

Garzoni

Apprendistato e formazione tra Venezia e l'Europa in età moderna

a cura di

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A View on Venetian Apprenticeship from the *Garzoni* Database

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Abstract

A sample of contracts of apprenticeship from three periods in the history of early modern Venice is analysed, as recorded in the archive of the *Giustizia Vecchia*, a venetian magistracy. The periods are the end of the 16th century, the 1620s and the 1650s. A set of findings is discussed. First, the variety of professions represented in the dataset reduces over time, as the proportion of venetian apprentices increases, in accordance with previous literature highlighting the decline of the venetian economy during the 17th century. Secondly, apprenticeships are found to be divided into two broad groups: those who stipulated a payment to be given by the master to the apprentice (circa 80%), and those who did not. The first group is suggested to represent contracts used in part, sometimes exclusively, to hire cheap workforce as well as to provide training. Lastly, professional profiles are introduced, as a combination of statistics which provide evidence of three typologies of professions with respect to apprenticeship market dynamics.¹

1. Introduction

In the context of the debate on guilds and their economic and social role, two quite opposite views have been proposed. S. R. Epstein casts a benign view on guilds, as essentially devoted to the transfer of skills through apprenticeship and to the guarantee of contracts for both parties involved.² S. Ogilvie instead depicts guilds as closed groups of self-interested masters, whose aim was the endogenous redistribution of wealth. As such, guilds for the most part indulged in providing preferential access to relatives, neglecting open access to training for outsiders, essentially disregard-

1. This paper is a preliminary result of the *Garzoni* (GAWS) project, which will extensively study venetian apprenticeship in the coming years. See <http://irhis.hypotheses.org/12296> and <http://garzoni.hypotheses.org/>.

2. Stephen R. Epstein, «Craft Guilds, Apprenticeship, and Technological Change in Preindustrial Europe», *The Journal of Economic History*, 1998, 58 (3), p. 684.

ing their alleged social role as providers of skill transmission and security for young people.³ Both authors at least agree on the need for further quantitative and regional investigations as a means to inform this currently polarized debate.⁴

The last take on Venice in this respect is that of MacKenney, who suggested that in the city of Saint Mark, «[...] an apprenticeship maintained the traditional standards of production of the trade and protected a considerable number of young people from poverty».⁵ At the same time, «there is no evidence that the family operated as a power base for its members within the corporation» except for some specific guilds, and only during the 18th century.⁶

The lively debate on guilds therefore cannot but be informed by a more thorough and comparative view on apprenticeship, an institution of crucial importance within the mechanics of society for reasons of welfare, labour, transmission of skills and knowledge, and more general economic dynamics. Yet apprenticeship is also a gateway for several other enquiries spanning from social and gender history to the history of art.

Venetian apprenticeship has never been systematically studied.⁷ It is the purpose of the *GAWS* project to amend this gap in our knowledge, by the creation and systematic study of a series of contracts of apprenticeship for several crafts, registered in documentation currently held at the State Archive of Venice.

3. Sheilagh Ogilvie, «The Economics of Guilds», *The Journal of Economic Perspectives*, 2014, 28 (4), p. 181-183.

4. Stephen R. Epstein, «Craft guilds in the pre-modern economy: a discussion», *Economic History Review*, 2008, 61 (1), p. 155 and Sheilagh Ogilvie, «Rehabilitating the guilds: a reply», *Economic History Review*, 2008, 61 (1), p. 181.

5. Richard MacKenney, «The Guilds of Venice: State and Society in the Longue Duree», *Studi Veneziani*, 1997, XXXIV, p. 39.

6. Ivi, p. 41-42.

7. Anna Bellavitis, «Apprentissages masculins, apprentissages féminins à Venise au XVIe siècle», *Histoire urbaine*, 2006, 15 (1), p. 49-73.

The goal of this paper is to present an analysis of a sample of contracts from different periods in venetian history, with the aim of sketching a first view of the apprenticeship in Venice from a strictly macroscopic perspective, something rarely attempted before in the context of the history of the Republic. Some questions to pose and address include: which were the basic feats of venetian apprenticeships, and how do they compare to other examples in Europe? Can apprenticeship contracts provide some cues of the state of the venetian economy in general? Do such cues accord with previous literature or not? What was the use of the apprenticeship as an economic relation, and how did it develop over time? Were apprentices in Venice viewed as a cheap source of generic labour, or were they effectively trained to become journeymen, masters and members of a guild, thus providing a relevant social role such is that of skill and knowledge transmission?

Venice seems to differ from other well-known examples (e.g. England), as the apprenticeship appears to be a bi-faceted instrument used both as a source of labour and as a gateway to entry in a profession, with characteristic traits for each profession persisting over time in this regard. The future study of such tension, and its relative stability through time, could provide in due course an important contribution to the debate on guilds and the economics of knowledge in early modern Europe. Some of these insights are anticipated in what follows.

After a brief description of the evidence used and its acquisition into a database, a section of descriptive statistics highlights the essential traits of venetian contracts of apprenticeship. Next, a closer look at salaries and their components allows to delve into some fundamentals of venetian apprenticeship over the periods under consideration. The notion of *professional profiles* is finally introduced, in order to understand how apprenticeships were used in different crafts.

