

Setting Up a Silk Manufacture in the Late Middle Ages: Strategies and Outcomes in Comparison with Tuscany and the Crown of Aragon

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1. Introduction

During the Middle Age the transmission of knowledge was characterized not only by a vertical pedagogical direction, consisted in the teachings taught inside the workshop from the master to the student, but also by the transfer of technical skills coming from one geographical place to another (Degrassi, 65-66). Unlike the first type, this last transmission involved a multitude of people moving from one city to another, who brought with themselves, along with their own experience, sometimes their precious equipment. This diffusion of knowledge was often irregular and contradictory, because, on one hand, the public institutions forbade the emigration of their artisans with severe penalties, but on the other, they eventually encouraged the immigration of skilled workers in their own cities.

This article, starting from this last aspect, investigates the strategies adopted by individuals and institutions to transfer the technical skills, developed in the silk industry, from Tuscany to the Crown of Aragon in the late Middle Ages. In other words, by comparing the cases of Lucca, Florence and Siena with those of Genoa, Barcelona and Valencia we will try to highlight the similarities and differences about the mentality and the strategies adopted by those cities. The decision to limit the area under investigation (mainly to some cities of Tuscany and the Crown of Aragon with particular attention to the city of Siena) was made because of the skills and the opportunity for the writer to exploit the historical sources, and moreover because in those places is possible to highlight similar strategies adopted by very different individuals, who had the same mindset in different places. This will allow us to trace a red thread that links, in terms of work mobility, the city of Lucca to the city of Valencia. This transmission of techniques and knowledge is emblematic in the manufacture of silk because the information concerning the production of silk fabrics has always been kept hidden since its debut (think of China and the myths of stealing cocoons in Europe) (Mainoni).

2. The first migration: from Lucca to Siena

The origins of the Italian silk industry have been a classic trend in historiography about Lucca since its inception. Despite various interpretations, the theme, that is from where and from whom the people of Lucca learned this ancient art, is still unsolved (Del Punta, 33-35).

However, once implanted in Italy and arrived in Lucca in the twelfth century, only the intervention of Ugucione della Faggiuola in 1314 triggered the spread of skills and knowledge, related to the production of silk fabrics, from Lucca to other cities. As a contemporary historiography pointed out, this diaspora of knowledge involved, in the first instance, the cities of Bologna, Venice and Florence (Edler De Roover 1993, Del Punta, Molà, Tognetti 2002). The studies of Molà and of Tognetti (2014) have shown how these flows of moving people were actually very irregular and discontinuous and, sometimes, they even ended in the return into the native city. Recently has been identified in Lucca a Venetian weavers specialized in the realization of porpore during the beginning of the fourteenth century (therefore before the aforementioned diaspora), which fact overturn the belief about the spread of technical knowledge only from Lucca

to other cities (Del Punta & Rosati, 17). As shown by the case of Lucca, although it is likely that these artisans preferred to change cities in search of fortune or just because they were highly indebted, we know nothing about the spontaneous movements of these individuals throughout the thirteenth century and in the early fourteenth century. Although other cities had already a production of light silk and small fabric as early as the thirteenth century, it is possible, starting from 1314, to speak of a true dispersion of the knowledge that allowed Lucca to hold the monopoly of the production of silk. The cities that knew how to convey the artisans and the workers of Lucca into their urban centers were, according to the historiographic tradition, Florence, Bologna and Venice.

Accumulated by the Guelph cause, Florence and Bologna endeavored to approve particular privileges in favor of the immigrants of Lucca. In particular, the Florentine merchants, asked and obtained from the Signoria in August 1314 the tax exemption for the new artisans of Lucca for ten years. It is worth of notice how the corporation of the merchants of Florence –*Universitas Mercatorum*– took the initiative and to asked for protection in favor of the new arrivals. They asked, though unsuccessfully, even that the City paid the rent of the houses occupied by the people of Lucca. The Municipality was so aware of the importance of the presence of those people in the city to improve the silk production as much that they distributed, in the same year, a thousand florins to the exiles of Lucca (Edler De Roover 1999, 4-5).

