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Genoese trade networks in the southern Iberian peninsula: trade, transmission of technical knowledge and economic interactions

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This paper presents the results of a research project undertaken at the University of Granada, and in collaboration with several European research groups. We aim to investigate the process of interaction and integration between different economic areas in the western Mediterranean during the late Middle Ages. The southeast of the Iberian Peninsula has been analysed as a case study. Genoese merchants were particularly active within this area; they played a key role in connecting diverse trading areas (including Seville, Granada, and Valencia), thanks to their complex trading network. They controlled a wide range of production activities in key places, playing an important role in the transmission of technical know-how, and thereby promoting the reorganization of production activities. This complex process is exemplified by the production of high-quality pottery (regarded as a luxury item).

Keywords: Nasrid Kingdom; Mediterranean trade; transmission of technical knowledge; pottery production

Introduction

Recent historical research has brought to light that the economy of western Europe underwent important changes during the late Middle Ages, at a time when new kinds of ‘capitalistic’ economic relationships started to emerge. This transformation took place in different ways and at different times. Thus, when referring to the process and when discussing the topic, historians would talk of a hierarchy of economic areas, implying that certain regions depended upon others. This relationship was described in terms of interactions between central areas and their environs, insisting on an ongoing process of ‘commercial colonization’ of dominant settlements over the regional areas they controlled as a clear exemplification of this relationship. The Nasrid kingdom of Granada was certainly part of this economic system, as was the rest of western Europe. It has been suggested that this area had a ‘colonial’ dependence on the centres leading the commercial development of the whole area. This case was not unique, as many others are known and documented. In all fairness, this hypothesis was useful when it came to explain such extremely complicated processes as general economic growth. Later on, however, this idea was clarified and revisited by the same scholars who had previously formulated it.¹

Perhaps, instead of attempting to reconstruct the role of the region we are studying through a variety of clues (which in some circumstances might be regarded as arbitrary), it might be more instructive to try to understand the process of economic growth and integration of this area within a broader context during a period of general development.²

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Economic growth in the southern region of the Iberian Peninsula can be mainly linked to Genoese trade. Indeed, Genoese merchants played a key role in joining up diverse trading areas (for example, they included Seville, Granada, and Valencia in their trading network). They organized production activities in areas like Granada and Valencia, while at the same time playing an important role in the transmission of technical knowledge, which can be regarded as a clear sign of the intent of reorganizing the production process.

Despite this, it cannot be assumed that Genoese merchants actually had a colonial jurisdiction over the areas they controlled economically, and which were involved in the development process as described above.³ This paper will discuss the most important changes that influenced the trading characteristics of the Nasrid kingdom of Granada, focusing on how the acts and interests of the major economic leaderships operating within the Mediterranean area during the fourteenth and fifteenth centuries influenced the development of local economies. Their role in boosting new production activities – for example, high-quality ceramics – is clearly related to trade, and will also be brought into perspective.

The Nasrid kingdom of Granada and the Mediterranean trading network: Genoese merchants and trade

Like other political entities, the Nasrid kingdom of Granada originated with the collapse of the Almohade Empire, which was reduced to an Islamic enclave within the Iberian peninsula. The consolidation of the economic system, together with its legitimization both politically and religiously, had been two crucial issues since the foundation of the reign.

Because of its strategic position, the Nasrid kingdom was strictly connected to trade, and had been so since its foundation. The only possible way to overcome the emerging political difficulties was to develop its strategic economic vantage as a region where western economic leadership could expand.

Concerning this point, it is known that from the early stages of their reign the Nasrid sovereigns had openly encouraged trade and craft activities. In some cases it is likely that they directly promoted certain types of production activities regarded as especially profitable and therefore beneficial for trading purposes. To foster commercial enterprise, favourable economic conditions were granted so as to facilitate as much as possible the establishment of these activities.⁴

This ‘strategic’ interest in promoting a trading network met immediately with a favourable response, whereby several countries took part in the process of reshaping the economy of the Nasrid kingdom, as major economic authorities of the Mediterranean area initiated diplomatic relations with the new reign of Granada. These agreements openly included the presence of foreign merchants within the Nasrid area,⁵ and in this respect the activities of the Genoese traders⁶ proved to have the greatest impact.

Genoese merchants were widely present in all the kingdoms of the Iberian peninsula, including the Nasrid Granada, and had control over the trading system in its entirety. Thanks to the reliable and dynamic network the Genoese had developed, they held sway over a vast economic domain, increasing greatly their profits by interacting with neighbouring areas.

