

The following is a condensed version of the third chapter of my book *Commercial Agreements and Social Dynamics in Medieval Genoa*. The chapter - the third part entitled *Network Dynamics: From Clientelism to Corporatism* in particular - will serve as background reading for my presentation at the Economic History Conference at Yale on February 26.

## *Equity Partnerships for Heterogeneous Ties*

Around the year 1155, Genoa, reacting to the military threat of the German emperor Barbarossa, undertook a vast renovation and consolidation of its fortified wall. The footprint of the wall provides us with a fairly precise measure of the town of 55 hectares and, thus, a solid base from which to estimate Genoa's population at the time to be 30,000 to 40,000.<sup>1</sup> While the mountainous terrain surrounding Genoa<sup>2</sup> certainly created one of the most densely populated towns in Europe, its population size was surpassed by several other Italian cities, such as Venice, Bologna, Milan and Naples. On the Mediterranean Sea though, Genoa was rapidly catching up with Venice to become one of two dominating Mediterranean powers. First dominating the western basin, Genoa was soon to share with Venice the eastern part as well. It was during this period that Italian cities enjoyed the rapid commercial expansion that set the stage for western economic supremacy during the Renaissance and, ultimately, the rise of capitalism.

From 1150 to 1300, Genoa's trade grew steadily, such that, by the beginning of the 14<sup>th</sup> century, Genoa might well have been the wealthiest city in the wealthiest part of Europe, with its power extending from its commercial dealings in Bruges to its colonial dominion in Black Sea.

---

<sup>1</sup> Heers uses a comparison to other towns' density during later periods to get to the higher number of 52,500 inhabitants. This is rather high considering that, in medieval Europe, some of the foodstuffs were directly produced inside the city walls, thus reducing the density of the population. Most other estimates, like Chandler's (1993), are around 30,000 to 40,000 inhabitants. For a slightly later period, Day's estimate (1988), of 50,000 to 60,000 based on wheat consumption is in line with Chandlers' number. Demographic trends are especially hard to estimate because the dominion was expanding. Lopez posited that the population had grown to a realistic number of 100,000 in the mid-13<sup>th</sup> century (1975, p.17).

<sup>2</sup> Among the 15 largest Italian cities around that time, only Salerno and Amalfi were like Genoa, mountainous urban centers, but neither of them would match its importance in the 13<sup>th</sup> and 14<sup>th</sup> centuries (Sestan 1960, p.83). Genoa is probably the only large Renaissance city that had no easy hinterland connections by way of water or land.

In this chapter, I analyze several thousand equity associations dating from 1154 to 1315, to demonstrate how the medieval commercial upsurge altered the organization of trade and the Genoese social dynamics as a whole. In contrast with the northern trade, which was almost exclusively organized by credit relationships between specialized and – at first – mostly foreign traders, equity associations, contracted for the duration of a single trading voyage, comprised almost all Genoese investments in the Mediterranean commerce. These agreements – called *commenda* – which served as the ventures’ framework, followed rules that were similar to those in other parts of the Mediterranean. The *commenda* was particularly well suited to the Genoese trading association because of the simplicity of its norms-based rules, combined with the limited duration of the arrangements fit the occasional nature of commercial pairings.

However, as routinization and specialization settled in from the second part of the 13<sup>th</sup> century, and as the Genoese elite increasingly defined their relational ties through commerce, the *commenda* did not survive the long-distance trade network changes. “One voyage” partnerships were increasingly replaced both by more permanent equity ties and by credit relationships (chapter 4), both of which emerged to form the institutional framework that defined the Genoese commercial pairing.

The chapter is divided into three sections. First, I review the formal functioning of the equity arrangements that organized Genoese ventures. In so doing, I review certain statistics that contribute to a more classic economic history about what, where, and when trade took place. The second section describes the make-up of the *commenda* network by analyzing successively its gender, occupation, and status distribution. Finally, in a third section, I formally review the *commenda* network over time to show the morphological change in the trading ties. From a series of feebly-tied star shape clusters in the second part of the 12<sup>th</sup> century, the network’s cohesion at first decreased because of its lost hierarchy, before regaining connectedness through status or occupational ties.

Before proceeding, it is appropriate to give a word of explanation about periodicity. Unlike many historical studies, in this book the research is not presented in a strictly chronological manner and each remaining chapter concerns a type of institutional dynamic that organizes the trading network. These institutions have their own temporality and, as an example, this chapter refers mainly to Genoa’s history from roughly 1150 to 1315, as the periodicity is dictated on the one end by the oldest surviving notarial cartulary minuted in 1154 by Giovanni

Scriba, and on the other, by the decline and – as a result – the increasing scarcity of the commenda contract from the beginning of the 14<sup>th</sup> century onwards. This period also roughly corresponds to the strongest growth period of Genoese long-distance commerce and to the golden age of the Champagne Fairs (Doehaerd 1941).

## 1. COMMENDA: A STAPLE FRAMEWORK FOR OCCASIONAL PARTNERS

It is virtually impossible to know how many Genoese traveled the Mediterranean with their funds or own merchandise to sell overseas. No doubt some did, but historians seem to agree that, predominantly, those who sailed away entered into joint ventures with sedentary investors. In addition, it can be safely assumed that – at least for the earlier part of the commercial revolution – most of the agreements found their way into the notarial cartularies. Indeed, an analysis of a variety of historical documents, such as the list carried by the ambassador Grimaldi in 1174 regarding the financial loss in the plunder of Genoese assets 12 years prior<sup>3</sup> and the custom duty of 1214, give us a strong indication that most of the Genoese exports were not financed by the travelers themselves, but by the pooling of resources between two or more partners.

For the most part, the contract followed one of several formal templates, each of which corresponded to several specific financial agreements and mutual obligations. Every year thousands of contracts were duly recorded, and even if most did not survive the passage of time, many can still be found in the Genoese archives. Out of more than 18,000 commercial ties that I have coded in my database, about 14,500 refer to the period between 1154 and 1315<sup>4</sup>. Leaving aside agreements, such as promissory notes and exchange contracts that pertain mainly to overland transactions and which will be covered in the next chapter, the database contains more than 8,400 ties organized by sea venture standard agreements.

Economic historians typically bunch two credit mediums, the sea loan and the maritime exchange, together with commenda to study commercial flows. For the purpose of this research,

---

<sup>3</sup> See Bertolotto (1898, pp.389-397).

<sup>4</sup> I consulted and coded over 20,000 Genoese medieval notarial records to build data set that records about 18500 commercial relationships from 1154 to 1450.

I deal with the commenda separately because equity partnerships constituted an altogether different type of social tie than creditor/debtor relationships.

While we will see later in the book that credit agreements were preponderant in the northern overland commerce, equity contracts formed the overwhelming majority of sea bound ventures. An analysis of the various types of agreement that bonded the participants in the maritime trade from 1154 to 1300 reveals that over 93% of all maritime commercial ties coded in the data set were organized through commenda contracts (6764 out of 7221). This confirms the findings of other economic historians, namely that Genoese's investments followed very similar rules to those in other port cities. Indeed, although commenda took various names in different cities – such as *accomendacio*, *collegantia* and *societas maris* – the contracts uniform features formed the foundation of the vast majority of investment partnerships across the western Mediterranean.

The commenda, which has been the object of several specific studies such as Chiaudano (1925), Astuti (1933), Scialoja (1940) and more recently Pryor (1977 and 1983), was an agreement between an investor and a traveling partner to engage in a commercial enterprise that usually took place overseas.<sup>5</sup> The terms of the contract invariably included the following:

1. The traveler acknowledged the receipt of the capital from one or more investors and swore to abide by certain instructions concerning the use of the money, such as restrictions on destinations or goods transacted. To the capital received, the traveler might also add his own capital to the venture (always to the ratio 1/3 traveler, 2/3 investor). In this case, the agreement was called a “bilateral commenda.” In some other cases, the traveler specified that he was also carrying his own capital segregated from the commenda agreement.

2. The agreement was for the duration of one voyage.<sup>6</sup> Upon the return of the traveler from his overseas venture, the partners shared the profit. After deductions of traveling expenses and restitutions of the capital originally invested, the venture profits were divided as follows: In a

---

<sup>5</sup> Commenda contracts sometimes organized local industrial partnerships but this was not frequent in Genoa. Indeed, while I recorded more than 8400 commenda ties for overseas venture from 1155 to 1315, commenda partnerships in local enterprise could not have amounted to more than a couple of hundred. This is another piece of evidence in support of S.A.Epstein's (1988) assertion that, in contrast to the eastern Mediterranean where craftsmen's partnerships were the common practice (Goitein 1967), wage labor was the predominant factor in determining the Genoese work relationships.

<sup>6</sup> Unlike in the craftsmen's partnerships so prevalent in the east, time-based commercial associations were very rare.

unilateral commenda, the investor collected  $\frac{3}{4}$  of the net proceeds and bore all liability for loss, while the traveler received only  $\frac{1}{4}$  of the net and bore no capital risk. In a bilateral commenda version, often called *societas* in Genoa, the equal division of profit between the traveler and the investor seems at first different than the unilateral version, but when taking into account the share of the traveler's return on investment, the economics behind the pay-out was identical.<sup>7</sup> In bilateral venture, the liability of loss was proportioned to the respective initial investment of each participant.<sup>8</sup>

### Equity Partnerships

The relationships within the commenda differ fundamentally from other financial ties organized through a variety of agreements, such as sea loans, promissory notes and exchange contracts, all of which are credit instruments which are analyzed in the next chapter. Indeed, although the

---

<sup>7</sup> In the bilateral commenda, the traveler receives  $\frac{1}{4}$  profit made on the  $\frac{2}{3}$  of the investors' funds, which is  $\frac{1}{4} * \frac{2}{3} = \frac{1}{6}$ . In addition, he collected all of the net proceeds from his  $\frac{1}{3}$  of the investment.

<sup>8</sup> I have adopted Pryor's idea that unilateral and bilateral commenda are essentially the same agreement. (See Luzzatto for same opinion 1961, p.119). As he noted, the only evidence of a repeated partnership, for which we have enough accounting to understand the passage of one to the other, is that of Ansaldo Baiardo and his *commendator* Ingo della Volta from 1156 to 1158 (1971, p.9). In that investment's sequence, Ansaldo, who probably did not dispose of much capital, started off as a "unilateral" partner. After accumulating his quarter profits from two successive ventures, he entered into a *societas* with Ingo della Volta in 1158 (de Roover 1941). From that evidence, as well as from the common form of the legal statutes of both the commenda and *societas* and the perceived interchangeability of the contracts across destinations and partner pairings, Pryor concluded that the decision of entering into one form or the other was strictly based on the travelers' basic economic level. This would in turn explain the slightly higher average value per transaction of the *societas* over the commenda, and the historical concomitance of the contract form. Further contributing to Pryor's theory of the interchangeability of the two forms is a comparison of the network measures for both unilateral and multilateral forms of commenda during 1154-1164 period and the 1182-97, period when both forms could be observed in large quantities. The bilateral form network is slightly more centralized, but exhibits similar degrees of integration to that of the unilateral commenda network. As such, network theory is not very helpful for providing additional clues as to why the *societas* disappeared in the 13<sup>th</sup> century, just to give further credit to Pryor's theory. While commenda and *societas* provided the same returns on investment and labor for both parties, it may well be that the commenda – which had until the 13<sup>th</sup> century been an "introductory" contract – became prevalent because long-distance trade growth opened opportunities for a more heterogeneous pool of participants who found in the commenda the most flexible framework to formalize their agreements.

financial outcomes of credit agreements were simply a function of the solvency of the creditor, i.e. the ability of the creditor to pay the principal (in whatever currency specified) and interest at the due date, the commenda outcome depended solely on the success of the business enterprise, and was, thus, akin to a one voyage venture capital partnership. Thus, whereas the credit agreement united a creditor and debtor in a credit tie, the commenda formed a real joint venture. It comes, therefore, as no surprise that the traveler and the investor were referred as *socii* (partners) in the statutes of Genoa, Pera, Marseilles and Pisa (Pryor 1977, p.14).

But, unlike modern venture capital agreements, and unlike some medieval credit agreements, commenda's financial terms did not vary according to market conditions until the end of the 13<sup>th</sup> century. Indeed, the payout of each of the partners followed a fixed rule and was virtually independent of the business characteristics at hand, or the social circumstances of the partners. In fact, in a sample of 4860 commenda ties from 1154 to 1265 which cover ventures to dozens of long-distance destinations, with sizes ranging from less than one Genoese pound to several thousand, and which involved a wide variety of merchandise, only a handful<sup>9</sup> of contracts provided a payout different than the customary  $\frac{1}{4} - \frac{3}{4}$  payout for the unilateral commenda and  $\frac{1}{2} - \frac{1}{2}$  for the bilateral commenda. It is important to keep in mind that it was the payout schedule which was fixed, rather than the return of investment to the investors: commenda were not capital investments with a fixed interest – such as preferred stocks – but a straight equity investment.

During the last quarter of the 13<sup>th</sup> century, the payout structure started to change. Although the great majority of commenda maintained the customary ratio of profit sharing, the traveler's cut became higher for very small commenda (worth usually only a few Genoese pounds) because during this period of rising prices and diminishing returns, the traveler needed enough of a profit to justify the trip. Nevertheless, even during the course of the 14<sup>th</sup> century, which saw an increased variation in the division of profit, payout of  $\frac{1}{4} - \frac{3}{4}$  in Genoese commenda remained the rule. As such, the commenda's institutional resistance to market fluctuation, a

---

<sup>9</sup> Throughout the western Mediterranean ports, different payouts were extremely rare for long-distance ventures. However, they were more frequent for local commerce arrangements and even for trading along the Ligurian coast. Those kinds of commerce were often contracted not for a single venture but for a time period. Another exception to the standard payout are the few commenda contracted for free (*gratis et amore*). These may have been for an exchange of favor (Doehaerd 1941, p.125). See, for example, LA#473/ August 1203

resistance which had been an attractive feature for occasional investors, could not accommodate the biggest investors, who presumably became unwilling to share such a high proportion of their increasingly large profits. It is, thus, from both economic sides that the commenda's stable framework became obsolete beginning in the last quarter of the 13<sup>th</sup> century, and its inflexibility accelerated the demise of a type of agreement that could not survive the change in the social structure of the long-distance trade network.

### **Origin of Commenda**

Udovitch (1962, 1970) and Pryor (1977) have been the two preeminent scholars debating the origin of the western commenda. Both seem to agree that the commenda originated from the customary law of commerce, as opposed to from the legal sciences. The wide dispersion of a constant set of institutional practices among interconnected maritime communities from a variety of judicial traditions supports their position. While Udovitch also has argued that the pre-existing Muslim commercial agreements, called *qirad*, show the most similarity to the commenda, Pryor also noticed that the Byzantine *chreokoinonia* and the Jewish *isqua* also have elements which probably shaped the western partnerships.

My intent in mentioning the debate on the commenda's origin is not to try to adjudicate between these two positions. For the purpose of this book, it is sufficient to know that the commenda originated in the near eastern Mediterranean (Liber 1968, p.240) and to point out the influence of some eastern procedures on western practices. My goal in doing so is to ascertain why the European commenda facilitated the pooling together of capital between disjointed social networks in a way that the eastern formal framework could not.

First, both the *chreokoinonia* and the *isqua* agreements suggest the idea of debt, or at least equal and joint liability, which severely restricted the pairing of participants with substantial difference in wealth. Under the *chreokoinonia* and the *isqua*, a man of humble condition could not withstand the financial risk of an association with a wealthier partner involving large capital, whereas in the western Mediterranean, any traveler could take a large amount invested by a wealthy investor on a sea venture because his loss was limited to the value of his labor.

In this regard, the Muslim *qirad* seems at first to be similar to the commenda mainly because of the limited liability of the traveler (Pryor 1977). However, this agreement presented two key variations, which also limited the involvement of the whole community. First, any



proportional division of net proceeds agreed to by the partners was deemed acceptable, so much so that, as Udovitch (1970, pp.190-96) reports, Muslim legal manuscripts considered a wide range of profit splits from half-and-half to 1/20-19/20. In other words, the cost of capital among eastern Mediterranean long-distance participants was a function of market conditions and, of course, of one's position in the traders' network. Thus, outsiders were at a disadvantage, and it is likely that they did not benefit from the same terms of trade as the more specialized operators. Moreover, the uncertainty that accompanied the constant reset of the payout favored the formation of clusters, as partners were more likely to build on previous experience and to do away with the bargaining.

In the West, room for profit sharing bargaining was very limited. No doubt, experienced traders could extract marginal advantages in the negotiation of commercial ties, but, because of the absence of a liquid financial market, there was very little flexibility. The stable profit split encouraged the involvement of Genoa's occasional participants, who benefited from the same commercial protections as the more regular traders. This was especially true because – in a period when economy of scale did not seem to be substantial –<sup>10</sup> the stable profit split also allowed small investors to expect returns similar to those of some of those larger operators.

Thus, in many ways the western long-distance equity agreement was a lesser market instrument than the original *quirad*. As an aside, this shows how inaccurate North was when he wrote that one prime evidence demonstrating the more efficient west was the commenda which was – according to him – “devised” by Italian merchants (1973, p.53). In the course of doing research, every social scientist will make errors leading to inaccurate historical claims. Although I have endeavored not to, I am convinced that I made some myself. For the most part, though, errors of this type do not necessarily vitiate whole theories, and have little significance when confronted with the empirical regularities organizing large sets of evidence. But, in the case of North's assertion, without the luxury of quantitative data, this error is particularly emblematic. Indeed, the commenda originated, and was in use in, the eastern part of the Mediterranean centuries before it came to the western Mediterranean. It is only in the context of a different social organization in Italy that the commenda took its meaning as an engine of revolutionary

---

<sup>10</sup> Economy of scale did not seem to play an important role. Transportation costs did not vary with quantity, and the great variety of merchandise involved in some single commenda shows that the partners were not concerned with obtaining better pricing by concentrating their capital into single items.

growth. Thus, the historical evidence specifically inverts North's theory by placing the historical primacy on social structure, as opposed to economic optimization.

## **Goods**

A second difference between the eastern and western equity partnerships was that, according to Muslim laws, the *quirad's* capital – unlike the western commenda – could not consist of commercial merchandise or even precious metal, but only of coinage.<sup>11</sup>

The difference in capital formation points to a difference between the Easterners, whose commercial ties formed a tight network of merchants with access to money and credit, and the westerners, whose principal occupation was often not commercial. In particular, the Genoese ability to invest goods instead of money was significant in the city's commercial initial development not only because it increased the volume of capital available for investment, but also because it facilitated the participation of those citizens among the less well-off who did not necessarily have access to monetary instruments.<sup>12</sup> This was especially true during the initial period in which monetary instruments were not widespread, but also toward the end of the 13<sup>th</sup> century, when the ability to sell one's own production overseas encouraged artisans, who would not have otherwise participated in the long-distance trade, to export their product.

Unfortunately, aside from that specific case, an analysis of the notarial documents often does not yield enough information to make a meaningful assessment about the nature of the commenda's capital. Indeed, the great majority of commenda contracts do not indicate of what the capital consisted. In most cases, the contract simply mentions the value of the investment that the traveler received to conduct business abroad. For example, on April 8, 1190, the notary Oberto Scriba recorded, in front of the house of Nicolaio Mallone, a typical agreement in that regard, which reads:

---

<sup>11</sup> See, Udovitch (1970, pp.176-83). This difference might be especially significant in the formal conception of the partnerships because, as Goitein noted, commercial practice did not always follow judicial rulings. Indeed, the Geniza records show many *quirad* in which the capital consisted of commercial goods (1967, p.173 and pp.175-76).

<sup>12</sup> Pryor actually developed the opposite argument by stating that the fungibility of specie was actually conducive to the pooling of resources by very small investors (1987, p.413). However, individual average investment per commenda with multiple investors was actually higher than per commenda with single investors. In a sample from 1210 to 1300, the average was £94 for multiple investors (n=504) against £73 for single investors (n=2705). It was thus not a form of investment specifically favored by small operators.

