Introduction

During most of the sixteenth century, the duchy of Brabant stood at the center of European trade as Antwerp became one of the most important commercial cities on the continent. Thanks to the favorable orientation to trade over industry, merchants found in Antwerp and in the nearby city of Bergen op Zoom, an ideal atmosphere in which to conduct their business. Merchants from England, Italy, Germany, Spain, Portugal, and beyond came to these cities to buy and sell products from all over Europe and its colonial possessions. Antwerp, which had reached the status of a continental emporium, became a node on an extensive urban commercial network extending all across Europe from London to Venice; from Gdansk to Seville; from Breslau to Bordeaux.

That there existed a network of commercial cities with some cities serving as regional markets and other cities serving as local markets cannot be denied. We can, for instance, consider what has been described as a shift from Mediterranean based trade with Venice as the principal city to Atlantic based trade centered in Antwerp by the early sixteenth century. Venice and Antwerp remained connected by seaborne trade even as this shift was taking place, and a vast overland network of commercial cities served as distributive markets for both Mediterranean and northern commerce. As the sixteenth century wore on crises (like the Dutch Revolt) made Antwerp less favorable as a trading center, and dominance shifted south again, to Genoa for a time. By the beginning of the seventeenth century, Amsterdam took the lead as Dutch merchants and shippers succeeded in concentrating distribution in their principle city. Eventually what Ormrod has called a “new pattern of economic development” took

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hold based on an “integrated national economy” and London came into prominence as the most important city for Great Britain’s worldwide commercial empire. The “rise” and “decline” of these commercial centers has been extensively studied, the cities compared with each other, and other aspects of role of cities and regions as network nodes are becoming increasingly understood.

Certainly networks can be studied in a variety of ways, and I will outline some of these in this paper, but my focus for this essay is to examine the networks individual merchants created as they sought to decrease risk and coordinate their commercial activities in the sixteenth century. Indeed, networks studied at the level of the individual, while increasing in number, are not particularly well represented in historical studies.

The biggest problem that most scholars are confronted with is the necessity of employing social and/or economic theory as they try to understand how trade worked in the past. Historians have recognized perhaps better than most social scientists the interdependence of historical variables; that “reductionism” rarely offers us a satisfactory way to understand the past. Nevertheless, social scientific methodologies can often provide us with a starting point on the road to understanding commerce as a complex system. Social network analysis, which I have begun to use in this study can help us understand how foreign merchants engaged in long-distance trade interacted with local merchants, and how the networks of long-distance merchants connected with local commercial networks. Applying social network analysis to historical sources, however, is not without its problems. I have been bound by the sources available to me, so I want to reiterate that this can only be seen as a starting point for further study. I have discovered that it is not easy to find extensive evidence

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for large scale foreign merchants in Antwerp forming lasting networks with local and regional merchants outside of the institutions established to facilitate international trade (e.g. the fairs, the bourse, etc.), but this aspect of commercial networks is crucial if we are to begin to grasp the larger economic system at work in the early modern period.

In this essay, I will first offer a discussion of the models scholars have proposed to describe urban commercial networks. I will then present a few specific examples of the networks that sixteenth-century merchants participated in. Third, I will suggest some ways that the results of social network analysis can be integrated with broader studies of commercial networks to give a more complete representation of the extent of commercial networks. Finally, I will offer some conclusions.

Models for the Study of Networks

Economic historians have proposed a variety of models to explain how commercial networks functioned. Since Christaller and Lösch published their central place theories early in the twentieth century scholars have tried to explain how cities were distributed and interconnected in space, but they have been less successful in explaining how networks formed. Christaller for instance was looking at production and the way products and services were distributed geographically. While his model was elegant and has offered historians a way to examine some factors of economic organization, it falls short on many counts, not the least of which were his unrealistic assumptions. His theory has little bearing in the historical reality of any period given Lipietz’s observation that goods are usually produced in ‘districts’ rather than in evenly spaced production centers within a given geographical area.

Because Christaller’s Central Place model was oriented to production rather than long-distance trade, it is not particularly helpful if we want to understand the trajectory of commercial relationships. I do not mean to imply that central place

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theories should be ejected from the scholar’s toolbox; rather I suggest that the theory is not a panacea. Blockmans has suggested, for instance, that theories of the centrality of places or of urban networks can be appreciated on several levels: to examine certain factors, to put these factors in relation to others, and to test a general theory by applying to a specific case. However, we must keep in mind that centrality and rank size alone fail to illustrate the dynamic nature of urban networks.