The Ligurians were extremely skilful in knowing the right moment to sell certain goods on a certain market, waiting for the favourable time, and this clearly exemplifies the process described above. The information network created all around Europe by trading companies, such as that belonging to Francesco Datini, should be considered in this perspective. These people provided relevant information on when it was most convenient

to sell certain kinds of goods. For example, when large quantities of dried fruits from the Valencia⁷ area, or from the Nasrid⁸ kingdom, were being shipped to northern Europe, the price of such goods dropped, which meant that it was possible to sell these foodstuffs at a convenient price only if one had relevant information about when best to ship.⁹

The way Genoese merchants organized trade in the Nasrid kingdom, and how they linked this trading network with the nearby areas where they were operating, clearly exemplifies the methods by which they managed to integrate different regional areas into a broader system. The picture outlined in the accounts written by some of the most prominent Genoese merchants operating in Granada in the mid-fifteenth century helps to clarify how this network was organized.

The head of the entire network was the distinguished Genoese merchant Francesco Spinola *quondam* (son of the defunct) Pietri, a prominent member of the dynasty and of the family trading company, which was successful on the leading European markets, from the Atlantic coast (London and Bruges) to the Mediterranean area. Moreover, he was held in great esteem by the Genoese community, and remained its effective leader during the Nasrid kingdom. He was also close to the royal family, lending money to sovereigns and acting as their representative abroad.¹⁰ He took full advantage of his charge and, thanks to his considerable wealth, was able to pursue important business throughout the whole region.

Spinola operated through a network of collaborators working directly for him, who were located in the main economic towns of the Nasrid kingdom (Malaga, Granada, Almeria, and Almuñécar). These agents were members of his own family and worked in close contact with him, signing a contract with the company either for specific tasks for a short period, or for more complex duties. Thanks to these conditions Spinola's agents could operate within the Nasrid kingdom on a local basis. Furthermore, they could rely on local merchants who were providing Genoese merchants with goods such as dried fruits and silk.

One such overseas dealer, Agostino Spinola, was put in charge of relations with the Nasrid trade network from where he was living in Almuñécar, keeping regular contacts with local merchants operating in nearby places like Jete and Motril. In order to facilitate transactions and foster trade, Agostino regularly provided loans at accessible rates to local merchants,¹¹ such as Macomet Mormoso from Motril, who is recorded in documents as supplying sugar for Genoese merchants.¹² The overseas Spinola dealers followed similar practices in other trade areas. The relationship between the Nasrid kingdom and the rest of the Iberian peninsula have been investigated in detail and are now very well known, especially concerning the nearby areas that were under closer control by the Genoese merchants.

Communications between different trading networks in the peninsula and the western Mediterranean (including the area controlled by the Genoese) were facilitated by the capillary coastal navigation that the Genoese fleets had established in the westernmost part of the Mediterranean. By means of this coastal navigation, they created a regional trading network that resembled transoceanic trade, on a smaller scale, which comprised several centres in the southern Iberian peninsula (Cadiz, Seville, Malaga, Almeria, and Valencia) and in northern Africa (Tunis, Honeyn, Bujia, Oran), all of which came under Genoese control.

These trading centres were linked to those in southern Castile by road routes, whereas the journey between Cadiz and Malaga was often undertaken by sea. The combination of journeys by road and by sea was quite common among Genoese merchants undertaking coastal navigation in this area. Genoese merchants living in Granada dealt on a regular

basis, and had long lasting commercial contacts in Cadiz and Seville through members of their own trade network operating in the southern Iberian Peninsula, as well as through routine dealing with local merchants. It is well known that Agostino Spinola was on good terms with the Centurione family, who had settled in the Iberian Peninsula and had contacts in the most important trading places, including Valencia, Seville, and Granada. By the same token, connections with the Lomellini family, settled in Iberia, also proved useful.

The influence of Genoese merchants based in the Nasrid region spread to other areas of the Peninsula, including the Catalan and Aragon kingdoms. The relationship between these two areas is especially interesting, given that during the fifteenth century Genoese merchants started to take control of trade with the Levant, involving the network of trade and control over production activities that they had been developing. By the means of coastal navigation the Genoese managed to link up centres under their control all around the Mediterranean, and to connect the trans-regional trade network between the Iberian Peninsula with northern Africa, with the Atlantic routes. This was made possible thanks to the extensive network of contacts that the Genoese had in each of the above-mentioned harbours and marketplaces. These were well-established communities which in many cases were organized into recognized institutions known as *consulados* (consulates), grouping together merchants working on a regional or international basis.¹³

A ship registry (logbook) written by Filippo de Nigro for his journey in 1445 clearly shows that Malaga was part of this trade network, and provides a clear picture of the regional trade system controlled by the Spinola.¹⁴ It plainly reveals that Genoese merchants were leading the commerce between the two shores of the western Mediterranean, and were in full control of the major trading centres and the network they had developed around them. Moreover, Genoese merchants used these centres as starting-points for trafficking along the Atlantic routes. During the Nasrid period, Malaga proved to take a central part in the trading system described above. As Malaga was an important stopover along the coastal navigation routes, different commercial activities took place there, making it a crucial business hub.¹⁵