I *Bufarus Saragus* received in commenda from you *Ottone Mallonus*  
138.5 Genoese pounds that I will take to Sicily to do business.<sup>13</sup>

It is possible that *Bufarus Saragus* was to leave Genoa with a bag of coins but that is not necessarily the case. There are two other possibilities: Either £138.5 represented the value of merchandise that *Ottone Mallonus* was entrusting to *Bufarus*, or *Ottone* had no specific requirements as to what *Bufarus* would carry abroad and gave him the flexibility either to carry the currency or to purchase, prior to sailing off, whatever goods that made the most sense to him.

The lack of thorough information about the goods exported in commenda makes it difficult to make quantitative assessments about Genoese exports. In particular, for the purposes of this research, it is impossible to systematically test for an interaction between the commercial pairing and the make-up of the commenda's capital. However, a look at the changes of goods exported provides an indication of what kind of investments were put together, and also, indirectly, of what was one of the increasing constraints – while it was not yet a barrier to entry – to one's participation in the long-distance commerce. During the earlier period covered by the data set (1154-1199), the evidence points to Genoese exports being a variety of merchandise, such as foodstuffs (wine, cheese, almonds), lead, and animal skins. Additionally, the steadily-increasing proportion of cloth, in particular, fustian (an inexpensive fabric produced in northern Italy from imported cotton or linen) already indicates what would become the staple Genoese export.<sup>14</sup> Aside from those exports, a handful of contracts mention goods from the eastern Mediterranean basin, such as pearls, silk, and dye materials (indigo, exotic wood), which were sometimes transiting through Genoa before being rerouted to the Maghreb and Muslim Spanish littoral. For example, in April 1191, Ottone Farmons traveled to the North African city of Ceuta with £12 invested in pearls.<sup>15</sup>

As the Genoese long-distance trade increased, so did the cloth exports. In a sample of 287 entries from 1200-1249 documenting commenda ties specifying the capital carried, not only were textiles the most important export, but high-quality and expensive cloths constituted over 45% of the total value of “in kind” commenda. For that period, the rest of the exports were varied, such that no other category of goods particularly stands out (precious metals and jewelry,

---

<sup>13</sup> OB3## 368.

<sup>14</sup> For example, see S#678/ June 1160; OB2#173/ October 1186; CA#488/ April 1191, #805/ July 1191.

<sup>15</sup> CA# 496.

17%; cheaper cloths, 12%; commodities and food stuff, 10%; manufactured products, 5%; all others, 11%). The increase in the quality of cloth<sup>16</sup> was due not only to the increase of imports from the north, but also to the development of Genoa's own textile industry, which was geared towards enhancing basic cloth by, for example, embroidery or simply coloring basic fabrics. Thus, even if the famous Genoese gold thread does not appear to have been an important export, it may be that from the early 13<sup>th</sup> century onwards, the threads were exported as ornaments for the precious northern cloth.

Aside from textile-related goods and a few isolated types of merchandise, such as knives or helmets, the data set does not include many industrial products before the second half of the 13<sup>th</sup> century. From then onwards, the records refer to a growing amount of manufactured goods which seem to have been the craftsmen exporters' own production.<sup>17</sup> In a sample of 323 in-kind commenda from 1250 to 1300, 68% of non-textile exports involved craftsmen whose occupation matches the goods exported. However, those commenda concerned much smaller ventures, not only in comparison to the overall average, but also more specifically to all of the "in kind" commenda. In that light, an analysis of the changes of the standard deviation and of the average of the capital pooled together per commenda show that, toward the second part of the 13<sup>th</sup> century, the long-distance trade became much more polarized with respect to size. The average values of the all commenda sampled stood at £65 for the period 1154-99, £48 for 1200-50 before rising to £199 for the next period. Conversely, the ratio between these averages and the corresponding standard deviation equaled 1.22 and 1.32 respectively before jumping to 2.71.

The changes in both the average and the standard deviation of the monetary value of commenda ties indicate that, while small operators continued to be active in the long-distance trade, the capital build-up was increasingly in the hands of a smaller group of regular long-distance traders. As such, the evidence pointing to an even larger range of "in-kind commenda" volume in the context of the steady participation of craftsmen is an indication of the growing vertical integration of business operations. Indeed, the largest Genoese traders who – from the 1250s – increasingly frequented the Champagne fairs themselves, as opposed to relying on

---

<sup>16</sup> My sample for the 12<sup>th</sup> century textile export shows that half was made of cheaper cloth (fustian).

<sup>17</sup> Prior to that, there are only a handful of "non textile" artisans exporting goods which could have manufactured themselves. While excluding textiles the manufactured products represented only 3% of the total in-kind agreements between 1200 and 1249, the proportion jumps to 20% for the 1250-1315 period.

foreign merchants, directly purchased those goods that they sometimes enhanced in the Genoese artisans' shops. Conversely, a growing number of commenda contracts regarded artisans carrying their manufactured goods themselves or sending them by way of fellow craftsmen.

### **Autonomy and Improvisation**

If the notarial records only seldom specified the type of goods to be carried overseas, it was more often the case that the contracts stipulated a destination that left the travelers with different degrees of autonomy, a detail which certainly informs us of the kind of ties that existed between the travelers and the investors. Varying from a stringent clause imposing a one-stop, round-trip itinerary, the range of geographical constraints reflected the great uncertainty of medieval long-distance commerce, uncertainty caused not so much by fluctuations of supply and demand, but more because of unpredictable traveling conditions and local political instability.<sup>18</sup> Economic historians, who wish to portray medieval commerce as an embryonic modern market, like to point out that supply and demand required changes in itinerary. However, if this started to be a concern for the 14<sup>th</sup> century Italian merchants in the early phase of the commercial revolution, the high return on capital driven by an inelastic demand certainly could have accommodated a short term rise and fall in local prices – even the kinds that seem very large to a modern analyst. Strong evidence that price fluctuation was not the primary concern of the investors is that, among the thousands of contracts I have analyzed dating before 1315, I have never encountered an explicit condition imposed on the travelers as to a maximum price at which goods should be purchased or at what minimum price they had to be sold.

Political and transportation-related uncertainties were of a different nature than supply and demand fluctuations, and could altogether ruin a venture – or an investor for that matter. While the traveler was obviously exposed to changes in sailing conditions caused by weather, a ship's technical problems, or the activities of pirates, his itinerary could also simply be dictated by the captain's unilateral opportunistic decisions.

Likewise, changes in local politics were another potential hazard. The sack of the Genoese's quarter in Constantinople in 1162, or that of Alexandria in 1200, are certainly some of the larger-scale consequences thereof. But smaller changes in local politics might also be damaging to the traveling Genoese, whose legal status was at the mercy of the local rulers.

---

<sup>18</sup> See Pryor (1983, p.154).

To respond to a traveling danger, the investor might sometimes restrict the area of the intended destination of the venture and demand the traveler's full financial responsibility in case of transgression (Pryor 1983, p.158). For example, on October 8, 1191, Pietro della Croce, Marino de Veredeto and Fulco de Ponte de Sori formed a partnership that was to send Fulco to Catalonia and "wherever he thought best fitted" with the exclusion of Alexandria.<sup>19</sup> Obviously, this exclusion of the Egyptian port situated almost at the opposite end of the Mediterranean from Catalonia indicates that Pietro della Croce and Marino de Veredeto were well aware that Fulco de Ponte's journey might take him all over the Mediterranean Sea, and thus left him with maximum autonomy. However they wanted to ensure that he avoided Alexandria. Similarly, the investors tried sometimes to control the sailing risks by forcing the traveler to make use of a specific ship. It is easy to understand why a ship's age, size and speed, to name but a few characteristics, would have affected the investor's level of comfort. Additionally, in a city where a captain's reputation – not only for good stewardship but also for his military bravura – could be part of the popular historiography, the investor might also be reassured by knowing his investments were in good hands.<sup>20</sup>

This said, the exclusion of stopovers, and constraints on the ship and/or captain were rather infrequent. Indeed, I have analyzed and coded the exact language organizing 2320 commenda ties from 1154 to 1230, and I found fewer than three dozen exclusions of stopovers and fewer than 100 specifications of ship or captains. So, in the cases in which the investor tried to limit the traveling risk, the most common way was to control the intended destinations, which he usually did by simply imposing a strict round trip journey to a specific port, requiring the traveler then to sail back directly to Genoa.<sup>21</sup> But this clause was often not compatible with the overseas realities. As a result, aside from this most rigid clause, the commenda could stipulate several others that provided the travelers with ample flexibility to improvise and to make the best traveling decision as events unfolded.

---

<sup>19</sup>CA# 1197 /October 1191.

<sup>20</sup> For example, there is the mention "*nave que vocatur Francesca*" in LA#327/ June 1206. The importance of the captain's reputation and the ship's characteristics in the eyes of the investors is confirmed by the 14<sup>th</sup> and 15<sup>th</sup> century insurance contracts, which almost always linked the policies to both the skipper and the ship.

<sup>21</sup> For example CA#476/ April 1191, which specify that trade had to take place in Palermo and in Sicily and on all the land of the king of Sicily (*Panormi et per siciliam et per totam terram Regis Sicilie, causa negociandi* ).

Dictating narrow destination autonomy, be that of a country or a region<sup>22</sup> or a determined set of stopovers, was a way for the investor to maintain some restrictions. It remains that the great majority of commenda only specified an initial port<sup>23</sup> from which the traveler should sail, and whatever destination he deemed the most appropriate. At the open end of the spectrum, many contracts did not mention any destination at all, and each venture could take the traveler to any of the Mediterranean ports. Some historians have wanted to see in the lack of the mention of destinations in certain contract a desire to conceal a profitable market from other traders or to avoid tip-offs to pirates from their spies. This does not sound very plausible though. Indeed a given ship could carry tens of traders with various cargos and it was thus impossible to keep the intended destination secret when so many had knowledge of it.

The lack of geographical constraints did not mean that the traveling partner was making strategic decisions about the destination, or even that he was in full control of his itinerary, as sailing conditions often dictated his trading circuit. An evidence of this is the frequent commenda clauses “where God will let him sail”<sup>24</sup> or “whenever goes the ship in which he shall go.” This type of formula has to be interpreted as autonomy for the traveler and not a casual habitual clause since it sometimes precedes an interdiction, as in “*excepto in Romania*”.<sup>25</sup>

The great autonomy left to the traveler gives further meaning to the term “partner” in the relationship between the traveler and the investor. Even in the asymmetrical relations between a wealthy investor and a traveler of lesser means, the traveler’s autonomy is further evidence of a cooperative partnership within the ties of a commenda, which differs from the emergent 14<sup>th</sup> and 15<sup>th</sup> century agency relationships with stricter guidelines.

### *Destinations*

Researchers have used the quantitative breakdown of the commenda’s first destinations as a proxy for the pattern of distribution of Genoese exports. When considering that, especially during the early part of the commercial revolution, Genoese could leave without goods but with currency, this cannot be accurate. Additionally, unless the commenda imposed a round trip on the traveler, a stipulation which became increasing rare in the course of the 13<sup>th</sup> century, it is a

---

<sup>22</sup> A recurrent practice was to bunch Corsica and Sardinia. See for example, GI#680/ September 1203.

<sup>23</sup> This did not preclude the traveler from buying and selling goods on the way to the first destination.

<sup>24</sup> See Jehel (2000, p.126).

<sup>25</sup> See for example, GI#779/ September 1203 and GI#1222/ May 1205.

stretch to try to break down the Genoese trading destination by port, or even country when, in reality, the destination in the contract is only an indication of one commercial stopover of a journey that was likely to include many, and one single journey could cover the whole Mediterranean basin. For example, on October 4 1198, Oberto Primavera carried £36 belonging to a tanner called *Wilielmus*. He would first sail on the ship *Dianna* to the Levant and then to Ceuta, at the opposite end of the Mediterranean “if that was where the ship went.”<sup>26</sup>

My objective in selectively introducing a geographical component of Genoese-long-distance trade is not only for the purpose of loosely controlling for possible bias in our samples,<sup>27</sup> but also to check for possible geographical interactions in the unfolding of the commercial network. In light of the autonomy left to the traveler to improvise, and of the inherent uncertainty of medieval sailing, unless it is for a rare event that can be otherwise specified, it makes little sense to break down the destination beyond the three-area division usually devised by historians:<sup>28</sup> The Levant, the western Mediterranean, and the northern territories. Indeed, a finer clustering grouping of destinations that are in the same wide geographical area, and, thus, that correspond to comparable sailing practices, and probably to more or less similar supply and demand conditions, is difficult. For example, a clustering that separates all voyages to North Africa from those to Provence and to the near Spanish coast would prove wrong<sup>29</sup> because common sailing routes (Udovitch 1978; Devisse 1972) make it hard to distinguish trips to North Africa from those to Sicily in the east or to Spain on the western route. Likewise, Tunis is much closer geographically to Sicily than to Ceuta, which was reached after a journey that usually included a stopover in what is today Spanish Majorca, which was, until 1229, under Muslim rule.

Thus in the context of this research, the clustering of eastern Mediterranean basin trade into one region seems also to be an adequate simplification. While the cultural and political conditions varied, the use of the word “Levant” often to designate the whole eastern basin clearly

---

<sup>26</sup> BO#88/ October 1198.

<sup>27</sup> In that regard, because the data set is based not only on the analysis of comprehensive notaries cartularies over short periods, but also on the two private personal transcripts of professor Balard and Jehel, who have respectively selected Romania and the whole western basin as the base of their research and on the published transcript of contracts between Genoa and northern Europe (Doehaerd 1941, 1952; de Sturler 1969), the sample should be representative.

<sup>28</sup> Doehaerd (1941), Balard (1988), Jehel (1993) and before them Byrne (1920) and Krueger (1933).

<sup>29</sup> See CA#1118/ October 1991 or GI#226 & 228/ June 1200 for a justification of that clustering.



represented a commercial reality.<sup>30</sup> A trip to either the Syrian coast, Egypt or Byzantium required similar traveling conditions and involved exchanging the same range of goods. Moreover, periodic fractures in commercial relations with certain eastern destinations meant that, during several time periods, the Genoese concentrated their commerce on only some of the potential Levant destinations. Similarly the grouping of all northern destinations is also justified by the term “*Ultramontanus*” indifferently used by the Genoese in the notarial records to designate all northern destinations. Before the end of the 13<sup>th</sup> century, that meant almost exclusively the Champagne fairs, but when the Genoese opened a sea route to Flanders and England which quickly supplanted the overland trade, the term included any northern European market place. But this need not concern us yet because, as will be apparent in the next chapter, the medieval commerce with the north was not organized by temporary equity partnership agreements, but mainly by credit relations, and is thus not central to this chapter.

An analysis of the average value of commenda contracts confirms other studies indicating that Levant’s partnerships were on average larger than those concerning the western basin, but the record also show that smaller ventures were not excluded from the eastern trade.<sup>31</sup> A prevalent economic historians’ explanation of this difference is that the higher profitability of the eastern markets attracted the largest and more routinized operators. However, while it is likely that imports from the east could provide higher margins, the increased transportation risk and the required length of the travel there did not make it necessarily more profitable than the closer western trade which provided a quicker capital turnover.

Likewise, another theory that links the mid-12<sup>th</sup> century Syrian trade to the ruling elite’s monopoly over the most “profitable” long-distance trade is also part of the same “rational choice” anachronism that portrays the Genoese as having the ability to make strategic investments based on accurate profit forecasts. The Syrian trade was very profitable, but no more than other Levant trade. To understand the Genoese aristocracy’s choice of trading destinations,

---

<sup>30</sup> Actually, even the term *Ultramare* which is commonly narrowly interpreted as the Christian Kingdom of today’s Syria, was often referring to all eastern basin destinations.

<sup>31</sup> From 1154 to 1199, the average amount commenda per tie is 82 versus 52; from 1200-1249, 53 versus 37; and from 1250-1299, 121 versus 82. The range of amount of ventures is large for both western and eastern destination: from 1154 to 1199, the standard deviation is 84 versus 66; from 1200-1249; 61 versus 46; and from 1250-1299, 293 versus 156.

it is better to look at their social familiarity with certain ports rather than at price differences. As John Day shows in his book on the Byzantine trade (1988), Genoese traders tended to sail where they could count on an established social network. In particular, dynasties of the warrior ruling elites had long fought in the eastern basin and, therefore, relied on ties throughout the crusader states and Byzantium.<sup>32</sup> Confirming the notion that strict economics does not go far enough to explain how investment choices were made is the fact that nobles of that period were proportionally less active in the Alexandrian trade than were the other long-distance travelers, even though commerce with Egypt was likely the most profitable of all eastern trade.<sup>33</sup> Similarly, the members of the Genoese nobility, who had few relations and little combat experience in northern Europe, were almost completely removed from the profitable northern trade (less than 8% of total volume before 1250, almost all sedentary). It is only when seafaring routes began to replace overland transportation that the aristocrats developed their northern trade network.

In the next section, I will further explore the activity of these men-of-arms as I describe the social fabric of the whole long-distance commercial network as Genoa built on its military might to establish its preeminence in the growing medieval commerce.

## 2. *JANUENIS ERGO MERCATOR*: THE MULTIVALENT GENOESE

In examining the 12<sup>th</sup> and 13<sup>th</sup> century commenda data sets, one is immediately struck by both the large variety of people involved in the long-distance trade and the occasional nature of their activity. Furthermore, the very large number of names in the surviving notarial records indicates that, during the “commercial revolution,” a substantial part of the Genoese community became engaged in the Mediterranean long-distance trade.<sup>34</sup> As a result, the records provide a unique

---

<sup>32</sup> This does not mean that the crusades were ex-ante commercial enterprises. Balard shows that the financial advantages to Italians were limited and the growth of Italian trade with the crusader’s states lagged behind the conquest by 50 years (2001, p.205).

<sup>33</sup> The historian Ashtor has demonstrated that goods were cheaper in Alexandria and that the relatively small custom exemption could not have made a difference in profitability (1986, p.25).

<sup>34</sup> Even knowing the approximate number of notaries at work for different periods, the proportion of the population involved in long-distance trade is difficult to assess. However for those few periods for which we have multiple cartulary access, it is tempting to extrapolate. If Lopez’ estimate based on tax records of 30 notaries at work for the

collection of quantitative information about a medieval urban commercial organization and the description in this section of the social make-up of the data set offers empirical evidence from which to understand some of medieval Genoa's social dynamics.

The participants' diversity expressed itself in the variety of places of origin, occupation, status, and even of gender, as women constitute a non-trivial segment of the commenda data set. It is in this light that the ubiquitous saying "*Januenis ergo mercator*" (Genoese therefore merchant) should be understood. A great many Genoese were engaged in the Mediterranean trade, but only a very small – albeit growing – minority made commerce their primary activity. That long-distance trade was a side activity for many persons is evident in the case of all those artisans who showed up only once in our data set,<sup>35</sup> or in the case of those servants who took advantage of an overseas trip with their master to carry the capital of fellow Genoese overseas. This was for example the cases for Oberto de Parma, the servant of a regular long-distance operator Pelegriano de Nigro, who traveled to Constantinople on April 26, 1274 carrying a modest £6 in commenda.<sup>36</sup>

The sporadic nature of the long-distance investment was also true among the most powerful operators. Even for the two largest and most illustrious traders in the city's medieval commercial historiography, Ingo della Volta (1132-1185) and Benedetto Zaccaria (1235-1296), trading was only a small part of their activity. Ingo della Volta, the head of the ruling feudal clan for much of the mid-12th century, administrated justice, led military operations, organized the

---

year 1190 is correct, we can safely assume that several thousand Genoese directly participated in overseas commerce. Indeed, based on the cartularies of two of them, over a combined 23 months period from 1190 to 1192, I have counted 1363 individuals involved in the long-distance trade. From those, I identified approximately 450 foreigners or operators living in nearby towns. That leaves around 900 Genoese for two notaries only. Obviously, since using a given notary over another was to some extent a matter of customer's choice, it was not uncommon to record business through more than one notary, and we should not multiply 900 by 15 to assess the participation. Nor should we assume that all notaries were equally drafting long-distance trade contracts. Nonetheless, it is fair to assume that over a period of a few years, several thousand Genoese were directly involved in the long-distance trade.

