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*Economic and Social Aspects of the Trade
of Luxury Goods between Africa and Europe: Ostrich Feathers**

In Europe, from the mid-thirteenth century, iconographic sources testify to the use of ostrich feathers for the decoration of military headgear as a representation of the high lineage and military virtues of the possessor. At that time, it was customary for armoured knights, to place a crest of various types at the top of their metal helmet, some of these were created from the wings of birds of prey adorned with feathers from peacocks or other local birds, or with the more exotic ostrich feathers. A fine example of a crest of this type can be admired in the manuscript of the *Annali genovesi* by Caffaro which is preserved in the Bibliothèque nationale de France: a knight wears a “Topfhelm” on his head which is decorated with a small stuffed bird whose tail is made of white feathers which are longer than the helmet itself and which probably came from an ostrich.¹ This identification seems more certain in the illustrations of knights in the *Chansonnier* from the second half of the thirteenth century which is preserved in the same library² or in the French manuscript *Le livre des ansienes estoires* dated around 1285, preserved in the British Library.³ Finally, it is most certainly an ostrich feather that adorns the helmet of a knight in the *Roman de Tristan* written in Arras at the end of the thirteenth Century.⁴

There is multiple evidence of the use of ostrich feathers in the fourteenth century. Between 1307 and 1342, Charles Robert of Anjou, king of Hungary, commissioned the making of a silver coin bearing on one side, a helmet topped with an ostrich head with two long feathers on either side. Edward the English Plantagenet Prince, the Black Prince, was customary to use three ostrich feathers in his coat of arms and during the period when he was Duke of Aquitaine (1362-1372) he commissioned the making of a gold coin (*pavillion*) which portrayed him standing, surrounded by four long feathers placed on typical cartouches bearing the German

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¹ BIBLIOTHÈQUE NATIONALE DE FRANCE (BNF), *Latin*, 10136 (B), c. 141v. The participation of around thirty different hands show that this text was drafted over a period of time ranging from the late twelfth century to the late thirteenth. It is therefore difficult to accurately date the miniature described here (*Annali genovesi di Caffaro e de' suoi continuatori dal MXCIX al MCCXCIII*, ed. L. T. BELGRANO, Genoa 1890, pp. XXIV-XXVII).

² BNF, *Français*, 844, *Chansonnier*, c. 49v.

³ BRITISH LIBRARY, *Additional*, 15268, cc. 81v, 103r.

⁴ BNF, *Français*, 776, c. 154r.

motto “Ich dien” (I serve). In 1368, the Duke of Savoy, Amadeus VI purchased eight ostrich feathers for his own helmet in view of his participation in a tournament organized by the Viscount of Milan⁵ and in May 1386, Lord of Verona, Antonio della Scala, carried 200 ostrich feathers with him which were to donate to the best fighters of the huge army that was about to attack the enemy city of Padua.⁶

The raw material for the decoration of military headgear was made available thanks to Mediterranean commercial networks. During the Middle Ages large regions of North Africa, Syria and the Euphrate valley were populated by a subspecies of the ostrich, the *Struthio camelus syriacus*, characterized by its smaller dimensions in comparison with its Central African relatives and which became extinct in the mid-twentieth century.⁷ This variety still appeared to be widely spread in Egypt and in the Arabian Peninsula during the fourteenth century⁸ and its presence is recorded by Christian travellers, such as the Italian pilgrim Leonardo Frescobaldi⁹ or by Muslims, such as the Moroccan explorer Ibn Battuta.¹⁰ The larger subspecies *Struthio camelus camelus*, more appreciated for the length of the feathers, was widespread in vast areas of the regions south of the Sahara desert, from the Atlantic to the Indian oceans. This species still exists today despite having suffered a progressive and severe reduction of its population.¹¹

THE TRANSPORT ROUTES FROM AFRICA AND THE MEDITERRANEAN PORTS TO NORTHERN EUROPE

The large white ostrich feathers, much appreciated in Europe, were torn from male specimens, while the greyish feathers of the females were less used. These reached the Mediterranean ports through three main commercial routes.

