sloping areas, sketch on paper, with quill, ruler and compass, the figures that were asked of him, as well as answer questions orally (Martins de Oliveira, 1757: 147-151).

3.3. *The examinees*

According to the general rules of 1572, no apprentice could leave his master before the end of the apprenticeship, nor could a journeyman practise his trade until they had been examined (Correia, 1926: 234-236). Furthermore, according to the 1709 regulation, to sit for the examination, a journeyman had to present a certificate from the master with whom he had learned, attesting to the completion of his training. If a mason wanted to be examined in both stonemasonry and brickwork, he had to present two certificates, one from each master (Langhans, 1943-1946(I): 278-279). If a journeyman failed the examination, he could only retake it six months later (Correia, 1926: 233-237; Langhans, 1943-1946(I): 278).

The examinee also had to pay the examination fees. In 1572, this amount was 300 *réis* for locals and 600 *réis* for foreigners, one third of which was used to pay the examiners and the rest went to the guild[19]. In 1709, the examination fees were set at 2,160 *réis* (with no difference as to the geographical origin of the examinees[20]), which included a payment of 480 *réis* to each examiner, the same amount to the registrar to write out the examination certificate, and another sum for the guild — known as alms for Saint Joseph —, and a further 240 *réis* to pay for the copy of the professional regulation (Langhans, 1943-1946(I): 278, 282). However, in 1771, according to a survey of all the trades in the city, the expenses for a Lisbon mason or house carpenter were 3,760 *réis* in total, from the examination to receiving their certificate from the city council office (Oliveira, 1882-1911(XIII): 560-561)[21].

19. AML-AH, CVQ, *Livro dos regimentos dos oficiais mecânicos da cidade de Lisboa reformados por ordem do Senado*, fl. 126v. In Porto, the 1548 regulations for carpenters set the examination fee at 100 *reais* for locals and 140 *reais* for non-locals, with the amount going to the Brotherhood of Saint Blaise, plus an additional 60 *reais* to pay the examiners (Cruz, 1943: 72-73).

20. In the second half of the seventeenth century, the practice of charging different examination fees to locals and foreigners was also abolished in Girona (Domènech, 2019: 291).

21. Comparing the fees for the 53 registered trades, the builders' examination was close to the average values (around 3,887 *réis*), with each end of the scale occupied by the costs of the potters' and goldsmiths' exams, respectively 460 *réis* and 14,560 *réis*. In the city of Porto,

At the beginning of the eighteenth century, the examination fees were equivalent to about nine days' work, as a journeyman who had not taken the examination could not earn more than 240 *réis* per day (compared to 300 *réis* for the masters) in 1708 (Oliveira, 1882-1911(X): 388-389). This was reduced to a little more than seven days' work in 1733, when the daily rate tables were revised and those who had not taken the examination were paid the same amount as journeymen who had, i.e., 300 *réis* (Oliveira, 1882-1911(XII): 516). According to contemporary reports, immediately after the 1755 earthquake, due to the shortage of builders, some carpenters were being paid 400 and 500 *réis* per day, but two years later these values stabilised, at 300 reis for journeyman who had not taken the examination, until the 1780s (rising then to 350 *réis*), unlike the masters, who earned 400 *réis* (Madureira, 1997: 466-467). Given this, in the 1770s, payment for the examination was equivalent to about twelve and a half days' work.

As a result of this expense, Lisbon city council issued temporary six-month licences to all those who, at the end of their apprenticeship period, did not have the financial conditions to pay the examination fees[22]. With this municipal licence, journeymen could then practise their trade and save enough money to undertake the examination. According to municipal notice of 23 December 1678, this temporary licence was only issued once, and the craft-judges had to reject subsequent licences «because the city council had no intention of granting a second licence to any journeyman who had not taken the examination»[23]. In 1740, however, second, third and even more temporary licences had already been granted, and there were journeymen who had practised their trade «for more than ten or twelve years without being examined», and had no intention of taking the examination, «either because they considered themselves incapable of passing it, or to free themselves from the burdens to which examined journeymen are subjected». The king ordered that, from then on, temporary licences would only be allowed through the authorisation and with the knowledge of the craft-judges, to ensure the quality of work, limiting the granting of successive temporary licenses to three, after which the journeymen would be obliged to undertake the examination (Oliveira, 1882-1911(XIII): 559-561).

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according to the 1785 regulations for carpenters, the total cost of the examination reached the exorbitant sum of 9,280 *réis*, made up of 4,800 *réis* for the brotherhood, 800 *réis* for each judge, 480 *réis* for the registrar and a further 2,400 *réis* for office expenses (Cruz, 1943: 77-78).

22. This practice was not exceptional. The local rules of Tomar of 1607 stated that if a journeyman wished to practise his trade before being examined, he had to ask the town council for permission, which would be granted for as long as seemed necessary (Rosa, 1968: 84). The same practice existed in Brazilian cities and towns, such as Vila Rica (Ouro Preto), and non-examined masons and carpenters even tried to evade the six-month licence requirement in 1738 (Vasconcelos, 1940: 343-344). The six-month licence also existed in Murcia at the end of the eighteenth century (Peña, 1984: 150).

23. AML-AH, CC, *Livro 5.º de Assentos do Senado Oriental*, fl. 14.

Despite this royal resolution, the problem of masons and carpenters exercising their trade without having taken the examination and thus not contributing annually to the guild Brotherhood persisted in 1747, leading its members to directly ask the king to prevent such a practice. Firstly, they asked that the temporary licences granted should be free of charge, to prevent them from being surreptitiously passed off as the initial ones, as there would be nothing to profit from this. In addition, they requested that before being examined, the journeymen should first join the Brotherhood of Saint Joseph, and if they were unable to do so (because they were New-Christians, of mixed race or were of ill repute), they should pay 10 years of fees in one lump sum, about 20,000 *réis* (or 67 days' work), which was equivalent to the penalty applied to offenders[24].

3.4. *Those examined*

When an examinee passed the examination and, following the 1572 regulation, this was certified through a document signed by the examiner — the examination certificate. This would then be approved by the city hall, which meant the professional registration of the craftsman within the municipality (Correia, 1926: 233-237). On 14 May 1626, a royal charter proposed that approval of the craftsmen's examination certificates would cost 200 *réis*, to be paid at the city hall (Oliveira, 1882-1911(III): 146-150). However, this proposal was not implemented and on 4 December 1633 it was agreed not to demand money «as has always been the case» (Oliveira, 1882-1911(I): 204-205).

Once all the requirements and formalities had been complied with, the examined journeymen became master masons or master carpenters, and were then able to freely exercise their trade, i.e. sign building contracts and undertake major architectural projects alone or in partnership. The examined journeymen also received other perks and had new obligations. From the outset, only examined journeymen had the right to vote in guild elections. In fact, until the mid-1570s, servants and journeymen who had not undertaken the examination were also able to vote, but this power was taken away from them because, firstly, they voted «out of friendship or interest and not according to that which is necessary for the good of the people», and, moreover, they were much more numerous and therefore ended up being the ones who decided the elections[25] (Langhans, 1943-1946(I): 265-270). Only examined journeymen were eligible for the higher offices of the guild, from which were selected the representatives of the guild to the House of Twenty-Four,

24. AML-AH, ISJC, Folder 140, fls. 250-251v.

25. Apart from this case, there is no evidence in the sources used for this work of other conflicts between examined and non-examined builders. However, the possibility that such conflicts existed and were documented elsewhere cannot be ruled out.

and from this collegial body, four representatives [*procuradores dos mesteres*] were chosen to serve in the government of the city council alongside the city councillors (Caetano, 1943: LXIX-LXXIV). Only examined journeymen could have apprentices (a maximum of two), to teach and closely monitor their training (Correia, 1926: 107; Langhans, 1943-1946(I): 279-280). From 4 July 1609 onwards, only examined journeymen were allowed to carry the banner with the image of the patron saint and their professional insignia in the procession held during Corpus Christi (Langhans, 1943-1946(I): 270-271). Furthermore, according to the sumptuary rules of 18 May 1749 and 21 April 1751, only examined journeymen were allowed to wear a sword or rapier around their waist (*Collecçaõ das Leis*: 1-19). Moreover, and as noted above, as masters, examined journeymen were usually better paid.