Venice and Florence, although involved immediately in the first phase of emigration from Lucca, had different outcomes. Venice immediately entrusted the development of its silk industry to the *setaioli* –merchants and silk manufacturers– from Lucca who compacted themselves into a solid community in continuous contact with the mother country. The great *guelph setaioli* who escaped from Lucca and chose Florence in the twenties of the fourteenth century, which city apparently seemed more suitable for hosting them, found themselves in a reality still not very suitable for their activities and, in forty years, they left for other places (France, Flanders or Venice). Those who remained (mainly small industrialists, dyers and weavers of drapes) got involved into society and become Florentines (Tognetti 2014, 41). So while in Venice the Lucchese community will lose its centrality at the end of the fifteenth century in a completely different political and economic context, in Florence the last mention of the Lucchese member dates back to 1371 (Dorini 1934, 290-291).

We can now stress a first fundamental point. On one side there was a city with a flourishing silk industry that lost numerous skilled labor, on the other side there were cities that sought to attract and divert this flow into their urban centers. Once inside the city the public institutions took two opposing paths in the management of migrants: one saw the birth of a community with a strong identity strongly linked to the motherland (Venice), and another had, despite himself, a high integration and assimilation in the society (Florence).

While this phase saw the establishment of bargaining between city institutions and groups of artisans, the next phase, starting from the fifteenth century, saw public institutions in several places actively mobilize in the search for specialized craftsmen who allowed the flowering or the implantation *ex novo* of a silk industry and, consequently, the emergence of a strong and fierce opposition to labor mobility by those cities that had succeeded in planting a silk industry.

All the cities that benefited from the Lucchese manufacturing diaspora adopted, in the course of time, a shrewd economic policy aimed at encouraging the foreign masters to move to their city, in addition to hurling themselves against any form of internal and external competition to their own state. Mindful of what had happened at the Lucchese monopoly, Florence did not want such dynamics to occur even in its own city and

countryside (Tognetti, 18). It did its utmost to ensure that the monopoly taken away from Lucca remained in the hands of the Florentine production, preventing this manufacture from flourishing in other cities. By annexing Pisa in 1406, for example, it stifled the growth of this industry in the city until the sixteenth century when the Florentine silk monopoly vanished (Dorini).

But the city where absolutely no silk industry could be allowed was Siena. Siena, although small, near Florence and closer than Florence to Rome (a large and important outlet market for Florentine fabrics) was constantly in the thoughts of the Arte di Por Santa Maria of Florence, that was the body in charge of managing the business of the silk industry. But if on the one hand Florence tried to hinder the release of vital knowledge, on the other hand, Siena sought craftsmen willing to migrate to their city. The whole fifteenth century was characterized by this continuous argue won, finally, by Siena. Siena won thanks to his tenacity but also, in truth, thanks to the economic change in general, which saw, during the fifteenth century, an exponential increase in competition throughout the territory that frustrated Florentine efforts.

The transmission of knowledge in Siena as an importation of skills necessary for the production of silk fabrics in the first half of the fifteenth century, was characterized by spontaneous migrations of individual craftsmen. The implantation of a silk industry could not come from foreign masters who were too disinterested to move to a city that did not grant them any subsidy or privileges and that did not have a network well connected to the European commercial centers. Siennese citizens emigrated in the past to other cities, after having acquired specific skills, tried to repatriate to Siena. This was the case of Mino di Roba Squarcialupi.

Originally from Poggibonsi, where he kept estates and descendants of a well-known Siennese family, after having lived several years in Florence, he decided to install a silk textile company in Siena together with his brother Checco. Loaded by his skills, the draper Mino, he appealed in 1412 to the Common (Lusini, 29-30). In fact, lacking an institutionalized referent, such as a Corporation, and in the absence of a conscious strategy by the Common to protect small town silk production, the individuals were isolated and at the mercy of Florentine initiatives. Mino and his brother Checco, in exchange for 300 florins to be returned in 4 years, offered to bring their four frames to town “ad tessendo trappos et vellutos et taffeta et alios labores sete” and, once that their shop “de bono in melius crescere et devenire”, promised the sale of their products “pro illo pretio qui dantur in Florentia et etiam pro pauciori” (Lusini, 29-30). Worth noting are the enticing promises proposed by the two artisans: a quality production at favorable prices. Obviously the two obtained the approval of the petition and the credit thanks to the “bonos fideiussore” they presented. Mino and Checco were related to two very important families who were part of the city's ruling class: the Squarcialupi and the Aringhieri. It was in fact the bank of Aringhiero of Messer Niccolo da Casole, known Siennese character who was forced to exile in Venice as a result of a conspiracy in 1391, to finance the relatives Mino and Checco (Gelli 2016, 322). Behind the proposal of the two artisans there was a family network that had close business ties both in Venice and in Florence, and the same Aringhiero was present on the day of the petition next to the two brothers Squarcialupi¹. They knew, in other words, where to obtain raw materials at advantageous prices and had found a market potentially free from competition where to sell their products.