Although the medieval chronicles report ostrich specimens in Morocco and in the Algerian highlands,¹² the most consistent western supply came from caravans that crossed the Sahara heading north, touching the towns of Agadez (Niger), Ghat

⁵ L. CIBARIO, *Della economia politica del Medio Evo*, Turin 1839, p. 563.

⁶ G.M. VARANINI, *La crisi decisiva della signora scaligera. Esercito e società nella guerra contro Padova*, in *La guerra scaligero-carrarese e la battaglia del Castagnaro (1387)*, G.M. VARANINI and F. BIANCHI eds., Vicenza 2015, pp. 59-91.

⁷ T.J. ROBINSON, C.A. MATTHEE, *Molecular genetic relationships of the extinct ostrich, Struthio camelus syriacus: consequences for ostrich introductions into Saudi Arabia*, in “Animal Conservation”, 2, 1999, n. 3, pp. 165-171.

⁸ N. MANLIUS, *The ostrich in Egypt: past and present*, in “Journal of Biogeography”, 28, 2001, n. 8, pp. 945-953.

⁹ LIONARDO DI NICCOLÒ FRESCOBALDI, *Viaggio in Terrasanta*, in *Pellegrini scrittori. Viaggiatori toscani del Trecento in Terrasanta*, A. LANZA, M. TRONCARELLI eds., Florence 1990, pp. 189, 191.

¹⁰ I. BATTUTA, *Travels in Asia and Africa 1325-1354*, ed. H. A. R. GIBB, London 1929, p. 107.

¹¹ J.-M. THIOLLAY, *Severe decline of large birds in the Northern Sahel of West Africa: a long-term assessment*, in “Bird Conservation International”, 16, 2006, pp. 353-365.

¹² M. LOMBARD, *La chasse et les produits de la chasse dans le monde musulman (VIII^e-XI^e siècle)*, in “Annales. Économies, Sociétés, Civilisations”, 24, 1969, n. 3, pp. 572-593, 578-579.

(Libya), Ghadames (Libya) and which converged mainly at the port of Tunis.¹³ Other western supply routes followed the Atlantic coast or reached Sijilmassa and Tahert, then passed the Atlas Mountains and replenished the numerous ports of the current Algerian coast¹⁴.

From here the feathers were sold by the Aragonese merchants, who transported boxes full of feathers to the island of Mallorca or to the Spanish ports.¹⁵ Sometimes the feathers reached the main Italian ports through direct imports, such as the transfer route from Susa (Tunisia) to Genoa operated in 1470 by Giovanni Gregorio Stella¹⁶ or the trade between the various ports of the “Barberia” and the Pisan Port, which in 1460 were subject to an import tax of 4%.¹⁷

A second important route crossed Egypt and, exploiting the course of the Nile, linked the capture areas of the ostriches which were in the current regions of Sudan and the Horn of Africa to the large commercial city of Cairo¹⁸. From here, the feathers were taken to the port of Alexandria, where they replenished the western galleys: a Venetian commercial *tariffa* which already existed in the fifteenth century, offers precise indications on the importation of feathers from Egypt detailing wholesale prices and tares useful for the determination of the toll duties.¹⁹

The third supply route departed from the Horn of Africa, circumnavigated the Arabian Peninsula and through the Persian Gulf entered into the Euphrates delta to reach the commercial city of Basra. From there, the caravans steered away from the usual caravan tracks and headed to Aleppo, a logistic hub of primary importance

¹³ M. PRAX, *Commerce de l'Algérie avec la Mecque et le Sudan*, in “Revue de l'Orient et de l'Algérie: bulletin de la Société orientale”, 5, 1849, pp. 337-348; M. ABITBOL, *Le Maroc et le commerce transsaharien du XVII^e au début du XIX^e siècle*, in “Revue de l'Occident musulman et de la Méditerranée”, 30, 1980, pp. 5-19.

¹⁴ I. HOUSSAYE MICHIEZI, *Datini, Majorque et le Maghreb (14^e-15^e siècles). Réseaux, espaces méditerranéens et stratégies marchandes*, Leyde 2013, pp. 224-231.