<sup>35</sup> Such as the grocer *Fredericus* who, in September 1220, carried £25 to Ceuta (JE# 101) or *Obertus* the shoe maker who invested £3 in a commenda venture to the Levant on July 17, 1190 (OB#541).

<sup>36</sup> BA#272. Note also that the propensity of servants to be part of a long chain of investors indicates that they also tagged along on their master's investments. 66 % invest with others as opposed to 11% for the population as a whole.

city's foreign policy and attended to his estate in the *contado*. Considering these activities, the few yearly transactions in which he participated over a ten year span appear to be a lucrative – maybe even crucial – side operation, but quite different from the time-consuming commercial obsessions of the Renaissance merchants. Similarly, at a distance of a century, Benedetto Zaccaria was certainly very involved in trading commodities. However, his wealth derived from a monopoly of alum mines in Phocaea granted to him for his military services to the emperor Michael, and his omnipresence in Mediterranean military history at the helm of his fleet on behalf of the republic or of other European rulers makes him much more a military commander than a trader. Benedetto Zaccaria was an admiral in the service of the house of Castille and later in the service of the French crown. The book he wrote was not about commerce. It was a treatise on naval strategy for Philip the Fair of France in view of a possible naval blockade of England.

The distribution of number of contracts per participant did not change much during the 13<sup>th</sup> century. As historians<sup>37</sup> have previously noted on the basis of smaller samples for most people, the long-distance trade was still a rare event. However, the variations in the basic network's measurements, presented in this chapter's last section, show that the Genoese trading network experienced a morphological change that reflects the rise of a commercial elite and a shift in its social make-up.

## **Gender**

On September 25, 1216, Auda “the sister of the late *Obertus Boletus*” gave £10 in *accomodatio* to *Iohannes de Vulturi*. He was to invest the capital in the eastern Mediterranean and “other places”. Upon his return, after deducting his expenses, he was to keep a quarter of the venture's profit.<sup>38</sup> The agreement, duly recorded in front of the church of San Lorenzo, contains all of the commenda's standard legal provisions. Although Auda, like most women in the data set, is identified by her relation to a male (the identifier was often the husband, but sometimes the father or the sons), nothing indicates that she did not have full authority to invest the ten

---

<sup>37</sup> See in particular Bach 1955; Krueger 1962; Jehel 1993; and Balard 1978.

<sup>38</sup> See LA#1134/ September 1216

pounds.<sup>39</sup> In fact, women's participation in long-distance ventures was commonplace and constituted a meaningful segment of the trade network.

Many records involve women investing either the nuclear family's money when the husband was traveling, or that of under-aged kin left under their authority.<sup>40</sup> In most cases, however, they simply put up their own capital. A small amount could have been saved from years of labor or be a small inheritance, as may have been the case in September 1210, when Zibona, "the maid of *Henricus de Murta*" gave £5 to *Iordanus* "the son of the butcher *Zilius*" who was traveling to the Levant, but larger investments likely related to their marriage contracts.<sup>41</sup> Indeed, a consular brief of 1143 (CD 1, pp.145-6) which eliminated a women's right to a third (*tercia*) of her husband's assets provides a clue as to how married women might, from that period onwards, have had increased access to liquid funds – as opposed to tangible assets –<sup>42</sup> that would have been available to be invested in the Mediterranean trade. That year, the consuls – most likely intending to slow down the rate at which estates were being divided because of an increase in family size – ended the traditional women's right to the *tercia*. As a result, women lost standing in their destination family, but larger dowry (which the husband could use during his lifetime) and the *antefactum*, a sum given by their husband to provide for her in widowhood, increased their liquid assets (Hughes 1975).

Historians familiar with the Genoese archives have recognized and analyzed women's participation in Mediterranean trade, but these studies have been based either on partial records and/or on shorter time periods.<sup>43</sup> Although quantitative comparison is difficult because my unit of analysis is actual ties, and not, as in previous studies, the number of contracts involving at

---

<sup>39</sup> That does mean that they did not benefit from their relative's network. For example, in August 1190, Boneta, "the mother of *Rufus banchierus*" might have profited from her son's experience when she decided to invest the large sum of £60 in a venture to the Levant (OB3 #657/ August 1190).

<sup>40</sup> S.A. Epstein noted that husbands did not always appoint their wives as tutors, but that this was the case in two thirds of the wills he sampled (1992, p.91).

<sup>41</sup> Jehel shows that unmarried women constitute a minority of the women investors (1975). The largest female commenda's investors of the early 13<sup>th</sup> century in the data set, Drua Streiaporco, Giardina Boleto and Mabilia Lecavella, were all widows. See GI#26, #494, #787, #809, #850, #1087, #1141, #1407, #1408, # 1611, #1853, and #1964.

<sup>42</sup> Women were much less likely than men to specify an "in kind" investment (24/535 against 699/5286).

<sup>43</sup> See Jehel (1978); Pistarino (1978); and Angelos (1994)

least one woman, an analysis of the data set leads nevertheless to similar general findings. For example, women' venture destinations were similar, but their partnerships concerned, on average, smaller investments (see figure 3.1).

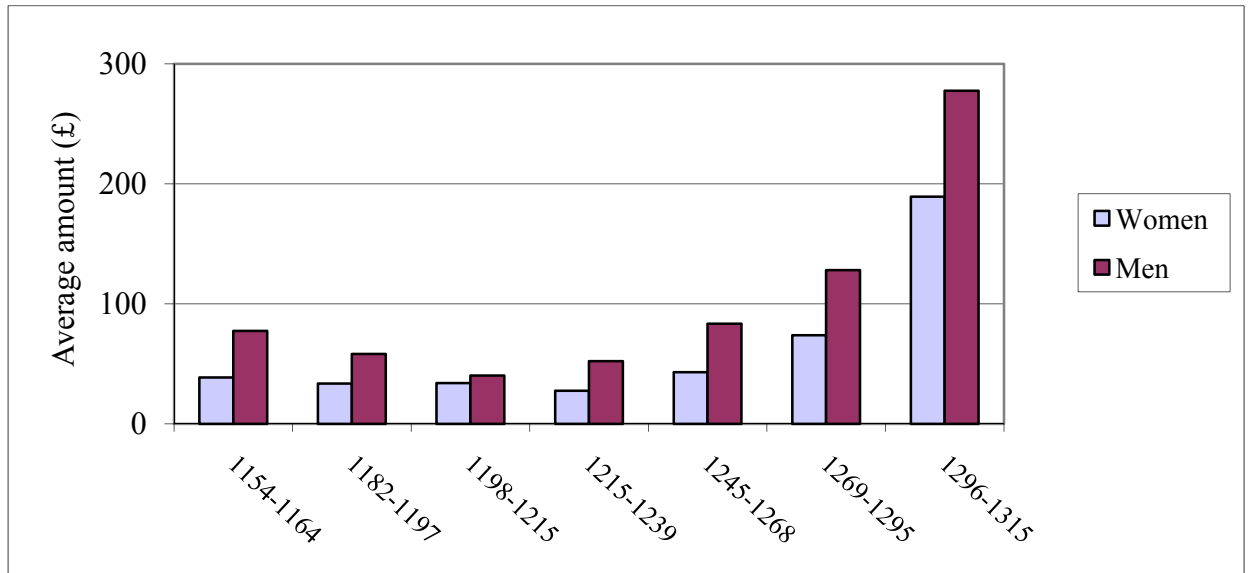
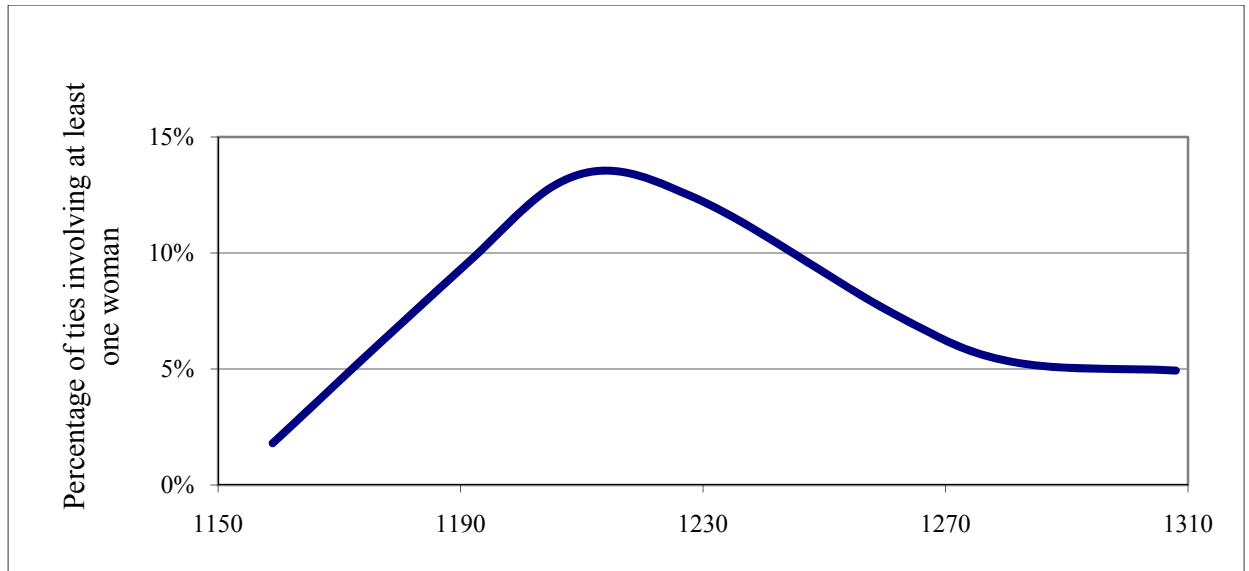


Figure 3.1 Average commenda value (per tie) by gender

A more original and more interesting finding is the only slightly lower number of ties of women, on average, in comparison to men (average network degree centrality). Considering that their “career” was shorter (unmarried women represent a very small part of the sample and many of them started to invest only after their husband’s death) this small difference is not an indication that women were less active than men, but, rather, it is another confirmation that the network was mainly composed of occasional participants.



*Figure 3.2* Percentage of commenda including at least one woman

More significant still in the context of this book, is the historical trend of women’s participation in the long-distance trade reported in figure 3.2 because, as non-specialized operators,<sup>44</sup> the pattern reveals the social dynamic of investment in its entirety. First, the height of women’s participation, the first half of the 13<sup>th</sup> century, is representative of the involvement of the whole Genoese community during that period. Second, the rare involvement of women in the early segment of our data set, along with the empirical regularity of their decreased participation toward the end the 13<sup>th</sup> century, further confirms that the period of wide and heterogeneous participation in the long-distance trade was sandwiched between two stages of more restricted involvement.

Further evidence of the decline of women’s direct participation is reflected in the increase of men’s investment on behalf of women. While rare in the early part of the century, from 1296 to 1315 a quarter of women’s ties in the commenda network are by an agent, as opposed to other direct participants. Furthermore, those who represented women were generally more active and more central participants than others, pointing, thereby, to trend toward specialization.

<sup>44</sup> A notable exception to this is Eliadar, the wife of Solomon di Salerno, one of the most active women in the whole data set and the only one to have contracted a variety of standard commercial agreements, both equity and credit. For a description of her participation in the long-distance trade, see Abulafia (1977, pp.241-53).

As historians have noted, women constituted an integral part of the medieval economic order, but their significance declined over time. For example, both Howell (1986) and Herlihy (1990), referring to slightly later periods, emphasize that the deterioration in women's positions was caused in part by their inability to access public office, coupled with the loss of their traditional role in production. The analysis of Genoese women's investment patterns also provides insight into the cause of this decline. First, in the same way that the rise of guilds drove women out of urban labor forces, the rise of a more specialized merchant group all but eliminated women from the long-distance network. Second, the change in partner selection patterns in the long-distance trade network toward partners who were homophilic with respect to occupation and status (see next section) further reduced women's choices. An alternative may have been for women to develop their own trade network, but for obvious reasons, it was almost impossible for them to fill the role of traveling partner.<sup>45</sup> Third, the increased accent on status as criterion partner selection concurrently with a rise in commercial kinship ties (see chapter 5) and the enlargement of clans beyond the nuclear family further reduced women's commercial role. Wives who had traditionally lent a hand in their husband's business when he was away were increasingly replaced in that task by the clan's males.

### **Economy and Occupation**

Common people leave less historical traces than elites, and this disproportion is amplified in periods for which we have scarce records. This is why medievalists tend by default to build their narratives around the stories of powerful people and the institutions that organized their social encounters. This conception does not necessary make for "just-so-stories" that rely on individual action to power history; it is simply that scholars must work with whatever records survived. In some ways, Genoese classic historiography in regard to periods before the middle of the 12<sup>th</sup> century, presents the same shortcomings as in other parts of Europe: the histories of the local nobility left just enough records to provide an idea of the elite structure.<sup>46</sup> However, beginning with the continuous surviving notary records from 1154 onwards, Genoese documents

---

<sup>45</sup> There are almost no records of women being *tractator* (only 5 in the entire data set).

<sup>46</sup> The emergence of a multiplicity of activities renders the status of clans more ambiguous than in most other places, but the identification is facilitated by overlapping information and the continuity of records that spans multiple generations (Forcheri 1974).



provide an insight into common people's occupations much earlier than in other parts of Europe (Slessarev 1967; Face 1969). One should be careful, however, in interpreting heuristic categories, because the Genoese could have a multiple activities. Trade is no exception; as mentioned before, it remained for most a side occupation. As a result, it is very difficult to define a "merchant" category in the early phase of the commercial expansion. In particular, in the several thousand documents dated prior to 1250 that I analyzed, I have not encountered a single word that evoked a strictly<sup>47</sup> commercial activity other than a few mentions of *bancherius* (banker). It is thus important to keep in mind that this section is not meant to give a precise idea of Genoese economic activity, but more to outline a few criteria and methods to present elements of stratification that illustrate the intrinsic multivalence of economic activity.

### *Sailing*

Reading a list of medieval urban occupations is a challenge for the modern reader because many of those activities simply do not exist anymore and refer to skills that have disappeared: just the modern translation of "tanner" regroups six different occupations.

However, the variety of occupations and the fine specialization of functions in certain industrial fields hide a fundamental medieval reality: most men, even artisans, would not easily fit into the modern rigid occupational classification because they were all capable of devoting themselves for extended period to activities as diverse as agriculture, war making, or house building.

This fluidity of occupation was especially evident in Genoa because it was the sea, above all, that presented the primary economic opportunity, and sailing seasons or military ventures could at any time draw the Genoese far from their regular occupations. As evident by the employment contracts that are almost exclusively for the duration of a single round trip voyage, many artisans took leave from their occupation to find temporary employment on ships. For example, the names in the oarsmen's employment contracts for the 1234 Ceuta expedition are often a first name followed by a craft. Similarly, there is nothing surprising to see as late as 1339, a woolworker (*lanerius*) and a gardener (*ortolanus*) taking temporary employment on a galley. In

---

<sup>47</sup>Grocers and drapers certainly engaged in commerce, but neither occupation was strictly commercial. For example, the medieval grocers (*speziarius*) dealt with spices and their occupation was more akin to today's pharmacists. Similarly, I will show in the next chapter that drapers (*draperius*) were artisans who most often sold their own production.

doing so, they, like thousands of Genoese before them, gained a direct taste of the overseas exchange economy, which they could then bring home to share with their kin and neighbors. For some sailors, overseas trips also provided a small opportunity for entrepreneurship, as each crewmember was allowed to carry a minimal quantity of merchandise to trade upon arrival.<sup>48</sup>

It is difficult to estimate the Genoese fleet, but Krueger's analysis (1985) from the lone surviving notarial records of 1155-1166 provides a sense of it. Krueger enumerated seven galleys, 50 *navis* and numerous smaller boats. Knowing that the largest vessels, galleys and *navis*, employed respectively 100 to 120 and 20 to 30 sailors each, and knowing that at the time a dozen notaries<sup>49</sup> were at work in Genoa, S.A. Epstein's estimate of several thousand Genoese men simultaneously at sea each sailing season seems fairly reasonable (1996, p.98). Of course, when the city was at war, that number could increase considerably.

While for many Genoese, sailing was not a regular occupation, conversely, the record shows that sailors often interrupted their employment to return home in time for the harvest (Byrne 1920; Krueger 1933). In this regard, they were no different from other members of the community for whom agriculture was a regular side occupation. Even those in the urban center, whose main occupation might be draper or grocer, farmed the countless parcels situated, as in most other European towns, still inside the city walls (*Castrum* and *Sancto Donati*) or just outside the gates (*Domoculta*, *Mortedo*, *Caligniano*).

When not at war, at sea, or in the fields, some Genoese worked to supply their community with basic services. Among these occupations one can find barbers, butchers and shoemakers, as well as a large quantity of servants<sup>50</sup> and apprentices, all providing the necessities of the city's daily life. Unlike artisans who could export their own production and did not

---

<sup>48</sup> The existence of this practice, called the mariner *pacotille*, can be documented in medieval Venice (Cox 1951) but there is little surviving evidence of it in Genoa, probably because sailors preferred to use the onboard scribe rather than the notaries to draw their contracts. However, indirect evidence is provided by ship-leasing contracts that sometimes specified the maximum load the crew could transport of their own goods (Byrne 1930, p.66).

<sup>49</sup> Of course, an estimate of the fleet's size should not be the number of ships found in that lone surviving cartulary multiplied by 12. Ships surely would have been mentioned in more than one cartulary.

<sup>50</sup> Throughout the medieval period, the large population of slaves also provided many of those basic services and constituted a reservoir of cheap labor. Even common people like *Gerardus barberius* (Gerald the barber) who bought a slave in August 1201 could be slave owners (GI#367). For more on the slave population in Genoa see Delort (1966) and Verlinden (1977).

necessarily need access to monetary instruments, the “small service providers” were able to benefit from long-distance trade as a way to invest very small amounts of capital. (In the period of 1200-1250, the average value of long-distance tie for the “small service providers” was less than £4). Those small-venture profits might improve living conditions, but could hardly serve as a build-up in equity. Indeed, unlike wealthier investors, whose consumption was limited by the scarcity of goods, the less well-off could always find basic local goods they could use.

### *Industry*

The next broad heuristic category of occupation includes all the artisans involved in industry. While the sea presented Genoa’s primary employment prospect, it also molded the occupational landscape inside the city. The port naturally promoted the maritime and armament industries, and shipbuilding was the first among them. A variety of specialized craftsmen transformed fabrics, iron, wood and other material into sails, anchors, nails and rope with which to build and equip ships. This made for a growing industry as the rising long-distance trade and the increasing size of military operations required a larger fleet. Adding to the demand was the ships’ short life spans – probably not exceeding an average of 10-12 years (Krueger 1985) – not only because of natural aging, but also because wars and storms claimed many ships. The shipyard also filled a steady foreign demand. Finally, aside from building new ships, the maritime economy also included all the men involved in the maintenance of vessels, as well as the porters who loaded and unloaded the cargoes. Armament production was the other main industry that benefited from Genoa’s rising maritime power. Military vessels and commercial ships had to be armed. Thus, as the size of the fleet rose, so did the demand for local production of weapons such as shields, armors, swords, and the famous Genoese crossbows.

On the other hand, the sea was also a constraining factor for the development of other crafts for one main reason: the very high return on long-distance trade investment drew almost all the available capital. In contrast with other Mediterranean cities, especially in the eastern basin, only a very small number of records refer to commenda investment in local handicraft. In many cases, especially in the early phase of the commercial revolution, even craftsmen themselves found it more lucrative to invest their surplus in long-distance trade than in their own activities.

No matter how the industry grew, the long-distance commerce is what drove Genoa’s economic development. Genoese craftsmen never developed the kind of trade association based

on monopolistic training that was so crucial in advancing the political success of guilds in other European towns such as Florence or Bologna (Owen 1977, p.105). There certainly existed an association of butchers (*macelarius*) and possibly other artisans involved in foodstuffs, such as bakers (*panettierius*), but those derived from the feudal rights associated with the occupation, and preceded the commune. Similarly, the most ancient occupational association might very well be that of the *muateri* (muleteer), but again, those are more auxiliaries than artisans in that sense (Vitale 1949).