Despite the financing received, the activity of the two brothers, after twenty years, was forced to close. In 1434, in fact, due to an accident, according to the Della Valle

¹ State Archive of Siena (ASS), *Concistoro* 318 c.20r.

(41), the Squarcialupi palace caught fire. The causes and dynamics of the fire remain obscure. Although it was rebuilt at the expense of the public, the sons of Mino (we do not know if Mino was still alive in 1434) left Siena and the palace soon passed to the Pecci family². They left Siena to fall back to Florence which is the city where the father had learned the art of silk weaving many years ago³.

In the following five years, from 1435 to 1440, the Comune of Siena began to actively engage in the growth of silk production, thus colliding directly with the Arte di Por Santa Maria of Florence. This has produced in the municipal documentation a series of pleas and measures that denounce the attempts to sabotage aimed at “levare o sviare de la città di Siena alcuno mastro, lavorante o garzone, che servisse manualmente a la decata arte de la seta” (Banchi, 123-124). This behavior, known to everyone since the fire that involved the Squarcialupi, was finally publicly denounced:

da poi che in Siena si cominciò ad tèssare e lavorare drappi over velluti de seta [that is, when Mino di Roba Squarcialupi arrived] per li fiorentini continuamente sònno tenute pratiche de tòllare e guastare detta arte nella vostra ciptà, sicome dar bando ad lavoranti e maestri che qua fussero ad lavorare.

But seeing that neither the fire nor the ban extended to the workers and the masters stopped the growth of the manufacture and the consequent diffusion of techniques and knowledge “àno mandato qua da due volte e più, lor mandati a corrompare nostri tessitori et altri lavoranti; et di ciò da fedelissimo nostro amico insino da Fiorenza siamo advisati de tali mandati, et simili de’ nomi et sopranoi et di loro affare” (Banchi, 124). In other words, for much of the fifteenth century there was a real "industrial espionage" between Florence and Siena. In fact, there were people infiltrated both inside the Arte di Por Santa Maria and, obviously, in Siena, who revealed measures and strategies adopted by the counterparts.

The penalties instituted against the saboteurs were not light. In addition to the incarceration and payment of a fine of 500 lire, the convict was forced to be “scopato”, that is whipped, publicly and “marchato con ferro caldo da la gola in suso, in luogo che palesemente si possa vedere acciò che gli altri sia exemplo di non contrafare in alcuna cosa a bonificamento et mantenimento de la detta arte” (Banchi 124). These and other penalties were not enough to discourage the Florentines and other cities that, in truth, continued to oppose the importation of skills and knowledge to Siena. In 1444 a Venetian was imprisoned, Zaccaria di Tomme, guilty of having attempted to persuade the silk weaver Gherardo, who was specially conducted to wield silk drapery, to leave the city. The attempt succeeded but Zaccaria was captured. It was released once Master Gherardo, returning to Siena with his family, restored the previous situation⁴.

The Siense setaioli the other hand were not better. If on the one hand they complained about the Florentine intrusion, on the other they also turned their attention to those centers rich in experienced and qualified artisans such as Lucca, Venice and Florence. In this first phase they turned mainly to citizens of Siense origin, judging the foreigners, probably, not very reliable and easily corruptible. In 1437 the master weaver

² The Squarcialupi family owned the Palazzo Grottanelli. In the second half of the fourteenth century the Palazzo Squarcialupi (the current Palazzo del Capitano, in the homonymous street), was sold to the Municipality of Siena. Around the middle of the fifteenth century it passed from the Commune to the Pecci (Tuliani, 463-469).