¹⁵ M.D. LÓPEZ PÉREZ, *La Corona de Aragón y el Magreb en el siglo XIV: 1331-1410*, Barcelona 1995, pp. 365, 525; I. HOUSSAYE MICHIEZI, *Le commerce des plumes d'autruche de l'Afrique subsaharienne aux marchés européens (fin XIV^e-début XV^e siècle)*, in *Le commerce du luxe: production, exposition et circulation des objets précieux du Moyen Âge à nos jours*, N. COQUERY, A. BONNET eds., Paris 2015., pp. 16-26.

¹⁶ R. URBANI, *Ricerche d'archivio nei rapporti tra Genova ed il Nord-Africa alla fine del Quattrocento*, in *Ricerche d'archivio e studi storici in onore di Giorgio Costamagna*, Rome 1974, pp. 139-145, doc. 4, 144-145.

¹⁷ *Traité de paix et de commerce, et documents divers concernant les relations des Chrétiens avec les Arabes de l'Afrique septentrionale au moyen-âge*, ed. L. DE MAS LATRIE, Paris 1866, pp. 334-335; M. AMARI, *I diplomi arabi del R. archivio fiorentino: testo originale con la traduzione letterale e illustrazioni*, Florence 1867, doc. IX, pp. 66-67.

¹⁸ A. DAVID, *The Mercantile Activity of Avraham Colon in Sixteenth-Century Egypt*, in “Pe'amim”, 51, 1992, pp. 107-123; IDEM, *The Role of Egyptian Jews in Sixteenth-Century International Trade with Europe: A Chapter in Social-Economic Integration in the Middle East*, in “From a sacred source”: *genizah studies in honour of Stefan C. Reif*, B. OUTHWAITE, S. BHAYRO eds., Leiden-Boston 2011, pp. 117-118.

¹⁹ A. SOPRACASA, *Venezia e l'Egitto alla fine del Medioevo. Le tariffe di Alessandria*, Alessandria 2003, *Tariffa Arimondo*, p. 439, II.16.

towards the Mediterranean:²⁰ from Syria, the feathers were then traded at the port of Tripoli and finally reached Venice by sea via Cyprus.²¹

The supply routes were not always feasible due to war or to the presence of commercial restrictions. On the western route, for example, the obstacles set up by Aragonese merchants against foreign commercial competition often forced Italian economic operators not to take supplies directly from African ports, but instead to use Spanish intermediation: so the Tuscan merchants had to set up a base in Mallorca to obtain the feathers they sold to Italy or France,²² while the Lombard merchants had to go to Valencia to supply the port of Genoa.²³ In Venice too, the prolonged interruption of galley navigation to Syria and Egypt may have provoked the temporary rarefaction of feathers. Lorenzo da Pavia writes in a letter from April 1501: “*I have searched the whole of Venice without success for it has been 3 years that the Galleys do not sail.*” (*ò cercato tuta Venecia in modo che non se ne trova perché l'è 3 anj che le galee non àno navegado*).²⁴ At that time the Venetian authorities encouraged multiple supply channels, attempting to intercept even the supplies coming from Maghreb through the Tyrrhenian Sea: a shipment of feathers organised by the Datini company from Mallorca to Venice was noted in 1396²⁵ and in the sixteenth century the import duty on feathers imported from the Venetian mainland was even five times lower than those arriving from Alexandria.²⁶

The logistical hub ports of Majorca, Genoa and Venice constituted both the points of destination for African exports and the points of origin of the supplies to the Northern European markets. Between 1397 and 1401 agents of the Tuscan Datini company supplied their Tuscan partners established in Bruges from Mallorca,²⁷ while the port of London was supplied with ostrich feathers in 1470 by Baldassarre Squarciafico, and in 1484 by Enrico Camilla and Geronimo Salvago all from Genoa.²⁸ Even Bartolomero di Pasi's *tariffa*, which was published in Venice in 1503 but is in reference to the situation in place at the end of the fifteenth century, mentions ostrich feathers as one of the most sought-after goods in Bruges and Antwerp, thus advising exportation with the annual convoy of Muda.²⁹ In 1516, individual English merchants had dozens of feathers on the London Bridge.³⁰

²⁰ *An Economic and Social History of the Ottoman Empire, 1300-1914*, H. İNALCIK, D. QUATAERT eds., New York 1994, p. 340.

²¹ *Lettres d'un marchand vénitien Andrea Berengo (1553-1556)*, ed. U. TUCCI, Paris 1957, pp. 266.