According to the 1572 regulation, examined journeymen in other municipalities had to take a new examination for the Lisbon guild[26]. This requirement was imposed on «foreigners» in the 1709 regulation[27] (Correia, 1926: 241; Langhans, 1943-1946(I): 281). However, since at least the seventeenth century, what usually happened was that the examination certificates issued by Portuguese cities and towns with the status of «notables of the realm» were accepted as valid, with just certain enquires about the veracity and legitimacy of examination certificates issued in those other municipalities being made. An audience which took place between Lisbon city council and the King on 7 October 1757 shows that this procedure was «old», commonplace and reciprocal, something that the craft-judges had been trying to change at this time, but without success. Several city councillors were against such an amendment, arguing that the city needed builders from outside Lisbon more than ever to repair the houses destroyed by the earthquake and it was not fair to impose a burden that had not previously existed on such individuals. In addition, due to the lack of professional builders, masons and carpenters of Lisbon were charging a daily rate higher than the fixed rate «extorting those undertaking the repair of their houses», and even acting against the decree of 10 November 1755 that forbade any increase in prices (Oliveira, 1882-1911(XVI): 327-330).

26. Indeed, in 1538, examination certificates issued in the city of Évora (as in other parts of the kingdom) were not recognised by the city council of Lisbon. For this reason, and as a form of retaliation, the city council of Évora agreed to no longer accept examination certificates issued in Lisbon and demanded that examined journeymen be re-examined by local examiners (Évora, 1965-1967: 285).

27. The impediment to foreigners accessing the profession can be seen in the case of a Flemish carpenter, called Matheus Somar, from the city of Liège, who by royal order had come to work in the royal construction works for the Convent of Mafra. In 1739, he had no work in Mafra and was prevented from returning to his homeland by royal order. However, he was also unable «to earn a living working with wood» as he did not have the required licence. This was only issued by the Lisbon city council after the King, through the secretary of state for affairs of the kingdom, had expressly requested it (Oliveira, 1882-1911(XIII): 480).

4. THE PRACTICES

The two examination registers considered in this study contain 2,088 entries of craftsmanship examinations written in running text. The entries consist of various data elements identifying the examinee, such as their name, trade, age, affiliation, geographical origin, residence, marital status, and respective information on their spouse and sometimes their parents, as well as data concerning the examination itself, i.e., the date and the members of the guild who carried out and registered the examination. However, not all entries contain all this data, as most of the personal information provided by the examinees was first entered on the examination certificates[28] and subsequently the registrar copied this in whole or in part into the register books[29].

As several data elements can be analysed quantitatively, a database[30] was organised with the following fields: name of examinee; trade (in which they were examined); speciality (for masons); date of examination; age; marital status; father's name; mother's name; wife's name; name of in-laws; place of baptism; place of residence; name of the registrar; name of the senior judge-examiner for masons; name of the novice judge-examiner for the masons; name of the senior judge-examiner for the carpenters; name of the novice judge-examiner for the carpenters; name of the board-judge for the masons; and name of the board-judge for the carpenters. A field for notes and comments was also added.

Before analysing the data, it is important to make a few observations. The Brotherhood of Saint Joseph was made up of two groups: one called the «head» and the other the «annexes». The head was made up of the mason and house carpenter trades. Other related trades belonged to the annexes, which for most of the eighteenth century were the following: tillers, fine woodworking carpenters, wood carvers, guitar makers, wood turners and workshop carpenters (also called the carpenters of *Rua das Arcas*, as their workshops were in this street) (Langhans, 1943-1946(I): 257). Hence, in the books under study, some of these trades are mentioned, either holding offices within the guild, especially in the 1703-1761 book, but also in 16 craftsmanship examination entries in the 1650-1682 book. Because the number

28. Indeed, some entries show the lack of, or inconsistency of certain information provided by the examinees. For example: «the name of the father and the mother will not be [written] because it does not appear on the certificate»; «and because [the examinee] does not know the names of his parents, I have made this declaration so that the same doubt will not arise at any time as it did for me» (respectively AML-AH, ISJC, MS 41, fl. 34; MS 111, fl. 56v).

29. This practice is understandable because the registrars for the years 1727 and 1728, in the closing period of the annual register, gave not only the total number of journeymen examined in the year but also the date of entry in the book, the first being on 15 January 1728 and the last being on 10 January 1729 (respectively AML-AH, ISJC, MS 41, fls. 75, 78v-79).

30. The database is available online: https://lisbonbuilders.omeka.net/database.

of these latter entries is modest and circumscribed[31], it can be assumed that they have been mistakenly recorded[32] and have therefore not been considered for this analysis, which focuses on builders. Furthermore, eight entries, three from the period 1650-1682 and five from the period 1703-1761 (relating to four masons and four carpenters), appear to be duplicates, as they contain equivalent data in their identifying fields and their date, despite being recorded in different folios[33].

Given this, the total scale of the study consists of only 2,064 entries of craftsmanship examinations undertaken throughout 92 years, of which 620 entries belong to the period from 1650-1682 and 1,444 entries from the period 1703-1761. These figures will be used to gauge the representativeness of the results due to the significant missing data, which will be expressed as a percentage per period and of the total, appearing in the tables as «%T». Incomplete data, or illegible/unintelligible data for each variable, will also be recorded and noted as «N/A». However, to understand the frequency of the results within each variable, their relative percentages are also included, coded as «%».

The quantitative analysis of the examination records naturally begins with the overall figures (see Table 1). Of the 2,064 entries relating to the builders examined, 1,064 (51.6 %) relate to masons and 982 (47.6 %) to carpenters, with only 18 (0.9 %) entries lacking this information. If in the 1650-1682 period more masons were examined than carpenters (59.5 % against 39.8 %), in the 1703-1761 period there was an increase in the number of carpenters, who now formed most of the examined journeymen, although there was no significant difference between the two (50.9 %, as opposed to 48.1 % for the masons).

In turn, as regards masons, and notwithstanding a significant number of entries with the speciality omitted (i.e., 463, or 43.7 % of the 51.6 %), there was a preponderance of bricklayers over stonemasons, since 208 (19.5 %) were brickwork examinations, whereas only 75 (7.0 %) were stonemasonry examinations, in addition to 316 (29.7 %) masons who undertook examinations in both specialities simultaneously. In this sense, it should be noted that only two masons were found to have undergone an examination for the two specialities at different stage: one,

31. AML-AH, ISJC, MS 111, fl. 4v (4 workshop carpenters, 1 fine woodworking carpenter), fl. 6v (2 fine woodworking carpenters), fl. 67 (6 wood turners, 1 wood carver, 2 fine woodworking carpenters).

32. Such mistakes also occurred with the examination records for the masons and carpenters, with the registrar for the year 1711 noting that the registrar of the previous year had mistakenly entered the 1710 records in «another old book, which does not belong to these [records]», and so ended up copying them back into the correct book (AML-AH, ISJC, MS 41, fl. 20).