Major European markets were part of this system. Georgio Spinola *quondam* Petri (Francesco's brother) was based in Bruges and in 1436¹⁶ he is recorded as looking after incoming goods. During the same year he took part in other transactions on behalf of his brother for the family company in Granada.¹⁷ From 1455 onwards, his nephew Pietri Spinola *quondam* Georgi replaced his father in the business in London and Bruges.¹⁸ Mediterranean market places were under the family control as well. The goods arriving in Genoa were shipped on behalf of the Spinola, even though it is not clear if every time a Spinola is named the document is actually referring to the trading company. For example, in 1439 Francesco recorded in his account book in Granada that a small amount of almonds (14 *arrobas*)¹⁹ and of raisins (17 *arrobas*) was shipped to Genoa; he sent these items divided in four equal parts to the following recipients: Pietro Spinola *quondam* Cepriani, Luca Spinola *quondam* Luciani, Teramo Spinola d. Catanei (together with his father), and to Francesco himself.²⁰ These kinds of transaction clearly show that these merchants had a wide experience in running their companies, and were able to move goods all around Europe with ease.

We are therefore dealing with a well-established network focusing on a common interest that made possible the movement of goods, money, information, and people. As recent research on this topic has shown, the trading networks created by these merchants and within which they worked grew in importance.²¹ Scholars are no longer discussing merchant operating on an individual basis, but as a complex system of

relationships. These relationships implied close collaboration as well as the leadership of different people, so that the merchant was part of a system whose complexity increased in time.

Genoese merchants and their influence on production activities

The creation of a new trading system meant the existence of favourable conditions to develop trade, along with the chance of profitable turnover for the foreign merchant operating within that area.

Merchants were looking for the best buying/selling conditions, meaning that they needed to buy the required goods at a proper rate. This was possible only if the availability of the goods in question satisfied certain conditions – namely, that they were produced in the adequate amount to satisfy the demand of the market, that they were either rare products or complex objects to be manufactured, and that they were widely available because local authorities made favourable conditions possible.

Obviously, merchants tried to operate within a compass that fulfilled as many of the aforementioned conditions as possible. Whenever they could consolidate their business thanks to favourable political conditions, they started increasing production activities. Thus, they were able to ensure enough supply of certain products within that area, instead of buying the same goods at a higher rate somewhere else.

This intervention had a positive impact in reorganizing the economic activities of the area involved, whereby speculation was based on production. The processes involved here are quite clear, and consist in addressing already existing production activities towards international trade.

Sugar-cane and silk production and trade clearly show how the Nasrid area was part of the economic system described above, which had characterized all of western Europe since the early steps of the capitalistic model. In the kingdom of Granada, sugar-cane trade was completely controlled by the Genoese. The profitability of this foodstuff on the European market is undeniable, and hence this group of merchants encouraged and supported the spread of cane-sugar crops in different places, reorganizing production as a one-crop cultivation wherever possible. Such was the case in the Algarve, a nearby Portuguese area, where the king of Portugal himself had encouraged the growing of sugar-cane since 1410, after being persuaded of its convenience by the merchants themselves.²² A few years later, in 1416, the Genoese promoted cane-sugar cultivation in Valencia. The plantations of Burriana and Castellón are the first ones known in this area, and once again local authorities championed them, in this case the king of Catalonia and Aragon. As before, Genoese merchants were among the owners of the first cane-sugar plantations established in the Canary Islands and in Madeira, which had been colonized just a few years earlier, marking the first production activity on the island.²³ Cane-sugar is not the only cultivation introduced by the Genoese as a one-crop cultivation. In the area under study, Algeciras is the earliest known case of plantation slave-work in the Iberian Peninsula, and Genoese merchants promoted this activity. The area around Granada is the first known example of cane-sugar cultivation in the peninsula, and immediately after the Castilian conquest, Genoese merchants organized production as an extensive one-crop form of agriculture.

These examples show that Genoese merchants were deeply involved in reorganizing economic areas, on the one hand creating the conditions for the transmission of production experiences, and on the other, making possible the assimilation of new kinds of activities within this international framework. Nevertheless, it is not clear what happened during the

first phase of this economic expansion, as the available records do not state clearly how and under what circumstances this process of integration took place.