³ Thanks to the florentine *Catasto* we know that in 1457, Roba di Mino Squarcialupi at the age of 37, a silk weaver with two unmarried brothers, did not own a house in the city but a farm and two vineyards that were taxed *soldi* 7 (Edler De Roover 1999, 78)

⁴ ASS, *Consiglio Generale* 222 c. 157v, 1444 maggio 24.

of velvets Martino d'Antonio from Siena, who lived in Lucca with his family with the weaver master Simone di Nanni da Siena who lived in Venice and the foreign weaver Lupo di Nanni from Florence introduced themselves at the Consiglio Generale of Siena. They were from

Ciptadini [Sieneses] levati da loro inniamenti per venire ad formare nella Vostra Magnifica ciptà questa honorevole arte. Et fullo data speranza et facte promesse che la Signoria Vostra lo farebbe subsidio, il perché loro affetionati ala patria [they left everything and came to Siena].⁵

Obviously the defection cost them the penalty of the ban in their city of origin. Siena tried to compete with the other production centers adopting the same strategies adopted by the Florentines, able of diverting the master weavers and stealing fundamental knowledge. These masters were literally brought to Siena by “certi ciptadini [...] mediante certe pratiche tenute intorno a la detta materia, le quali cose per buoni motivi rispetti non se specificano al presente” (Banchi, 117-119). In other words, it was necessary to cover and hide both who took care of the engagement of foreign artisans, and how this happened.

These precautions were necessary. In fact, not only the customers but also the craftsmen ran many risks. The transmission of knowledge on the processing of silks, which we remember were at the center of a huge turnover capable of uniting remote parts of the globe, was not to be underestimated. And it is therefore clear why the apprenticeship within the shops was a long and not at all immediate.

Despite these precautions, many craftsmen managed to emigrate to other places, eager to improve their position, perhaps through subsidies or privileges. This was the case of Giovanni, son of Petroccio di Paolo Del Grissa –family of ligruttieri from several generations– who worked several years in Florence where he learned to weave “fiette damaschine and broccate”. Once that he learned the art in Florence “per condurre el magistero di quelle [i.e. strips damaschine and brocades] in Siena trasse segretamente di Firenze più artifizii con grande pericolo dela persona sua.”⁶ Giovanni di Petroccio setaiolo, before 1410, left Florence and moved to Siena bringing with him knowledge, tools and technical skills. He practiced his profession for more than fifty years, that is until his death in the 1480s⁷.

The Comune of Siena, similarly to many other centers outside Tuscany such as Venice, Bologna and Genoa, had adopted a policy of incentives and support for those craftsmen who had installed their shops in Siena (Molà). In 1439 he extended to any stranger, who came to live and make the craft of silk art in Siena, the provision granted the year before –to the three weavers already mentioned Martino d'Antonio, Simone di Nanni and Lupo di Nanni– of 100 florins a year for eight years; in addition to tax exemption for ten years, as was already stated in the Statutes, to outsiders who had moved to the city. Similarly they tried to import other professional figures indispensable for the silk industry: the dyers.

Another pillar on which silk production was based, in fact, was linked to the dyeing of fabrics. Siena, however, had difficulty finding dyeers ever since the Arte di Por Santa Maria, in 1440, had managed to bribe the operating dyer of crimson in Siena. We do not know if any other dyer was present in the city. Certainly, if there had been, he could not alone dispose of the amount of work. The silkmakers denouncing the incident claimed that “el detto mestiero aver perduto el capo suo, per modo che ad questo tracto tucti

⁵ ASS, *Consiglio Generale* 223, cc.117v,118r, 1446 febbraio 25.

⁶ ASS, *Consiglio Generale* 226 c.79v. 1453 marzo 18.

⁷ ASS, *Lira* 215 c.194. 1488.

siamo sbagottiti.” Thus his head was hit, that is the most important artistic part for the production of fabrics. Also in this case the Comune decided to pay the entire salary to a dyer who would be taken to the city by the guild⁸. The salary of 80 florins, guaranteed for six years, was paid in installments and paid every six months, except for the first year in which the entire sum would be given to allow the dyer to “acconciare la buttiga et adviarsi et fare altre sue spese necessarie [and to do] compagnia con uno o più cittadini acciò che la detta Arte si solidi et conservi”. Also in this case Siena looked at the dyers of nearby Florence.