33. AML-AH, ISJC, MS 111, fls. 12, 13, 49v, 50, 79, 80v; MS 41, fls. 14(1)v, 14(2), 29, 30, 99v, 100, 148, 150, 158, 158v.

first for stonemasonry, in 1705, and then for brickwork, in 1709; the other, first for brickwork, in 1712, and then for stonemasonry, in 1715[34].

Table 1. Examined by trade

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Masons	369	59.5	695	48.1	1064	51.6
Brickwork	38	10.3	170	24.5	208	19.5
Stonemasonry	3	0.8	72	10.4	75	7.0
Both	232	62.9	84	12.1	316	29.7
N/A	96	26.0	369	53.1	463	43.7
Carpenters	247	39.8	735	50.9	982	47.6
N/A	4	0.6	14	1.0	18	0.9
Total	620	100.0	1444	100.0	2064	100.0
%T	30.0		70.0		100.0	

Source: AML-AH, ISJC, MSS 41 and 111

During the 92 years under analysis, the average number of journeymen examined per year was 22.2 (with a standard deviation, which reflects the dispersion of data, of 21.5), although lower in the 1650-1682 period (18.8) and higher in the 1703-1761 period (24.1). However, an examination peak can be noted in both periods (see Table 2). The first took place in 1671, with 118 journeymen examined, and the second took place in 1757, with 147 journeymen examined. Both peaks can be explained by historical conjunctures.

The first peak, which occurred shortly after the War of the Restoration of Portuguese Independence (1641-1668), was probably due to the return home of many journeymen and master builders who had been posted to conflict areas. In fact, only for the year 1671 is there information about journeymen repeating the examination because they had lost their examination certificate. Overall, there were five of these cases[35], three masons, one carpenter and another journeyman without

34. AML-AH, ISJC, MS 41, fls. 8, 18, 23, 29v.

35. The record of the first examination was found in only one case, namely that of a mason who had been examined in 1656. AML-AH, ISJC, MS 111, fls. 14v, 60v, 63, 65, 65v, 66v.

this information, to which we can possibly add two other masons who had already been examined in 1657 and 1668 respectively, although their 1671 records do not include a note to this effect[36].

The second peak is obviously explained by the catastrophe of 1755 and the need to employ many builders to help rebuild the city. The values found show an increase in the number of examinations in carpentry relative to those in masonry (thirty more), something that proves the reports of the time: «in the first days [after the earthquake] there were no mason or carpenter craftsmen, but in a short time there were twice as many as before because everyone wanted to learn these trades, especially that of carpenter» (Sousa, 1928: 518). And this was due not only to the temporary ban on the construction of stone and brickwork buildings[37], but also due to the fear that some people had of inhabiting these buildings[38], which was the case with the royal family itself, who moved into a wooden building, nicknamed the Royal Hut [*Real Barraca*] (Abecasis, 2009).

However, the craftsmanship examinations did not take place to the same extent throughout the year. The data collected — with 71.5 % representativeness, due to the 1,476 entries with this information — leaves no room for doubt: examinations took place mainly at the end of the year, particularly in December (38.8 %), followed by November (10.7 %) (see Table 3). The seasonal aspect found can be partially justified by the fact that these months were normally periods with little work. Firstly, adverse weather conditions (rain and cold/low temperatures) would have made it more difficult to carry out construction work outdoors; what is more, with less sunlight, working hours were in fact fewer than during the summer period[39].

36. AML-AH, ISJC, MS 111, fls. 19, 60v, 46, 63v.

37. According to decrees of 29 November and 3 December 1755, until the reconstruction plan for the city had been carried out — which was completed on 12 May 1758 — the construction of houses using «mortar and stone» was forbidden, and in the meantime, houses or shacks of «canvas and wood» could provisionally be constructed. Later, the decree of 8 October 1760 prohibited the construction of shacks, establishing that any still existing structures be demolished by the end of the year (Oliveira, 1882-1911(XVI): 206, 277, 355-359).

38. Indeed, the same report explains that the increase in the number of carpenters was «because everyone took it upon themselves to build shacks, even those who had very good and adequate houses» (Sousa, 1928: 518-519).

39. These obvious facts are also supported by documentary sources, such as the daily rate tables of builders. Although the daily rate in Lisbon was never seasonally adjusted, in Lamego in 1530, Coimbra in 1573 and Braga in 1581, to name but a few, carpenters and masons earned more from March to September/October than from October/November to February (*Collecção de Ineditos*: 603; Carvalho, 1922: 20-21; Rosário, 1970: 371). On the other hand, in Porto in 1545, masons earned the same in winter and summer to compensate for the lack of work in winter, given the amount of work they had to do in summer (Cruz, 1943: CXI).

But a more pressing argument that may have decisively influenced the interests of the masons and carpenters in being examined at this time of year was the date of the guild elections which, as mentioned above, took place on the day after Christmas. In this way, those recently examined could both vote, as well as become eligible for election. This explains why the remaining winter months, with similar weather conditions, such as January (2.6 %) and February (3.1 %), were indeed the months with the lowest number of craftsmanship examinations.

Table 2. Examined over the 92 years.
Period from 1650-1682

Year	Masons	Carpenters	N/A	Total	Year	Masons	Carpenters	N/A	Total
1650	7	10	0	17	**1667**	8	3	0	11
1651	3	0	1	4	**1668**	22	9	0	31
1652	3	13	0	16	**1669**	13	10	0	23
1653	5	8	0	13	**1670**	19	15	0	34
1654	5	4	0	9	**1671**	69	47	2	118
1655	14	15	0	29	**1672**	40	11	0	51
1656	17	12	0	29	**1673**	17	8	0	25
1657	14	4	0	18	**1674**	15	5	0	20
1658	6	2	0	8	**1675**	3	3	0	6
1659	18	9	0	27	**1676**	8	2	0	10
1660	3	4	0	7	**1677**	9	10	0	19
1661	9	14	0	23	**1678**	3	3	1	7
1662	0	0	0	0	**1679**	0	0	0	0
1663	2	4	0	6	**1680**	6	7	0	13
1664	2	0	0	2	**1681**	5	3	3	11
1665	9	4	0	13	**1682**	0	2	0	2
1666	13	5	0	18	$\bar{x}$	11.2	7.5	0.1	18.8

Source: AML-AH, ISJC, MS 111

Period from 1703-1761

Year	Masons	Carpenters	N/A	Total
1703	22	2	0	24
1704	21	6	0	27
1705	6	0	0	6
1706	8	23	0	31
1707	11	15	0	26
1708	1	4	0	5
1709	20	9	0	29
1710	9	9	0	18
1711	19	15	0	34
1712	10	6	1	17
1713	6	4	3	13
1714	23	9	0	32
1715	35	20	0	55
1716	3	27	0	30
1717	15	20	0	35
1718	17	20	0	37
1719	18	17	0	35
1720	17	20	0	37
1721	36	28	0	64
1722	12	10	1	23
1723	12	15	0	27
1724	11	17	0	28
1725	23	7	0	30
1726	3	1	1	5
1727	18	3	0	21
1728	8	13	0	21
1729	2	4	0	6
1730	4	1	0	5
1731	11	45	0	56
1732	27	23	0	50
1733	13	23	0	36
1734	11	4	0	15
1735	1	5	0	6
1736	5	8	0	13
1737	2	10	0	12
1738	5	20	2	27
1739	4	13	0	17
1740	4	6	0	10
1741	4	2	0	6
1742	3	3	0	6
1743	5	9	0	14
1744	4	4	2	10
1745	12	11	0	23
1746	5	10	0	15
1747	12	10	1	23
1748	6	4	0	10
1749	19	16	0	35
1750	9	12	0	21
1751	20	15	0	35
1752	6	2	1	9
1753	6	9	0	15
1754	1	2	0	3
1755	5	7	0	12
1756	30	19	2	51
1757	58	89	0	147
1758	9	17	1	27
1759	4	1	0	5
1760	2	8	0	10
1761	1	1	1	3
[N/A]	0	1	0	1
$\bar{x}$	11.6	12.3	0.2	24.1