2. Data Acquisition

The documentary series of the *Accordi dei Garzoni* is the product of the systematic registration of contracts of apprenticeship at the *Giustizia Vecchia*, a venetian magistracy. The *Giustizia Vecchia* was in charge for registering apprenticeship contracts from most of the regulated professions in Venice, with some notable exceptions (e.g. silk workers). Regulation enforcing the registration of contracts was put in place during the 13th and 14th centuries, in order to provide a guarantee for both parties involved, especially apprentices. The outcome is a dense series of contracts, surviving for the best part integrally from the year 1575 until 1772.⁸

The typical contract of apprenticeship registers the following components: the mentions of the apprentice (always one per contract), the master (rarely more than one) and the guarantor (sometimes absent, sometimes more than one) in terms of a variable set of information, comprising name, surname, patronymic, profession, gender, etc. Two fields are specified almost exclusively for apprentices: age and geographical origins. The last two components are the financial and temporal details of the contract: the payment (if due, usually by the master) and other agreements (such as who provided for clothing, accommodation, etc. for the apprentice), the length of the contract, and whether the contract was interrupted in advance (e.g. due to the premature departure of the apprentice).

The pre-study phase for the *Garzoni* project spanned the whole year 2014. Its aim was to populate the database with a set of samples of contracts from different periods, considering all contracts from a subset of the professions recorded by *Giustizia Vecchia*.⁹

8. For more details see Vittorio Lazzarini, «Antichi ordinamenti veneziani a tutela del lavoro dei garzoni», in *Atti del regio Istituto Veneto di scienze, lettere ed arti*, 1929, LXXXVIII (II), p. 61-75 and Bellavitis, «Apprentissages masculins, apprentissages féminins», cit.

9. The full list of the 204 professions and specializations considered for the pre-study is available upon request. The selection has been made by considering or exclu-

A data-entry interface has been developed using an instance of a Semantic Media Wiki, which allows fast deployment speed at the price of customizability.¹⁰ A total of 11563 contracts have been recorded into the database, all sampled from State Archive of Venice, *Giustizia Vecchia*, *Accordi dei Garzoni*, registers 151 to 177. Of these contracts, a final subset of 3687 double-blind-checked contracts is retained for the present study: the full contents of registers 152, 153, 157, 158, 163, 164, 169, 170, for the selected crafts.

Due to the goals of the pre-study, which were exploratory, contracts pertain to different *sample periods*, as can be seen from Figure 1. This sample can be considered to be representative of three important periods in venetian history: 1549 contracts from the late 16th century (before 1600 and after the plague of the year 1576), 982 contracts from the 20s of the 17th century (before the plague of the years 1630-31), and 1156 contracts from the middle years of the War of Candia (1650 to 1660).

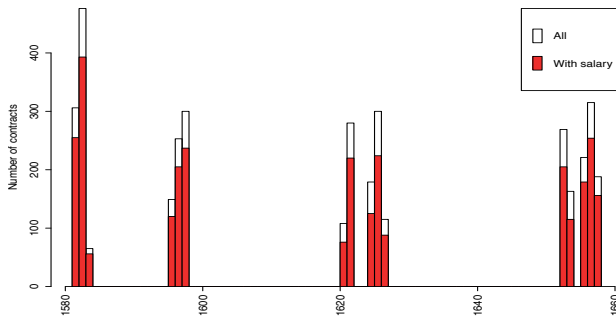


Fig. 1. Number of contracts per year, and proportion of contracts with a payment given by the master to the apprentice.

ding entire activity sectors, for example all professions within or related to the 'book industry' are included, and all professions in the textile sector are excluded.

10. <http://semantic-mediawiki.org/>.

3. Descriptive Statistics

A first overview of the dataset must start from the distributions of professions, in order to understand the variety of venetian economic activities. The sample presents 178 unique professions, several being compositions of specializations (such as “Stampador, Componer” or “Far manacordi, Suonador di manacordi”). The first 20 professions by number of contracts cover roughly 81% of the total contracts, producing a fat tail in the distribution and highlighting a variety of activities, as shown in Figure 2. The three sample periods, taken individually, offer some insights into the dynamics of venetian economy, as per Figure 3 and Figure 4. The trend presents a reduction in the number of represented professions (111 for period 1, 94 for period 2 and 75 for period 3) and a reduction in size of the right tail of the resulting distributions (if we need 20 professions to gather 80% of registered apprenticeship contracts during period 1, we need 16 and 14 during periods 2 and 3 respectively). Essentially, the same number of apprentices were directed towards fewer professions in variety, and at the same time fewer professions were getting the lion's share of fresh recruits.

It is also worth noting that the economy appears to become increasingly specialized towards specific luxury areas (mirrors, gold products), whilst the relative reduction in importance of some general activities (carpenters, general retail sellers) over period 3 might also be caused by the lasting effects of the plague. Some well-known trends in venetian economy are confirmed by apprenticeships too, such as the virtual disappearance of the press industry during the 17th century.¹¹ To be sure, these preliminary considerations will be re-examined in light of the integration of all professions into the database and an extensive survey of other sources.

11. Mario Infelise, «La crise de la librairie vénitienne, 1620-1650», in Barbier, Frédéric et al. (eds.), *Le livre et l'historien: études offertes en l'honneur du professeur Henri Jean-Martin*, Geneva, Droz, 1997, p. 343-352.

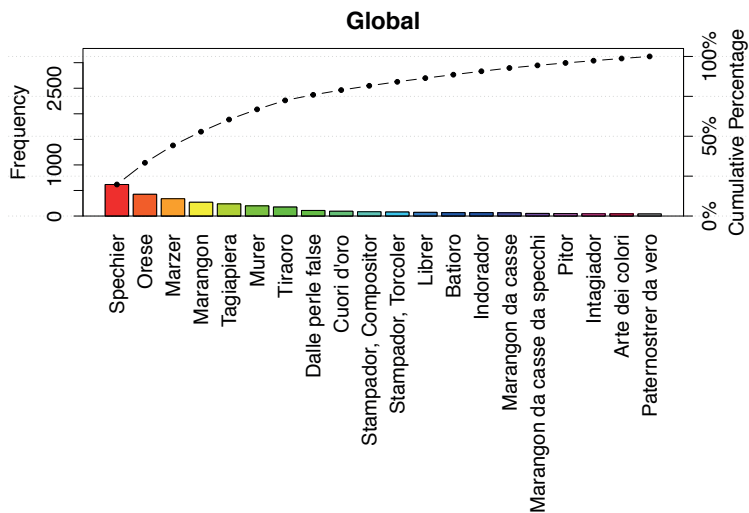


Figure 2. Number of contracts for the 20 most represented professions over the whole sample.