Sometimes it is nearly impossible to identify and to reconstruct the transmission of technical knowledge and, furthermore, the underlying economic interest that could be defined as the cause of the creation and expansion of new economic areas. These changes can be identified through the material evidence concerning the changes introduced and the consequent progress in the production of traded objects. Thus, as perishable items, most of the goods discussed here did not leave any archaeological evidence, so only the documentary evidence ratifies the existence of these goods.

Ceramics, however, is one type of merchandise that left 'traces', and especially luxury objects were among the non-perishable goods traded during the Middle Ages. Pottery has generally been studied as the equivalent of 'fossil dating' for reconstructing the chronology of different productions, but some scholars have published excellent studies based uniquely upon written documents.

Nowadays, new approaches have been developed in studying ceramics from an archaeological point of view. For example, it is possible to reconstruct the distribution of the finds, sometimes using information technology such as GIS (geographic information system), which makes it possible to reconstruct the routes of these products, as well as where they were introduced and the places of higher concentration, which might indicate marketplaces. Furthermore, physical and chemical analysis can be used to discern the composition of the glaze. All these different approaches provide us detailed and direct information about the places where these objects were made, and about the techniques used to make them. The results of these researches make possible to reconstruct how technical knowledge was transmitted between different areas and production centres. The transfer of technical knowledge simply reflects the economic and commercial context of a certain period.²⁴

Nasrid luxury ceramics: lustreware (*loza azul y dorada*)

The last part of this paper will put forward a case study on the production of lustreware, a high-quality artefact diffuse during the Nasrid period. Even though a preliminary research on sherds of lustreware has been undertaken, a systematic study is still lacking. Nevertheless, the work carried out so far clearly shows what kind of information can come out of this research.²⁵

Although luxury pottery has been chosen as a case study, it is not the most significant item for describing the economy of area in question, nor can it provide us exhaustive information about the process of economic integration as a whole; and it is important not to overestimate the role of ceramics among other traded goods. However, this item is widely mentioned in written sources referring to economic transactions, even though its role was not central, and could be regarded as secondary. On the one hand, pottery is so important because it preserves well underground, thus it represents an important source of information about the movement of objects. For this reason it can be used as main reference when undertaking this kind of research.

On the other hand, its reliability can be questioned for several reasons: first, it seems to be the earliest case of transmission of technical knowledge in the Nasrid kingdom; second, it is a clear example of introduction of a new kind of production that underlies the existence of trade on an international base; and third, it seems that the transmission of technical knowledge involved different places at a later stage, in this case the Valencia area.²⁶

Nasrid pottery was made in the ceramics production centres of the Islamic area in the Iberian Peninsula from the mid-thirteenth until the late fifteenth century, when al-Andalus was reduced to the southeast of the peninsula (nowadays the *comunidades* of Malaga, Granada, and Almeria). Shortly after the foundation of this small new reign, the luxury ceramics manufactured in its workshops developed certain distinctive features, like the combination of particular unusual forms with decorations such as blue and lustrated lines, making them easily recognizable outside the kingdom. Lustreware known as *loza azul y dorada* is the most common type of luxury pottery, and was widely appreciated on the European market immediately after its production had started.²⁷ This well-known type of tin-glazed pottery was decorated with blue and golden lines that resulted from a complex production process. The technique for producing tin-glazed pottery – that is, ceramics with an opaque white glazing that could then be used as a background for painted decorations – was known in al-Andalus since at least the period of the Ommayad caliphate of Cordoba (tenth century).²⁸

As the potters working in the Nasrid kingdom of Granada acquired this technique, it continued to be used over the following centuries. These craftsmen were able to paint glaze decorations using a variety of oxides to produce different colours (copper for green, manganese for purple or black). Moreover, they could make lustreware, requiring a far more complex technique that had already been known in al-Andalus for several centuries. The most important innovation introduced by Nasrid potters was the use of cobalt-blue oxide to paint blue lines as a decoration. The result was a type of pottery that combined blue decorations and lustre on a white background, with decorations representing geometric or vegetal patterns, as well as figurative elements.

Lustreware was fired up to three times: the first firing was needed to make the vase in itself (known as *bizcocho*), the second firing was for the glazing, in the opaque tin-glaze decorated with blue lines and sometimes with dark lines, depending on which oxides were used (cobalt for blue, manganese for purple and black). Finally, the third firing was needed for the lustre decoration. The three firings were different from each other, and the last one in particular involved a quite delicate process, taking place in a smaller kiln with a reducing atmosphere – that is, an atmosphere lacking oxygen, by which all minerals remain in their metal state.

Making this kind of pottery was fairly complicated, as different kilns were needed, complex chemical transformations occurred, and a background of technical knowledge was required. Doubtless, the objects produced in these workshops were of high quality, with remarkably beautiful decorations.