Source: AML-AH, ISJC, MS 41

Table 3. Examinations throughout the year

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
January	11	2.4	28	2.8	39	2.6
February	6	1.3	40	3.9	46	3.1
March	12	2.6	86	8.5	98	6.6
April	15	3.3	65	6.4	80	5.4
May	12	2.6	84	8.3	96	6.5
June	9	2.0	46	4.5	55	3.7
July	13	2.8	58	5.7	71	4.8
August	12	2.6	67	6.6	79	5.4
September	16	3.5	72	7.1	88	6.0
October	28	6.1	65	6.4	93	6.3
November	56	12.2	102	10.0	158	10.7
December	270	58.7	303	29.8	573	38.8
Total	460	100.0	1016	100.0	1476	100.0
%T	74.2		70.4		71.5	

Source: AML-AH, ISJC, MSS 41 and 111

Some characteristics and patterns of the builders who took the craftsmanship examination will now be highlighted.

At what age did builders become masters? The data collected — with 60.4 % representativeness, due to the 1,247 entries with this information — confirms the complaints of the guild members, showing that several years did elapse between completing their apprenticeship (around the age of 20) and applying for the examination (see Table 4). In fact, the average age was 32 (with a standard deviation of 6.8), with the minimum age being 18 and the maximum 60, and there were no significant differences in this regard between masons and carpenters. Conversely, between the two periods under analysis, there was an increase in the average age of about 4 years for masons and 5 years for carpenters, thereby justifying the guild's insistence on this matter.

In any event, the data also shows that most journeymen (994 or 79.7 %) took the craftsmanship examination between the ages of 25 and 40, with numbers above this age being somewhat insignificant (94 or 7.5 %) (see Chart 1). The peaks at the ages of 25, 28, 30, 35 and 40 are possibly explained by the examinees not knowing

their exact date of birth, thereby providing an approximated round number[40], or consciously trying to deceive the guild members by stating a lower age[41].

Table 4. Ages of the examinees

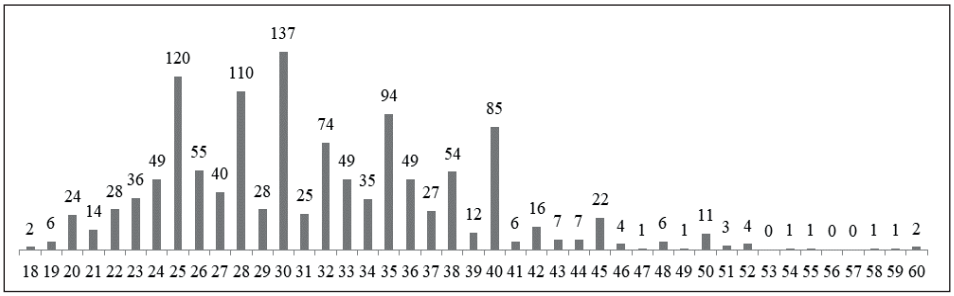
	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Masons	108	65.9	527	48.7	635	50.9
lowest age	20		18		18	
highest age	50		59		59	
mean	28		32		32	
mode	25		30		30	
Carpenters	56	34.1	547	50.7	603	48.4
lowest age	18		19		18	
highest age	60		60		60	
mean	27		32		31	
mode	25		30		30	
N/A	0	0.0	9	0.8	9	0.7
lowest age	-		19		19	
highest age	-		46		46	
mean	-		32		32	
mode	-		30		30	
Total	164	100.0	1083	100.0	1247	100.0
lowest age	18		18		18	
highest age	60		60		60	
mean	28		32		32	
mode	25		30		30	
%T	26.5		75.0		60.4	

Source: AML-AH, ISJC, MSS 41 and 111

40. In forty entries, next to the age, there is the expression «more or less», with nine referring to the age of 25 and eight to the age of 30 (AML-AH, ISJC, MS 111, fls. 56, 69v-71v, 72, 73v, 74, 75, 80v, 88, 88v; MS 41, fls. 23v, 39v, 40).

41. This circumstance can, for example, be deduced in the case of a mason who was previously studied. At the time of his examination in 1721, Valério Martins de Oliveira claimed to be 23 years old, but according to his baptismal certificate dating from 1695, he must have been 26 (Pinto, 2018: 78). Another inconsistency is found in one of the masons, who took his specialisation examinations separately, declaring in both instances that his age was 28, despite there being a gap of 4 years between the two events (AML-AH, ISJC, MS 41, fls. 8, 18).

Chart 1. Distribution of the examinees by age



Source: AML-AH, ISJC, MSS 41 and 111

What was their marital status? Given the importance of marriage in early modern societies (Rodrigues, 2008: 206-216), the data collected — with 55.3 % representativeness, due to the 1,141 entries with this information — shows, unsurprisingly, that 79.9 % of the examinees were married, compared to 18.81 % who were single and only 1.2 % who were widowed (see Table 5).

Table 5. Examinees by marital status

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Masons	312	64.2	350	65.4	662	64.8
single	48	15.4	77	22.0	125	18.9
married	258	82.7	269	76.9	527	79.6
widower	6	1.9	4	1.1	10	1.5
Carpenters	173	35.6	299	55.9	472	46.2
single	35	20.2	55	18.4	90	19.1
married	136	78.6	242	80.9	378	80.1
widower	2	1.2	2	0.7	4	0.8
N/A	1	0.2	6	1.1	7	0.7
single	0	0.0	0	0.0	0	0.0
married	1	100.0	6	100.0	7	100.0
widower	0	0.0	0	0.0	0	0.0
Total	486	100.0	657	100.0	1141	100.0
single	83	17.1	132	20.2	215	18.8
married	395	81.3	517	78.9	912	79.9
widower	8	1.6	6	0.9	14	1.2
%T	78.4		45.4		55.3	

Source: AML-AH, ISJC, MSS 41 and 111

Yet, it should not be assumed that widowers were the oldest examinees and that bachelors were the youngest. If we combine the two variables (marital status and age) — with only 26.9 % representativeness, due to the 556 entries with both information — we can see that widowed examinees had obtained this status prematurely, with ages ranging from 22 to 40 (with an average of 32), that single examinees were aged between 18 and 40 (with an average of 27) and that married examinees covered the widest age range, between 19 and 60 (with an average of 31), since this group included examinees married for the second time or more (see Table 6).

Table 6. Ages of the examinees by marital status

	1650-1682		1703-1761		total	
	No.	%	No.	%	No.	%
Single	42	30.7	107	25.5	149	26.8
lowest age	20		18		18	
highest age	40		40		40	
mean	25		27		27	
mode	25		25		25	
Married	92	67.2	308	73.5	400	71.9
lowest age	20		22		19	
highest age	60		52		60	
mean	29		32		31	
mode	25		30		30	
Widower	3	2.2	4	1.0	6	1.0
lowest age	22		28		22	
highest age	35		40		40	
mean	27		35		32	
mode	-		40		40	
Total	137	100.0	419	100.0	556	100.0
%T	22.1		29.0		26.9	

Source: AML-AH, ISJC, MSS 41 and 111

What was their geographical origin? The data gathered — with 84.6 % representativeness, due to the 1,747 entries with this information — is unequivocal: in all periods, the entirety of almost all builders who undertook the examination belonged to the diocese of Lisbon: a total of 81.9 % (see Table 7)[42]. Still, there was

42. Similarly, in Pamplona, of the two hundred carpenters examined between 1587 and 1650, only five were non-Navarrese (Molins, 1988: 364).

an important contingent of masons and carpenters originating from the north of the kingdom, particularly from the diocese of Braga (6.4 %), followed by journeymen originating from the dioceses of Coimbra (2.7 %) and Évora (2.3 %). The number of journeymen from the Atlantic islands (Azores and Madeira) was quite insignificant, like those from areas further away from Lisbon, such as the dioceses of Miranda, Guarda, Portalegre, Elvas and Faro (see Figure 1). No examinee originated from the overseas territories of the Portuguese empire. There were only three examinees from outside the kingdom: a mason baptised in Pontevedra (Galicia), a carpenter from Holland who was baptised in Lisbon and a journeyman from the «Irish nation»[43].