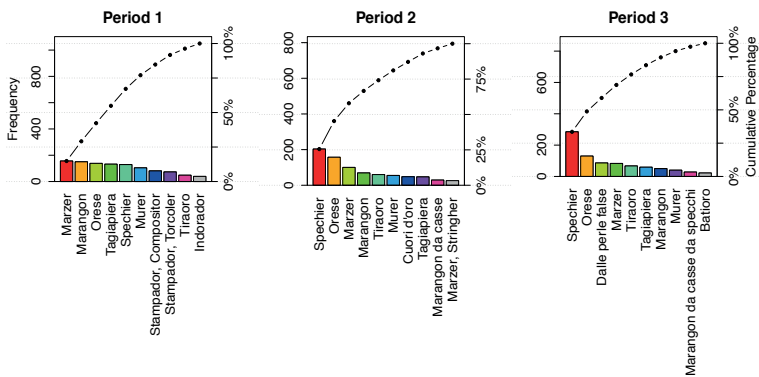


Figure 3. Number of contracts for the 10 most represented professions over the three sample periods.

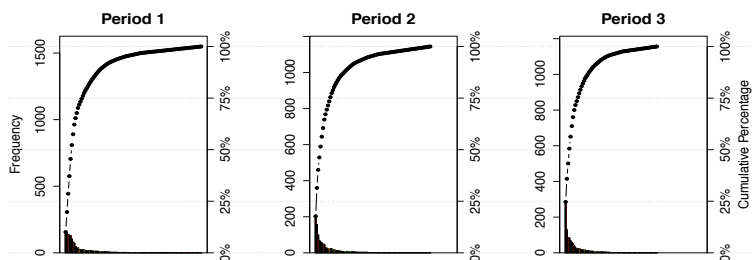


Figure 4. Number of contracts for all professions over the three sample periods. Note the reduction of the distribution tail over periods, in terms of both its length (variety of professions) and ‘fatness’ (concentration of contracts into few professions).

Another perspective is given by a first sample of summary statistics, to be compared over time, in Table 1.

| Statistic | Overall | Period 1 | Period 2 | Period 3 |
|--|---------|----------|----------|----------|
| Average age of apprentices (below 25 y.o.) | 14.3 | 14.25 | 14.4 | 14.31 |
| Average length of contracts (in years) | 5.09 | 5.15 | 5.15 | 4.96 |
| Average end of the contract age (below 25 y.o.) | 19.46 | 19.43 | 19.57 | 19.39 |
| Average annual salaries (in venetian ducats) | 5.7 | 5.4 | 5.2 | 6.6 |
| Known orphans by father among apprentices | 36% | 39% | 38% | 32% |
| Apprentices declared as fled | 11% | 15% | 10% | 5.8% |
| Venetian apprentices <i>loose</i> (see note 14) | 44% | 34% | 46% | 56% |
| Venetian apprentices <i>strict</i> (see note 14) | 11% | 8.5% | 4% | 22% |
| Contracts with a payment by the master | 79% | 82% | 75% | 79% |

Table 1. Summary statistics overall and for the three sample periods, y.o. stands for years old.

The average age of apprentices, calculated removing a small number of particularly old outliers,¹² is substantially stable over time at just above 14 years. This element, as well as the average length of contracts and age of apprentices at the end of their contract has been previously analysed.¹³

The last statistic in Table 1 is possibly the most important one: overall 8 out of 10 contracts of apprenticeship stipulated that the master was supposed to give a payment to the apprentice, for the most part to be paid in a single instalment probably at the end of the contract, and in venetian ducats (with a negligible amount of exceptions). We see here a first bifurcation, which will be further explored in what follows, between apprentices that were paid, and apprentices that worked for free or were paying their master in turn.

Another element to note is that the proportion of apprentices¹⁴ from Venice consistently rose over time, and to the opposite the proportion of apprentices declared as fled during their contract lowers. The reduction in professional variety, as well as the rise of the venetian component among apprentices, might both be consistent with previous work remarking how the venetian economy became increasingly introvert during the 17th century.¹⁵

Apprenticeships were, for the most part, successfully brought to an end. Only circa 11% of apprentices was denounced as fled before the contract was over; a proportion that, even if added to a lower but

12. A marginal phenomenon, further illustrated in Lazzarini, «Antichi ordinamenti veneziani a tutela del lavoro dei garzoni», cit., p. 64. The mean statistic is calculated only considering apprentices below 25 years old at the beginning of their contract.

13. Bellavitis, «Apprentissages masculins, apprentissages féminins», cit., p. 56.

14. Venetian apprentices strict only considers apprentices explicitly mentioned as venetian, whilst loose also considers as venetians all apprentices for which the geographical origins are not specified, as previously suggested by Bellavitis, «Apprentissages masculins, apprentissages féminins», cit., e.g. p. 61. In the discussion, the loose version is considered as it seems by far the most reasonable.

15. Paola Lanaro, «Corporations et confréries : les étrangers et la marché du travail à Venise (XVe-XVIIIe siècles)», *Histoire urbaine*, 2008, 21 (1), p. 32.

similar proportion of contracts ended by mutual agreement,¹⁶ is quite low compared to other European settings. Venetians were less likely to flee, maybe being more guaranteed and well treated by their masters, and with more vested interest for integration into the city life.