Further weakening artisans as a group, was their relative spatial dispersion that contrasted with the concentration of certain trades in specific neighborhoods in most other urban centers. With the possible exception of drapers, who seemed to have been more or less concentrated around via del Cannetto, and the wool workers around the stream of Bisagno and Polcevera (Grossi Bianchi and Poleggi 1979), artisans set up shops everywhere (Heers, 1961, p.583).<sup>51</sup> This dispersion was not only a reflection of the lack of relative critical mass needed to occupy a certain space, but also of the historical legacy of the Commune establishment in 1099 which had provided association through residency from one of the seven, and later eight, districts. Districts were designed so that each had access to the Sea as opposed to control of a gate, as in other urban center partitions, or to link to a specific social or professional group. Additionally, the increase of trade partnerships that established commercial ties across professions and social categories contributed to decoupled residence and professional activity in Genoa in a way that was different from the rest of Europe.

Also impeding and weakening the constitution of a large group of independent craftsmen was the relative absence of artisans' partnerships compared to numerous employment and apprentice contracts in the notarial records, which confirm that wage labor was comparatively more prevalent in Genoa than other parts of the Mediterranean (Petti Baldi 1980). For example, in contrast to the situation in Genoa, the records of old Cairo indicate that artisan's partnerships and not employment was the rule in the eastern Mediterranean (Goitein 1967, p.87). As S.A. Epstein points out "One of the most crucial differences between the two economies was the concentration of Genoese profits in a smaller numbers of hands" (1988). This does not mean that industrial production was out of the household (Herlihy 1958, p.136), just that a master-

---

<sup>51</sup> "Les travailleurs de la soie et de l'or filé, cordonniers, tailleurs, épiciers, sont dans tous les quartiers » (Heers 1962, p.583).

craftsman could hire up to a dozen helpers who would all live in his house, where the factory was also usually located (Petti Balbi 1980). As figure 3.3 suggests, this was mainly the case in the textile industry, where a few drapers succeeded in building capital which, when reinvested in the long-distance trade, further amplified the wealth difference between capital holders and others.

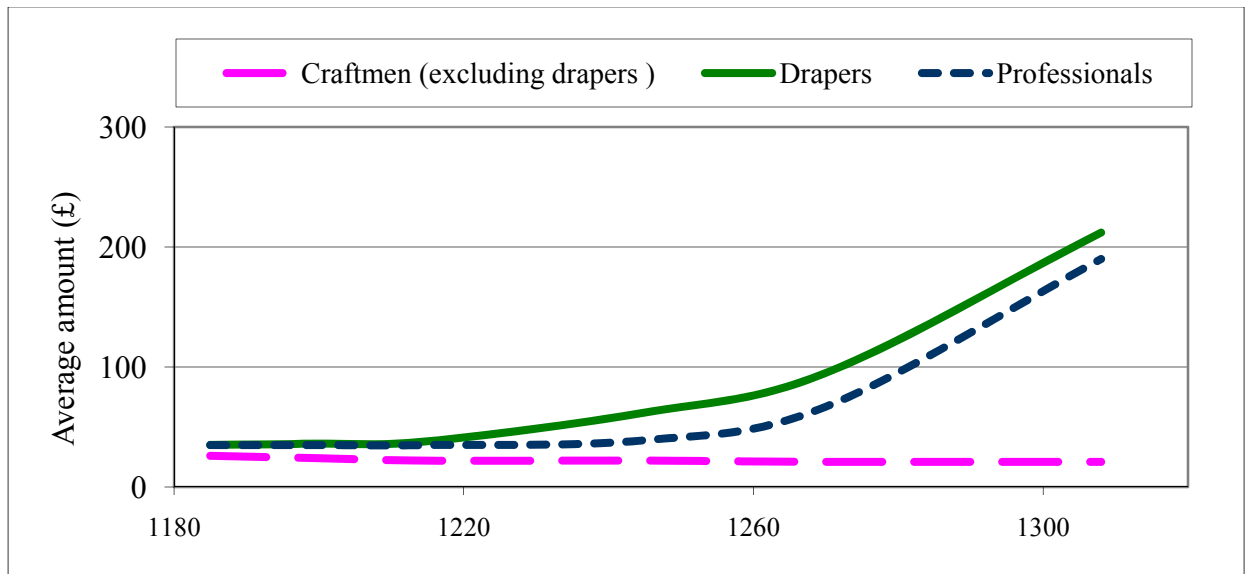


Figure 3.3 Average commenda value in three selected occupational groups, 1182-1315

### *Professions*

Professions typically rely on the monopolistic mastering of esoteric knowledge to become regarded as a high-status occupation, and are predicated on the idea that their practices benefit society as a whole. Defined as such, the term “profession”, when referring to a medieval social organization, is for the most part, out of the historical order. At the time, almost no occupation could claim this dual condition and education was the privilege of clerics. Furthermore, there was little room in the middle of the honor-based dichotomous social division (Weber 1978, p.930).

However, the increased use of written documents in the fast-growing administrative and commercial practices fostered the reemergence of occupations requiring a higher level of literacy, which had all but disappeared in the early Middle Ages. Among those, the commenda’s record lists, for example, teachers, notaries, lawyers and scribes. As demand for these professional skills increased throughout the 12<sup>th</sup> and 13<sup>th</sup> centuries, members of these

occupations, along with a few others such as physicians, enhanced their position by bringing into play their relationships with universities in order to claim exclusive access to their practices (Bullough 1969).

At first, however, a profession's emergence did not necessarily translate into higher income or enhanced status over manual occupations.<sup>52</sup> However, economic growth and, in long-distance trade in particular, provided opportunities for upward mobility. First, professions directly involved in commercial dealings benefited from the trade expansion. This was especially the case for those whose arithmetic expertise was sought after by rising merchants' families. For others, such as physicians, increase of disposable income and enhanced regulation (Bullough 1969) led to increased demand for their services. Second, as figure 3.3 reports, investment in overseas ventures provided the professionals with an opportunity to solidify their emerging status with increased wealth. Indeed, the increased difference of the average investment's size between the two largest urban occupational groups clearly indicates the rising material welfare of professionals who formed a base for the emerging middle class.<sup>53</sup> While the disparity in investment size was, in some part, explainable by higher income,<sup>54</sup> this is not in itself sufficient to explain this dynamic. Indeed, although teacher salaries or physicians fees rose, so did the earnings of artisans. In addition, a larger increase of professional incomes did not necessarily translate into a faster increase in disposable income, as professional lifestyle was more costly. However, although the whole community was using their services, professionals catered mostly to the ruling elites with whom they enjoyed more cultural affinity than the craftsmen did. As will be developed in the next section, when trade expanded, professionals were then able to leverage these relationships by pairing off with wealthier associates in a way that manual workers would not.

---

<sup>52</sup> See for more details Gorrini 1931; Bullough 1961; and Le Geoff 1980.

<sup>53</sup> The term class might be somewhat out of historical order as well, but it aptly expresses the increased grouping of people according to their economic interest.

<sup>54</sup> It is difficult to measure the difference in income growth. Undoubtedly, income for some professions outperformed the average. However, this was not a guarantee: intellectual occupation could also be a competitive business. For example, the number of notaries was around 30 in the beginning of the 13<sup>th</sup> century and jumped to several hundred in the middle of the 15<sup>th</sup> century.

## Status and Politics

While the previous paragraphs deal with the burgeoning medieval economy and the rise of occupational categories, status is historians' fundamental way to ascertain a role structure for that period. In medieval Europe, formal status defined one's judicial, fiscal, military and land ownership rights and obligations.

For the most part, the medieval aristocratic class conformed to an ideal type that takes its definition in a functionalist description of the social organization. Nobles took upon themselves political and economic control as a condition for providing military protection for the community (Weber 1978). In many ways, the Genoese men-of-arms who formed the *gente nobiles* did just that. At least until the middle of the 13<sup>th</sup> century, the nobles exclusively controlled the institutions<sup>55</sup> that organized the city's social encounters. However, the long-distance Mediterranean trade gave them an economic opportunity that fit their fighting and sailing skills in a way that did not exist in many parts of Europe.

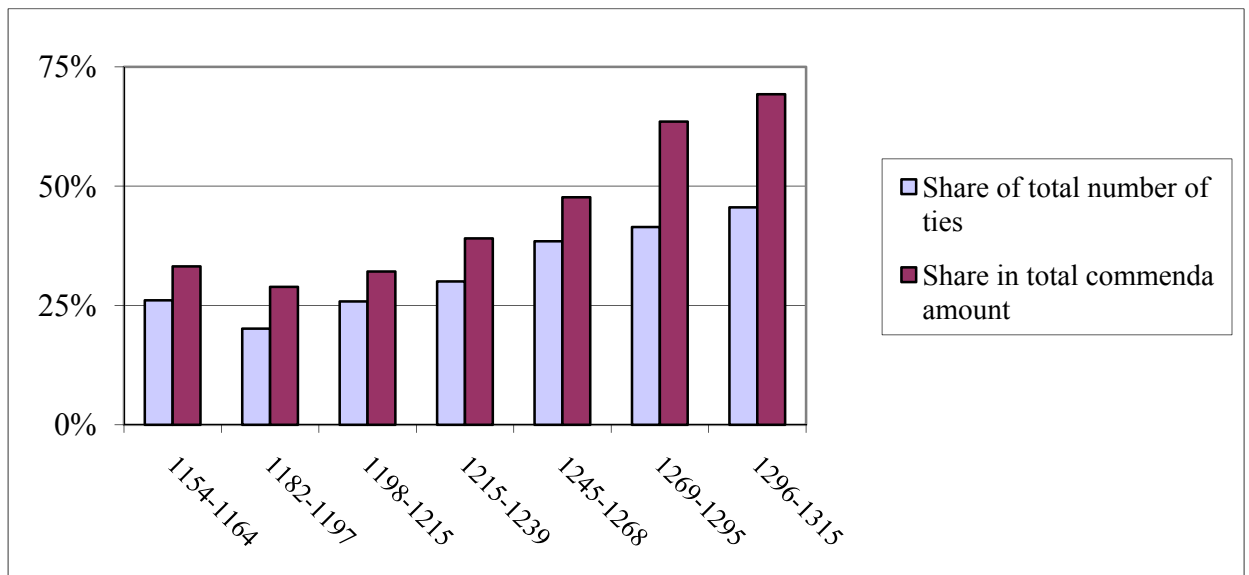


Figure 3.4 Aristocrats' participation in commenda networks (measured by percentage of the long-distance population and by percentage of trade volume)

<sup>55</sup> The best evidence of this control is the almost exclusive presence of the ruling clan's names in the magistrates, ecclesiastic, consular and military nominations. In many cases the same individuals filled all the roles. For the relation of the nobility with the church see chapter 2, p.58.

Figure 3.4, which reports the proportion of aristocrats among the commenda network's participants, as well as their share of commenda investments for seven networks from 1154 to 1315, confirms earlier findings about the crucial impulse given by the aristocratic elite to the Mediterranean long-distance trade. In addition, the long-run trend points to a growing aristocratic participation in commerce, which contrasts with the classic historiography that links the development of a merchant class with the emergence of "new men", informs a central theme of this book about the emergence of a mercantile oligarchy, not so much as an outcome of economic development, but as a consolidator of social relationships. It is thus significant to follow the commercial pattern of the nobility because, as a heuristic device, it points directly to the shift of the ruling elites from a group of families deriving their power from their position in the feudal organization of the city to a oligarchic group that united some of the old feudal urban clans, newly emigrated country-dwelling lords<sup>56</sup> and a handful of lay families who rose in status because of their wealth, as opposed to their birth origin or their accomplishments in military or public office, which had hitherto provided some social mobility in earlier periods.

#### *Tracing lineage*

The task of identifying members of the nobility in most of medieval Europe is usually straightforward. Cumulating and overlapping information about formal titles, feudal obligations or political rights are usually sufficient to make a distinction between commoners and the aristocratic caste. This process of identification in Italian urban centers such as Genoa works well enough. As in other parts of medieval Europe, participation in the city's government was contingent on formal status. Until the second part of the 13<sup>th</sup> century, only *gentes nobiles* had access to the consular position. Furthermore, from that point onward, the emancipation of the commoners (the "*populares*") did not mean a democratic regime in the sense of equality of rights. Indeed, political rights and administrative appointments were allocated according to a well-defined proportion between aristocrats and others.

Statically, it is therefore at any given time easy to place families in one status group or another. However, in contrast with other, more stable, medieval European social organizations, the Genoese urban nobility's composition changed over time such that it becomes difficult to track the feudal antecedents of the growing group of aristocrats. Thus, although the 11<sup>th</sup> and 12<sup>th</sup>

---

<sup>56</sup> Such as the very active della Croce or de Savignone clans, who naturally maintained their formal status when emigrating to the city.



century classic feudal organization of the city is confirmed by the relatively consistent match between the list of names of consular appointees and a variety of aristocratic attributes – such as vassalage to the church, military leadership<sup>57</sup> or feudal possession – from the late 1100's onwards, it becomes more difficult to ascertain status. This is mostly due to aristocratic immigrations, as well as – to some extent – a social fluidity that facilitated *de facto* cooptation and the accession to political emancipation to a few families of *populares* origins. This explains why eminent specialists of medieval Genoa differ in their classification of even of some of the most influential clans. For example, the status of the greatest 13<sup>th</sup> Genoese statesman and military commander Benedetto Zaccaria remains undetermined. Similarly, Balard (1978, p.525) excludes the members of the de Nigro clan on the objective basis of their later affiliation to the *populares* clans while most other historians do not (Scorza 1973). As a result, I have relied on several primary sources that include 1) a list of the church's vassals found in the *Registrae Curia*, (pp.24-25); 2) the consular appointments until 1270 established by Canale (1860); 3) the 1188 peace treaty with Pisa that listed aristocrats ahead of commoners (CD 2, pp.321-32) and 4) the lists of the grand council of 1380 and 1382 (Jarry 1896) which are particularly precise since they classify most of the Genoese clans according to their neighborhood and status. I have then complemented these primary sources with other information about places of origin and feudal tenure contained in the secondary literature to establish a double codification of the data set. A first group, that I will call the “old aristocratic families” is composed of the families that can either be traced clearly to Genoese feudal lineage or else who belong to the consular nobility before the 13<sup>th</sup> century. The second group – whose composition is very similar to that used by Kedar (1976), Balard (1978), Grendi (1987) and Jehel (1993) – is much larger as I added to the first group what I call “new aristocratic families,” that is all other families belonging to the nobility at the end of the 13<sup>th</sup> century.

An analysis of the data set shows a steady increase in the proportion of “new” versus “old” aristocrats in the commenda networks from 1154 to 1315. Starting with just less than 8% of total trade volume, the “new” aristocrats accounted for up to 40 % of the nobility's long-distance trade a century later. It is, indeed, only toward the mid-13<sup>th</sup> century that the growth of

---

<sup>57</sup> Evidence for the Platealunga, Embriaco, de Castello, Doria, Guercio and della Volta include the following: Maurizio Platelunga was a leader during the first crusade and Nicolaio Embriaco, Fulcone de Castello, Simone Doria, Baldovino Guercio and Rubeus della Volta were chieftains in the battle of Acre in 1190.

their participation leveled off,<sup>58</sup> precisely when the political strength of the nobility – the older families in particular – declined and the feudal elites switched repertoire and increased their long-distance operations. However, the distinction between the two groups does not necessarily provide an indication of status mobility, as many aristocratic families emigrated. Thus, the rise of the new nobility should be considered when thinking about social mobility inside the ruling aristocratic group and about the incidence of the long-distance trade in the emergence of new oligarchic elite. Indeed, the next paragraphs empirically demonstrate that political upward mobility for a given family, as defined by the number of consular appointments, was coupled with trade participation.

#### *Lineage dynamics and politics*

We can infer from the payment of the *dime*, the church's levy on agricultural revenues, that urban aristocratic families derived income from land ownership to add to their various feudal dues. In addition to these regular revenues, the product of plunder from all across the Mediterranean has been recognized by Lopez (1937) as seed money for many commercial ventures from which the investment would dwarf those of the traditional feudal economy. For example, Zaccaria de Castello's investments of 1205 and 1206 seem suspiciously linked to his pillage of the city of Syracuse in 1205.<sup>59</sup> It remains that the urban aristocracy never abandoned their agricultural activity which provided not only income, but also feudal legitimacy, as lords could draw military enrollments from their estate. In fact, the notarial record shows many real estate purchases by nobility active in commerce. In a sample of 475 transactions between 1154 and 1225, the urban nobility were net buyers of real estate (buyers totaled £3,128 sellers' £2,308). Conversely, I have found of no evidence of an asset allocation shift from land to commerce. Indeed, in the same sample there is almost no sale that can be directly connected to long-distance investment.<sup>60</sup>

Real estate was for all urban nobility a crucial political and economic asset and the historical theory that pits real estate owners against the expansionists does not seem plausible.

---

<sup>58</sup> A blip in "new" families' trade volume toward the last quarter results from the Zaccaria clan's large trading activity.

<sup>59</sup> GI#1327, #1328, #1329, #1812.

<sup>60</sup> This is actually true across social groups. Many smaller sales of land seem to follow the death of the owner. Indeed, often the seller is still identified as a deceased person (*del fu*).

However, traditional income did not suffice to maintain one's political position. Indeed, an analysis of table 3.1 (next page), which contains the change in political importance (as measured by number of consular appointments for two successive periods by family trade volume, confirms the relations between success in trade and political relevance. To compute the figures contained in table 3.1, I started by counting the number of consular appointments for every aristocratic family in the data set. Next, I ranked the families by number of appointments<sup>61</sup> for two periods, the first before 1191 and the second from 1191 to 1270.<sup>62</sup> Then, for both periods, I divided families into 5 quintiles. After that, I assigned for each family 2 numbers ("the rank pair") that identify the rank for both periods. The numbers here take values from 1 to 5, with 1 assigned to families whose number of consular appointments places them in the first quintile and 5 to families whose number of appointments places them in the bottom quintile (using a comparison of the actual appointment's number instead of rank was impossible because the yearly number was not constant throughout the period under study). Finally, I computed the average value of all commenda contracts per family per pair of quintile rank. Thus for example, the average commenda amount engaged over the whole period per family whose number of consular appointments rank them in the second quintile prior to 1191 and in the third quintile from 1191 to 1270 (cell (2,3)), stood at £1982.

---

<sup>61</sup> For detail about consular appointment procedures see p.52 to 54.

<sup>62</sup> 1191 was chosen as the cutoff date because it divided the period of consular's appointments records almost evenly, and corresponds to the emergence of the *podesta* regime. Checking the political dynamic using more cutoff dates would have dramatically increased the number of families with no observations and would have made the result of the analysis conditioned on sequence-picking, as opposed to upon the historical dynamics.