Figure 1. Map of ecclesiastical boundaries in mainland Portugal in the eighteenth century

Source: Author, based on *Atlas. Cartografia Histórica* (http://atlas.fcsh.unl.pt/)

43. There was also a carpenter whose parents were from the «Flemish nation», but as his record does not mention his geographical origin, only that he was baptised in the diocese of Lamego, he was not considered as a foreigner (AML-AH, ISJC, MS 41, fl. 80).

Table 7. Origin (place of baptism) of the examinees by Portuguese ecclesiastical boundaries with foreign places marked with *

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Fiães (*nullius dioecesis*)	0	0.0	1	0.1	1	0.1
Braga	30	6.0	81	6.5	111	6.4
Miranda	0	0.0	3	0.2	3	0.2
Porto	7	1.4	6	0.5	13	0.7
Soalhães (*nullius dioecesis*)	0	0.0	1	0.1	1	0.1
Lamego	5	1.0	15	1.2	20	1.1
Viseu	7	1.4	13	1.0	20	1.1
Coimbra	10	2.0	38	3.1	48	2.7
Guarda	1	0.2	7	0.6	8	0.5
Crato (*nullius dioecesis*)	1	0.2	6	0.5	7	0.4
Leiria	8	1.6	8	0.6	16	0.9
Portalegre	1	0.2	2	0.2	3	0.2
Tomar (*nullius dioecesis*)	1	0.2	8	0.6	9	0.5
Lisbon	418	82.9	1013	81.5	1431	81.9
Elvas	1	0.2	2	0.2	3	0.2
Évora	11	2.2	30	2.4	41	2.3
Faro	1	0.2	2	0.2	3	0.2
Angra (Azores)	1	0.2	3	0.3	4	0.2
Funchal (Madeira)	1	0.2	1	0,1	2	0.1
* Galicia	0	0.0	1	0.1	1	0.1
* Holland	0	0.0	1	0.1	1	0.1
* Ireland	0	0.0	1	0.1	1	0.1
Total	504	100.0	1243	100.0	1747	100.0
%T	81.3		86.1		84.6	

Source: AML-AH, ISJC, MSS 41 and 111

Within the Lisbon diocese, the largest number of examinees belonged to the municipality of Lisbon (67.8 %), followed by the municipality of Torres Vedras (9.0 %), whose migration decreased in the 1703-1761 period, contrary to that which happened with the journeymen coming from other municipalities around Lisbon, such as Sintra, Cascais or Alenquer (see Table 8).

Table 8. Origin (place of baptism) of the examinees by municipalities of the diocese of Lisbon

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Abrantes	2	0.5	0	0.0	2	0.1
Alcobaça	1	0.2	0	0.0	1	0.1
Alcoentre	1	0.2	1	0.1	2	0.1
Aldeia Galega da Merciana	1	0.2	6	0.6	7	0.5
Aldeia Galega do Ribatejo	5	1.2	1	0.1	6	0.4
Alenquer	4	1.0	23	2.3	27	1.9
Alhandra	5	1.2	4	0.4	9	0.6
Almada	10	2.4	5	0.5	15	1.0
Alverca	2	0.5	6	0.6	8	0.6
Alvorninha - termo (Vidais)	0	0.0	1	0.1	1	0.1
Arruda dos Vinhos	4	1.0	3	0.3	7	0.5
Atouguia da Baleia	0	0.0	3	0.3	3	0.2
Aveiras (de Cima / de Baixo)	2	0.5	3	0.3	5	0.3
Azambuja	1	0.2	4	0.4	5	0.3
Belas	2	0.5	8	0.8	10	0.7
Cadaval	2	0.5	3	0.3	5	0.3
Carvoeira	1	0.2	0	0.0	1	0.1
Cascais	10	2.4	29	2.9	39	2.7
Castanheira do Ribatejo	0	0,0	3	0.3	3	0.2
Cela	0	0.0	2	0.2	2	0.1
Chamusca	0	0.0	5	0.5	5	0.3
Colares	2	0.5	4	0.4	6	0.4
Coruche	0	0.0	1	0.1	1	0.1
Cós	0	0.0	3	0.3	3	0.2
Ericeira	1	0.2	0	0.0	1	0.1
Évora (de Alcobaça)	1	0.2	0	0.0	1	0.1
Golegã	0	0.0	1	0.1	1	0.1
Lavradio	0	0.0	1	0.1	1	0.1
Lisbon	220	52.8	750	74.0	970	67.8
Lourinhã	3	0.7	3	0.3	6	0.4

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Mafra	3	0.7	4	0.4	7	0.5
Óbidos	9	2.2	16	1.6	25	1.7
Palmela	3	0,7	2	0.2	5	0.3
Peniche	1	0.2	1	0.1	2	0.1
Salvaterra de Magos	0	0.0	1	0.1	1	0.1
Santarém	9	2.2	13	1.3	22	1.5
Sesimbra	2	0.5	13	1.3	15	1.0
Setúbal	3	0.7	5	0.5	8	0.6
Sintra	12	2.9	34	3.4	46	3.2
Sobral de Monte Agraço	2	0.5	1	0.1	3	0.2
Torres Novas	1	0.2	2	0.2	3	0.2
Torres Vedras	87	20.0	41	4.0	128	9.0
Vila Franca de Xira	4	1.0	6	0.6	10	0.7
Vila Verde dos Francos	1	0.2	0	0.0	1	0.1
N/A	1	0.2	1	0.2	2	0.2
Total	418	100.0	1013	100.0	1431	100.0
%T	67.4		70.2		69.3	

Source: AML-AH, ISJC, MSS 41 and 111

Table 9. Origin (place of baptism) of the examinees from the municipality of Lisbon

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
City parishes	119	54.1	517	68.9	636	65.6
Surrounding parishes	101	45.9	233	31.0	334	34.4
Total	220	100.0	750	100.0	971	100.0
%T	35.5		51.9		47.0	

Source: AML-AH, ISJC, MSS 41 and 111

The same spatial proximity dynamic was also evident within the municipality of Lisbon (see Table 9), where most of the journeymen examined came from the parishes of the city (65.6 %), especially those situated at its northern limit, such as Nossa Senhora dos Anjos, São José — the construction trade parish —, Nossa

Senhora da Pena, and São Sebastião da Pedreira (see Table 10). Regarding the parishes surrounding the city, the largest number of examinees also came from nearby areas, such as Oeiras, Santos Reis, Lumiar, Belém, Olivais, and Loures (see Table 11).