In 1427 we learn from the Florentine catasto that in Florence there were four companies for silk dyeing and three dyers who had an individual company. Among these individual companies the two youngest, Agnolo di ser Giovanni (32 years old) and Piero di Neri di Biagio (36 years old), had a dyeing house at the beginning with a very reduced amount of work (Edler De Roover 1999, 34-43). Years later, exactly in 1451, the sixty year old Pietro di Neri, after almost thirty years of activity, took advantage of the aforementioned Sienese subsidy and decided to leave his dyeing house in Corso dei Tintori in Florence, to move to Siena⁹. The salary was collected by the silk corporation who then gave it to Pietro¹⁰. This emphasizes, first of all, that the control and management of the dyer's work was in the hands of the corporation. The Florentine dyer worked in Siena for consecutive years and received from the corporation the due every six months¹¹. At the age of seventy, however, he evidently died without leaving a substitute. In 1461 the commune of Siena, in fact, found itself allocating to the corporation another 96 lire for the salary of a new dyer to be driven into the city (Banchi, 131). This time he would receive 8 monthly lire for the next three years, suggesting that perhaps there was an increase in costs in the sector. The silk dyers, unlike those of the wool that were divided according to the dye used, could use any appropriate dye and dyed the threads instead of the fabrics in full (Edler De Roover 1999, 31). It seems undoubted that, for half a century, Siena had difficulty finding crimson dyers. The problem blew up, as mentioned, when Florence took away from Siena the only dyer of this type, so much so that in the sixties still could not guarantee continuity of this workforce. It was therefore difficult to produce the most expensive fabrics dyed in red and its various nuances even though in 1476 another silk dyer was present: Vittorio di Marco¹².

The fabrics, to increase their value and be increasingly competitive and demanded on the market, had to have bright colors but above all gold plots. To reduce the costs of importing gold threads, it was necessary to bring someone who knew how to produce the indispensable gold plates into the city. The battiloro, as the name says, was that craftsman who “beating” and then grinding precious metals, gold or silver, allowed the creation of plates that, after having been transformed into thin strips, and extremely narrow, were wrapped on the wire silk. In the absence of battilori in the city, as early as 1389, arrived gold “in verghe”, spun up in “matasselle” coming from Lucca, as well as gold beaten up for painters¹³. In fact, the skills of the beater were required, as well as in the production of wires, even by miners and painters.

⁸ ASS, *Statuti di Siena* 40 c.73r. 1451 novembre 11.

⁹ ASS, *Lira* 58 c.120, 1454.

¹⁰ ASS, *Biccherna* 320 c.106. 1451.

¹¹ ASS, *Biccherna* 321 c.29r.

¹² ASS, *Consiglio Generale* 237 c.88v, 1476 dicembre 12.

¹³ ASS, *Gabella* 4.

It is precisely the “Università et Arte de Depintori” that, by taking initiative, presented a petition discussed in the Consiglio Generale of Siena. The lack of a battiloro involved the leakage of four thousand florins.

che fra l’arte nostra e l’arte de la seta ogni anno ne vadino ad Fiorenza. Et però essendoci al presente capitato casualmente uno magistro Iacomo et quale è persona d’assai e di tale mestiero perfettissimo maestro, supplicano a la vostra Magnifica Signoria acciò che tucti e’ denari no eschino de la vostra ciptà che non solamente sopplirebbe ad l’arte nostra e de la seta ma etiam dio adsai denari forestieri che rimarrebbero che [...] al detto magistro Iacomo sia per la Signoria Vostra data qualche condotta.¹⁴

Iacomo di Giovanni da Genoa was a rich person –but more importantly– he was a very skilled craftsman in his profession. It was therefore vitally important to have it come to Siena. An annual salary of 12 florins was then granted to the Genoese battiloro for the next three years. Besides working in Siena, he had to teach his art to some Sieneese people, without paying anything else. The workload was so large and expanding that Iacomo mastro called his brother Battista directly from Genoa.

Shortly thereafter, on 17 July 1441, the petition was extended to him the same privileges given to his brother, Iacomo, but he committed himself to teaching the art to four Sieneese citizens behind the correct payment. They could choose to go “in altri luoghi più propinqui [were] troviamo assai maggiori salari che non et questo”, instead they chose Siena, moving with their families because “assai piace la stantia in questa ciptà [...] sì per la conversatione de’ ciptadini, sì etiam dio perché cognosciamo essere veduti volentieri.”¹⁵ It was true, for example, that in Florence the salaries of the battilori were generally higher (Edler De Roover 1999, 90), it was also true that the fact of having accepted a lower salary–although in reality Battista demanded a slightly higher salary of 15 monthly florins –denotes the monopoly regime that Iacomo and Battista had in Siena. Accepting the reduction of one’s salary can derive from the human factor as described by Battista but also from the total absence of competition. The battiloro, a figure sometimes overlooked by pertinent historiography, is without a doubt one of the pillars on which the production of quality fabrics was based.