*Table 3.1* Average commenda trade volume per family according to change in consular appointments (measured by “rank pairs”)

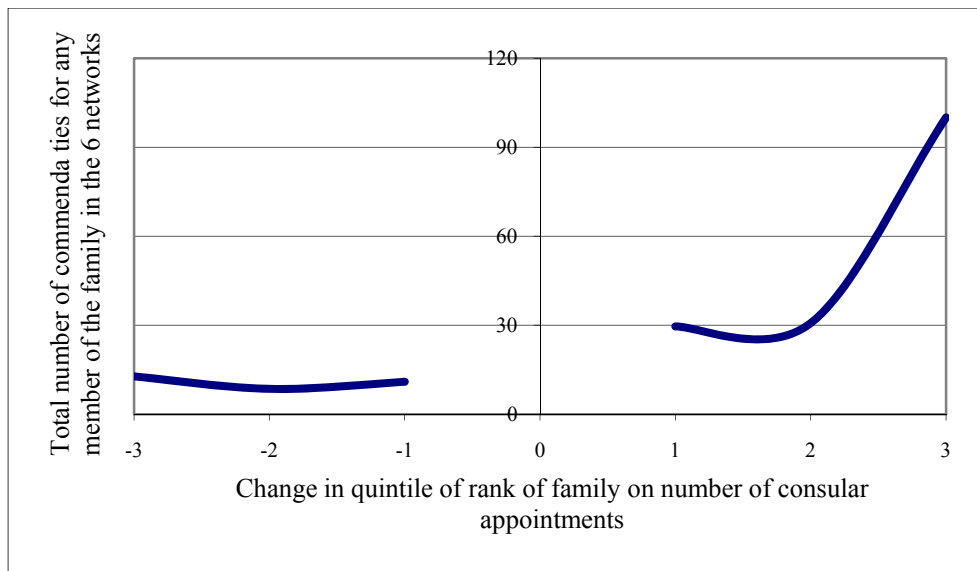
		Rank from 1191 to 1270			
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup> & 5 <sup>th</sup> <sup>63</sup>
Rank prior to 1191	1 <sup>st</sup>	£11413	£1204	£920	£1313
	2 <sup>nd</sup>	£8872	£4670	£1982	£2015
	3 <sup>rd</sup>	£3396	£480	£3345	£702
	4 <sup>th</sup> & 5 <sup>th</sup>	£8400	£3631	£2578	£0

A first remarkable finding is that 104 out of the 110 consular families participated in long-distance trade. Conversely, every large aristocratic commercial operator before 1270 is represented in my political data set. But as the results reported in table 3.1 indicate, the amount invested was wide ranging. The ancestral feudal nobility, such as the della Volta, Spinola or Doria, who maintained their political power – that is who ranked first for both periods ( thus cell (1,1)) – were large commercial operators (average trade volume = £11413). At the same time on average, the newcomers (those who ranked low in number of consular appointments prior to 1191, but high after – for example cell (2,1) and (4,1)) who were active in the long-distance trade replaced those families whose declining political standing (cell (1,2), (1,3) and (1,4)) was associated with their relative lack of participation in trade. Establishing a positive relation between political appointments among the aristocratic groups and their commercial investments might not be a very surprising finding; however, for such a remote period of history, this empirical evidence is a rare confirmation of the analysis of scattered biographies that have, up to now, served as evidence of the increasing relation between political power and commerce in medieval Italy. Even more to the point of this research in demonstrating the tight relation between commerce and politics, is figure 3.5 that plots the relationship between change in political importance and the average number of commenda ties per family in the six networks

<sup>63</sup> Rank 4 and rank 5 could not be differentiated because for each period between 30 and 40 % of the families did not have any appointments.

from 1154 to 1295.<sup>64</sup> Thus, unlike in table 3.1, here it is number of relationships, and not trade volume, that serves to measure the relationship between commerce and politics.

As figure 3.5 confirms, those families who exhibited the most political upward mobility (+3) were also those most central to the Mediterranean network.<sup>65</sup> It is good to remember that during the first half of the 13<sup>th</sup> century, the change in the composition of the ruling elites happened inside the aristocratic group where fighting skills and lordship were prerequisites. However, the positive relationship between number of trading ties and political ascendancy indicates that not only was monetary wealth taking its place along with traditional “honor” as the main value of the aristocratic corporatism (H.C. White 2008), but actual commercial ties could also provide the raw material for the weaving of a new elite social organization which is formally described in the next section.



*Figure 3.5 Families’ political appointments and commenda ties, 1154-1295*

\*Measured by change in quintile of rank of family on number of consular appointments

\*\*Measured by the total number of commenda ties for any member of the family

<sup>64</sup> 1154-1164, 1182-1197, 1198-1215, 1216-1239, 1245-1268, 1269-1295.

<sup>65</sup> I did not include those families who did not move ranks (cell x,x). Indeed, the leading families who maintain their position (cell, (1,1)) have in average a very high number of commenda ties and dominate the cells (x,x) group. As such, the average degree centrality for the cells (x,x) is the confirmation that the leading families who maintained their rank in political appointment were central commercial operators, but is not an indication that all “static in rank” families were active trade participants.

### 3.3. NETWORK DYNAMICS: FROM CLIENTELISM TO CORPORATISM

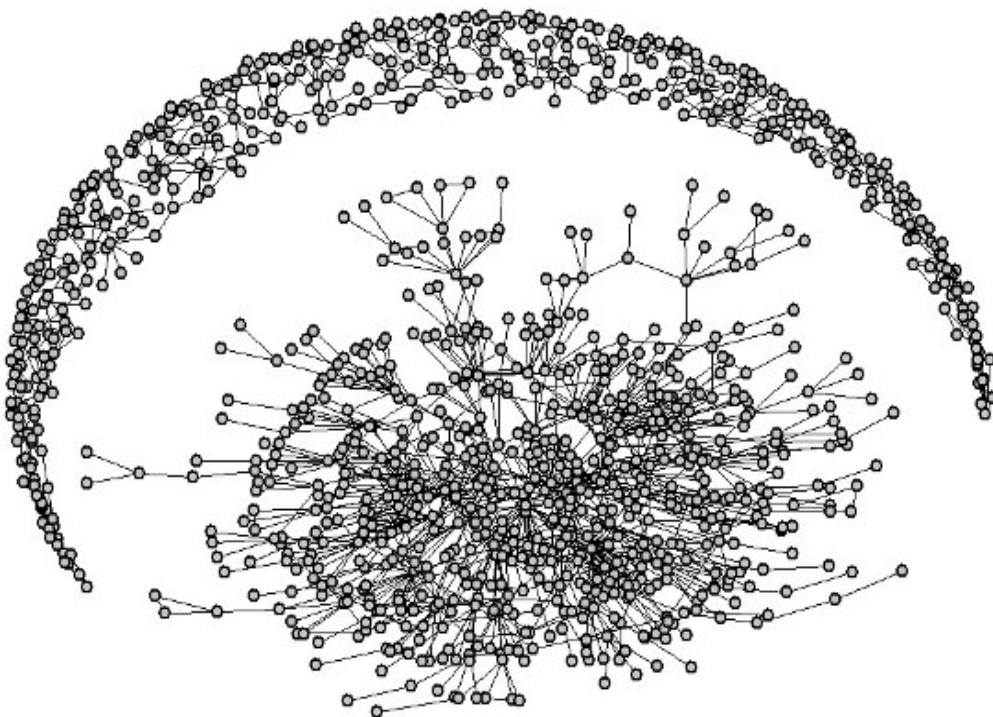
The previous pages illustrated that, while Genoese from all segments of the community participated in the Mediterranean trade throughout the 13<sup>th</sup> century, for the overwhelming majority of them, long-distance trade was a rare event and certainly not their main occupation. However, despite the fact that most operators lacked specialization, commerce was making an increasingly important contribution towards the organization of social structure, foreshadowing the central role that trade played in defining social relationships during the Renaissance. An investigation of this transformation requires one to analyze not only the behavior of persons, but also the way in which the structure of the Mediterranean trade network changed between the end of the first crusades and the beginning of the 14<sup>th</sup> century, when commenda lost their preeminence as the main partnership frameworks.

In this section, I begin by reviewing two basic network measurements and explore the morphological changes that the Mediterranean's commenda network was undergoing and which reflected the rise of a commercial elite as well as a shift in Genoa's social organization. Then in the second part of the section, I connect the network's macrostructural dynamics with the microsocial interaction of partner selection patterns to demonstrate how overseas commerce became salient in the definition of relational ties among the nobility and, to some extent, among occupational groups.

The analytical strength of network analysis resides in the fact that it can be used systematically to examine relational data. My objective, therefore, is to compare standard parameters across time to follow the commenda network dynamic. It should therefore be remembered that, although the previous section dealt with groups of persons, and their occupations, status and gender, here the unit of analysis are the networks of relationships which linked the thousands of men and women who invested in trade in the medieval Mediterranean, and those who traveled all around it by sea.

As Mark Bloch (1953) observed, it is as comparative tools that analytical concepts should be deployed when referring to medieval history. Formal network analyses did not exist when Bloch made his recommendations, but following his methodological suggestions remains

relevant. Bearing this in mind, my objective is to unearth empirical regularities of graph features that are scalable and transposable in time, rather than precise indicators of the stand-alone social structure for individual periods. As with any other theory, the idea is that the hypothesis behind the parameters' signification will allow us to understand the concatenation and sequence of social dynamics in a way that would otherwise be hidden. As a result, in an effort to simplify my analysis, I elected to use basic measures because I realized that a marginal gain in indices' precision might be mistaken for an increase in veracity, and that such a gain would not yield much when considering the length of the time series, the size of the data set, the low density of the networks, and the remoteness of the period under study.



*Figure 3.6* Commenda network, 1198-1215 (n=1112, mean nodal degree=2.45, average transaction per tie=1.09)

I have displayed in figure 3.6 a graph that represents the commenda network from 1198 to

1215.<sup>66</sup> Each dot (node) in figure 3.6 represents a participant in the commenda network, and each line represents either a relationship between a traveler and an investor (86% of all ties), between two coinvestors in a venture (10% of all ties) or, more rarely, the agency relationships that linked one or more investors, to agents investing on his or her behalf in a commenda (4% of all ties).<sup>67</sup> Little can be determined just by looking at the graphs, other than the fact that, despite being only a sample of the total network, the quantity of nodes in each figure confirms a large involvement on the part of the Genoese community. Note, however, that the number of records available to me to code varies between each graph, and thus the variation in the sample size over time is not representative of the social dynamic. This said, the disparity in the size of the seven networks actually offers an unexpected methodological benefit, in that the number of records coded for each period is not a function of time. Thus, empirical regularities in the change in the network measurements cannot be attributed to the network's size.

### **Occasional Partnerships and Sampling**

In network language, the number of ties that are incident to a given actor is termed the 'nodal degree'. A quick examination of the nodal degree frequency distribution (see appendix D) and of its average in each network from 1154 to 1315 confirms that the overwhelming majority of Genoese traders were occasional participants in long-distance trade. More informative network measures indicate that, even among those who were part of multiple contracts, very few selected the same partner twice. Obviously, this lack of a "repeat" in the data set could be the result of two possible sampling biases, both of which I consider below.

The first possible sampling bias stems from the fact that the distribution of the notarial records I coded for each network is not uniform with respect to time, as the data entries are more abundant in certain years. Therefore, the data set might provide an adequate picture of the trade network as a whole, but not of each individual pattern of action, because few consecutive years

---

<sup>66</sup> I build seven networks that serve as the basis of this chapter analysis (1154-1164, 1182-1197, 1198-1215, 1216-1239, 1245-1268, 1269-1295, 1296-1315). I chose the number and the periodicity of the networks to maximize the period covered while maintaining enough data density for each network. Unless otherwise indicated, every commenda network analysis in this chapter is based on the parameters of those seven networks.

<sup>67</sup> Direct co-traveling relationships are very rare. Out of almost 7000 commenda in the database, only 34 involve more than one traveler.



in the time series have sufficient data points. However, I tested those years in which the data was dense for more than two out of five consecutive years, and I found that the average “repeat” was not significantly statistically different from that of the period as a whole. Additionally, the difference between the much higher proportions of “repeats” between the investor/investor ties on one hand and the traveler/investor ties on the other demonstrates that the data set indeed picks up repeated relationships when they happened.

The second possible sampling bias that could explain the lack of “repeat” in partner selection might be a result of a change in the population sampled. Indeed, a dynamic analysis of the notarial records could underestimate the “repeats,” simply because once the partners had had one successful venture, a rise in trust could have decreased the need for a written notarial agreement, which would mean that “repeat” partners would be underrepresented in the cartularies. However, though this is possible, it is unlikely because the records are full of contracts between members of the same nuclear families who have, as a group, relationships that are founded on the strongest degree of trust. In fact, because in some cases overseas ventures might, whether they were expected to or not, last several years, written documents were necessary to supplement faltering memories and to serve as evidence in the case of the death of one of the partners. The careful maintenance of written records was also essential not only because litigious issues could arise between partners, but because an adequate inventory had to be kept of the share of several investors recorded in separate contracts into one traveler venture. Indeed it was not uncommon for a traveler to collect funds on different days of the venture from different sources, sources that might otherwise have been unrelated.<sup>68</sup>

Thus, the low number of “repeats” in investor/traveler ties in our data base probably represents the commercial reality of the time: With little control over the length of each venture, and thus of cash flow and its timing, participants in the commenda network were only able to

---

<sup>68</sup> This said, the “change in population” argument used to explain the lack of partnership repeat should not be completely ignored; the change in population may be due to the rise of agreements other than commenda during the period of my equity data set. Mentions of *compania*, or of overseas venture partnerships that were delimited in time, which I at first found to be rare, become a little more common towards the beginning of the 14<sup>th</sup> century. It is likely that most of these agreements, as well as those related to the employment of overseas agents, were not recorded by notaries but as private documents. However, it remains that, at the very least, the timing of appearance of such agreements in the notarial records is strong evidence that the institutional change in question did not take place before the end of the 13<sup>th</sup> century.

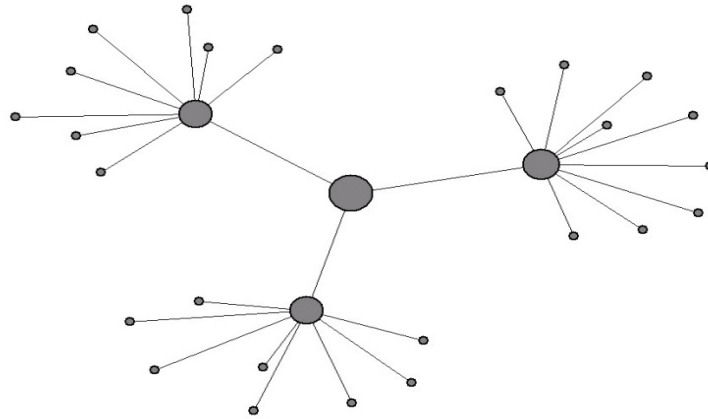
plan their investment decisions to a limited extent. This meant that opportunistic behavior was the norm. Investors selected travelers who were about ready to leave, as opposed to waiting for their previous partners, as the timings of their departures would be unpredictable (if they were to leave again at all). Similarly, and especially in the early phase of the commercial revolution, those travelers who decided to take to the sea again could not necessarily take it for granted that their previous investors would provide them with access to cash or goods. This is especially true in the case of Mediterranean trade, where credit instruments did not yet leverage existing equity investment. The best evidence that investors did not have much cash sitting around and did not wait to invest their cash – a factor that severely limited the repeat of partnerships – is the very small ratio of cash to commenda contracts apparent in the thirteenth century wills that have been studied by S.A. Epstein (1984).

### **Hierarchy**

In network analysis, an actor's "centrality", a measure of his activity level and/or of his "distance" from others<sup>69</sup> is arguably the most common parameter corresponding to the "importance" that a given node has to a network's overall architecture. This is especially true in symmetric relations where the direction of the ties is not relevant. As such, systematic measures of network centrality variation provide indications of inequalities between actors, and thus of the hierarchal nature of social organization. An example is the intrinsic hierarchical nature of the feudal system, the historical starting point of our inquiry. Thus figure 3.7, a graph representing an "ideal type" feudal organization, is composed of a series of star-shape clusters in which everyone is indirectly connected through their mutual ties to the local lord.

---

<sup>69</sup> Those "others" have different degree of prominence, and the "importance" of a given node is a function of the "importance" of the actors that he or she is linked to.



*Figure 3.7* An ideal type of feudal social organization

As an ideal type of exchange, figure 3.7 contrasts with other ideal types of economic relationships such as markets – which vary from the hyper-classic economic models of disconnected dyads which are randomly linked together, to more connected networks that take into account the interactional regularities that produce the social construction of markets (H.C. White 2002, p.318). It also contrasts with more collaborative schemes characterized by dense and robust ties and reciprocal cliques<sup>70</sup> (Windolf & Beyer 1996).

There is an abundant amount of literature which considers individual and group centralization, and the properties of several operational parameters have been well analyzed (Freeman 1979; Marsden 1981; Bonacich 1987). For our purposes, those parameters that take into account how “close”<sup>71</sup> actors are to each other (such as “betweenness” and “closeness” centrality) can only be deployed when considering a subgraph of the entire network. Indeed, the very large amount of components – subgraphs of nodes that are directly or indirectly linked to each other – in each network are a graphic representation of the lack of commercial connection apparent between many operators in our sample. Thus the distance between them cannot be computed.

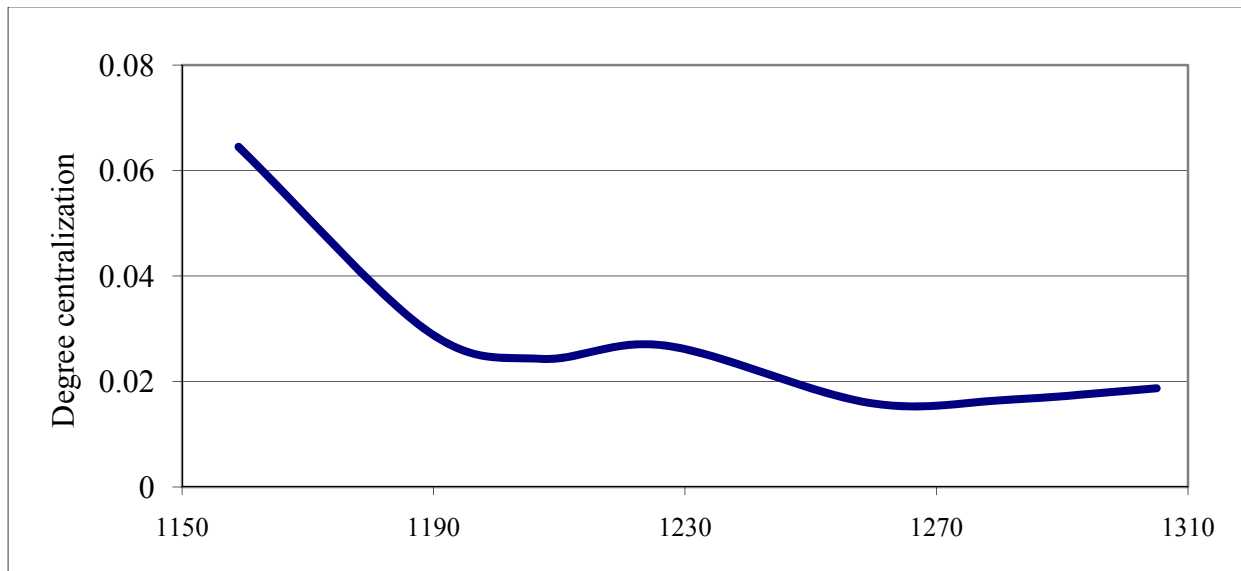
As a result, I have relied on network degree centralization – an index that measures the dispersion of a person’s activity as represented by the number of his ties – when assessing the hierarchical dynamic of the Mediterranean trade network. In other words, since this

---

<sup>70</sup> Cliques refer to subgraphs where every node is symmetrically related to every other one.

<sup>71</sup> Most distance-related parameters are based on the shortest path between two nodes, also called “geodesic distance”.

centralization's index is the variation in the number of ties of each operator divided by the maximum degree variation for a network of this size, the change in the index value from 1154 to 1315 reported in figure 3.8 is an indication of how isomorphic each trade network is to a star<sup>72</sup> and thus to an ideal type feudal clientelist configuration.