Table 10. Origin (place of baptism) of the examinees from the parishes of the city of Lisbon

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Basílica Patriarcal (1709)	0	0.0	0	0.0	0	0.0
Nossa Senhora da Conceição	1	0.8	3	0.6	4	0.6
Nossa Senhora da Encarnação	0	0.0	16	3.1	16	2.5
Nossa Senhora das Mercês	2	1.7	24	4.6	26	4.1
Nossa Senhora do Loreto	2	1.7	2	0.4	4	0.6
Nossa Senhora do Socorro	1	0.8	30	5.8	31	4.9
Nossa Senhora dos Anjos	6	5.0	64	12.4	70	11.0
Nossa Senhora dos Mártires	0	0.0	3	0.6	3	0.5
Santa Catarina	5	4.2	23	4.4	28	4.4
Santa Cruz do Castelo	0	0.0	2	0.4	2	0.3
Santa Engrácia	0	0.0	31	6.0	31	4.9
Santa Justa e Rufina	0	0.0	15	2.9	15	2.4
Santa Maria Madalena	0	0.0	7	1.4	7	1.1
Santa Maria Maior (Sé)	0	0.0	2	0.4	2	0.3
Santa Marinha	0	0.0	3	0.6	3	0.5
Santana / Nossa Senhora da Pena (1705)	2	1.7	58	11.2	60	9.4
Santíssimo Sacramento	0	0.0	2	0.4	2	0.3
Santo André	0	0.0	2	0.4	2	0.3
Santo Estevão de Alfama	1	0.8	14	2.7	15	2.4
Santos-o-Velho	5	4.2	22	4.3	27	4.2
São Bartolomeu - Beato	0	0.0	3	0.6	3	0.5
São Cristóvão	0	0.0	3	0.6	3	0.5
São João da Praça	0	0.0	2	0.4	2	0.3
São Jorge	0	0.0	1	0.2	1	0.2
São José	1	0.8	52	10.1	53	8.3
São Julião	1	0.8	7	1.4	8	1.3
São Lourenço	0	0.0	0	0.0	0	0.0
São Mamede	0	0.0	1	0.2	1	0.2
São Martinho	0	0.0	0	0.0	0	0.0
São Miguel de Alfama	0	0.0	6	1.2	6	0.9

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
São Nicolau	0	0.0	6	1.2	6	0.9
São Paulo	0	0.0	1	0.2	1	0.2
São Pedro de Alfama	0	0.0	4	0.8	4	0.6
São Salvador	0	0.0	4	0.8	4	0.6
São Sebastião da Pedreira	6	5.0	37	7.2	43	6.8
São Tiago	0	0.0	2	0.4	2	0.3
São Tomé	1	0.8	0	0.0	1	0.2
São Vicente de Fora	0	0.0	8	1.5	8	1.3
N/A	85	71.4	57	11.0	142	22.3
Total	119	100.0	517	100.0	636	100.0
%T	19.2		35.8		30.8	

Source: AML-AH, ISJC, MSS 41 and 111

Table 11. Origin (place of baptism) of the examinees from the surrounding parishes of Lisbon

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Ameixoeira (Nossa Senhora da Encarnação)	2	2.0	3	1.3	5	1.5
Apelação (Nossa Senhora da Encarnação)	0	0.0	0	0.0	0	0.0
Arranhó (São Lourenço)	0	0.0	1	0.4	1	0.3
Barcarena (São Pedro)	2	2.0	11	4.7	13	3.9
Belém (Nossa Senhora da Ajuda)	5	5.0	23	9.9	28	8.4
Benfica (Nossa Senhora do Amparo)	9	8.9	6	2.6	15	4.5
Bucelas (Nossa Senhora da Purificação)	0	0.0	5	2.1	5	1.5
Camarate (Santiago)	6	5.9	1	0.4	7	2.1
Carnaxide (São Romão)	3	3.0	9	3.9	12	3.6
Carnide (São Lourenço)	9	8.9	5	2.1	14	4.2
Charneca (São Bartolomeu)	3	3.0	15	6.4	18	5.4
Fanhões (Santo Saturnino)	0	0.0	0	0.0	0	0.0
Frielas (São Julião)	1	1.0	5	2.1	6	1.8
Granja (São Sebastião)	0	0.0	0	0.0	0	0.0
Loures (Santa Maria)	15	14.9	12	5.2	27	8.1
Lousa (São Pedro)	0	0.0	0	0.0	0	0.0
Lumiar (São João Batista)	11	10.9	17	7.3	28	8.4

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Milharado (São Miguel)	0	0.0	1	0.4	1	0.3
Odivelas (Santíssimo Nome de Jesus)	5	5.0	9	3.9	14	4.2
Oeiras (Nossa Senhora da Purificação)	8	7.9	26	11.2	34	10.2
Olivais (Nossa Senhora)	9	8.9	18	7.7	27	8.1
Póvoa de Santa Iria	0	0.0	7	3.0	7	2.1
Póvoa de Santo Adrião	0	0.0	2	0.9	2	0.6
Sacavém (Nossa Senhora da Purificação)	1	1.0	3	1.3	4	1.2
Santo Antão do Tojal	1	1.0	3	1.3	4	1.2
Santo Estevão das Galés	1	1.0	0	0.0	1	0.3
Santos Reis (Campo Grande)	6	5.9	23	9.9	29	8.7
São João da Talha	0	0.0	3	1.3	3	0.9
São Julião do Tojal (Tojalinho)	0	0.0	0	0.0	0	0.0
São Quintino (Nossa Senhora da Piedade)	1	1.0	3	1.3	4	1.2
São Tiago dos Velhos	0	0.0	0	0.0	0	0.0
Sapataria (Nossa Senhora da Purificação)	0	0.0	3	1.3	3	0.9
Unhos (São Silvestre)	0	0.0	4	1.7	4	1.2
Vialonga (Nossa Senhora da Assunção)	0	0.0	14	6.0	14	4.2
N/A	3	3.0	1	0.4	4	1.2
Total	101	100.0	233	100.0	334	100.0
%T	16.3		16.1		16.2	

Source: AML-AH, ISJC, MSS 41 and 111

The trend found in the 92-year span under analysis is also visible in the two years with examinations peaks, that is, 1671 and 1757, with most of the examinees coming from the diocese of Lisbon, 74.0 % and 82.5 %, respectively (see Table 12). Thus, the data support the idea that the master masons and carpenters examined in other municipalities who then went to work in Lisbon did not have to undergo a new examination at the city's guild, contrary to that intended by the members of the Brotherhood of Saint Joseph. If this had happened, the number of examinees from outside Lisbon would have been much higher. In fact, what the results show is that those who rose to the category of master builders through examination were masons and carpenters from the parishes of Lisbon, which rather suggests the regularisation of professional status, mainly for 1757, of the builders already working in the city.

Table 12. Origin (place of baptism) of the examinees in 1671 and 1757

	1671		1757	
	No.	%	No.	%
Other dioceses	26	26.0	25	17.5
Diocese of Lisbon	74	74.0	118	82.5
Other municipalities	26	35.1	29	24.6
Lisbon - Surrounding parishes	26	35.1	29	24.6
Lisbon - City parishes	22	29.7	60	50.8
Total	100	100.0	143	100.0
%	84.7		97.3	

Source: AML-AH, ISJC, MSS 41 and 111

Indeed, the previous inference is in line with what was found in terms of the place of residence — with 36.5 % representativeness, due to the 754 entries with this information (see Table 13). In fact, almost all the examinees lived in the diocese of Lisbon, and of these more than 80 % were indeed parishioners of the city. Outside the diocese of Lisbon, there were only four examinees, a mason from the diocese of Coimbra (municipality of Avô), and the rest, two masons and a carpenter, from the diocese of Évora (municipalities of Cabeção, Alcácer do Sal and Alcáçovas).