It is also worth mentioning that 2 out of 5 apprentices were orphans by father, a strong hint at the social role of apprenticeships as a safety net for young children.¹⁷

Lastly, in the corpus there are at the moment only 4 female apprentices, but 32 female masters and 192 contracts with at least one woman as guarantor. Indeed, the *Garzoni* database will allow to study the professional activity of women in some detail, yet here the reduced sample and the fact that the sectors deemed traditionally most important for women (notably, textile) are for now missing, prevent further analysis.

To summarize it can then be argued, albeit from preliminary evidence, that the venetian apprenticeship market became gradually more introvert over time, with a rising component of venetians by origin, who brought more stability (fewer early interruptions), without substantial modifications into other statistics such as age and length of contract. The apprenticeship market therefore seems to confirm the increasingly more introvert tendency of the economy of Venice during the 17th century, either directly or via changes in guild regulation or their record-keeping practices. We now take a closer look at wages, the payments given by masters to apprentices.

4. A Preliminary Analysis on the Determinants of Payments to Apprentices

Wages are crucial in our understanding of apprenticeship as an economic institution: were apprentices a source of cheap and generic labour or were they getting training, or a bit of both? What

16. MacKenney, «The Guilds of Venice: State and Society in the Longue Durée», cit., p. 37-38.

17. Ivi, p. 39.

elements in the contracts concur to determine the payments given to apprentices? How do they change over time?

The overall trend of wages¹⁸ paid by the masters in Figure 5, confirms a previously found general rise of the value of labour following the plague of the 1630-31,¹⁹ and also in the years of the War of Candia. Yet the question to be asked here is: who was paying whom and why?

The proportion of contracts with some kind of payment in money given by the master to the apprentice, is substantially equal across sample periods (Figure 1). Only a minor 4% of contracts entailed a payment given instead from someone (apprentice or guarantor)



Figure 5. Overall trends of average annual payments (in venetian ducats) given by masters to apprentices.

18. In the absence of further specifications, I will from now on refer to wages as the share of payments given by the master to the apprentice in money, using whatever periodization.

19. Luciano Pezzolo, *Il fisco dei veneziani*, Verona, Cierre, 2003, p. 198.

to the master. The rest, 17% of contracts, had no specification of a payment in money (Table 2). Similarly, the proportion of wages to be paid in one instalment over wages paid at regular intervals is very high and stable over time (average of 87%). Furthermore, of these, almost all wages were paid annually (11.5%, Tables 3 and 4).

Other factors related to these compensations, and possibly impacting them are the contractual conditions related to the lodging, providing personal care, clothes and expenses of the apprentices. Table 5 presents the highly positive correlations that can be found when some components of the contracts are considered. As it can be seen, 3 out of 4 components are part of the provisions of the master to the apprentice, whilst for the most part it was on the apprentice to provide for his/her clothes. In summary, not only most of the contracts provided a payment in a final instalment to the apprentice, but also demanded to the master to provide for lodging, personal care and generic expenses.

| Variable (1/0) | Accommodation by master | Personal care by master | Clothes by master | Generic expenses by master |
|----------------------------|-------------------------|-------------------------|-------------------|----------------------------|
| Accommodation by master | 1 | 0.872 | 0.226 | 0.926 |
| Personal care by master | 0.87 | 1 | 0.179 | 0.826 |
| Clothes by master | 0.226 | 0.179 | 1 | 0.195 |
| Generic expenses by master | 0.926 | 0.826 | 0.195 | 1 |

Table 2. Correlation matrix of some components of the contracts (all reported statistics have a p-value at 0.01 significance, only contracts with a payment given by the master are considered).

The working hypothesis of this section is the following one: apprenticeships broadly belonged to two groups. On the one hand, most contracts, especially the ones with a payment given annually, and possibly also those paid in a final instalment, are primarily, even if not exclusively, labour contracts.²⁰ Another group is that of apprenticeships who were not paid or were supposed to pay their master in turn, who might be considered as contracts for apprentices mostly getting trained and possibly a preferential access to the craft. To be sure, a mixed view is the most reasonable:²¹ apprentices pertaining to both groups were likely receiving some training and were also performing some generic work, the difference is not to be intended as one of absolute, but relative degree.

| Statistic | Overall | Period 1 | Period 2 | Period 3 |
|------------------------------------|----------------|---------------|----------------|-----------------|
| Paid by master | 79% | 82% | 75% | 79% |
| Paid by someone else to the master | 4% | 3.2% | 5% | 4% |
| No payment in money | 17% | 14.8% | 20% | 17% |
| Totals | 100% (3687) | 42% (1549) | 26.5% (982) | 31.5% (1156) |

Table 3. Who gets a payment and who pays for it.

20. A possible practice already highlighted in Manuela Martini, Anna Bellavitis, «Households economies, social norms and practices of unpaid market work in Europe from the sixteenth century to the present», *The History of the Family*, 2014, 19 (3), p. 276.