Of more value than central place theory for the study of commercial networks has been the work of James Vance, who viewed long-distance trade as part of an open system. Vance put forward the notion of ‘agents of trade,’ an idea that Paul Hohenberg and Lynn Lees used to good effect in their well-known model of Network Systems. According to Vance’s model the ability to produce surplus “father[s] the desire to expand trade beyond the local area.” In an open system of the type Vance envisioned, efficient information exchange must be present to match sellers of surplus with buyers. The mechanism for information exchange is the ‘agent of trade’ illustrated by Vance as a city positioned to take advantage of long-distance trade. The agent of trade familiarizes outside consumers with “abundance and its location” on the one hand, and familiarizes producers with the “location of external scarcity” on the other hand. In many respects Vance’s commercial city, acting as an agent of trade, forms a type of gateway city connecting a regional trade to the larger commercial network.

Regional studies of urban networks have been some of the most interesting historical work on networks. The work of Walter Prevenier, Jean-Pierre Sosson, and Marc Boone, on Flemish urban networks during the broad period of the thirteenth to the nineteenth century is one example along these lines. These scholars suggested

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that urban networks in Flander were based on a number of factors: economic, financial/fiscal, and political/administrative relations. They concluded that geographic attributes, political dynamism and material infrastructure, population density, favorable life expectancy and marriage rates, and migratory patterns favorable to economic changes were what contributed to the success of the Flemish urban network. This was an important study precisely because it rejected the older social scientific idea that research to isolate independent variables was most fruitful. Instead, this study pointed out that examining many interdependent variables would give us a better picture of how urban networks functioned. Implied, but not made explicit in this study is the importance of action on the part of individual. While most models of urban networks, including Prevenier’s, assume that individuals, and especially merchants, acting rationally choose one city or trade route over another, a more explicit connection could examine the social networks merchants constructed in order to give a fuller picture of the extent of the interplay between various kinds of networks.

James Murray has also criticized the geographical, hierarchical nature of most urban network models by pointing out that scholars have “lost sight” of the “merchants themselves.” Like Vance, Murray is concerned with efficient communication between buyers and sellers, and he understands that this communication takes place largely in commercial towns, but he fears that static and hierarchical models cannot illustrate complex human behavior. Robert Brenner, coming from a very different theoretical starting point, highlighted the diversity of merchant actions when he wrote that “The reaction to commercial opportunity (or cost), if indeed there is one, will tend to vary with the social, political, and economic character of the mercantile group.” What Brenner is saying is that not all merchants will react the same way to each opportunity because they have different experiences, interests, capabilities, etc.

Historique (1350-1850), 158-200, (Brussels: Gemeentekredit, 1992).
13 Ibid., 189-190.
Despite Brenner’s observation about merchant character, scholars have tended
to ignore the differing motivations of individual merchants in their studies of
commercial networks. I do not want to give the impression that scholars have
completely ignored individual merchants. Most of the studies of merchant guilds, for
example, have involved lengthy treatments of the place of individual merchants and
the goods they traded in.16 Some studies have quite successfully examined how guilds
might be viewed as networks established to regulate exchange in the absence
“institutionalized enforcement mechanisms.”17 Indeed, the data presented in these
studies provide us with starting points for understanding commercial networks on a
grand scale.

During the past ten years historians have begun to employ social network
analysis as they have sought to broaden their understanding of how networks of all
kinds functioned in the past. Leos Müller, for example, has studied the social network
Swedish merchants created during the seventeenth and eighteenth century as they
sought to reduce the risks involved in commerce.18 Even more recently Steve
Murdoch has studied how various kinds of networks – and kin networks above all –
were used in the Scottish emigrant communities in early modern Northern Europe to
enhance commercial and political endeavors.19

Urban Commercial Networks

In his Regula Transporti,20 written in the early sixteenth century, Willem van
de Lare identified a series of commercial networks based on the availability of