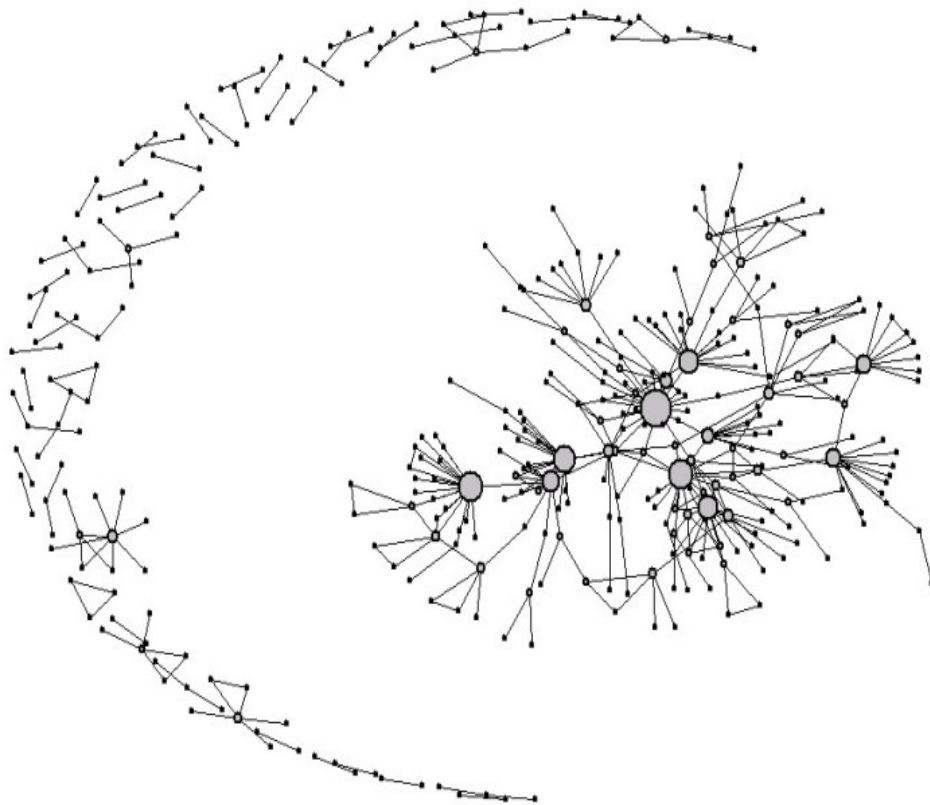


*Figure 3.8* Degree centralization in commenda networks, 1154-1315

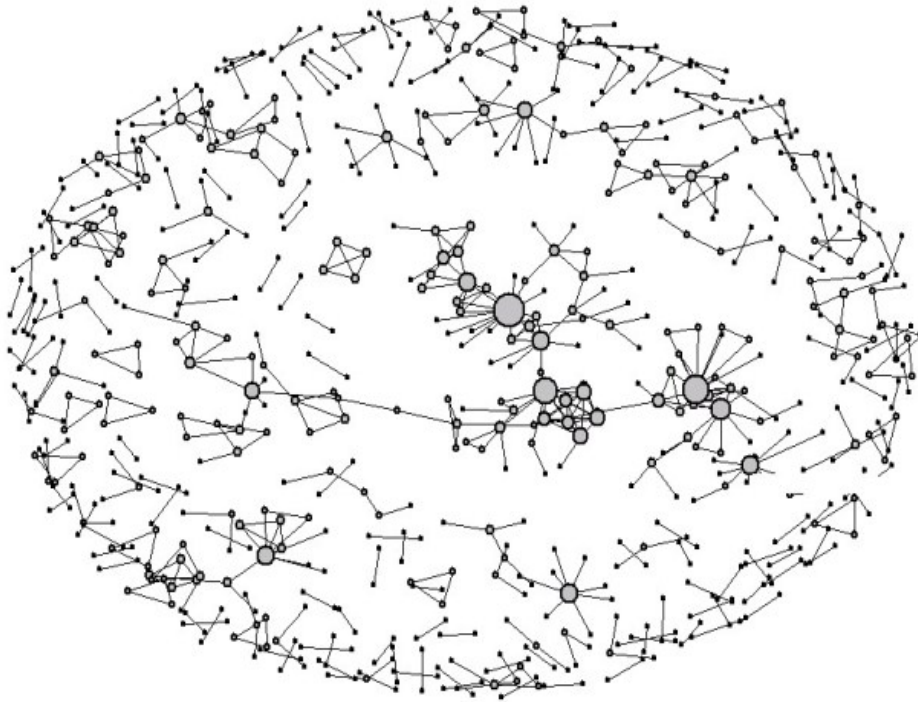
Evidently the trade network's centralization decreased in the early phase of the Genoese commercial revolution, as trade opportunities opened up to all, and remained low during the 13<sup>th</sup> century. A closer look at the network for the period 1154 to 1164 in figure 3.9 in which plotted nodes whose size is proportional to each individual amount of trading ties shows that during that period, aside from isolated and smaller operators, the Mediterranean trade was controlled by a few large operators, each surrounded by clients who were only indirectly connected to each other by their exclusive client tie to a central node. As such, network analysis confirms earlier findings – based on the surviving records of that time – which show that a group of larger-scale operators dominated the long-distance trade around the mid-12<sup>th</sup> century (Byrne 1920; Day 1988).

<sup>72</sup> In a star network of  $x$  nodes, the index (variation of degree) is maximal since the central node's degree equals  $x-1$ , while all others equal 1. Conversely, in a network where all nodes have equal degree (for example if each node belongs to a clique of a similar size), the index is equal to zero.

One interesting feature, however, is how tenuous the indirect commercial relationships between these operators were during that time. Indeed while we have evidence to show that the large operators interacted socially and forged momentary political alliances with each other, the network indicates that they did not necessarily deal directly with each other commercially. There is also little evidence for indirect paths of commercial interaction. This is another indication that the exclusive character of feudal clientelism permeated not only the social organization as a whole but also the commercial network as well. While graph's measurements demonstrated the change in the hierarchical nature of the network and the lack of connection between larger traders, figure 3.10 (which represents the commenda network for the period 1296-1315) offers a visual confirmation that by the end of the 13<sup>th</sup> century, this had changed: here the largest operators increasingly collaborated with each other directly and their ties were spread all around the network. By then the elite collaborated more, not only with regard to the political and military organization of the city, but also with regard to matters of long-distance trade.



*Figure 3.9* Commenda network, 1154-64 (nodes sizes are proportional to nodal degree)



*Figure 3.10* Commenda network, 1296-1315 (node sizes are proportional to nodal degree)

Traces in the earlier network of the transition to come are hard to find. However, while it may not be remarkable that, during the earlier period, none of the four clans – Spinola, Doria, Grimaldi and Fieschi – who came to dominate later medieval and Renaissance Genoa, were among the largest operators, it is noteworthy that the two that were already firmly involved in long-distance trade established key positions in the network by providing connections between important traders. Indeed, the Spinola and the Doria rank much higher with regard to betweenness centrality – a measure usually associated with the idea of power – than they do with regard with the volume of their trade. During the 1154-64 period, Doria ranked 17<sup>th</sup> in trade volume but fourth in betweenness centrality, and Spinola ranked 25<sup>th</sup> in trade volume and 8<sup>th</sup> in betweenness centrality. These networks measures are significant because – as Freeman notes –, everything being equal, an actor who is between other individuals has more “control” over the flow between them. This is especially true because the betweenness centrality index takes into account the proprietary position of the in-between actor and the non-redundancy of his network position (1979). This means, therefore, that, in comparison with other clans, the position of these two

preeminent families in the trade network was, on average, more on the path which indirectly linked large operators. As the network measurements show, what mattered in the influence wielded by one's clan was not only the clan's commercial volume, but also the position it held in the network.

## **Integration**

The centralization index makes clear the changing hierarchical nature of the networks. However, the measures provide no information about either the integration of the network or, in general, about the social cohesion of trade. Indeed, centralized networks always exhibit some degree of connection, but the reverse is not true. For example, our centralization parameters will be equally low for networks in which integration varies from none (if they consist of dyadic relationships only) to maximal (if all the nodes are tied to each other).

Integration is naturally related both to the idea that the actors are connected and to the social concepts of cohesion (a more robust version of connection which involves more intensively-organized mutual relationships) and adhesion (which refers to the idea of social partition) (D. White and Harary, 2001, pp.308-12). While density of relationships springs directly to mind when considering social connection, this criterion is not very helpful when comparing a large network of tangible social ties such as that considered here, because of the inherent maximum number of social relationships that any given person can have.<sup>73</sup> Thus density indices are a function of a network's dimension, and the difference in sample size for each period of this research makes this measure non-operational. Similarly, parameters that include graph measures of distance between operators in a network are also naturally deployed to assess a social organization's integration. However, as noted above, the commenda networks consisted of many disconnected clusters of ties, and distance between all operators can therefore simply not be computed. As a result, as in other studies on large networks, I relied on the parameter *connectedness* – an index that is based on the number and variability of the size of a given network's components (i.e. connected subgraphs of the network) – to assess the integration dynamic of the commenda networks.

---

<sup>73</sup> Obviously that statement varies depending on what kinds of ties are analyzed. For example density might be a meaningful parameter to assess the integration of an internet network based on hits on common web sites.

Figure 3.11 presents *centralization* as well as *connectedness* indices from 1154 to 1315. As already noted, the integration of the earlier networks was based on their centralized architecture, as most trade connections passed through a central operator. However, as feudal-like control over the network declines, the trade network's integration decreases sharply, before commercial ties knit the whole back together to form a more integrated – yet more decentralized – trade architecture. Unsurprisingly however, the historical increase in the interaction activities occurring between operators, as well as the slow build-up in specialization, followed the earlier more dyadic construction of the early 13<sup>th</sup> century, which involved many smaller components. In many ways this developmental model (moving from an isolated cluster of operators to a more integrated network) intuitively fits with both the historiography (which recognizes that an increase in trade opportunities for the population as whole followed the more restricted access to long-distance trade which was associated with the earlier period) as well as theoretical market models that recognize that a market's integration correlates with its maturity.

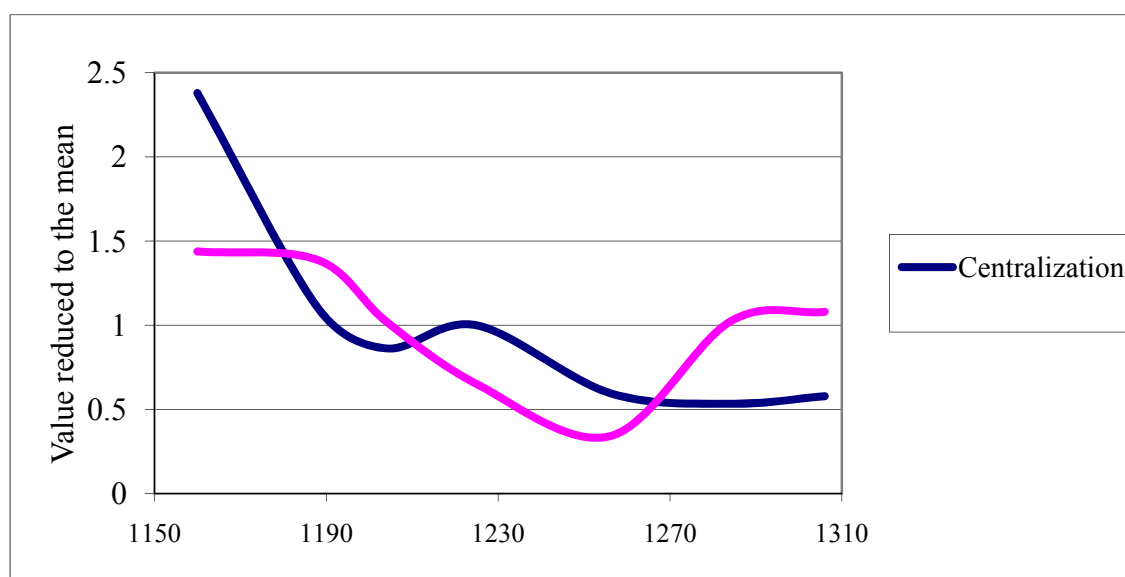


Figure 3.11 Centralization and connectedness indices, commenda network 1154-1315

### *Economic growth*

It is especially noteworthy that the period of minimum centralization and connectedness corresponds to the highest level of growth in Genoese long-distance trade. Indeed, although there



is insufficient consistent data to plot annual trade growth rates on figure 3.11, historians specializing in medieval Genoa have still been able to piece together enough about the period to recognize that it was during the 13<sup>th</sup> century that the city experienced its biggest growth before long-distance trade slowed in the early part of the 14<sup>th</sup> century, and even before the demographic impacts of the “Black Death”.<sup>74</sup> Thus integration was not synonymous with economic growth, but rather with economic consolidation.

### **Partner Selection**<sup>75</sup>

While figure 3.11 leaves little doubt about the change and the timing of the social “rewiring” which occurred in the trade network after the mid-13<sup>th</sup> century, its partner selection processes need to be investigated if we are better to understand how the early medieval long-distance commercial organization was being replaced by the involvement of the community as a whole.

Partner selection analyses of contemporary social organization often rely on a sample or census that explicitly ascribes several pieces of sociometric data to each person in order to produce multivariate equations that define the likelihood of social pairing. My medieval Genoese data set does not pretend to such systematic sampling, and several promising hypotheses cannot be tested. For example, spatial proximity certainly played a crucial role in partner selection, especially in a city divided into eight distinct political entities, each with their own client–patron relationships. However, 12<sup>th</sup> and 13<sup>th</sup> century records are just too scant to establish the long-distance trade operators’ domiciles.

In light of this, my objective here is to assess the incidence of the status and of the occupation related homophilic propensities in the “rewiring” of the trade network that occurred towards the middle of the 13<sup>th</sup> century. The incidence of kinship ties in trade-partner selection is not eluded; however, although family ties are often cited as the backbone of medieval trade network, this assertion is not confirmed by our commenda data set. As a result, I have decided to analyze the role of kinship in the trade network as part of the fifth chapter’s focus on the rise of clan relationships in the social organization of the city.

---

<sup>74</sup> See Heers (1961); Day (1963); Kedar (1975); Balletto (1983); Jehel (1993); and Greif (2006, p.243).

<sup>75</sup> The term “partner selection” seems to imply decision by the actors. However, this is not the case here. Commercial operators certainly used some initiative in a restricted menu of social choices, but in average, social structural regularities operated in partner selections.

I operationalized homophily – “the tendency for individuals with similar attributes, characteristics, or practices to form partnerships” (Bearman et al., 2004) – by coding each commercial tie with a pair of binary attributes corresponding to the connected nodes, in order to generate a set of 2 by 2 tables for each of the networks from 1154 to 1315.<sup>76</sup> In each of the four cells of the tables, I recorded the total amount of one of the four possible combinations of attributes for each period. From these 2 by 2 tables, the simplest way to assess the propensity of commercial operators to form homogeneous partnerships with respect to the attributes coded would be to use percentage. However, this metric does not take into account the availability of “alike partners”. As a hypothetical example, consider a case in which 30% of artisans form partnerships with other artisans and 70% select non-artisans as their commenda partners. If only a few artisans took part in the commercial network, this could indicate a very high propensity for homophilous selection with respect to occupation. However, if artisans were to represent the majority of the commercial operators, it might actually represent the opposite. Indeed, everything being equal, artisans in this second hypothetical case would be more likely to select a non-artisan as a partner.

As a result I selected a measure that takes into account the availability of “alike partners”. From among the measures suggested by Gower and Legendre (1986), which were suitable for use with a 2 by 2 table, I elected to use the point-correlation statistic, which those authors label  $S_{14}$ <sup>77</sup> in their article. Following Krackhardt’s suggestion (1990, p.350), I also deemed  $S_{14}$  appropriate because it exhibited sensitivity to large variations in cell sizes and a low distortion at the extreme values that could result from such variation.

The calculation of  $S_{14}$  generates values that range from -1 to 1, with a positive value indicating that there exists a propensity to form homogenous partnerships given appropriate availability. Measures close to zero indicate that, on average, the attribute is not salient in the partner selection process.<sup>78</sup>

---

<sup>76</sup> The occupational data is sparser than the status data. As a result, I decided to use a longer period to group information.

<sup>77</sup> For a given 2X2 table with four cells denoted  $x_{11}$ ,  $x_{12}$ ,  $x_{21}$ ,  $x_{22}$ ,  $S_{14}$  is defined as follows:  $S_{14} = \sqrt{[(x_{11}/x_{11} + x_{21} - x_{12}/x_{12} + x_{22})(x_{11}/x_{11} + x_{12} - x_{21}/x_{21} + x_{22})]}$ .

<sup>78</sup> I noted earlier in the text that I will trace the role that kinship played in the rise of the commerce in chapter 5. In this context though – and solely for the purposes of furthering our understanding of the trade network rewiring that

*Status as a “rewiring” attribute*

*Table 3.2 Value of S<sub>14</sub> for status homophily, 1154-1315*

1154-1164	1182-1197	1198-1215	1216-1239	1245-1268	1269-1296	1297-1315
0.191	0.117	0.223	0.348	0.451	0.499	0.604

Table 3.2 reports S<sub>14</sub> values for a status-homophilic propensity for the seven periods that correspond to the seven commenda network that serve as the base of the network analysis. The index shows that, following an earlier period of heterogeneous partner selections, from the end of the 12<sup>th</sup> century onwards, formal status became increasingly salient in commercial partnerships. This is not to say that cross-status commenda disappeared; however, it does indicate that, given availability, an aristocrat was increasingly likely to form a partnership with a fellow aristocrat.

In figure 3.12 for the sake of comparability, I have reduced the seven homophilic S<sub>14</sub> indices to their means. Then I supplemented these values to the hierarchy and integration parameters reported earlier in figure 3.11.

---

took place toward the end of the 13<sup>th</sup> century – we have to be satisfied with following the pattern of the proportion of intra-family trade in the whole trade network. Indeed, it would be impossible to take into account availability of “alike partners” in the way that parameter S<sub>14</sub> did for occupational and status attributes, as it would require a separate index for each family. Moreover, considering the total number of selection alternatives, the random selection of kin would, even in large families, be a rare event and this would force us to accept that all kinship selection is an indication of high levels of intra-family partnerships. As I show in chapter 5, the proportion of intra-family partnerships increases only slightly during the 13<sup>th</sup> century and when considering that most intra-family trade occurred among the nobility, it is perhaps more useful to note that, among intra-status partnerships, the selection of kin as commenda partners did not increase until the end of the 13<sup>th</sup> century which is consistent with the notion of a higher integrated network.

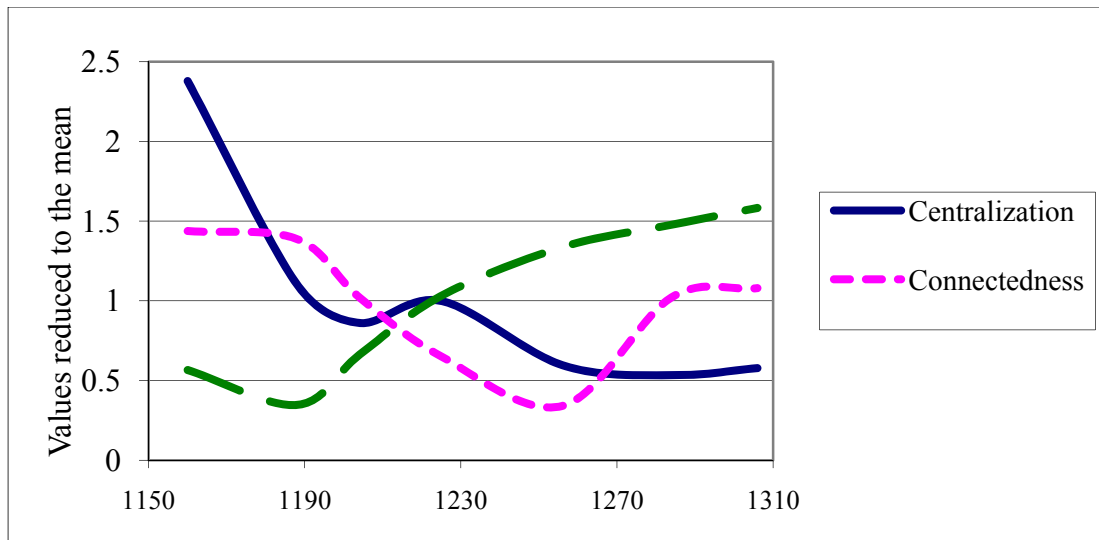


Figure 3.12 Network centralizations, connectedness and status homophily, 1154-1315

In light of the changes in both network measures, the rise of homophilic selection among the aristocracy takes on greater meaning. From the middle of the 12<sup>th</sup> century onwards the decrease that occurred in centralization expresses the loss of the preeminent position previously enjoyed by those of the ruling aristocracy who benefited from long-distance trade. In addition, the feudal nobility's monopoly of financial surplus was eroding, as the marginal saving rate of non-noble participants in long-distance trade increased. While, the loss of this economic monopoly did not translate into much of a loss of political power until the middle of the 13<sup>th</sup> century, it remains obvious that the nobility as a group had increasingly to compete for resources with the rest of the population. For the nobility, one logical outcome of this situation was to increase intra-status ties. As a result, over time, status-based selection became salient, giving rise to a social mechanism which contributed to the formation of a commercial network which was, as a whole, more integrated but less hierarchical. There is no evidence to indicate, however, that the desire for intra-status partnerships was the result of a deliberate control strategy. But, this said, the data certainly does show that, as aristocrats lost some of their feudal prerogative, commerce became an increasingly significant factor in the definition of their social ties.