²² I. HOUSSAYE MICHIEZI, *Datini, Majorque et le Maghreb*, cit., pp. 222-223.

²³ P. MAINONI, *Mercanti lombardi tra Barcellona e Valenza nel basso Medioevo*, Bologna 1982, pp. 65-66, 74-75, 114, 132.

²⁴ *Isabella d'Este and Lorenzo da Pavia. Documents for the History of Art and Culture in Renaissance Mantua*, C.M. BROWN, A.M. LORENZONI eds., Genève 1982, doc. 37, p. 54.

²⁵ I. HOUSSAYE MICHIEZI, *Datini, Majorque et le Maghreb*, cit., p. 501.

²⁶ ALESSANDRO MOROSINI, *Tariffa del pagamento di tutti i daci di Venetia*, Venice 1525, pp. 9 e 27.

²⁷ I. HOUSSAYE MICHIEZI, *Datini, Majorque et le Maghreb*, cit., p. 223, note 178, pp. 521-522, 525.

²⁸ A. NICOLINI, *Commercio marittimo genovese in Inghilterra nel Medioevo (1280-1495)*, in “*Atti della Società Ligure di Storia Patria*”, 121, 2007, n. 1, pp. 215-328, 281-282.

²⁹ BARTOLOMEO DI PASI, *Tariffa de pexi e mesure. Con gratia et privilegio*, Venezia 1503, pp. Hi-Hii.

³⁰ *Letters and Papers, Foreign and Domestic, Henry VIII*, ed. J. S. BREWER, II/II, London 1864, *Revel Accounts n. 9*, p. 1509.

It is certainly more difficult to reconstruct the terrestrial trading routes: in the early decades of the fifteenth century, Lombard merchants, established in Savona Nicola da Montiglio and his brother Francesco used the port of Genoa for their supplies of ostrich feathers purchased in Valencia, as did Giovanni da Corteregina, an agent of the Milanese merchant Antonio Rabia, for shipments from Valencia to Milan.³¹ Venice obviously supplied its nearest Italian regions as demonstrated by a commercial transaction with Padua from 1401³² or the correspondence from the 15th-16th century between the marquises of Mantua with their procurators in the lagoon city³³. However, there is evidence that the Venetian market also supplied regions north of the Alps: purchases of feathers in Venice are testified to in the fifteenth-century account books of the dukes of Austria³⁴ and in the letters of Albrecht Durer to his friend Willibald Pirckheimer of Nuremberg.³⁵ The *Tariffa oder Uncostbüchlein von allen Waren in Venedig*, published in Frankfurt in 1572, explicitly cites ostrich feathers among the goods that the German merchants could find in Venice.³⁶ Instead, from Antwerp the feathers travelled south towards Cologne, as evidenced by the letters of the Ravensburg merchant Hans Hillenson from the early 16th century.³⁷

FEATURES OF THE RAW MATERIALS AND MARKETING METHODS

Due to the extreme delicacy of the feathers, it is unlikely that the birds were killed during bloody hunts with dog packs and lances, as was a customary practice in Europe and depicted in the engravings of Antonio Tempesta, for this would risk the precious goods for export getting broken or stained by blood in an irreparable way. As some images of the early twentieth century show, animals could be caught without the shedding of blood and tied at the legs to prevent escape or defensive jumps.

³¹ P. MAINONI, *Mercanti lombardi tra Barcellona e Valencia*, cit., pp. 65-66, 74-75.

³² F. PIGOZZO, *Appunti sul commercio veneziano di piume di struzzo fra medioevo e prima età moderna*, in "Archivio Veneto", ser. VI, 16, 2018, forthcoming.

³³ In 1496 Isabella d'Este, Marchioness of Mantua, wrote to her attorney Giorgio Brognolo asking for both white and black pens (C. ZAFFANELLA, *Isabella d'Este e la moda del suo tempo*, in *Isabella d'Este. La primadonna del Rinascimento*, ed. D. BINI, Modena 2001, p. 217) and in 1501 another of her emissaries, Lorenzo da Pavia, complained about the scarcity of ostrich feathers on the Venetian market (*Isabella d'Este and Lorenzo da Pavia*, cit., docc. 36-37, pp. 54-55). Then in 1593 Quattrocchio, the "pennecchiaro" of the Gonzaga court, exported as many as 900 large feathers from Venice to Mantua (M. SERMIDI, *Il carteggio tra Venezia e Mantova (1588-1612)*, Cinisello Balsamo 2003, doc. 206, p. 166).