The last topic we need to talk about is the types of relationships that were established between the artisans in the city and the newcomers. In the pact between the commune and some Sieneese setaioli who officially sanctioned the birth of the silk guild in Siena with its own prior, in November 1451, it was specified “che qualunque forestiero venisse ala città di Siena et volesse exercitare la detta Arte dela Seta possa liberamente esse arte exercitare et da detti Setaiuoli sia benignamente veduto et ricevuto senza pagare alcuno dritto alla detta Arte.”¹⁶

The document in question –very important for the understanding of the birth of the silk guild in Siena– counts only four cards and is very laconic. It is essentially limited to delineating the basic rights and duties of the corporation against the municipality. It intrigues how the contractors, within a pact that regulates fraud, the administration of justice, prices and sales measures, we felt the need to specify the nature of the relationships that had to exist between Sieneese weavers and newcomers. The two Genoese battilori had chosen Siena because they knew “to be well seen”¹⁷, evidently because they brought with them new and exclusive knowledge not present in the city.

¹⁴ ASS, *Consiglio Generale* 220 cc.191v-192r, 1440 settembre 19.

¹⁵ ASS, *Consiglio Generale* 221 cc.37r-37v, 17 luglio 1441.

¹⁶ ASS, *Statuti di Siena* 40 cc.72v-75r, 1451 novembre 11.

¹⁷ ASS, *Consiglio Generale* 221 cc.37r-37v, 17 luglio 1441

The same perhaps could not happen for the new weavers. Underlining that the newly arrived weaver should be graciously seen and received may indicate that the relationships could be, on the part of the Sieneese artisans, sometimes unfriendly. After all, the newcomers often held technical knowledge and better looms than the weavers in the city and could be interested in obtaining privileged positions rather than sharing their knowledge with others.

The dynamics of these three Tuscan cities, of which we have spoken extensively, were not isolated cases, on the contrary, they are comparable in equal measure to other Italian and foreign cities.

3. The Silk Industry from Genoa to Valencia Passing from Barcelona

As far as silk fabrics are concerned, before the 14th century, we can speak more of commerce than of production in Genoa. Before the birth of the guild, which was legally recognized in 1432, there were weavers in the city dedicated to the production of silk fabrics commissioned by private individuals (Massa, 21). Genoa, which was probably involved in the process of initiation of this manufacture in Italy (Del Punta 2010, 35), welcomed, at the beginning of the fourteenth century, numerous silk workers from Lucca. These producers of silk fabrics, who had long benefited from the Genoese ships for their international business, had the merit, not only of having set up the silk guild in Genoa but of having brought their greater experience, technical and taste.

The growth of this manufacture was exponential and the corporation enjoyed a particular autonomy except for the period in between the 1463-1478, in which Genoa had fallen under the dominion of the Sforza (Massa, 36). The take-off of the silk industry that was made possible by the flow of immigrants from Lucca, was put to the test in the following centuries by a flow of labor leaving Genoa to other cities.

The skill of the Genoese weavers, dyers and battilori became the object of proposals from other cities wishing to have highly skilled craftsmen. The emigration of Genoese artisans was favored by the constant oppression of the business class towards these workers (Massa, 159-182). The children of the masters, eager to improve their economic condition, and the highly indebted artisans were therefore urged to move to other more favorable places. Moments of surplus labor and internal struggles, similar to what happened in the city of Lucca, provoked the diaspora of numerous Genoese artisans.

After the approval of the city's guild and after have proved the economic indigence of their family, during the half of the fifteenth century it was possible for the Genoese silk industry craftsmen to move to Florence, Lucca, Venice and Caffa (Massa, 188). This provision, apparently favorable to the most destitute artisans, actually produced few advantages. In fact, the cities where they were allowed to move were places where the silk industry was strongly rooted and therefore with high levels of competition. In any case, the Genoese institutions adopted a system of constant repression and an exponential increase in penalties aimed at marginalizing the circumstances favorable to expatriation. Starting from 1452, with the first pecuniary penalties, in 1499 there was an extension to the death penalty to all those who had spread abroad knowledge and, above all, the tools necessary for the production of silk fabrics (Massa, 187-190).