21. Close to what has been proposed by P. Wallis for London (Patrick Wallis, «Apprenticeship and Training in Premodern England», *Journal of Economic History*, 2007, 68 (3), p. 7 and 24): a mixed model accounting for work and training in parallel, in order to minimize the risk for both parties involved, in the absence of extra-market contract enforcement. The venetian case is quite different at its core, especially since the high retention rate and incentives given to apprentices in the form of a payment, as well as a probably higher state enforcement, do not justify the need for a strictly parallel mode of apprenticeship. My remark here is of simple common sense: apprentices were likely to do a lot of things at the same time, but still two broad groups of contracts, one oriented towards labour and the other towards training are justifiable by evidence.

| Statistic | Overall | Period 1 | Period 2 | Period 3 |
|---|----------------|---------------|--------------|--------------|
| Payments given at the end of the contract | 86.7% | 87% | 84% | 88% |
| Corresponding average annual payment | 5 | 4.4 | 4.9 | 6 |
| Payments given annually | 11.5% | 9.5% | 15.7% | 11% |
| Corresponding average annual payment | 9.4 | 10.5 | 6.6 | 11.1 |
| Incremental payments given annually | 4.8% | 6.1% | 3.4% | 4.1% |
| Corresponding average annual payment | 10.9 | 10.5 | 6.9 | 14.4 |
| Totals | 100% (2908) | 43% (1266) | 25% (733) | 31% (909) |

Table 4. Periodization analysis for payments by masters to apprentices.

Average wages paid annually, especially so if incrementally, are considerably higher than those paid on one instalment, providing more evidence for the added value of apprentices to their masters. We are left wondering what kind of so valuable training they were getting to require such incentives to stay into apprenticeship: a future enquiry on these contracts, and the professions where they were most in use, might provide further cues.

In order to verify the given hypothesis, it is worth considering the positioning of venetians into the individuated remuneration groups. As can be seen from Table 5, a considerable and rising proportion of apprentices without a given payment were venetians, more than the relative proportion of venetians overall. For example, if 17% of contracts overall were without payment, 10.6% of these were venetians (thus the 62.35%, albeit overall venetians were just the 44% of the total apprentices). It can therefore be concluded that venetians had a preference for contracts of group 2, likely to lead to more rapid training and professional advancement, which seems reasonable.

| Statistic | Overall | Period 1 | Period 2 | Period 3 |
|--|--------------------|-------------------|--------------------|-------------------|
| Venetians with single-instalment payment | 27% | 21% | 26% | 35.5% |
| Corresponding average payment | 5.4 | 4.4 | 5.2 | 6.4 |
| Venetians with annual-instalment payment | 5.9% | 4.4% | 7.9% | 6.2% |
| Corresponding average payment | 8.9 | 10 | 5.9 | 11 |
| Venetians with incremental payment | 2.4% | 2.8% | 1.6% | 2.3% |
| Corresponding average payment | 9.6 | 8.3 | 6 | 13.9 |
| Venetians with no payment from master | 10.6% | 7.5% | 11.6% | 13.8% |
| Venetians overall | 44% (1630/3687) | 34% (536/1549) | 45.6% (448/982) | 56% (648/1156) |

Table 5. Venetians and their remuneration groups.

A final regression analysis is useful in providing insights on the factors most relevant to determine wages, also over time. A set of variables are taken as independent and regressed against the average annual payment (see Appendix for results).

The positive strong correlation of the age of the apprentice on its payment is another indicator of apprentices being used as generic labour force. It is important to consider this evidence in comparison with the estimate of apprentices who switched masters. More than 97% of apprentices never had more than one master in our dataset: the practice of swapping masters and/or professions was apparently not common, at least for what we know now.²² Therefore, the pre-

22. These results rely on record linkage, which is the process of solving multiple references to the same person, as for example the same master being mentioned in

mium of age on payment can hardly be considered as entailing previously developed skills in the same craft, but as a natural increase in the physical fitness of apprentices as generic providers of labour in the workshop. To be sure, in specific cases, previous undocumented experience into the craft, as well as a personal relationship between the master and the family of the apprentice might also explain this phenomenon, as discussed by Andrea Caracausi.²³

We should turn for comparison to what has been shown for London, where rising premiums paid to masters were linked with younger apprentices, deemed less productive,²⁴ and lower premiums were due by apprentices with previous «exposure to the occupation».²⁵ Indeed, a «London apprenticeship was costly, long, and unstable. Youths entered much longer terms of service than their peers on the continent». These traits were substantiated by a minimum length of 7 years, the practice of paying the master to enter apprenticeship, and the high likelihood of interruption before completion.²⁶

In Venice, on the contrary, contracts were shorter, apprentices younger and for the most part receiving a payment, contracts were quite stable. Wages paid by masters generally increased if the apprentice was older at the beginning of a contract, even without previous known experience in the craft. Other notable elements, which con-

several contracts. Work on record linkage for the Garzoni database is still ongoing, see G. Colavizza, M. Ehrmann, Y. Rochat, *A Method for Record Linkage with Sparse Historical Data*, Digital Humanities Conference, 2016.

23. Andrea Caracausi, «The price of an apprentice: contracts and trials in the woolen industry in sixteenth century Italy», *Mélanges de l'École française de Rome - Italie et Méditerranée modernes et contemporaines* [En ligne], 2016, 128-1. URL: <http://mefrim.revues.org/2476>.

24. Patrick Wallis, Cliff Webb, Chris Minns, «Leaving Home and Entering Service: The Age of Apprenticeship in Early Modern London», *Continuity and Change*, 2010, 25 (3), p. 400.

25. Chris Minns, Patrick Wallis, «The price of human capital in a pre-industrial economy: Premiums and apprenticeship contracts in 18th century England», *Explorations in Economic History*, 2013, 50, p. 347.

26. Chris Minns, Patrick Wallis, «Rules and reality: quantifying the practice of apprenticeship in early modern England», *Economic History Review*, 2012, 65 (2), p. 792.

firm the working hypothesis, are a negative correlation of payments with the length of contracts (shorter contracts entailed higher payments) and, as previously noted, the positive impact of incremental wages and the negative impact of a single, end-of-contract payment agreement in this respect.