³⁴ W. MALECZEK *Die Sachkultur am Hofe Herzog Sigismunds von Tirol († 1496)*, in *Adelige Sachkultur des spätmittelalters. Internationaler Kongress Krems an der Donau 22. bis 25. Sept. 1980*, Vienna 1982, p. 153.

³⁵ ALBRECHT DÜRER, *Schriften und Briefe*, ed. E. ULLMANN, Leipzig 1978, pp. 112-114, 118.

³⁶ *Tariffa Oder Uncostbüchlein, von allen Waren in Venedig: So auß und ein geführt mögen werden, durch Teutsche, und andere Nationen; Auch was breuch und Zoll in Venedig darinn gebraucht warden*, Nürnberg 1572, p. 47v.

³⁷ A. SCHULTE, *Geschichte der Großen Ravensburger Handelsgesellschaft 1380-1530*, II, Stuttgart-Berlin 1923, p. 218.

Once carefully plucked from the slaughtered animal, the feathers were collected in bundles³⁸ and inserted into wooden crates, as testified to in 1470 by a Genoese merchant in Sousse, Tunisia (*capsia una in qua erant plures matii plumarum strutii*).³⁹ The use of rigid enclosures was essential to prevent the breakage of the rachis or the tearing of the barbs during long journeys across the desert on the back of camels. For greater protection of the goods, there are accounts from the sixteenth century of the use of sheets of paper placed inside the boxes to divide the goods, (*governamele ben in cartta*).⁴⁰ In the large trading centres of the North African coast where the goods were still being sold wholesale, the product underwent an initial cleaning process, which was necessary to remove the accumulated sand and dirt (the feathers exported from Alexandria, for example, were *spazade*, meaning cleaned).⁴¹ The long transfers and the equally long storage periods put the feathers at risk as they could easily be attacked by moths⁴² or perish.⁴³

Before being sold for retail in European ports, the feathers were subjected to a more thorough washing process with warm water and soap this was essential to remove the dust and saltiness accumulated during the journey: in this way they regained their original shiny appearance. A high temperature wash would have removed the dirt more quickly, but would have irreparably damaged the feathers, causing their sale value to drop.⁴⁴

THE REVOLUTION OF COLOUR

Towards the end of the 14th century, iconographic sources begin to show traces of a revolution in the trade of ostrich feathers. In the Oratory of San Giorgio in Padua, between 1379 and 1384, Altichiero di Zevio depicted Saint George dressed in knight armour wearing a helmet decorated with a two-tone feather, red on the left half and white on the right. Other varieties of colour are illustrated in the

³⁸ *Maci due de pene de struzo* (*Quaderno di bordo di Giovanni Manzini prete notaio e cancelliere (1471-1484)*, ed. L. GRECO, Venice 1997, p. 59); *mazi dusento de pene de struzo* (*Traité de paix et de commerce*, cit., VII, *Republique de Venise*, doc. XXV, p. 269).

³⁹ R. URBANI, *Ricerche d'archivio nei rapporti tra Genova ed il Nord-Africa*, cit., doc. 4, p. 144.

⁴⁰ *Lettres d'un marchand vénitien Andrea Berengo (1553-1556)*, cit., doc. 99, p. 112.

⁴¹ A. SOPRACASA, *Venezia e l'Egitto alla fine del Medioevo*, cit., p. 439, II.16.

⁴² In a letter from Valencia to Mallorca, an agent from the Datini company asks a colleague to procure feathers "that they should be big and well thick and that they should not be camolate", that is, infested with moths (I. HOUSSAYE MICHIEZI, *Le commerce des plumes d'autruche de l'Afrique*, cit., p. 25). In a chest of the Estense wardrobe in 1494, several ostrich feathers damaged by moths were found: "*Una capsia dipinta cum pene di struzo bianche et tincte de più colori et assai di tarmate et guaste*" (G. CAMPORI, *Raccolta di cataloghi ed inventarii inediti di quadri, disegni, bronzi, dorerie, smalti, medaglie, avorii, ecc. dal secolo XV al secolo XIX*, Modena 1870, doc. II, p. 33).