*Occupation as network "rewiring"*

Next, using a similar methodology to that applied to status attributes, I measured the homophilic tendencies of three occupational categories, artisans, professionals and merchants. Because notaries wrote down some operators' occupations, establishing a sample of artisans (including

drapers, whose occupation constitutes a hybrid) or professionals in the commenda network is a fairly straightforward matter. However, the lack of the term *mercator* in any contract before the mid-13<sup>th</sup> century poses coding problems. While I used my analysis of credit instruments to refine the notion of “merchant” (see next chapter), for the purposes of the commenda network, I aggregated bankers, *mercator* (when the term appears around 1250), foreign traders, and some local commercial operator (the criteria for coding were length of career, use of multiple financial instruments, or high centrality) in order to create a regular, if not specialized, merchant category. In figure 3.13, I report the homophilic tendency for the three occupational groups for the period 1186-1315. As the long-run trend indicates, as the commenda network became more integrated in the second part of the 13<sup>th</sup> century, intra-occupational partnerships among artisans, as well as merchants, increased. However, professionals, on the other hand, were no more likely to associate themselves with other professionals than with the population as a whole.

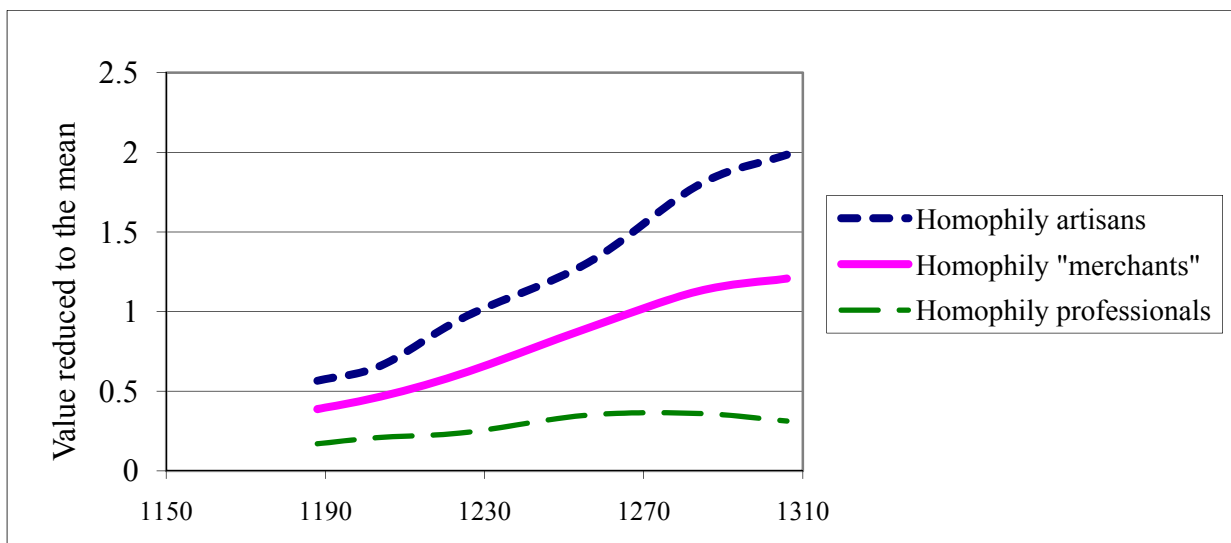


Figure 3.13 Occupational homophily (S14) for three selected groups

The increasing use of occupational categories as a salient characteristic for partner selection by artisans can be considered to be constitutive, as well as a result of economic factors; however, it was also a reflection of the increase in political and social stratification seen in medieval Genoa. Economically, the records show a disintermediation in the trade network. This was expressed by the increase that occurred in the export of small manufactured goods, either directly by the artisans who made them or by travelers practicing the same craft. However,

political history also provides clues concerning the rise of broad occupational categories, as from the mid-13<sup>th</sup> century onwards, a system of representation that relegated the artisans in a separate category as contrasted with the traditional feudal system, which had been organized around patron–client relationships in well-defined spatial units.

The lack of partnerships between professionals is, in that context, less surprising. Unlike craftsmen, who sometimes worked together or supplied each other, and who exhibited a higher level of solidarity than other groupings (Hughes 1975), professionals had no goods to export and had no particular occasion to interact with each other. In fact, their primary professional and social ties were often with the aristocratic clan they served. Indeed, it is apparent that even some notaries, the largest professional subgroup recorded in the commenda data set, displayed an increasing tendency to work exclusively for a single clan. As a result it is unsurprising that, as a group, professionals were, during this period, increasingly more likely to enter into partnership with the nobility than with the common population.

The dynamics of merchant group formation will be developed in the next chapter, as I will show that one of the differences between these men and the population as a whole was their use of credit instruments as an aspect of their intra-occupational ties. It is thus logical that, for the most part, merchants used commenda when entering into commercial relations with unspecialized operators.<sup>79</sup> And, although the end of the 13<sup>th</sup> century shows a slight increase in homophilic propensity, this might have been the result of the growing rate of adhesion to this group by people that carried on, for a while, the practices of the more occasional operator.

In this light, it is relevant to note that the homophilic selection pattern displayed by drapers (who are sometimes seen as merchants and not craftsmen) did not conform to that displayed by other merchants. Indeed, the data indicates that partner selection on the part of drapers was, on average, similar to that displayed by artisans as a broad category. This reinforces the claim that, in 12<sup>th</sup> and 13<sup>th</sup> century Genoa, even among those who were most involved in unprecedented growth in commerce, few could really have been called merchants.

In the medieval east, the commenda had been a standard contract that covered a variety of economic relationships. In picking up the same framework to organize long-distance trade partnerships, Italians found a stable framework that accommodated the participation of all

---

<sup>79</sup> Remember that figure 3.13 reports the value of parameters reduced to the mean to represent an historical trend. In fact the merchant S14 parameter is much lower than that of the artisans.

segments of the population. In this chapter, I have shown how the lack of repetition of most names, and the presence of a wide variety of participants in the record, points to the occasional nature of commercial activities for many Genoese and indicates that, before the middle of the 13<sup>th</sup> century, it is difficult to define a social structure with respect to trading activity. During that period of strong growth, the commercial expansion was characterized by a growing number of transactions. Oddly, though, the average size of those transactions remained relatively constant, and even decreasing, which provides further evidence of the participation of some of the less well-off in the long-distance trade. However, the range of transaction size was expanding, and the corresponding heterogeneity of social pairing increased the capital formation of the largest families. As trade became more routinized and more polarized with respect to size, occupational categories became salient in partner selection. Conversely, as the rise of commerce provided a new social currency, nobles responded to the threat to the status-based political organization by increasingly selecting their own as long-distance trade partners.

## Appendix A: Nodal Degree Distributions of Commenda Networks, 1154-1315

1154-1164, n=379

Nodal Degree	1	2	3	4	5	6-7	8-9	10-13	14-19	20+	Sum nodal degree
Frequency	241	77	21	13	8	5	3	5	5	2	777

1182-1197, n=1073

Nodal Degree	1	2	3	4	5	6-7	8-9	10-13	14-19	20+	Sum nodal degree
Frequency	578	229	94	63	30	39	21	11	5	5	2462

1198-1215, n= 1112

Nodal Degree	1	2	3	4	5	6-7	8-9	10-13	14-19	20+	Sum nodal degree
Frequency	538	251	108	61	35	40	25	22	10	4	2779

1216-1239, n=753

Nodal Degree	1	2	3	4	5	6-7	8-9	10-13	14-19	20+	Sum nodal degree
Frequency	472	137	69	27	16	15	7	4	5	1	1444



1245-1268, n=716

Nodal Degree	1	2	3	4	5	6-7	8-9	10-13	14-19	20+	Sum nodal degree
Frequency	508	115	48	19	15	5	1	1	0	0	1134

1269-1295, n= 1823

Nodal Degree	1	2	3	4	5	6-7	8-9	10-13	14-19	20+	Sum nodal degree
Frequency	1162	343	127	66	39	36	23	21	4	2	3468

1296-1315, n= 723

Nodal Degree	1	2	3	4	5	6-7	8-9	10-13	14-19	20+	Sum nodal degree
Frequency	414	175	66	23	16	19	4	4	2	0	1366

## *Abbreviations*

### **Unpublished Primary sources**

- BA Balard, Michel. Unpublished transcripts of notarial records. References in Balard, Michel. 1978. *La Romanie Génoise: XIIème-début du XVème siècle*. Rome: École française de Rome, Pp.678-682.
- JE Jehel, Georges. Unpublished transcripts of notarial records. References in Jehel, Georges 1993. *Les Génois en Méditerranée occidentale: fin XIème - début XIVème siècle: ébauche d'une stratégie pour un empire*. Amiens: Centre d'histoire des sociétés Université de Picardie, Pp. 480-82

### **Published Primary sources**

- Annales Caffarus, and Gabriella Airaldi. 2002. *Gli annali di Caffaro: 1099-1163*. Genova: Fratelli Frilli
- BO<sup>80</sup> Eierman, Joyce E., Hilmar C. Kruger, and Robert L. Reynolds (Eds.). 1939. *Bonvillano*. Torino: S. Lattes.
- CA Hall, Margaret, Hilmar C. Kruger, Renert G. Ruth, and Robert L. Reynolds (Eds.). 1938. *Guglielmo Cassinese*. Torino: S. Lattes.
- CD Imperiale di Sant' Angelo, Cesare, and Genoa (Republic). 1936, 1938 and 1942. *Codice diplomatico della repubblica di Genova, I-III*. Roma: Tipografia del Senato

---

<sup>80</sup> The number that follows each abbreviation in the text refers to the number of a specific notarial record and the date to when (month and year) the record was minuted. For example the abbreviation BO#224/ December 1198 refers to the notarial record number 224 minuted in December 1198 by the notary Bonvillano as it was classified by Eierman, Joyce E., Hilmar C. Kruger, and Robert L. Reynolds (1939).

- DO Doehaerd, Renée. 1941. *Les Relations commerciales entre Gênes, la Belgique et l'Outremont, d'après les archives notariales génoises aux XIIIème et XIVème siècles*: Bruxelles: Academica Belgica.
- GI Hall-Cole, Margaret, Hilmar C. Kruger, Ruth G. Renert, and Robert L. Reynolds (Eds.). 1939. *Giovanni di Guiberto*. Torino: S. Lattes
- KE Doehaerd, Renée, and Charles Kerremans. 1952. *Les Relations commerciales entre Gênes, la Belgique et l'Outremont, d'après les archives notariales génoises, 1400-1440*. Bruxelles: Academica Belgica
- LA Krueger, Hilmar C., and Robert L. Reynolds (Eds.). 1951-53. *Lanfranco*. Genoa.
- LO Lopez, 1953." L'attività economica di Genova nel Marzo 1253 secondo li atti notarili del tempo, *ASLI 54:163-270*
- OB1 Bach, Erik, 1955. Mercato Oberto Scriba de. in *La cité de Gênes au XIIème siècle*. Pp.150-76. Kobenhavn: Gyldendalske boghandel.
- OB2 Chiaudano, Mario, and R.M. della Rocca (Eds.). 1940. *Oberto Scriba de Mercato,1186*. Torino: S. Lattes
- OB3 Chiaudano, Mario, and R.M. della Rocca (Eds.). 1938. *Oberto Scriba de Mercato,1190*. Torino: S. Lattes.
- S Chiaudano, Mario, and Mattia Moresco (Eds.). 1935. *Il cartolare di Giovanni Scriba*. Rome.

## BIBLIOGRAPHY

### Primary Sources

- Bach, Erik, 1955. Oberto Scriba da Mercato 1182, 1183, 1184. in *La cité de Gênes au XIIème siècle*. Pp.150-76. Kobenhavn: Gyldendalske boghandel.
- Balard, Michel. Unpublished transcript of Genoese notarial records. References in Balard, Michel. 1978. *La Romanie Génoise: XIIème-début du XVème siècle*. Rome: École française de Rome,
- Balletto, Laura, 1985. *Atti rogati a Ventimiglia da Giovanne di Amandolesio dal 1258 al 1264*: Istituto Internazionale di Studi Liguri.
- Belgrano, Luigi (Ed.). 1868. *Il secondo registro della curia arcivescovile di Genova*. Genova: Tipographia del istituto sordo-muti.
- Belgrano, Luigi (Ed.). 1872. "Registrum Curiae Archiepiscopis Janua." *Atti della Società ligure di storia patria* 2.
- Belgrano, Luigi, and Cesare Imperiale di Sant' Angelo. 1890-1929. "Annali genovesi di Caffaro e de'suoi continuatori dal 1174 al 1224." in *Annali genovesi di Caffaro e de'suoi continuatori*, edited by Luigi Belgrano and Cesare Imperiale di Sant' Angelo. Rome.
- Chiaudano, Mario. 1925. *Contratti commerciali Genovesi del secolo XII, contributo alla Storia dell'accomendatio e della societatis*. Turin: Fratelli bocca editori.
- Chiaudano, Mario (Ed.). 1940. *Oberto Scriba da Mercato, 1186*. Turin: S. Lattes.
- Chiaudano, Mario, and Mattia Moresco (Eds.). 1935. *Il cartolare di Giovanni Scriba*. Rome.
- Chiaudano, Mario, and R.M. della Rocca (Eds.). 1938. *Oberto Scriba de Mercato, 1190*. Torino: S. Lattes.
- Chiaudano, Mario, and R.M. della Rocca (Eds.). 1940. *Oberto Scriba de Mercato, 1186*. Torino: S. Lattes.
- Doehaerd, Renée. 1941. *Les Relations commerciales entre Gênes, la Belgique et l'Outremont, d'après les archives notariales génoises aux XIIIème et XIVème siècles*: Bruxelles: Academica Belgica.

- Doehaerd, Renée, and Charles Kerremans. 1952. *Les Relations commerciales entre Gênes, la Belgique et l'Outremont, d'après les archives notariales génoises, 1400-1440*. Bruxelles: Academica Belgica.
- Eierman, Joyce E., Hilmar C. Krueger, and Robert L. Reynolds (Eds.). 1939. *Bonvillano*. Torino: S. Lattes.
- Hall, Margaret, Hilmar C. Krueger, Renert G. Ruth, and Robert L. Reynolds (Eds.). 1938. *Guglielmo Cassinese*. Torino: S. Lattes.
- Hall-Cole, Margaret, Hilmar C. Krueger, Ruth G. Renert, and Robert L. Reynolds (Eds.). 1939. *Giovanni di Guiberto*. Torino: S. Lattes.
- Jehel, Georges. Unpublished transcripts of notarial records. Reference in Jehel, Georges 1993. *Les Génois en Méditerranée occidentale: fin XIème – début XIVème siècle: ébauche d'une stratégie pour un empire*. Amiens: Centre d'histoire des sociétés Université de Picardie, Pp.480-82.
- Krueger, Hilmar C., and Robert L. Reynolds (Eds.). 1951-53. *Lanfranco*. Genoa.
- Lopez, Roberto. S. 1953." L'attività economica di Genova nel Marzo 1253 secondo gli atti notarili del tempo, *ASLI 54:163-270*.
- Lopez, Roberto, Irving Woodworth, and Olivia Remie Constable. 2001. *Medieval trade in the Mediterranean world: Illustrative documents*. New York: Columbia University Press.
- Liagre-De Sturler, Léone, and Archivio di Stato di Genova. 1969. *Les relations commerciales entre Gênes, la Belgique et l'Outremont, d'après les archives notariales génoises, 1320-1400*. Bruxelles, Rome: Institut historique belge de Rome Galerie Ravenstein 78; Academia Belgica.

### Secondary Works

- Abulafia, David. 1977. *The two Italies. Economic relations between the Norman kingdom of Sicily and the northern communes*. Cambridge, England.
- Abu-Lughod, Janet L. 1989. *Before European hegemony*. Oxford: Oxford University Press.
- Adler, P.S. 2001. "Market, hierachy and trust: The knowledge economy and the future of capitalism." *Organizational Science* 12:215-34.
- Agosto, Aldo. 1981. "Nobili e popolari: L'origine del dogato." in *La storia dei genovesi*. Genova.

- Angelos, Mark. 1994. "Women in Genoese commenda contracts, 1155-1216." *Journal of Medieval History* 20:299-312.
- Argenti, Philip P. 1958. *The occupation of Chios by the Genoese and their administration of the island, 1346-1566*. Cambridge, England: University Press.
- Ashtor, Eliyadu. 1969. *Histoire des prix et des salaires dans l'Orient médiéval*. Paris.
- Ashtor, Eliyadu. 1976. "Observations on Venetian trade in the Levant in the XIV century." *Journal of Economic History* 5:533-586.
- Ashtor, Eliyadu. 1986.(a) *East-West trade in the medieval Mediterranean / edited by Benjamin Z. Kedar*. London: Variorum Reprints.
- Ashtor, Eliyadu. 1986.(b) "Il ruolo del regno di Gerusalemme nel commercio di levante." in *I communi Italiani nel regno crociato di Gerusalemme: atti del colloquio "The Italian Commune in the crusading Kingdom of Jerusalem" (Jerusalem, May 28, 1984)*, edited by Gabriella Airaldi and B. Z. Kedar. Genoa: Università di Genova.
- Astuti, Guido. 1933. "Origini e svolgimento storico della commenda fino al secolo XIII." *Documenti e studi per la storia del commercio e del diritto commerciale Italiano* 3.
- Bach, Erik. 1955. *La cité de Gênes au XII<sup>e</sup> et XIII<sup>e</sup> siècles*. Kobenhavn: Gyldendalske Boghandel.
- Balard, Michel. 1978. *La Romanie Génoise: XII<sup>e</sup>-début du XV<sup>e</sup> siècle*. Rome: École française de Rome.
- Balard, Michel. 1986. "Les transports maritimes Génois vers la terre sainte." Pp.143-189 in *I communi Italiani nel regno crociato di Gerusalemme: atti del colloquio "The Italian Commune in the crusading Kingdom of Jerusalem" (Jerusalem, May 28, 1984)*, edited by Gabriella Airaldi and Benjamin Z. Kedar. Genoa: Università di Genova, Istituto di medievistica.
- Balard, Michel. 2001 (a). *Croisades et orient Latin (XI<sup>e</sup>-XIV<sup>e</sup> siècles)*. Paris: Armand Colin.
- Balard, Michel. 2001 (b). "Notes sur le commerce entre l'Italie et l'Égypte sous les Fatimides." in *Les Relations des pays d'Islam avec le monde Latin*, edited by Françoise Micheau.
- Balletto, Laura. 1983. *Genova nel Duecento: uomini nel porto e uomini sul mare*. Genova: Università di Genova Istituto di medievistica.
- Belvederi, Raffaele. 1974. *Genova, la Liguria e l'oltremare tra Medioevo ed età moderna: studi e ricerche d'archivio*. Genova: Fratelli Bozzi.