Table 13. Place of residence of the examinees

	1650-1682		1703-1761		Total	
	No.	%	No.	%	No.	%
Other dioceses	1	0.2	3	0.9	4	0.5
Diocese of Lisbon	414	99.8	336	99.1	750	99.5
Other municipalities	17	4.1	33	9.8	50	6.7
Lisbon - Surrounding parishes	60	14.5	26	7,7	86	11.5
Lisbon - City parishes	337	81.4	277	82.4	614	81.9
Total	415	100.0	339	100.0	754	100.0
%T	66.9		23.5		36.5	

Source: AML-AH, ISJC, MSS 41 and 111

Moreover, if we cross-reference the data entries for the place of baptism and place of residence — with only 28.2 % representativeness, due to the 583 entries with both information — it can be seen that of the 34 examinees who lived outside the municipality of Lisbon, well over half, i.e. 26, also came from outside the municipality of Lisbon, and 14 of these continued to live in their place of origin: two in Évora,

two in Torres Vedras, two in Sesimbra, one in Alhandra, one in Almada, one in Aveiras, one in Cascais, one in Palmela, one in Peniche, one in Sintra, and one in Vila Franca de Xira. In these cases, it may be concluded that, by having their examination certificate issued by the important guild of the capital of the kingdom, these master builders could not only work in the municipality of Lisbon, but also substantially increase the geographical reach of where they could exercise their trade, since that document would easily be accepted as valid in other mason and carpenter guilds in the kingdom.

Let us now look at the family links between the examinees. Only five entries contain any reference to this aspect, with two carpenters being the sons of carpenters, one mason the son of a mason[44], one carpenter the son of a blacksmith and son-in-law of a Brotherhood member, and another mason the son-in-law of a tiler[45].

Nevertheless, other family relationships were discovered when cross-referencing the names of the examinees with the names of their parents — with 96.2 % representativeness for the father's name and 72.0 % for the mother's name, due to the 1,972 and 1,088 entries, respectively, with this information —, with the names of the wife and parents-in-law — with 98.6 % representativeness for the wife, 11.6 % for the father-in-law and 11.2 % for the mother-in-law, considering only the number of married journeymen, due to the 899, 106 and 102 entries with this information — and also with the place of baptism, in order to rule out possible homonyms (see Table 14). Another 36 cases of examinees whose parents had also been examined in the same guild were found on average 29 years previously (with a standard deviation of 13,0), with the shortest time difference being four years and the largest 59 years (in this case, because the son only undertook the examination at the age of 40). Along with this, several builders who were brothers were also found, more specifically, 80 pairs, seven groups of three and a quartet, where the gap between their examinations was an average of 8 years (with a standard deviation of 6,8). Of note in this group were the nine pairs of brothers who were examined in the same year or the two sets of brother masons whose parents were also master masons. A further seven pairs and two groups of three of brothers-in-law, three pairs of sons-in-law and fathers-in-law, and two pairs of masons who were dual brothers-in-law (because they were married to two sisters) were also found, showing the connections of various families of builders through marriage and links to female family members.

It should be noted, however, that no case was found where kinship went beyond the immediate family, due to the lack of considerable data (especially the names of the mother and the wife), but also not having the records between 1683 and 1702,

44. Yet, the record of their fathers' examination was only found for one of these carpenters, which had taken place 16 years earlier (AML-AH, ISJC, MS 41, fl. 93v).

45. AML-AH, ISJC, MS 111, fl. 18; MS 41, fls. 44, 48, 132.

although it is quite plausible that there were several successive generations of masons and carpenters[46]. Even so, this small set may signify a certain openness on the part of the Lisbon builders' guild, since many of its new members do not appear to be related to other master builders.

Surprisingly, not all sons or brothers followed in the professional footsteps of the older members of their families — as is commonly described in historiography on the subject[47] —, showing that the transmission of knowledge did not only depend on parental ties. In fact, the data shows that three of the carpenters examined were the sons of masons and that other three masons were the sons of carpenters, that is, about 15.4 % of first-degree consanguinity relations found. This ratio increases for second degree consanguinity relations, reaching 19.3 %; that is to say, out of 14 pairs of brothers, one became a master mason and the other a master carpenter and, in three of the sets of three brothers, one brother took the carpentry examination and the other two had become master masons. Furthermore, in the 14 family relationships through affinity, it was found that there were six more cases where both trades are present, in addition to the mason who was the son-in-law of the tiler mentioned above, attaining a ratio of 40.0 %.

Table 14. Parental links of those examined

	Reported	Inferred	Total	Different trade	
	No.	No.	No.	No.	%
Consanguinity	**3**	**124**	**127**	**23**	**18.1**
Sons	3	36	39	6	15.4
Brothers	0	88	88	17	19.3
Two	0	80	80	14	17.5
Three	0	7	7	3	42.9
Four	0	1	1	0	0.0
Affinity	**1**	**14**	**15**	**6**	**40.0**
Sons-in-law	1	3	4	1	25.0
Brothers-in-law	0	9	9	4	44.4
Two	0	7	7	2	28.6
Three	0	2	2	2	100.0
Dual brothers-in-law	0	2	2	1	50.0
Total	**4**	**138**	**142**	**29**	**20.4**

Source: AML-AH, ISJC, MSS 41 and 111

46. One example is Valério Martins de Oliveira, who was the grandson, son, and brother of masons (Pinto, 2018: 78), although only his examination record and that of his brother, Francisco Martins, have been discovered (AML-AH, ISJC, MS 111, fls. 33, 55v).

47. Ripoll's analysis is also in line with this view (2000: 914-915).

Let us now look at the data regarding the guild officials who undertook the examinations in the 92 years under analysis[48]. The position of general registrar — with existing data for 86 years (93.5 %) — was held annually by one person, with the masons serving in even-numbered years and the carpenters in odd-numbered years. This alternation was set down in writing in the 1709 regulation, although its practice clearly predates this, and is proven — if not earlier — for the 1650-1682 period. The only exception to this rule was seen in 1757, when there were two general registrars, a carpenter and a mason, due to the increase in workload given the high number of examinations following the 1755 earthquake, as mentioned above.

Another aspect that clearly stands out from this data is that the same person never twice held the post of general registrar, despite the registrar of 1674 having been reappointed to the post at the end of 1676, replacing the registrar of that year who probably died in the meantime. If we cross-reference the names of the journeymen examined with the names of the registrars — where only 38 unequivocal matches were obtained, because there were many homonyms — it can be observed that this position was held on average 10 years after being examined (with a standard deviation of 6.3), although there were those who held it two years later, as well as those who did not hold it until 38 years later.

Curiously, the post of general registrar often served as a springboard for master builders to rise to higher positions (judge-examiner and board-judge), with 41 cases in which this happened being noted, and only three cases in which the post of registrar was taken up after holding a higher position. In relation to the position of examiner — with 71 years of data for the masons (77.2 %) and 68 years for the carpenters (73.9 %) — the precept established in the regulation was confirmed, whereby masters entered first as novice judges, and could eventually be chosen later as senior judges. This happened in 57 instances, where the average time between securing the two posts was about 6 years (with a standard deviation of 3.9).

Furthermore, and contrary to that which was noted with the registrars, for this post there were several recurring names, i.e., 29 individuals were examiners twice, five were examiners three times, and one was an examiner four times. The gap between such recurrent cases was 7 years on average (with a standard deviation of 4.1), although there were consecutive cases: the senior-judge of the masons in 1705 and 1706 (replacing the elected individual who, in the meantime, had died); the senior-judge of the carpenters in 1710 and 1711; the novice-judge of the masons in 1717 and 1718. This contradicted the rule that established that there were to be at least three years between the same individual occupying the same post.