In summary, several findings confirm a preliminary hypothesis which states that venetian contracts of apprenticeship were used for two distinct purposes in varying degrees: to hire generic workforce and as a means to provide professional training to apprentices. Contracts in one group were numerically more consistent (about 80%), entailed a payment paid by the master to the apprentice either as a final payment or in regular instalments, as well as further securities, and also show a payment bonus paid to previously untrained but older apprentices. As a consequence, early contract interruptions were low, and swaps of masters or profession very rare. On the other hand, a group of contracts with no payment, or a compensation to be paid to the master, but a proportionally higher presence of venetians was likely to provide for more systematic training to youths. This is for example the case of Pietro Mistan, enrolling in April 1622 to become an apothecary, and willing to pay decreasing amounts of money every year to his master Giacomo Picini, as he was supposed to improve, and thus become more of use to his master over time. His first year was to be devoted to «andar il prima anno a scola a imparar litera».²⁷ Similarly, the few contracts with a payment not paid by the master (thus paid by the apprentice, his relatives or some third party; 3% in our sample), considerably higher than average, are concentrated for the most part in some specific professions (3 out of 4 are 'merzeri', 'oresi' or 'tiraoro') and clearly point to possible individual paths of integration into the profession. Such outliers, whose presence is well known, await systematic study.²⁸

27. «Go to school to learn how to read and write during the first year [of apprenticeship]». ASVe, *Giustizia Vecchia, Accordi dei Garzoni*, b. 118, r. 163, c. 96v.

28. Anna Bellavitis, «Gender and Apprenticeship in Early Modern Western Europe: some considerations», in G. Jacobsen, H. Wunder (eds.), *East meets West*:

It has been suggested that, during the 18th century, printers and maybe other guilds or individuals used apprenticeships as sources of labour in order to overcome periods of crisis and find new margins of competitiveness in a now wider world.²⁹ Such practice, that has been considered as a late development of a restructuring venetian economy, or an expedient proper just to some sectors, might instead have been a constituent component of venetian apprenticeships, in a sort of duality giving flexibility and stability to the institution as a whole.

5. Investigating the Market of Apprentices: Professional Profiles

It is now time to bring back professions into the equation, in order to further characterize the large share of contracts with a payment paid by the master to the apprentice, which are considered to some extent contracts to hire young labour force. Professions can be divided in at least three distinct *profiles* according to the distributions of three statistics: the age at enrolment, the average annual payment, and the length of contracts. This reduced number of profiles is a possible systematic pattern into the well-known great variety of factors which affected the remuneration of apprentices and masters alike.³⁰

The overall average age at enrolment is found to be at 14.5 years; the average length of contracts is 5.08 years; and the average annual payment given by masters (calculated excluding 49 outliers with an annual payment above 30 ducats) is 5.09 ducats (over 2994 contracts).

These averages are rarely to be found in any profession, but instead aggregate quite different distributions. There are three professional profiles which can be identified in the dataset:

a gendered view of legal tradition, Conference of the International Research Network "Gender differences in the history of European legal cultures", Budapest, 10-12 March 2011, Kiel, Solivagus-Verlag, 2014, p. 212-213.

29. «[...] la riduzione dei lavoranti e garzoni a forza lavoro con scarse prospettive di promozione permisero alla stampa e all'editoria veneziana di vivere una favorevole stagione tra Sei e Settecento, pur nel quadro di un sistema corporativo formalmente rigido». Pezzolo, *Il fisco dei veneziani*, cit. p. 177.

30. Martini, Bellavitis, «Households economies, social norms and practices of unpaid market work in Europe from the sixteenth century to the present», cit., p. 276.

Profile 1: lower than average age at enrolment, lower than average payment and longer than average length of contracts. Examples are typesetters in Figure 6, goldsmiths in Figure 7 and carpenters in Figure 8.

Profile 2: higher than average age at enrolment, higher payment and shorter contracts. Examples are the apprentices at the press in Figure 6, and mirror makers in Figure 7.

Profile 3: lastly, young apprentices with long contracts, but a higher than average payment, as is the case for stonecutters in Figure 8.

Profiles are listed in order of estimated frequency. It must be noted that profiles can be considered only for professions with a reasonable number of contracts in the dataset, and are also not useful for professions with a very low number of contracts with a payment paid by the master. The example of 'pictori' (painters) is remarkable, in that a limited but stable number of apprentices over time (49 in total) are rarely paid by their masters to undergo their training; sometimes, instead, masters are to be paid in turn. Such professions or isolated cases clearly demand dedicated study.

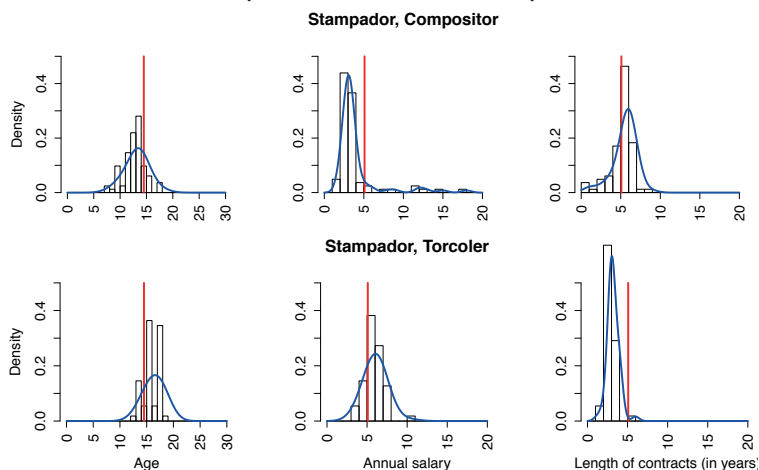


Fig. 6. Professional profiles of printers at the press (either press or inker, below) and typesetters (above). In red the overall mean for each statistic over the whole corpus.