16 The most important works on Antwerp merchant guilds include: Oskar de Smedt, De Engelse natie
te Antwerpen in de 16e eeuw, (1496-1582). (Antwerpen: De Sikkel, 1950); Hans Pohl, Die Portugiesen
in Antwerpen : (1567-1648): zur Geschichte e. Minderheit. Beihefte nr. 63 Vierteljahrschrift für
Sozial- und Wirtschaftsgeschichte (Wiesbaden: Steiner, 1977); J. A. Goris, Études sur les colonies
marchandes méridionales à Anvers de 1488 à 1567. (Louvain: Librarie Universitaire, 1925).
17 Daviken Studnicki-Gizbert, “Interdependence and the Collective Pursuit of Profits: Portuguese
Commercial Networks in the Early Modern Atlantic.” In D. R. Curto and A. Molho, eds. Commercial
Networks in the Early Modern World. EUI working papers HEC no. 2002/2 (Florence: European
University Institute, 2002), 92.
18 Leos Müller, “The Role of the Merchant Network: A Case History of two Swedish Trading Houses,
1650-1800.” In C. Lesger and L. Noordegraaf, eds. Entrepreneurs and Entrepreneurship in Early
Modern Times: Merchants and Industrialists within the Orbit of the Dutch Staple Market (The Hague:
Hollandse Historische Reeks, 1995).
19 Steve Murdoch, Network North.
20 Willem van de Lare, Regula Transporti, Plantin-Moretus Museum Archive, Arch 318.
products. Van de Lare’s identification was not explicit and it is possible that he was not even conscious of it, but today we can read in his little unpublished merchant manual an understanding of the networks of his day. The hub of van de Lare’s commercial world was Antwerp with Nuremberg, Frankfurt, Lisbon, Lyons, Paris, and Venice completing his commercial world. Certainly some cities are notably absent from this list that was written to instruct merchants on the exchange of important products, while van de Lare includes some secondary centers that we might find unusual (the Atlantic island of Madera and the nearby city of Limberg, for example). But these cities were the principal commercial centers for merchants interested in the products van de Lare highlighted in his manual: pepper and other spices, sugar, copper and other metals, and a limited variety of textiles – although the absence of an English city is particularly striking given the important of English cloth for Antwerp’s trade.

Van de Lare’s manual is just one example of how merchants understood their commercial worlds. Another important, and better-known merchant manual presents a fairly similar picture. Lorenz Meder’s merchant manual, published in Nuremberg in 1558, was intended for novice merchants who were just learning about the world of commerce. The most important commercial cities Meder listed included Venice, Lisbon, Antwerp, Nuremberg, Augsburg, Lyon, and a variety of Italian cities: Bolzano, L’Aquila in Abruzzi, Idria, Como, Bologna, Florence, Genoa.21 The inclusion of so many Italian cities likely speaks to Meder’s more southern orientation as a merchant of Nuremberg in contrast to van de Lare’s more northern perspective.

We would expect the great commercial cities of sixteenth-century Europe to head any description of urban commercial networks tempered only by the particular interests of individual merchants and merchant firms in products that originated in places off the beaten path. The authors of both these merchant manuals chose to concentrate on certain cities because of the products the cities offered to merchants. This has been almost a routine way for modern scholars to focus on commercial networks. The importance of the connection between Antwerp and Lisbon because of

the pepper trade, or the place of Antwerp for the English cloth trade are just a couple examples that scholars have highlighted as they have sought to understand early modern trade.22

Of course products were what attracted merchants to any particular town. Tracing product flows, as a way to conceptualize commercial networks, has proven fruitful in studies of trade routes. Not surprisingly, scholars have more closely studied the most heavily traveled routes and have tended to ignore the by-ways. We need to keep in mind, however, the point that Paul Bonenfant made many years ago when he explained that trade routes are really made up of a multitude of parallel and intersecting roadways.23

If we are to follow James Murray’s injunction against omitting merchants it is the merchants we must follow not the products if we are to understand how merchants structured their trade. Rather than looking at product flows, another way to reconstruct merchant networks might be to examine which cities merchants gravitated to when they conducted their business. Lucas Rem’s famous Tagebuch24 shows that the principal cities for the Welser firm were Augsburg, Venice, Lyons, Antwerp, and Lisbon. But by paying attention to the various side trips that Lucas took during the roughly forty years he recounts, a series of minor networks emerge connecting various regions to the larger cities. Between 1502 and 1509, Rem seems to have been based in the Welser’s Lisbon office. While there he traveled to Saragossa, and the Atlantic islands of Madeira and the Canaries. While in Antwerp in 1509, he took care of the firm’s affairs in Bergen op Zoom, Middelburg, Bruges, and Vlissingen. In 1511, he left Antwerp to visit the important markets of the area including Middelburg, Bergen, Bruges, Brussels, Mechelen, and Leuven.