- Birdzell, L.E., and Nathan Rosenberg. 1986. *How the West grew rich*. New York.
- Blau, Peter. 1964. *Exchange and power in social life*. New York: Wiley.
- Bloch, Marc. 1953. *The historian's craft*. New York.
- Blomquist, Thomas W. 1971. "Commercial associations in thirteenth-century Lucca." *Business History Reviews* 45:157-178.
- Bonacich, Philipp. 1987. "Power and centrality: A family of measures." *American Journal of Sociology* 92:1170-82.
- Borgatti, Stephen, and Martin Everett. 1999. "Models of core/ periphery structures." *Social Networks* 21:375-395.
- Bragadin, Marco Antonio. 1955. *Histoire des républiques maritimes Italiennes: Venise, Amalfi, Pise, Gênes*. Paris: Payot.
- Brautein, Philippe. 1997. "Pour une histoire des élites urbaines: Vocabulaire, réalités et représentation." in *Les Elites Urbaines au Moyen Age*. Rome, Publication de la Sorbonne.
- Bullough, Vern. 1961. "Status and medical profession." *Journal of Health and Human Behavior* 2:204-10.
- Bullough, Vern. 1969. *The development of medicine as a profession: The contribution of the Medieval University to modern medicine*. Basel and New York: S.Karger.
- Buongiorno, Mario. 1973. *Il bilancio di uno stato medievale, Genova 1340-1529*. Genova: s.n.
- Burt, Ronald S. 1995. *Structural Holes: The social structure of competition*. Cambridge, Mass.: Harvard University Press.
- Byrne, Eugene H. 1916. "Commercial contracts of the Genoese in the Syrian trade of the twelfth century." *Quarterly Journal of Economics*:128-170.
- Byrne, Eugene H. 1918. "Easterners in Genoa." *American Oriental Society*.
- Byrne, Eugene H. 1920. "Genoese trade with Syria in the twelfth century." *American Historical Review* XXV:191-219.
- Byrne, Eugene H. 1930. *Genoese shipping in the twelfth and thirteenth centuries*. Cambridge, Mass.: The Mediaeval Academy of America.
- Cattaneo Mallone di Novi, Cesare. 1987. *I "politici" del medioevo genovese (ricerche d'archivio): il Liber civilitatis del 1528*. Genova : Copy-Lito.

- Chandler, Tertius. 1987. *Four thousand years of urban growth and historical census*. Lewiston/Queenston: St David's University Press.
- Chandler, Tertius, and Gerald Fox. 1974. *3000 years of urban growth*. London and New York: Academic Press.
- Coleman, James S. 1988. "Social capital in the creation of human capital." *American Journal of Sociology* 94:S95-S120
- Day, Gerald W. 1988. *Genoa's response to Byzantium, 1155-1204: Commercial expansion and factionalism in a medieval city*. Urbana: University of Illinois Press.
- de Roover, Raymond. 1969. "The cambium maritimum contract according to the Genoese notarial records of the twelfth and thirteenth centuries." Pp. 15-33 in *Economy, society and government in medieval City*, edited by David Herlihy, Roberto S. Lopez, and Vassily Slessarev. Kent, Ohio: The Kent State University Press.
- Delort, Robert. 1966. "Précisions sur le commerce des esclaves à Gênes." *Mélanges d'archéologie et d'histoire de l'école Française de Rome*: 215-250.
- Devisse, Jean. 1972. "Routes de commerce et échange en Afrique occidentale en relation avec la Méditerranée." *Revue d'Histoire Economique et Sociale* 50:357-397.
- Doehaerd, Renée. 1954. *The early Middle Ages in the west: Economy and society*. North-Holland.
- Edler-Deroover, Florence. 1934. *Glossary of Medieval Terms of Business*. Cambridge.
- Edler-Deroover, Florence. 1940. "The business records of an early Genoese notary, 1190-92." *Bulletin of the Business Historical Society* xiv: 41-46.
- Edler-Deroover, Florence. 1941. "Partnership account in the twelfth century Genoa." *Bulletin of the Business Historical Society* XV.
- Emery, Richard W. 1952. "The use of the surname in the study of medieval economic history." *Medievalia et Humanistica* VII:43-50.
- Epstein, Steven. A. 1984. *Wills and wealth in medieval Genoa, 1150-1250*. Cambridge, Mass.: Harvard University Press.
- Epstein, Steven. A. 1988. "Labour in Thirteenth-century Genoa." in *Mediterranean cities: Historical perspectives*, edited by Irad Malkin and Robert L. Hohlfelder: Frank Cass.
- Epstein, Steven. A. 1991. *Wage labor and guilds in medieval Europe*. Chapel Hill and London: University of North Carolina Press.



- Epstein, Steven. A. 1996. *Genoa and the Genoese, 958-1528*. Chapel Hill, N.C.: University of North Carolina Press.
- Forcheri, Giovanni. 1974. *Navi e navigazione a Genova nel Trecento: il Liber Gazarie*. Genova: s.n.
- Fransson, Gustav. 1935. *Middle English surnames of occupation, 1100-1300, with an excursus on toponymical surnames*: Lund.
- Freeman, L.C. 1979. "Centrality in social networks: A conceptual clarification." *Social Networks* 1:215-239.
- Goitein, Shelomo. 1967. *A Mediterranean society; the Jewish communities of the Arab world as portrayed in the documents of the Cairo Geniza*. Berkeley: University of California Press.
- Gorrini, Giacomo. 1931. "L'istruzione elementare in Genova e Liguria durante il Medio evo." *Giornale Storico e Letterario della Liguria* I:265-285.
- Gower, J.C, and P. Legendre. 1986. "Metric and Euclidean properties of dissimilarity coefficients." *Journal of Classification* 3:5-48.
- Granovetter, Mark. 1985. "Economic action and social structure: The problem of embeddedness." *American Journal of Sociology*:481-510.
- Greif, Avner. 1989. "Reputation and coalition in medieval trade: Evidence on the Maghribi trader." *Journal of Economic History* 49:889-904.
- Greif, Avner. 1994. "Cultural beliefs and the organization of society: A historical and theoretical reflection on collectivist and individualist societies." *Journal of Political Economy* 102:912-50.
- Greif, Avner. 1998. "Self-enforcing political systems and economic growth: Late Medieval Genoa." in *Analytic narratives*, edited by Robert H. Bates and all. Princeton: Princeton University Press.
- Greif, Avner. 2006. *Institutions and the path to the modern economy: Lessons from medieval trade*. Cambridge; New York: Cambridge University Press.
- Grossi Bianchi, Luciano, and Ennio Poleggi. 1979. *Una città portuale del Medioevo: Genova nei secoli X-XVI*. Genova: Sagep.
- Hall, Margaret W. 1935. "Early bankers in the genoese notarial records." *The Economic History Review* VI: 73-79.

- Heers, Jacques. 1961. *Gênes au XVème siècle, activité économique et problèmes sociaux*. Paris: S.E.V.P.E.N.
- Herlihy, David. 1958. *Pisa in the early Renaissance: A study of urban growth*. New Haven, Connecticut: Yale University Press.
- Herlihy, David. 1990. *Opera mulebria: Women and work in medieval Europe*. Philadelphia, PA: Temple University Press.
- Hobson, John M. 2004. *The eastern origins of western civilization*. Cambridge: Cambridge University Press.
- Hoffman, Phillip T., Jean-Laurent Rosenthal, and Gilles Postel-Vinay. 2000. *Priceless markets: The political economy of credits in Paris 1660-1870*. Chicago: The University of Chicago Press.
- Howell, Martha C. 1986. *Women, production, and patriarchy in late medieval cities*. Chicago: University of Chicago Press.
- Hughes, Diane. 1975. "Urban Growth and Family Structure in Medieval Genoa." *Past and Present*:3-28.
- Hyde, John K. 1973. *Society and politics in Medieval Italy: The evolution of the civil life, 1000-1350*: Mac Millan.
- Jacoby, David. 2001. "Les Italiens en Egypte aux XIIème et XIIIème siècles: Du comptoir à la colonie?" in *Les Relations des pays d'Islam avec le monde Latin*, edited by Françoise Micheau.
- Jehel, Georges. 1975. "Le rôle des femmes et du milieu familiale à Gênes dans les activités commerciales au cours de la première moitié du XIIIème siècle." *Revue d'Histoire Economique et Sociale* 53:193-205.
- Jehel, Georges. 1993. *Les Génois en Méditerranée occidentale: (fin XIème – début XIVème siècle: ébauche d'une stratégie pour un empire*. Amiens: Centre d'histoire des sociétés Université de Picardie.
- Jehel, Georges, and Simone Jehel (Eds.). 2000. *Les relations des pays d'islam avec le monde latin du Xème au milieu du XIIIème siècle, textes réunis et présentés par G. et S. Jehel*. Paris: Edition du Temps.
- Kedar, Benjamin Z. 1973. "Toponomic surnames and evidence of origin: Some medieval views." *Viator* IV.

- Kedar, Benjamin Z. 1976. *Merchants in crisis : Genoese and Venetian men of affairs and the fourteenth-century depression*. New Haven: Yale University Press.
- Kowalewski, David. 1991. "Core intervention and periphery revolution, 1821-1985." *American Journal of Sociology* 97:70-95.
- Krackhardt, David. 1990. "Assessing the political landscape: Structure, cognition, and power in organizations." *Administrative Sciences Quarterly* 35:342-69.
- Krueger, Hilmar C. 1933. "Genoese trade with north west Africa." *Speculum* 8:57-71.
- Krueger, Hilmar C. 1962. "Genoese merchants, their associations and investments, 1155-1230." Pp. 415-426 in *Studi in onore di A. Fanfani*. Milan.
- Krueger, Hilmar C. 1985. *Navi e proprietà navale a Genova: seconda metà del sec. XII*. Genova: Landa, Janet T. 1994. *Trust, ethnicity, and identity: Beyond the new institutional economics of ethnic trading networks, contract law, and gift-exchange*. Ann Arbor: University of Michigan Press.
- Leifer, Eric. 1985. "Markets as mechanisms: Using role structure." *Social Forces* 64:442-72.
- Leoncini, M. 1966. "Maestri di scuola a Genova sulla fine del secolo XIV." Pp. 195-206 in *Miscellanea di Storia Ligure in memoria di Giorgio Falco*. Genoa.
- Lewis, A.R. 1951. *Naval power and trade in the Mediterranean, A. D. 500-1100*. Princeton.
- Lieber, Alfred E. 1968. "Eastern business practices and medieval commerce." *The Economic History Review* 21:230-243.
- Lopez, Robert Sabatino. 1933. *Genova marinara nel duecento. Benedetto Zaccaria, ammiraglio e mercante*. Messina, Milano: G. Principato.
- Lopez, Robert Sabatino. 1937. "Aux origines du capitalisme Génois." *Annales d'Histoire Economique et sociale* 9:429-454.
- Lopez, Robert Sabatino. 1942. "The life of the Genoese woolworkers as revealed in the thirteenth-century notarial records." *Bulletin of the Business Historical Society* 16:101-05.
- Lopez, Robert Sabatino. 1975. *Su e giù per la storia di Genova*. Genova: Università di Genova. Istituto di paleografia e storia medievale.
- Lot, Ferdinand. 1945. *Recherches sur la population et la superficie des cités remontant a la période gallo romaine*. Paris.

- Luzzatto, Gino. 1961. *An economic history of Italy from the fall of the Roman Empire to the beginning of the sixteenth century*. New York: Barnes&Noble.
- Luzzatto, Gino. 1961. *Storia economica di Venezia dall'XI al XVI secolo*. Venice.
- Mannucci, F.L. "Delle societa Genovesi d'arti e mestieri durante il secolo XIII." *Giornale Storico e Letterario della Liguria* VI.
- Markovsky, Barry, and Edward Lawler. 1994. "A new theory of social solidarity." Pp. 113-37 in *Advances in group process*, edited by Barry Markovsky, J. O'Brien, and K. Heimer. Greenwich, CT: JAI Press.
- Marsdsen, Peter V. 1981. "Models and methods for characterizing the structural parameters of groups." *Social Forces* 3:1-27.
- Millett, Paul. 1983. "Maritime loans and the structure of credit in fourth-century Athens." Pp. 37-49 in *Trade in the ancient economy*, edited by Peter; Hopkins Garnsey, Keith; Whittaker, C.R. London: Chatto & Windus.
- Mintz, Beth, and Michael Schwartz. 1985. *The power structure of American business*. Chicago: University of Chicago Press.
- Mizruchi, Mark. 1990. "Cohesion, structural equivalence, and similarity of behavior: An approach to the study of corporate political power." *Sociological Theory* 8:16-32.
- Moody, James, and Douglas White. 2003. "Structural cohesion and embeddedness: A hierarchical concept of social groups." *American Sociological Review* 68:103-127.
- Mundy, John H., and Peter Riesenber. 1958. *The medieval town*. New York.
- North, Douglass C. 1981. *Structure and change in economic history*. New York: Norton.
- North, Douglass C. 1990. *Institutions, institutitonal change, and economic performance*. Cambridge; New York: Cambridge University Press.
- North, Douglass C., and Paul Robert Thomas. 1973. *The rise of the western world*. Cambridge: Cambridge University Press.
- Olivieri, Agostino. 1971. *Serie dei consoli del comune di Genova*. Bologna: Forni.
- Pavoni, Romeo. 1983. "Signorie feudali tra Genova e Savona nei secoli XII e XIII." in *Atti del IV convegno sui ceti dirigenti della Repubblica di Genova*.
- Pavoni, Romeo. 1988. "Aristocrazia e ceti dirigenti nel commune consolare." Pp. 345-367 in *La storia dei genovesi, VIII vol. degli atti del convegno di studi sui certi dirigenti nelle istituzioni della repubblica di Genova, Genova 10-11-12*. Genova.

- Pavoni, Romeo, and Università di Genova. Istituto di medievistica. 1992. *Liguria medievale*. Genova: Ecig.
- Petti Balbi, Giovanna. 1980. "Apprendisti e artigiani a Genova nel 1257." ASLI:137-70.
- Pistarino, Geo. 1978. "La donna d'affari a Genova del secolo XIII." Pp.155-69 in *Miscellanea di storia Italiana e Mediterranea per Nino Lambodgia*. Genova.
- Pistarino, Geo. 1992. *I signori del mare*. Genova: Civico Istituto Colombiano.
- Pistarino, Geo. 1993. *La capitale del Mediterraneo: Genova nel Medioevo*. Bordighera: Istituto internazionale di studi liguri.
- Poldolny, Joel, and Karen Page. 1998. "Network forms of organization." *Annual Review of Sociology* 24:57-76.
- Poleggi, Emilio (Ed.). 1989. *Citta portuali del Mediterraneo: Storia e archeologia: Atti del convegno internazionale di Genova 1985*. Genova.
- Powell, Walter. 1990. "Neither market nor hierarchy: Network forms of organization." Pp. 295-336 in *Research in organizational behavior*, edited by L.Cummings and B. Staw. Greenwich, Connecticut: JAI Press.
- Powell, Walter W. and Paul J. DiMaggio. 1991. *The new institutionalism in organizational analysis*. Chicago: Chicago University Press.
- Pryor, John. 1977. "The origins of the commanda contract." *Speculum*:5-37.
- Pryor, John. 1983. "Mediterranean commerce in the Middle Ages: A voyage under contract of commanda." *Viator* 14:133-94.
- Renouard, Yves. 1950. *Les hommes d'affaires Italiens au Moyen Age*. Paris.
- Reyerson, Kathryn L. 1986. "Women in Business in Medieval Montpellier." Pp. 117-44 in *Women and Work in Preindustrial Europe*, edited by Barbara Hanawalt, A. Bloomington: Indiana University Press.
- Robinson, Maxime. 1970. "Le marchand Musulman." in *Islam and the trade of Asia*, edited by D.S. Richards: Bruno Cassirer Oxford and University of Pennsylvania Press.
- Rosenfeld, Rachel. 1992. "Job mobility and career processes." *Annual Review of Sociology* 18:39-61.
- Sapori, Armando. 1952. *Le marchand Italien au Moyen Age; conférences et bibliographie*. Paris: A. Colin.

- Schaube, Adolf. 1906. *Handelsgeschichte der Romanischen Volker des Mittelmeergebiets bis zum Ende der Kreuzzuge*. Munchen: Oldenbourg.
- Scialoja, Antonio. 1946. *Saggi di storia del diritto marittimo*. Rome.
- Scorza, Angelo M. G. 1973. *Le famiglie nobili genovesi*. Bologna: A. Forni.
- Sestan, Ernesto. 1960. "La citta comunale Italiana dei secoli XI-XIII nelle sue note caratteristiche rispetto al movimento comunale Europeo." in *Rapports du XI congrès international des sciences historiques*. Stockholm-Goteborg-Upsala: Almaquist & Wiksell.
- Simon, Robert. 1989. *Meccan trade and Islam, problems of origins and structure*. Budapest: Akademiai Kiado.
- Slessarev, Vsevolod. 1967. "I cosidetti orientali nela Genoa's del medioevo." *ASLI* VII:39-85.
- Slessarev, Vsevolod. 1969. "The pound value of Genoa's maritime trade in 1161." in *Economy, society and government in medieval City*, edited by David Herlihy, Roberto S. Lopez, and Vassily Slessarev. Ohio Kent: The Kent State University Press.
- Stark, David. 2001. "Ambiguous assets for uncertain environments: Heterarchy in postsocialists firms." in *The twenty first century firm: Changing economic organization in international perspective*, edited by Paul J. DiMaggio. Princeton: Princeton University Press.
- Stiglitz, Joseph. 2000. "The contribution of the economics of information to twentieth century economics." *Quartely Journal of the Economics* 67:76-90.
- Thompson, Grahame. 2003. *Between hierarchies and markets: The logic and limits of network forms of organization*. New York: Oxford University Press.
- Thrupp, Sylvia. 1967. *Early medieval society*. New York: Appleton-Century-Crofts.
- Udovitch, Abraham. 1962. "At the origin of the western commanda: Muslim, Israel, Byzantium." *Speculum* 37:198-207.
- Udovitch, Abraham. 1970. "Commercial technique in early medieval Islamic trade." in *Islam and the trade of Asia*, edited by D.S. Richards. Oxford: Bruno Cassier.
- Udovitch, Abraham. 1970. *Partnership and profit in early medieval Islamic trade*. Princeton: Princeton University Press.

- Udovitch, Abraham. 1977. "Formalism and informalism in the social and economic institutions of the medieval Islamic world." in *Individualism and conformity in the classical Islam*, edited by S. Vryonis. Wiesbaden.
- Udovitch, Abraham. 1978. "Time, the sea and society, duration of commercial voyages on the southern shores of the Mediterranean during the high Middle Ages." in *Navigazione mediterranea nell' alto Medioevo, Settimane di studio del centro Italiano di studi sull' alto Medioevo 14-20 Avril 1977*. Spoleto.
- Udovitch, Abraham. 1979. "Bankers without banks: Commerce, banking, and society in the Islamic world of the Middle Ages." in *The dawn of modern banking*. New Haven and London: Yale University Press.
- Uzzi, Brian 1996. "The sources and consequences of embeddedness for the economic performance of organizations: The network effect." *American Sociological Review* 61:674-98.
- Verlinden, Charles. 1977. *L'esclavage dans l'Europe medievale: Italie, colonie Italienne du Levant, Levant Latin, Empire Byzantin*. Gand.
- Vitale, Vito. 1949. "Vita e commercio nei notai Genovesi dei secoli XII e XIII." *ASLI LXXII*.
- Wasserman, Stanley, and Katherine Faust. 1994. *Social network analysis: Methods and applications*. Cambridge; New York: Cambridge University Press.
- White, Douglas, and Frank Harary. 2001. "The cohesiveness of blocks in social networks: Node connectivity and conditional density." *Sociological Methodology* 31:305-359.
- White, Harrison C. 2002. *Markets from networks*. Princeton: Princeton University Press.
- White, Harrison C. 2008. *Identity and control: A structural theory of social action*. Princeton, N.J.: Princeton University Press.
- Windolf, Paul, and Jurgen Beyer. 1996. "Co-operative capitalism: Corporate networks in Germany and Britain." *The British Journal of Sociology* 47:205-31.
- Young, Peyton H. 1998. *Individual strategy and social structure: An evolutionary theory of institutions*. Princeton, N.J.: Princeton University Press.