48. See also https://lisbonbuilders.omeka.net/committees.

The post of board-judge is the one with the least information available — with data for only 32 years (34.8 %) — which was held by two masters representing the two main groups of the guild, namely the masons and the carpenters. If this practice was consistent during the 1703-1761 period, with this being confirmed by the 1709 regulation, it was already present in 1650 (although strictly speaking that year was the only one containing this information for the 1650-1682 period). In one post, 27 masons and five tilers were appointed, while in the other 16 house carpenters, six fine woodworking carpenters, four workshop carpenters, three wood turners, two guitar makers and one wood carver were appointed. There were also recurrences in this post, with three master masons holding the position of board-judge again after 11, 14 and 22 years, respectively.

Finally, it should also be noted that, as a rule, the examination records do not contain notes commenting on the examination itself. The exceptions are 118 entries, all related to carpentry examinations that took place between 1653 and 1678, which show short pro-forma-type sentences concerning the pieces executed and which almost always end with «and all the other work that belongs to our trade»[49]. However, and despite their brevity, these sentences show that in the seventeenth century the clauses listed in the 1572 regulation were still in use, including the specific information concerning fine carpentry, due to clarifications concerning the execution of worked pieces to line ceilings and walls. Given this, it can be deduced that the changes in the rules of the carpentry examinations recorded in Valério Martins de Oliveira's book must have only occurred at the beginning of the eighteenth century.

5. CONCLUSION

As has been seen throughout this text, the juxtaposition between the examination rules, laid down in the regulatory documents, and the actual practices involved in the examination of masons and carpenters for construction work in Lisbon, set down in two registers, has enabled us to understand that most of the rules were indeed observed, almost always in terms of the formalities imposed for the higher positions of the guild.

The main exceptions to such rules were found in specific situations, some resulting from historical circumstances, and in two aspects that were also described in complementary sources for the period under analysis. Firstly, the data shows that most of the builders examined in other Portuguese municipalities did not have to undergo a new examination at the Lisbon guild to work in the city, since their number was not particularly high. Thus, it can be assumed that this was not

49. AML-AH, ISJC, MS 111, fls. 7v, 9-9v, 12-13v, 16-17, 19v-21v, 24, 27-27v, 29 (1)-29(1) v, 29-2, 32v, 40-41, 47-48v, 50v-51v, 54-57, 58v, 73-74, 81-81v, 84v, 86-86v, 87v, 88v-89.

a barrier preventing the geographical mobility of such builders. Moreover, the fact that journeymen took this examination long after their apprenticeships had been completed was not because the guild had imposed this, as a way of delaying access to the profession — an argument often used in studies of trade guilds — but by choice. In fact, the guild considered this to be a harmful practice, because various masons and carpenters exercised their profession without proper certification. Also, by not joining the Brotherhood of the guild, they did not contribute with obligatory annual fees used to assist its members in poverty, sickness, and death. Besides these circumstances, there were many other builders working in Lisbon who had been examined but did not belong to the Brotherhood of Saint Joseph, since they had been refused entry, because they were New Christians or married to one, did not have the required moral or physical qualities, their wives were saleswomen, or had lied or omitted information about their relatives[50].

One aspect that the examination registers do not cover is the number of examinees who failed, as they only record the names of those who passed. It is certainly not correct to require information from sources that they do not contain, but this matter is mentioned because only with such data would it be possible to ascertain what the success rate of the examinations was, as well as to show to what extent the six-month interval between attempts was complied with. These questions will therefore remain unanswered.

In addition, the examination registers contain two clear omissions. In none of the years were the names of the two «elected» members of the guild recorded who, according to the regulations, attended the exams, and so doubt arises as to whether this formality was in fact complied with[51]. Likewise, there are no examinees in earth works, or any other mention of earth masons, and it could be speculated that this craft and construction technique was no longer in use in seventeenth- and eighteenth-century Lisbon, although it was still alluded to in Valério Martins de Oliveira's book.

50. In 1735 the candidates that were «disapproved and rejected, according to the information that was first specified to be taken from them in the form of their commitment to this Brotherhood» were registered in a specific book. The book included 19 names of master builders (15 masons and four carpenters), examined between 1671 and 1758, who had not been able to join the Brotherhood (AML-AH, ISJC, *Livro de Lançamento dos Reprovados*, fls. 1-7). Thanks are due to Adriana Ferreira of the Office for the Conservation and Restoration of Graphic Documents of the Lisbon Municipal Archive for alerting me to the existence of this book.

51. This information is also absent from the actual examination certificates, where only the names of the examiners and the registrar appear (see, for instance, AML-AH, ISJC, Folder 138, fls. 294-294v). Another piece of information not included in the examination registers and certificates are the names of the masters who trained the examinees, although the regulations require them to certify the apprenticeship.

Nevertheless, the quantitative and qualitative analysis of the serial data has brought to light several important aspects of the examination practices that could not be understood just from knowing the regulations, including the number of journeymen examined each year and the preference to carry out the examination in the month of December, as well has show certain predictable characteristics and patterns of the Lisbon builders, such as marital status, geographical origin, and family relationships involving consanguinity and affinity.

Indeed, one of the most unexpected results of this analysis is the discoveries made concerning family relationships, through the existence of masons and carpenters within the same family, which supposedly would be working together in the construction of buildings. This circumstance may result from the characteristics of the Lisbon guild itself which, as has been noted, from early on included both house carpenters and masons — as building professionals[52] —, separating them from other trades related to woodwork, some of which formed part of different Brotherhoods[53]. However, to truly assess the joint action of those masons and house carpenters it will be necessary to explore other documentary sources, particularly those which record construction contracts and partnerships between builders, something that will be left for another project.

Given this, and to conclude, it is also important to note that the current state of the archival collection of the Lisbon masons' and carpenters' guild does not make it possible to attempt to fill in the various data missing from the examination records with the information contained in the surviving examination certificates, as most of its folders have yet to be catalogued. It should be noted, however, that not all the certificates are legible nowadays, since time and the lack of conditions of the place where the collection was deposited led to the material deterioration of many documents, the information from which has now been irremediably lost.

However, it is indeed the case that some missing data may still be recovered from other documents, such as the requirements for admission to the Brotherhood of Saint Joseph. In these, applicants had to include a series of family details (names of parents and grandparents, as well as the names of their wife and respective parents and grandparents) through which the moral qualities and place of origin of everyone

52. This is also proven by Valério Martins de Oliveira's book which, despite being written by a mason, in its third edition included carpentry skills (Pinto, 2018: 82).

53. Such is the case of the shipwrights who belonged to the Brotherhood of Saint Roch [*São Roque*] (Gomes, 1931), or the carriage carpenters who belonged to the Brotherhood of Saint Gundisalvus [*São Gonçalo*]. In 1771, there were three Brotherhoods that included woodworkers: Saint Joseph which included house carpenters and fine woodworking carpenters; Our Lady of the Olive Tree [*Nossa Senhora da Oliveira*] which included carriage carpenters, and Our Lady of the Incarnation [*Nossa Senhora da Encarnação*] which included workshop carpenters and wood carvers (Langhans 1943-1946(I): 418-419).

would be assessed[54]. Hence, strictly speaking, some of the results of this study, obtained by only analysing the examination records collected in two register books, should be regarded as provisional. Nevertheless, they already provide new evidence on a group of more than two thousand construction professionals in Portugal in the early modern period, surpassing the case studies of nominally identified builders or the abstract views obtained only through the regulatory documents. Added to all this is the relevance of the documentation analysed for this study of Lisbon trade guilds, as it is one of the few, if not the only one, that survived the 1755 earthquake.

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54. See, for example, the case of a carpenter examined in 1756, whose examination register only records the father's name (AML-AH, ISJC, MS 111, fl. 145). However, in his request to the Brotherhood, submitted on the same day of the examination, all the names of his parents and grandparents were known, as well as the name of his wife and respective parents and grandparents, and it turned out he was the son-in-law of a mason (AML-AH, ISJC, Folder 138, fls. 512-515v).

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