The range of action of these craftsmen, however, was not limited to the nearby Italian cities. In the same years Genoese artisans are attested in Barcelona (Camós Y Cadruja, 89-91). Barcelona, together with Valencia, had a silk production of Muslim origin, before the fifteenth century, carried out by Jews and converts, focused on the production of mixed silk-cotton fabrics (Hinojosa Montalvo). In 1451, however, three masters of brocade Baldassarre Maggiolini, Urbano Trincherio and Domenico da Lucca asked to open a shop in the city dedicated to the production of silk velvets. They

emigrated from Genoa without the permission of the Republic, they applied for a grant of 10,000 florins, the right to citizenship and the monopoly on brocade production in Barcelona (Navarro Espinach 1997, 203). Undoubtedly, as can be inferred from the advanced requests, they were very enterprising and unconventional people. In this case, in fact, the three weavers, “arripuerunt fugam et se transtulerunt adpartes Catalonie” although “debitum non patitur, et maxime quod presumant sine licentia clam recedere et familias eorum de civitate extrahere, instrumenta et alia necessary to dicta artes spectantia” (Massa, 195). In other words, they fled from Genoa in secret, taking with them the tools of the trade and their families.

In addition, Urbano the following year, in 1452, while he was in Genoa, he was captured in an attempt to supply the comrades with new work tools. The story of this weaver shows how often, more than for poverty, it was the desire for redemption and fortune that pushed the artisans to undertake business far from their land and with high risks. It is possible, in fact, to find Urbano, ten years later, in Ferrara where he was granted special privileges (Morazzoni, 27).

Barcelona, similarly to Florence, did not have a structure ready to welcome a silk industry and, despite the presence of Italian weavers (Carrère) in the city, many of these quickly migrated to Valencia. The attempt to start a production of velvets and brocades in Barcelona, after the arrest of Urbano, ended. In 1458, in fact, a master gold spinner, coming from Valencia, offered his services to the municipality of Barcelona underlining how in this city the manufacture of brocades was a novelty (Duràn, 83-87). It will be necessary to wait until the middle of the 16th century to see the first municipal measures to stimulate the manufacture of silk in the Catalan capital (Voltes Bou, 54-58).

Trade was at the center of the political agenda of the monarchy, which considered it essential for the economic re-launch of its kingdoms. Local and state authorities undertook strategies to promote economic development by focusing on trade and industry. Even here, if on one hand the wife of Alfonso V forbade the arrival of foreign cloths in 1422, on the other hand a policy favorable to the immigration of specialized craftsmen was undertaken (Navarro Espinach 2014, 286-298).

Valencia, the new center of the Genoese Mediterranean, thanks to the movement of labor and specialized techniques became an important center for the production of silk products. In 1457 Alfonso V granted a privilege in favor of three merchants from Savona, Gaspare and Bernardo Gavoto and Luca di Prè, to produce silk cloths. Gaspare, on the other hand, was present and active in the silk cloth trade in the city since 1445 (Navarro Espinach 1997, 203). It would be erroneous to think, however, that Valencia did not know a production of silk artifacts before this period. In fact, as early as 1316, provisions were approved by the municipality concerning the production of small pieces of silk mixed with cotton or other textile fibers (Navarro Espinach 2014, 418). The Genoese immigrants then grafted into a favorable context different from that of Barcelona. The contribution of the foreign workforce was so fundamental for the industrial takeoff of Valencia that 40% of the vellutieri (velvets weavers) present in the city between 1450 and 1525 were of foreign origin.

The Genoese presence was so close to the silk factory in this city that in 1477, at the house of the Genoese velvet master, Lazzaro Nero, 56 silk masters gathered to sign the first measures on the sector that led to the birth of the guild in 1479 (Navarro Espinach 1997, 206).

4. Conclusions

The two cases examined clearly show more similarities than differences. First of all, the Tuscan cities and the Crown of Aragon show the presence of an earlier silk production, even if it was made of small pieces, was the first fundamental step for the

promotion of a large-scale manufactory. Barcelona, Valencia, Florence and Siena possessed, albeit at levels not comparable between them, an embryonic silk production. On this aspect, before the thirteenth and fourteenth centuries, much remains to be investigated in both cases examined.

The essential requirement, however, for the actual take-off, since the case of Lucca, was a policy favorable to work mobility: both by sea and by land, craftsmen and merchants, brought with them the secrets of silk manufacture.

The two cases present, for different reasons, dynamics of outflow: from Lucca to the interior of Tuscany and from Genoa to Barcelona first and then Valencia. The good or bad management of this stream of skilled labor made the difference. Barcelona, from this point of view, is comparable to Florence, where the arrival of new artisans was not managed in the best way. In fact, they left Florence shortly afterwards for Venice and Barcelona to Valencia. On the other hand, Valencia can be compared to Venice, where a strong community of emigrants was created with a strong weight within society. In any case, Florence will succeed, unlike in Barcelona, to take off its industry thanks to the integration of second-generation silk workers.