⁴³ In the correspondence of the German merchant Hans Hillenson of 1507, he complains of the failure to sell a cargo of feathers coming from Antwerp in Cologne, because the product is likely to have been damaged in storage (A. SCHULTE, *Geschichte der Großen Ravensburger Handelsgesellschaft*, cit., doc. 89, p. 446).

⁴⁴ M. SERMIDI, *Il carteggio tra Venezia e Mantova*, cit., doc. 310, p. 206.

miniatures of some manuscripts produced in the Lombard area, dated between the seventies and eighties of the fourteenth century. In a battle scene illustrated in the *Guiron le Courtois* in the *Bibliothèque nationale de France*, a knight is wearing a helmet decorated with a plume containing a green feather placed between two red feathers while another knight wears a typical *Topfhelm* on his head which is richly decorated with a plume containing a green feather placed between two blue feathers. Finally, there is also a knight without armour, wearing a *zuccotto* hat, which in the front part has an eye-catching red ostrich feather⁴⁵. Likewise, a manuscript on the Search for the Holy Grail, produced for the Visconti court around 1380, shows a knight wearing a long light-blue feather on his *Topfhelm*, while in another scene the hero Galaad is depicted wearing a helmet, on which stands a solemn composition of three plumes containing red feathers sometimes combined with either blue or green feathers⁴⁶. Within a very short time, during the late eighties, these decorations show a further enrichment with the composition of tricoloured plumes. The *Cronaca universale* of the *Universitätsbibliothek of Kassel*, written in Bavaria around 1385, illustrates a warrior wearing a small helmet adorned with white, red and black feathers, while in front of him another knight is depicted with a helmet decorated with two red feathers.⁴⁷

The presence of coloured feathers in these new iconographic models shows how rapidly the trend spread and how fast the commercial contacts between Mediterranean ports, Atlantic ports and Central Europe were. In fact, during the eighties of the fourteenth century, an elaborately decorated breviary was written in the Belgian abbey of Saint Bavone of Ghent which depicts a man in full-length armour wearing a helmet on which a long, red ostrich feather is attached. Other illustrated characters wear blue feathers on felt hats.⁴⁸ To give another example, a fresco from around the year 1400 in the church of San Procolo in Naturno, in the Tyrolean Alps, depicting *I Re Magi* shows a knight in armour with his head covered in a cloth cap, adorned on the front by a long two-tone feather, white on the left and red on the right, thus replicating the colouring technique used twenty years earlier in the Oratory of San Giorgio in Padua.

The early appearance of coloured feathers in the Northern Italian market is well documented by the correspondence of Tommaso di Giovanni, trade agent for the Datini company in Milan, who in 1396 communicated the arrival of 400 ostrich feathers from Brescia (*asa' belle e conpartite bene di cholore, co 150 bianche, 100 rose e resto s' nero e verde e azzurre e alchuna berettina conpartite*). The businessman wrote that as the city was by then overflowing with such a precious product, he advised that it should be exported in order to gain a profit: it was therefore decided that it should

⁴⁵ BNF, *Département des Manuscrits, Division occidentale, Nouvelle acquisition française*, 5243, cc. 38r, 55r, 65v.

⁴⁶ BNF, *Département des Manuscrits, Division occidentale, Français*, 343, cc. 8v, 26v, 49v.

⁴⁷ UNIVERSITÄTSBIBLIOTHEK OF KASSEL, 2° Ms. theol. 4, c. 46r.