This new kind of pottery was quickly identified as a typical product of the kingdom, and circulated in different parts of Europe. It was not manufactured by chance, as the technical features, as well as the chromatic and decorative patterns that characterized the earliest production, were already completely developed. It is certainly a luxury product that had been conceived, made, and sold to satisfy a specific demand of the market. We believe that, in the first instance, it was specifically made for the Nasrid court; at a later stage, it was sold on the market as a luxury item.

Nasrid ceramics as representative of a new dynasty

If we consider where workshops were located, the role of these ceramics as representative of the new Nasrid court becomes evident. This is especially clear if we take into account the workshops operating in Granada, where most of the vessels in question were produced.

Firstly, we should consider the Alhambra itself,²⁹ a palatial citadel that abounded in workshops working directly for the royal family, and where an area once assigned for

ceramic production has been identified.³⁰ Despite the large quantity of ceramic sherds recovered, it is not possible to ascertain precisely what kind of pottery was produced in these kilns. Nevertheless, it is worth noting that inside the royal city itself, there was an area dedicated to ceramics production.

The second case of a production area linked to the royal power we know about is located in the town of Granada, and shows similar features. This is the area known as the Cuarto Real de Santo Domingo,³¹ where remains of a palace belonging to the Nasrid dynasty have been recently recovered. This palatial area is quite close to the zone where potters had their kilns. It was supplied with water and clay, where medieval and modern workshops were also located.

In both cases, the combination between buildings belonging to the first Nasrid kings, and craft or agricultural activities – including polluting ones such as pottery-making – suggests that to a certain extent the Nasrid dynasty had control over production activities in Granada. The role of ceramics as a typical feature representative of the Nasrid dynasty is quite evident, given the frequent use of the ceramics made in Malaga as diplomatic gifts. For example, in the mid-fifteenth century the king of Granada sent ambassadors to the Mameluke sultan in Cairo. Fairly detailed accounts are available of this event, and the presents sent to the sultan included pieces of ceramics from Malaga.³²

The role of ceramics as propaganda was not new in al-Andalus. Earlier on, during the caliph period, glazed pottery decorated in green and brown (*verde y manganeso*) served a similar purpose. The role played by *sgraffiato* ware made in Murcia and its environs during the Almohade period has been interpreted in a similar way. Concerning *verde y manganeso* production, it has been pointed out that this kind of pottery was made in workshops located in Cordoba, and that the colours used for the decorative patterns were a clear reference to the leading family (white for the Omayyad) and their religious commitment (green symbolized the Prophet).³³ Among the sherds with a strong symbolic



Figure 1. Large *safa* bowl decorated with the Nasrid coats-of-arms (Alhambra Museum, Granada, Spain).



Figure 2. Small *safa* bowl decorated with the Nasrid coats-of-arms (Alhambra Museum, Granada, Spain).

meaning, some pieces decorated with the sign *al-mulk* (power) were recovered in Madina al-Zahra. As regards the period of the Hudies from Murcia, during the relative period in which they controlled the area, *sgraffiato* ware with black decorations was produced extensively (black was the colour of the Abbasid, with whom Ibn Hud was on good terms). On such goods, scenes depicting court life in an oriental style are quite common.³⁴

Some of the pottery workshops were located close to the Nasrid palaces – that is, close to the hearth of political power, like the Alhambra and the Cuarto Real de Santo Domingo. As noted above, the decorative patterns of the ceramics produced in these centres often had symbolic meaning, as in the case of the inscription *al-mulk* present on several jars, along with the coat-of-arms representing the Nasrid dynasty painted on some dishes and tiles. Both seem to point to the promotional role of Nasrid pottery decorated in blue and lustreware.³⁵

Commercial trends of Nasrid ceramics

As mentioned earlier, a detailed analysis of these ceramic sherds can provide us relevant information about the economic strategies employed by the new dynasty, and their attitude in supporting production activities with relevant commercial output. The aim was to regularize finances, and the production activities promoted included pottery workshops.³⁶ The trading network underlying the production system shows up clearly if we look either at the location of the most important workshops, or at their proximity to the centre of political power (the Alhambra or the Cuarto Real de Santo Domingo). Moreover, several important production centres are located in harbours that played a central role within the trading network.

Two of the most important production centres were established in Malaga and Almeria. In Malaga, the workshops were located on the foothills of the El Ejido Mountain in the poor quarter known as Fontanalla. All the resources needed for this kind of activity were available within this area: flowing water and raw materials were available in the outskirts.³⁷ Concerning Almeria, archaeological excavations and occasional random findings show that the kind of pottery mentioned above was produced in there too.³⁸ Though there are no records of a kiln to prove the production of Nasrid lustreware, pottery kiln wastes of lustreware and tin-glazed pottery decorated with cobalt blue suggest that production may have been carried out in those workshops. In fact, as mentioned above, a small kiln would have been necessary to produce this pottery, but none has been identified so far.