What emerges from the Tuscan case is that from an importation of technical skills and knowledge entrusted first to the initiatives of individuals, gradually passed to a transmission strongly desired by public institutions that in turn declined to the corporations.

Crucial in this regard was the role played by the Tuscan corporations as mediators with state power, which did not happen in Barcelona and Valencia where the mediators, in the case of the Gavoto brothers, were the advisers of the king. These cities were almost natural destinations for the Genoese emigrants, because of the commercial interests present before the city, unlike the Tuscan case where the cities competed, without excluding shots, in an attempt to hire the best craftsmen at the expense of the others urban centers. In this regard, Siena presents similar dynamics both in Barcelona and Valencia. All three were initially involved in isolated initiatives by artisans who set out to work in their cities. The initial start of the silk industry in Siena was not linear and risked to stopped as in the case of Barcelona. However, the corporate and municipal initiative, in the first case, and the state promotion, in the second, soon led to the launch of this manufacture. In other words, the Genoese emigrants, once arrived in the kingdom of the Crown of Aragon, ran much less risk than the Tuscan weavers, always at the center of the attempts of corruption and sabotage by the other cities.

Another aspect is related to social relations and the business network present in the city. The case of Mino in Siena and the three merchants from Savona in Valencia show how having behind a clientelary and business network already rooted in the territory was essential for the success of the company. Urbano in Barcelona perhaps lacked this favorable economic context for the start of this new industry.

We can therefore distinguish various strategies adopted both by individuals and by institutions often linked to each other. In the absence of a specific guild the individual craftsmen, with the help wealthy merchants and bankers, offered their services promising handicrafts at favorable prices. In any case, the counterpart was often the request to work in a monopoly regime. Often, then, more than indebted craftsmen, it was very enterprising people who preferred to start from scratch in other places. In fact, as evidenced by the permission granted by the Republic of Genoa, the artisans preferred to move towards those cities where silk manufacturing was almost completely absent even at the risk of life. In Tuscany, moreover, while the emigrant citizens in the past wanted to return to their mother country, the foreigners generally appealed to the beauty of the city where they wanted to move.

Certainly, in all cases, the institutions moved by the interests of groups of individuals who pressed to legislate on the subject. In the case of Siena, in fact we can speak of a conscious and structured passage of a wealth of knowledge and techniques strongly desired by the public power. The two battilori Iacomo and Battista came from Genoa, as a clause for the benefits that were required, the transmission of their knowledge to Sieneze citizens was imposed. Battista was even imposed the exact number of workers he would have to teach. On the other hand, both in Barcelona and in Valencia, the newcomers were never asked to transmit and share their knowledge with the local artisans. This led in fact, over time, to clashes between the various categories of artesians.

A final consideration concerns precisely the relationships and networks that were established between local craftsmen and newcomers. In the Tuscan case, the arrival of skilled artisans in a city was often fomented primarily by merchants who, in contact with cities such as Venice and Florence, allowed the meeting of labor market demand and supply. This was the case both of the battilori convinced by the “*conversazione de 'ciptadini*” and the three weavers who persuaded by some Sieneze moved with their tools to start production. In the Crown of Aragon the Genoese compacted themselves around their manufacture even in contrast, at times, with the other corporations. The strength of the Genoese community in Valencia was based on royal privilege. In the Tuscan municipal cities the systems could change easily, especially in Siena, contrary to centralized power such as that of the Crown of Aragon and the possession of a royal privilege allowed the Genoese emigrants to make claims. The Genoese master weavers monopolized and influenced the Valencian silk industry so much that in the city, at the beginning of the 16th century, only black drapes were produced (Navarro Espinach 1994, 215). Genoa, almost like a hinge that united Western and Eastern countries, once again stands out for its ability to convey knowledge and technology.

In conclusion, it is possible to find out how the strategies adopted by the artisans in the silk sector, who emigrated for economic or personal reasons, did not differ between them both in Tuscany and in the Crown of Aragon. The success or failure of these companies was due, at first, to the economic context of the city of arrival. The ability of the institutions present in the territory, both public and private, allowed these timid workers to transform primordial manufactures into large industries.

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