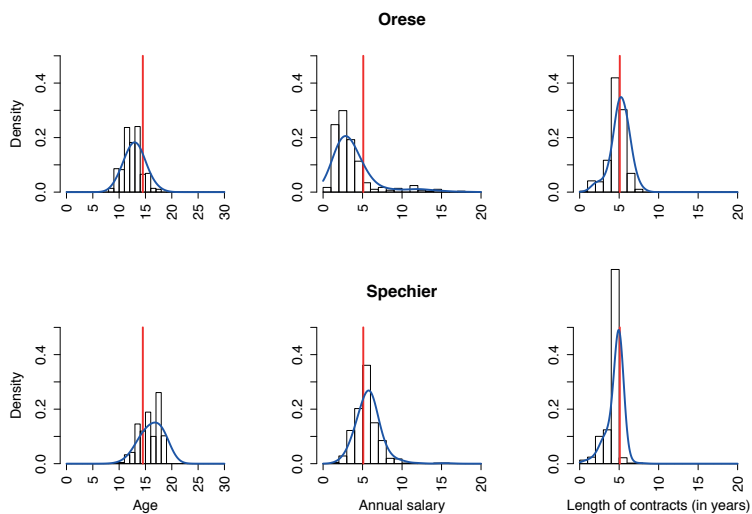


Fig. 7. Professional profiles of goldsmiths (above) and mirror makers (below). In red the overall mean for each statistic over the whole corpus.

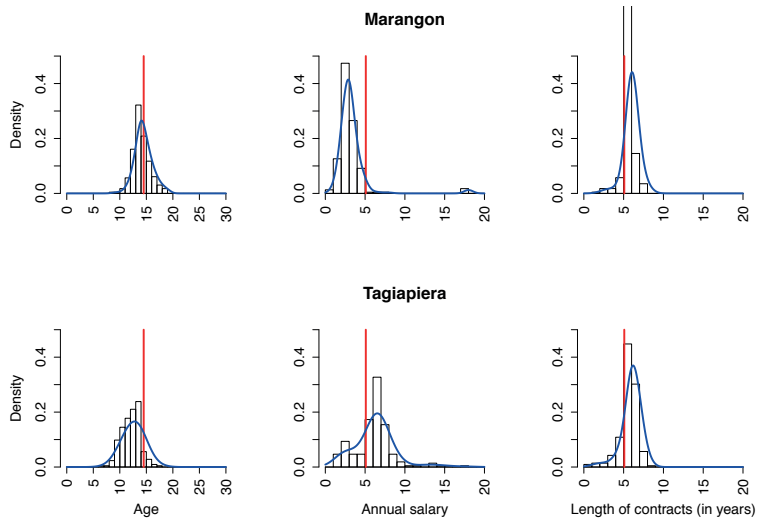


Fig. 8. Professional profiles of carpenters (above) and stonecutters (below). In red the overall mean for each statistic over the whole corpus.

A further remarkable trait of professional profiles is their stability over time. Figures 9 and 10 show profiles for carpenters and mirror makers respectively, over the three sample periods under consideration. Profiles do not fundamentally change in the peaks of their distribution, albeit they change in variance: carpenters tend to show a slight switch from profile 1 to profile 2 during periods 2 and 3, mirror makers stabilize in a weak form of profile 2.

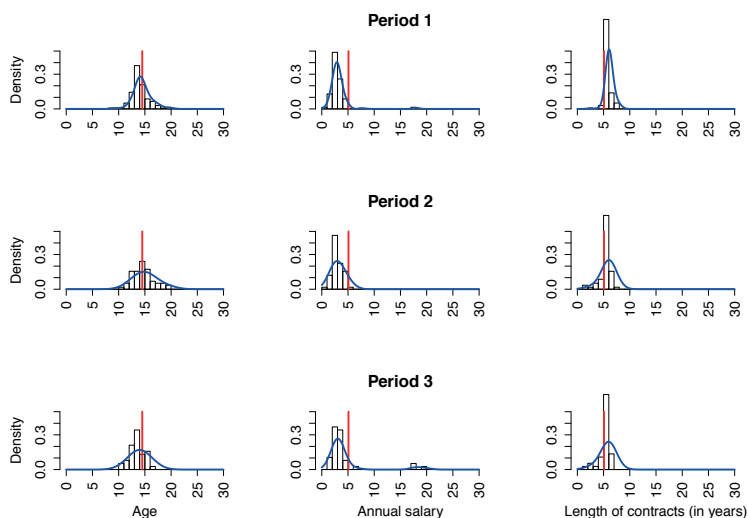


Fig. 9. Professional profiles of carpenters over the three periods. In red the overall mean for each statistic over the whole corpus.

Profiles help reduce the number of variables which characterize apprentices for different professions, and at the same time rise new questions on the inner workings of apprenticeships for different professions, as market dynamics come back into the picture. Profiles of type 1 indicate professions with a preference for young and cheap apprentices, who could work for longer. Profile 2 groups professions with a need for older apprentices,

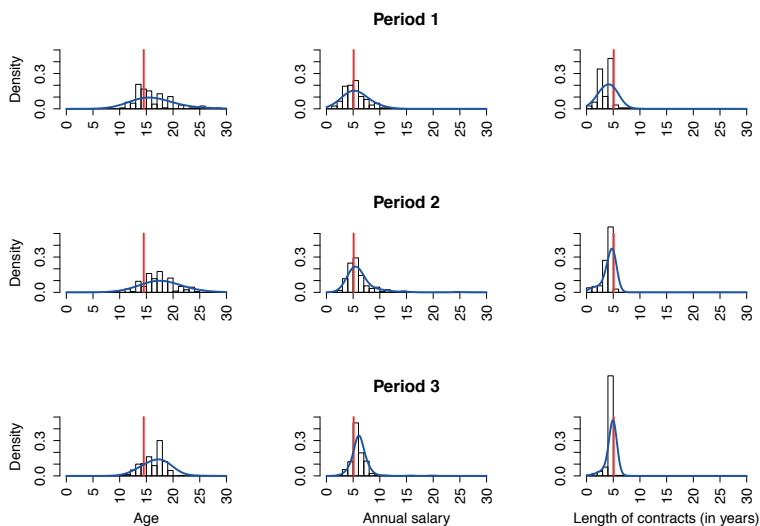


Fig. 10. Professional profiles of mirror makers over the three periods. In red the overall mean for each statistic over the whole corpus.