These craft activities involved economic interest. In this respect Ligurian merchants played an important role and were obviously supported by the sovereign of Granada, who had an international role in trade and, as documentary evidence reveals, was exploiting the land tenure of the Nasrid royal family both in Granada and in different regions of his kingdom.³⁹

The role of these activities and the profits they made possible were on the whole marginal, particularly if we take into account the most important products traded within the Nasrid international commercial system like silk, dried fruits, and sugar. The Nasrid sovereigns nevertheless encouraged these productions.⁴⁰

The origins of cobalt blue and lustreware pottery (*loza azul y dorada*): Nasrid and Tunisian ceramics

As discussed above, in terms of production Nasrid pottery was the result of a long-lasting tradition. The technical devices used by the most important potters working throughout the reign to make cobalt-blue and lustreware pottery had previously been developed in al-Andalus. The new device introduced was the use of cobalt blue, which considerably increased chromatic combination, as well as the number of decorative patterns. The new decorations characterized these productions, and were the result of transmission of technical knowledge.

For a long time it has been assumed that a new production could start simply by imitating models already in circulation, or by introducing new features. Now that we understand the complexity of the techniques required to start a new production, or to innovate an existing one, it is clear that learning a new technique was possible only through the transmission of technical knowledge. Generally speaking, only if craftsmen, in this case potters, moved from one centre to the next could a new production start successfully.⁴¹ Some research projects on Nasrid ceramics undertaken during the last few years have focused on clarifying the origin of this process.

Before Nasrid lustreware painted with cobalt blue started to be produced, several types of ceramic decorated with cobalt blue circulated within the Mediterranean. Among these, a class known as 'cobalt and manganese', made in Ifriquiya, in the region of Tunis, was in wide circulation.⁴²

A comparative study between the two productions (Tunisian and Nasrid) is still in its early stages, and is focused on decorative patterns. According to results achieved so far, it can be said that the relationship between different decorative patterns used in Tunis and Granada is clear. New ways of producing pottery suddenly appeared in Granada between the late thirteenth and early fourteenth century, and all technical devices and decorative patterns proved to be fully established. This process can be understood only if we take into account that the skills required were already known in Tunisia.⁴³

Genoese merchants and early production of Nasrid lustreware decorated with cobalt blue (*loza azul y dorada*)

The transmission of technical knowledge needs discussing in order to understand how in Nasrid Granada complex pieces were produced, starting from northern African models.

In order to understand this process it is important to take into account the importance of Tunisian objects as traded goods. We know that Tunisian ceramics were known and appreciated in different areas of the western Mediterranean. These objects circulated widely on an international basis.⁴⁴ It is worth pointing out at least two issues.



Figure 3. Tunisian conical plate (Kasbah, Tunis), and Nasrid small *safa* bowl (Alhambra, Granada).

First, a preliminary analysis of the geographical distribution of these objects within the Mediterranean area seems to indicate that the vast majority of these vessels were collected in harbours that were frequented by Italian merchants. Thus, it can be suggested that these merchants – especially the Genoese ones – controlled the distribution of these products both within the Mediterranean and in Tunisia.

On the other hand, thanks to research undertaken in Italy, it is possible to ascertain when this process took place. Tunisian vessels were employed in Tuscany to decorate façades and bell-towers, as well as for private use during a short length of time spanning the end of the twelfth and the beginning of the thirteenth centuries.⁴⁵ Afterwards, the number of Tunisian vessels decreased abruptly, while pieces from al-Andalus began to circulate. In the first instance, lustreware pottery arrived in Tuscany, and then lustreware with blue decorations began to spread. It is worth noting that this new kind of pottery imported from al-Andalus can mainly be found within certain regional areas (Tuscany, Liguria, Sardinia, as well as in Venice). Thus, it seems that these new imports replaced the earlier Tunisian production. As pointed out above, the new production had similar colours and decorative patterns.⁴⁶

It is quite clear that the process of assimilation of new technical devices in pottery-making in the southern Iberian peninsula, and the shift in the circulation of Islamic imported pottery decorated with blue lines within the Christian area of the western Mediterranean are closely connected.

Concerning the first point, although it is impossible to formulate a comprehensive account of the transmission of technical knowledge and of potters' movements from one place to the next, it is quite likely that these techniques, as well as the decorative patterns fashionable during the Nasrid period, imitated those of the area of Ifriquiya.