⁴⁸ HARVARD UNIVERSITY, HOUGHTON LIBRARY, ms Lat. 267, cc. 64r, 195r, 333v.

be sent to Avignon for the French market.⁴⁹ The origin of Datini's supplies suggests that Venice was the place where the feathers were processed. A Venetian inventory of hats and bags from December 1, 1401 shows how common compositions with feathers which had undergone colouring were: Giovanni d'Andrea dai Veli, not an international merchant but a simple retailer, supplied a workshop in Padua with 42 large ostrich feathers and 69 medium-sized feathers, all of which had been coloured, as well as 44 small feathers and two bunches of damaged feathers.⁵⁰

The practice of colouring the feathers was quickly established and there remains trace of practical indications on the use of colourants in a 15th century Bolognese manual: here one is advised to immerse both sides of the feather in the colouring liquid and then to dry the feather. Repeating the procedure over and over again is advised in order to fix the colour.⁵¹

It is very important to underline the fact that the processing and modification from an aesthetic point of view of the feathers that was taking place in Venice gave rise to a new product which had a much greater commercial appeal to that of the more common untreated product. This permitted the Venetian merchants to resell feathers in the same areas that had supplied them in their natural state, in a wide range of colours, ranging from pink to yellow and from light blue to green: this is very well evidenced in the correspondence of Adrea Berengo in the mid-sixteenth century, where he requests his Venetian business partner to send coloured ostrich feathers to be sold in Aleppo.⁵²

THE ECONOMICS OF THE EXCHANGES AND DEVELOPMENT OF RELATIONS BETWEEN TRADE OPERATORS ON THE OPPOSITE SHORES OF THE MEDITERRANEAN

Since ostrich feathers constituted a rare commodity, the written documentation that document the detail of their trade and allow the margins of profitability to be retraced are also rare. On short routes, for example from the port of Genoa to Milan, one could obtain a modest but relatively safe mark up: some German merchants in the early sixteenth century obtained an 11% gain on the sale of "*strusso federan*".⁵³ Although we have seen that in 1368 Amedeo VI of Savoy paid the beauty of two and a half florins for eight feathers to be put on his crest,⁵⁴ the

⁴⁹ *Milano fine Trecento. Il carteggio milanese dell'Archivio Datini di Prato*, ed. L. FRANGIONI, Florence 1994, I, doc. 460, pp. 333-334, doc. 472, pp. 346-348, doc. 488, pp. 363-364, doc. 490, pp. 364-365 e doc. 509, p. 380.

⁵⁰ F. PIGOZZO, *Appunti sul commercio veneziano di piume di struzzo*, cit..

⁵¹ M.P.H. MERRIFIELD, *Original Treatises: Dating from the XIIth to XVIIIth Centuries on the Arts of Painting, in Oil, Miniature, Mosaic, and on Glass; of Gilding, Dyeing, and the Preparation of Colours and Artificial Gems*, II, London 1849, cap. 176, p. 477; *Il Libro dei colori: segreti del secolo XV*, O. GUERRINI, C. RICCI eds., Bologna 1887, p. 149.

⁵² *Lettres d'un marchand vénitien Andrea Berengo*, cit., doc. 99, p. 112.

⁵³ A. SCHULTE, *Geschichte der Großen Ravensburger Handelsgesellschaft*, cit., doc. 45, p. 287.

⁵⁴ L. CIBARIO, *Della economia politica del Medio Evo*, cit., p. 563.

correspondence of the Milan branch of the Datini company from the late fourteenth century offers many more details on the then current prices. In a letter dated March 31, 1396, the agent Tommaso di Giovanni wrote that the coloured feathers imported from Brescia cost 32 *lire* per hundred, thus corresponding to 5 feathers a gold florin, but the Milan market was not willing to pay more than 25 *lire* per hundred, or 6 feathers a florin,⁵⁵ the same price documented in Venice in December 1401.⁵⁶ The same agent, urged by his head office to sell the goods anyway, on October 30, 1396, explained that the goods were not in demand in the city (*qui non nno quello spaccio credete*) and warned that to sell them by force (*a vollelle vendere quando non sono domandate*) meant that no more than one florin on average could be made for every 6.7-6.9 ostrich feathers. The agent's bitter conclusion was that a saturated market as was the one in Milan, was in danger of producing a loss-making trade (*ma qui, quando una cosa non chiesta e vollella pur vendere, si chomviene gittar via. Fate ora chome vi pare*)⁵⁷. In the summer of 1507, a similar situation occurred to the German merchant Hans Hillerson who bought 282 ostrich feathers at the price of 1 gold florin per *mass*⁵⁸ in Antwerp and sent them for sale to Cologne: here, however, the market price was only $\frac{3}{4}$ of a florin per *mass* and so the batch of feathers had to be sent back to Belgium.⁵⁹ Finally, in 1553, Namerio Varioti, a trade agent in Venice for a Jewish merchant, received 25% on the earnings but also paid back 25% of the losses on the sale of a batch of ostrich feathers from Egypt.⁶⁰ In all the cases examined, the margins of gain or loss on local routes, ranging to a few hundred kilometres, fluctuated within a range of between roughly 10% and 25%.