The commercial networks of the numerically few great merchant firms of Europe are the easiest to outline. Small-scale merchants and merchant firms, while they comprised the largest number of merchants, are much less visible in the historical record, and they had a much more limited area of operation. Of the

22 See the sources listed in note 16.
thousands of merchants active in any sixteenth-century city, most traded regionally and only rarely with the continental commercial capitals. For example, rather than sending their goods to Augsburg or Nuremberg, small-scale German merchants who came to Antwerp were more likely to have connections in Julich, Trier, Cleves, and Münster. Indeed, they more often than not had connections with just one or two cities rather than participating in a far-flung network. These more regional networks tended to persist even when a commercial city was no longer a node on continental networks. For example, Brabant’s regional trade continued even after Antwerp lost its dominance in larger commercial networks.

Operating in many different cities had the potential to present merchants with problems. While merchants could count on some familiar institutions in most commercial cities, trade was not necessarily conducted uniformly across Europe. While Europe’s great merchant houses could afford to establish a branch office in each city they wanted to conduct business in, less wealthy merchants had to rely on the relationships they formed in order to follow local customs and reduce risk. But even large merchant firms could not avoid relying on local institutions and individuals.

**Merchant Social Networks**

Tracing the extensive networks of the much larger merchant firms of early modern Europe, such as the Augsburg firm of Haug, Langenauer, and Link, would be a daunting undertaking. The firm had branch offices in Nuremberg, Cologne, Ulm, Venice, and of course at Antwerp. But through network connections, the firm’s reach extended to other part of Europe as well. The commercial network of Anton Haug’s son-in-law, the Ulm cloth merchant Joris Schorer and his brother Lenart connected their home town of Ulm with Augsburg, Antwerp, and London, and intersected with Haug’s networks. The Haug-Langenauer-Link firm’s principals came into direct contact with the Schorers’ in Ulm, Antwerp, and Augsburg, but not at the extreme ends of their respective networks (Venice in one case, and London, in the

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26 Donald J. Harreld, *High Germans in the Low Countries*, 73.
other), but the two firms benefited from their extended contacts. The connection of Anton Haug and his son-in-law presents a network based on kin-association, rather than geographical activity. Kin-based networks offered merchants a way to reduce risk by working with trusted relatives. By mapping merchants’ social networks, we can get an idea of how kin fitted into the structure of trade.

For example, on February 4, 1546 Anton Haug’s factor, Ulrich Hainhofer together with the Antwerp cloth measurer (mensurator), Anton Waryn, declared that the cloths Hainhofer had purchased for Haug from the English merchant William Stemp through the Leonard Schorer, brother of Haug’s son-in-law, were shorter than they were supposed to be.27 In this case, we can see that Haug’s network in Antwerp included kin, business associates, and local craftsmen.

Merchants capitalized on networks connections established at home, through kin or commerce, in order to advance their affairs abroad. The varied business of the Bimmel family of Augsburg made for them a network connecting Nuremberg, Ulm, Antwerp, Cologne, Venice, and Schwaz in Tirol. But the network connections of the Bimmel firm intersected with those of the Haug firm at home in Augsburg,28 and made it possible for the Bimmel’s to extend the firm’s reach to England in order to participate in the lucrative trade in English cloth. In July 1543, Ulrich Hainhofer, the Antwerp factor of Anton Haug’s firm (mentioned above) represented the Bimmel firm in the purchase of 200 pieces of fine English cloth from Wilhelm Giffort, factor for the London merchant Rafael Wareyn. Giffort arranged the sale by involving three other English cloth merchants who could together fill the 200 piece order. When Anton Waryn, the cloth measurer, set about measuring the cloths, he discovered that they were shorter than they were supposed to be. In a subsequent declaration with Waryn, Hainhofer indicated that he would be deducting the difference from the sale price.29

The most striking aspect of these two merchant networks to my mind is the centrality of the local Antwerp cloth measurer, Anton Waryn, within this network.