According to the changes that occurred in the imports of Italian ceramics, the data collected so far show that Islamic pottery decorated in blue was no longer exported from Tunisia but from Spain.⁴⁷ These two processes are closely connected, and Italian merchants took part in both of them. Genoese merchants in particular were responsible for the introduction of Tunisian ceramics into western Mediterranean trade, and later for the circulation of Nasrid pottery, which actually replaced the former. According to this hypothesis, it can be assumed that merchants were involved, at different levels, in the production of this new kind of pottery in Granada, channelling production activities towards profitable business. In fact, they aimed to stimulate production districts on the basis of their own commercial networks. As we argued at the start of this paper, this phenomenon shows up clearly in different activities and in the production of a variety of goods.

Conclusions

It is not unusual for the transmission of technical knowledge and the establishment of new production activities, together with the movement of craftsmen, to follow commercial interests, in order to increase the production of goods that could be traded profitably. In this respect, merchants can be regarded as the means of transmission of technical knowledge.

They could rely on the local sovereign – in this case, on Nasrid kings who, as discussed above, were keen to develop crafts such as ceramics production that could symbolize their recently established authority, which was undergoing a process of legitimization.

The establishment of a new craft such as pottery-making in the kingdom of Granada did not occur by chance. The influence of the recently established Nasrid realm, together

with the Ligurian merchants' familiarity with market demands, made possible the circumstances leading to this new ceramics production, and to the transmission of the technical knowledge needed.

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Notes

1. Heers, 'Le Royaume de Grenade'; Melis, 'Malaga nel sistema economico'; Chiappa Mauri, 'Il commercio occidentale'; Boscolo, 'Gli insediamenti genovesi'; Pistarino, 'Génova medievale'; López de Coca, 'Málaga, "colonia" genovesa'; idem, 'El periodo nazarí'.
2. Pérez Picazo, Lemeunier and Segura, 'Desigualdad y Dependencia'; Epstein, *Freedom and Growth*; Casado Alonso, 'El comercio internacional castellano'.
3. López de Coca, 'El reino nazarí'.
4. To prevent craftsmen from moving away, special laws to restrict their movements were issued, but they were also offered a place to live and work (*funduq*). By such means the Nasrid sovereign aimed to safeguard these craft activities.
5. Lisciandrelli, *Trattati e negoziazioni*; López de Coca 'Génova y el Reino de Granada'; Salicrú, '¿Repensando Granada?', Petti Balbi, *Negoziare fuori Patria*; Pistarino and Gari, 'Un trattato fra la repubblica di Genova'; Gari, 'Génova y Granada'.
6. Gari and Salicrú, 'Las ciudades del triángulo'; Salicrú, 'La Corona de Aragón y Génova'; López de Coca, 'Sobre las galeras venecianas de Poniente'; Fábregas, 'Estrategias de actuación'.
7. '...fosse venuto davanti la quaresima radoppiavano i danari di quella frutta Della Chantera... che mancamento ci si a di zibibo e di fichi questo anno per essere anchora venuti pochi navili di Spagna', Archivio di Stato di Prato (A.S.P), Archivio Datini (A.D.), Carteggio Comune (C.C.), Filza 855 Bruggia-Barzalona, doc. 118483, 12 February 1407.
8. '...mandarle ci sono abasate per l'asai venuteciene costi di Malicha...' A.S.P., A.D., C.C., Filza 979, Bruggia-Valenza, doc. 801913, 7 June 1397; '... Voi dite sopra fichi ne saranno assai e simile uva, non sarebe da inpaciarsene però que' di Malicha tolgo' la condizio' a tutti per buon merchato ne fanno...' A.S.P., A.D., C.C., Filza 979, Bruggia-Valenza, doc. 422776, 18 August 1393.
9. 'Voi arete sentito di quella nave de Leonardo Spinola che portava la frutta di Malicha che a di 2 di questo essendo per entrare qui nel porto Della Schiusa circha a 2 leghe di fuori si perde la nave e lle merchatantie... per la rotta desta nave ne varando qui di meglio zucheri e mandorlle...' A.S.P., A.D., C.C., Filza 980, Bruggia-Valenza, doc. 604941, 27 November 1408.
10. Airaldi, *Genova e Spagna*; Petti Balbi, 'Le strategie mercantili'; Fábregas, 'Actividad comercial'.
11. Among the wide range of existing examples, I will quote the most relevant ones only. Four cloths from London were traded in exchange for 136 *arroba* of sugar (see note 19) in Malaga in 1432. The exchange took place between Vincinguerra Spinola and Aim Benexeich (Archivio di Stato di Genova, Notai Antichi., Branca Bagnara, 510, fols. 283 r. y 286 r); trade of 23 *arrelde*s and 12 ounces of silk, given by Aim Aben Xiec to Francesco Spinola in exchange for '... jarre XVIII oleorum de Maiorica racionatis colle CIII de marcha eiis venductis a b. VII d. V cola, asendunt b. DCCLXXX et preciis ro. XXVIII septa fina pro Janua quam dare debent in fondaco Murleche...' (Archivio Durazzo-Giustiniani, sección Sauli (A.D.-G., S.), man. 1839, fol. 62). Another example is the trade of silk in exchange for cloths that Spinola noted down between 1435 and 1439. The cloth trade was regarded as advantageous for Genoese merchants, as it was an indirect way to get silk. Fábregas, 'Aprovisionamiento de la seda'.
12. Fábregas, *Un mercader genovés*, fol. XXXIIv.
13. Petti Balbi, *Negoziare fuori Patria*.
14. The logbook of the ship belonging to Filippo di Nigro is mentioned for the first time in Chiappa Mauri, 'Il commercio occidentale'; Heers, 'Gènes et l' Afrique du Nord'; this text has recently