who had to be paid more accordingly. Lastly, profile 3 might gather apprentices to professions with a preference for early hiring, but for particularly demanding works, which meant extra compensation had to be provided for (yet not always, such in the case of stonecutters). Professional profiles seem to be explained by market dynamics and the specific needs of different crafts. They also might confirm how, despite the general hypothesis of apprentices as being a source of cheap labour more than youths to be trained, different professions entailed varied, more or less demanding tasks from their recruits.

Venetian apprenticeships were used by contemporaries in different ways, and were also subject to market dynamics. Different professions had different needs from their apprentices, which were accommodated at least in part by the market, and resulted in characteristic professional profiles with strong stability over time.

6. Conclusions and Future Work

This paper presents a first framing of venetian apprenticeship. First, contracts of apprenticeships are shown to be a partial proxy for the dynamics of the venetian economy, as they too highlight its tendency for introversion over the 17th century. Apprenticeship wages are then analysed, evidencing a possible duality in degree between contracts with and without a payment being given to the apprentice by the master. Evidence supports the claim that the first group of contracts was also used to hire cheap workforce receiving reduced training or fewer chances to join the craft, whilst the second group instead is composed of apprentices receiving more systematic training. Lastly, professional profiles are introduced, as a means to further explore market dynamics for apprenticeships in different professions.

One remarkable limitation of the present work is the virtual absence of apprentices' geographical origins into the account, except for venetians and the rest. The preliminary stage of the project disallowed the use of this yet to normalize information. It will be, of course, of the outmost importance into a future investigation, and might further specify the mechanics of professional profiles alongside trends already discussed here. Another important subject barely touched upon here is gender. There are several cases of females among apprentices, masters and even more guarantors, even not having yet considered traditional female sectors of activity (e.g. the textile sector wasn't included in the pre-study). Lastly, but not exclusively, social professional and family networks resulting from this specific view on the society of Venice that contacts of apprenticeship provide, should yield further insights into the inner workings of venetian apprenticeships.

A proper investigation of the nature of apprentices will therefore require further work, yet it seems the complexity of the picture can hardly be oversimplified. Venetian apprenticeship therefore is a multifaceted institution, bent to the needs of professions and individuals, yet with remarkable stability through time.

Acknowledgements

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Appendix

OLS regression on Annual payment overall (1) and for the three sample periods (2), (3), (4).

| <i>Dependent variable:</i> | | | | |
|---------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Average annual payment | | | | |
| | (1) | (2) | (3) | (4) |
| Venetian (yes = 1) | -0.018 (0.202) | -0.262 (0.302) | -0.177 (0.359) | 0.361 (0.380) |
| Year | 0.013 ^{***} (0.003) | 0.008 (0.019) | -0.071 (0.067) | -0.114 (0.096) |
| Length of contract | -1.349 ^{***} (0.072) | -1.072 ^{***} (0.102) | -1.078 ^{***} (0.127) | -2.002 ^{***} (0.155) |
| Age of apprentice | 0.307 ^{***} (0.037) | 0.439 ^{***} (0.058) | 0.255 ^{***} (0.057) | 0.254 ^{***} (0.076) |
| Father (not alive = 1) | -0.046 (0.187) | -0.209 (0.279) | 0.247 (0.305) | -0.152 (0.372) |
| Accommodation (paid by master = 1) | 0.050 (0.641) | 0.188 (1.212) | 5.241 ^{***} (1.299) | -2.188 ^{**} (1.107) |
| Personal care (paid by master = 1) | -0.813 ^{**} (0.393) | -1.727 (1.403) | -2.832 ^{***} (0.966) | -0.580 (0.501) |
| Clothes (paid by master = 1) | -0.044 (0.207) | -0.154 (0.325) | 1.125 ^{**} (0.490) | -0.593 (0.370) |

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| | | | | |
|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Generic expenses (paid by master = 1) | -1.286 ^{***} (0.579) | -0.465 (1.056) | -4.604 ^{***} (1.065) | 0.577 (0.992) |
| Female guarantor (present = 1) | -0.393 (0.405) | -0.135 (0.559) | -0.405 (0.672) | -0.217 (0.951) |
| Periodization of payments (one final instalment = 1) | -3.328 ^{***} (0.334) | -6.790 ^{***} (0.675) | -1.648 ^{***} (0.429) | -3.133 ^{***} (0.643) |
| Incremental payments (yes = 1) | 4.306 ^{***} (0.413) | 4.350 ^{***} (0.573) | 1.732 ^{**} (0.763) | 5.684 ^{***} (0.870) |
| Constant | 4.350 ^{***} (0.573) | -1.273 (30.938) | 124.713 (108.372) | 205.320 (158.152) |
| Observations | 2,760 | 1,212 | 721 | 827 |
| R ² | 0.302 | 0.340 | 0.273 | 0.347 |
| Adjusted R ² | 0.299 | 0.333 | 0.261 | 0.337 |
| Residual Std. Error | 4.488 (df = 2747) | 4.510 (df = 1199) | 3.684 (df = 708) | 4.767 (df = 814) |

Note: *p**p***p<0.01