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27 Stadsarchief Antwerpen, Notariaat 2073, fo. 10.
29 Stadsarchief Antwerpen, Notariaat 2071, fo. 109 ff.
Waryn shows up as a central figure in the networks of many cloth merchants engaged in both regional and long-distance trade (see figure 1). Considering the importance of accurate measurement in trade, cloth merchants needed to associate with a trustworthy measurer in order to avoid being swindled. We may not be able to find out whether the cloth measurers introduced merchants to each other, but they were likely important purveyors of commercial information, and a welcome addition to a social network based primarily on kin.

In this network, Anton Waryn has by far the highest degree of “between-ness” of any of the participants, followed by Hainhofer the factor for both the Bimmel, and the Haug & Link firms. The cloth measurer might be characterized as a gatekeeper within this extended network.

Waryn showed up with the highest sociometric status in the network of the Antwerp cloth merchant, Adam Bachgracht (see figure 2). Indeed, I began this study by trying to reconstruct Bachgracht’s social network, and soon discovered the

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31 On the importance of betweenness as a measure of point centrality see John Scott, *Social Network Analysis*, 86.
importance of the cloth measurer within several other merchant networks such as the Antwerp connections of the Haug and Bimmel firms. Certainly there is some bias built into the notarial sources I have been using since they deal primarily with disputed transactions. However, Waryn was the original cloth measurer, not one called in to testify after the fact. Further study may indicate that a cloth shearer or a packer, for example, was an important node in cloth merchants’ networks as well.

In long distance trade, shippers also had the potential to be central to merchant networks. By looking at data from the fairs at Bergen op Zoom for Hans van Hoorne, a Hanse merchant living in Bruges, it became clear that his shipper, Jan Wipper, was a central figure in van Hoorne’s connections with Brunswick (see figure 3).
Likewise, several Hessian transporters provided the overland link between Antwerp and various Italian cities essentially contracting all shipping for most Italian merchants in Antwerp.

I could provide other examples of Antwerp’s merchant networks as well, but the point is that long-distance merchants were connected to local commercial centers due to their reliance on local institutions and craftsmen. These connections can be brought to light by the techniques available through social network analysis. By bringing these discrete merchant networks in to the discussion of continent-wide urban commercial networks, scholars can move from broad discussions of networks based on product flows and trade routes to more detailed work on interactions of merchants themselves. Rather than characterizing a particular city as an ‘agent of trade’ as Vance suggested, we might more properly consider individual merchants, like the Antwerp factor Ulrich Hainhofer, or even local craftsmen, like Anton Waryn, as the true agents of trade opening up a commercial city to foreign traders.

Conclusion

As merchants increasingly began to operate in a particular city, the city became a node on a network. This has been demonstrated by many scholars. But
individually, merchants were also nodes in much smaller-scale networks connecting themselves to other merchants, craftsmen, and transporters. Once we begin examining the affairs of individual merchants, we begin to see how complex the web of commercial networks was in the sixteenth century.

My objective in this paper has been to explore the ways scholars have conceptualized commercial networks for the sixteenth century, and to show that by looking at the networks individuals formed, we can begin to understand better how merchants extended their commercial affairs beyond their local area, and how foreigners brought local individuals into their networks.

Let me reiterate just a few points by way of conclusion. First, Scholars have identified a web of networks connecting commercial cities in Europe. These networks were not static. Merchants created these commercial networks when they engaged in trade between cities. The merchant guild was one of the structures that gave merchants a way to link together their operations in different cities, but it was not the only way merchants had for gathering commercial information, making connections and reducing risk.

Second, merchants participated in multiple networks. Some of these networks were based in commercial contacts, such as other merchants, factors, and craftsmen. Other networks, and perhaps those most important initially for extending trade into new areas were often kin-based. Merchants were also part of families, members in church congregations, neighborhoods, and a variety of other associations that provided contacts, but were not always immediately connected with commerce.

To be clear, I have been more interested in presenting a model for the study of commercial networks than in presenting firm conclusions with illustrative data. My conclusions at this point are still necessarily tentative, so I welcome your ideas about the value of using social network analysis in historical studies. Certainly more research needs to be done if we are to understand with some degree of confidence how commercial networks formed in the early modern period; we need to attempt to reconstruct these networks without loosing sight of the merchants who formed them.