- been analysed in detail concerning the connections that this merchant had in Granada: Fábregas, 'Redes de comercio'.
15. Melis, 'Malaga nel sistema economico'.
 16. A.D.-G., S., man. 1839, fol. 113.
 17. A.D.-G., S., man. 1839, fol. 116.
 18. A.D.-G., S., man. 1842, fol. 46.
 19. Translator's note: *arroba* = Spanish unit of weight and of liquid measure, varying according to region (between 11.502 kg and 12.5 kg, equivalent to about 15 litres).
 20. A.D.-G., S., man. 1839, fol. 211 (1439).
 21. Del Treppo, *Sistemi di rapporti*; Cruselles, 'Jerarquización y especialización'; Igual, 'Valencia y Sevilla'.
 22. Arquivo Nacional Torre do Tombo (A.N.T.T.), Chancilleria D. João, liv. II, fol. 200. A.N.T.T., Chanc. D. João I, liv. III, fol. 111r.
 23. Vieira, 'A Madeira e o mercado do açúcar'.
 24. García Porras, 'Una aplicación del SIG'.
 25. García Porras, 'Transmisiones tecnológicas'.
 26. Ibid.
 27. Hurst, 'Spanish pottery imported'; Khunel, 'Loza hispanoárabe'; Blake, 'La cerámica medieval', 64–6; Berti and Tongiorgi, *Ceramiche importate*, 11–12; Gutiérrez, *Mediterranean Pottery*, 15–23.
 28. Cano, *Cerámica Verde y Manganese*. The pottery known as *verde y manganese* (green and manganese) dates to this period.
 29. Malpica, *La Alhambra*.
 30. Torres Balbás, 'Cerámica doméstica', 52.
 31. García Porras and Muñoz Waissen, 'Un espacio singular'.
 32. Seco de Lucena Paredes, 'Viaje a Oriente', 18.
 33. Barceló, 'Al-mulk'.
 34. Ibid.
 35. We will make reference to a recent work only: Variorum (AA.VV.), *Los Jarrones*. In this work, there are images of some Nasrid objects with the sign *al-mulk* ('the power'), no. 7, p. 154, no. cat. 9, p. 158 (Jars from Palermo), no. cat. 10, p. 162 (jars from the Charterhouse in Jerez), or with the coat-of-arms of the Nasrid family, cat. no. 29 p. 198, n° 34, p. 208.
 36. Malpica, 'La expansión de la ciudad'; idem, 'La expansión urbana'.
 37. The archaeological excavations undertaken during recent years have made it possible to recover several potters' workshops dating to this period. Some references can be found in Salado, Rambla Torralbo and Mayorga, 'Nuevas aportaciones'.
 38. Flores, Muñoz Martín and Lirola Delgado, 'Las producciones'; Flores Escobosa, 'La producción de loza dorada'.
 39. Fábregas, 'Actividad comercial'.
 40. García Porras, 'La cerámica española'.
 41. Berti, Mannoni and Gelichi, 'Transformazioni tecnologiche'; Berti and Gelichi, 'Trasmissioni di tecnologia'.
 42. Daoulati, 'Le bleu et le brun'.
 43. García, 'Los orígenes de la cerámica nazarí'.
 44. Berti, 'La cerámica tunisina'.
 45. Berti and Tongiorgi, *I bacini ceramici*, 207–11; idem, 'Cerámica a cobalto e manganese'. In this context, Tunisian ceramics with lines in cobalt and manganese dates to the same period as lustreware pottery from southeastern Al-Andalus. Concerning the importance of these objects see Abulafia, 'The Pisan "bacini"'.
 46. García Porras, 'La cerámica española', 133–35.
 47. Ibid., 141. It should be stressed that the wide circulation of Nasrid ceramics in the Mediterranean area was short-lived.

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