Of course, the percentage gain on long-distance exchanges were quite different. According to the so-called *Tariffa Arimondo* of the late fifteenth century with regards to the prices of goods in Alessandria, the white feather, which had already been cleaned (*spazada*) of the dirt of the desert, had a price ranging from three to four ducats, with a tare of 10% (*vuol valler 3 duc. in 4 e dässe 110 per C*).⁶¹ The uncoloured white feather, therefore, could be purchased in the African port at a cost which was four or five times lower than the sales price of the finished coloured product in Italy.

Finally, it should be considered that war events could drastically reduce the supply of feathers in the west, causing prices to rise significantly. For example, in November 1553, a few years after the conclusion of a long Venetian-Turkish war over the control of the Peloponnese peninsula, the Cairo merchant Giuda Castro sent a batch containing less than 50 kg of ostrich feathers to Venice⁶² valued at as

⁵⁵ *Milano fine Trecento. Il carteggio milanese dell'Archivio Datini*, cit., pp. 346-348, n. 472.

⁵⁶ F. PIGOZZO, *Appunti sul commercio veneziano di piume di struzzo*, cit..

⁵⁷ *Milano fine Trecento. Il carteggio milanese dell'Archivio Datini*, cit., pp. 430-431, n. 581.

⁵⁸ Weight units used in Germanic countries, corresponding to approximately 1.5 kg.

⁵⁹ A. SCHULTE, *Geschichte der Großen Ravensburger Handelsgesellschaft*, cit., doc. 89, p. 446.

⁶⁰ A. DAVID, *The Role of Egyptian Jews in Sixteenth-Century International Trade*, cit., p. 117.

⁶¹ A. SOPRACASA, *Venezia e l'Egitto alla fine del Medioevo*, cit., p. 439, II.16.

⁶² The total weight of the shipment is quantified in 104 *ratl*. The *ratl* was a measure of weight that varied from 300 to 450 gr (E. ASHTOR, *Levantine Weights and Standard Parcels: A Contribution to the Metrology of the Later Middle Ages*, in "Bulletin of the School of Oriental and African Studies", 45, 1982,

much as 116 Venetian gold ducats and 20 Egyptian gold *maidini*.⁶³ Considering that the large white feathers of male ostriches today weigh between 80 and 100 grams,⁶⁴ it is possible to calculate with great approximation a unit price of uncoloured feathers of one ducato every 4 pieces, if not more.

Lastly, commercial partnerships and the use of intermediaries were important: at the end of the XIV century, the Florentines did not have a fleet of commercial ships as Venice did, they used the intermediation of the Aragonese merchants and above all of the Jewish merchants.⁶⁵ It has been calculated that the Mallorcan subsidiary of the Datini company received 45% of its supply of African feathers from Jews. In Egypt too, there is evidence of the important role played by Jewish merchants in sending ostrich feathers to the west. The *genizah* of Cairo has surrendered important evidence in this sense from the sixteenth century, as is clear from the correspondence of Abraham Colon or Giuda Castro.⁶⁶

CONCLUSIONS

As from the end of the 15th century, ostrich feathers began to become widely used in fashion in the European markets and ended up having the monopoly in decorations in male fashion. In Italy, ostrich feathers began to be used in the making of fans for the most refined noblewomen: in 1501 Isabella d'Este, Marchioness of Mantua, was looking for black and white feathers in Venice to make a fan (*per fare uno ventaglio*)⁶⁷ and another fan with black feathers was present in the 1516 list of the treasures of the Duchess of Ferrara Lucrezia Borgia.⁶⁸

In European courts, feathers found a progressive use even in theatrical sets: this happened in 1501 in Ferrara, where the *Sala delle udienze* in the *Palazzo della Ragione* di Ercole I d'Este was reconverted into a theatre;⁶⁹ and it happened also in 1511 in England, where Henry VIII buys ostrich feathers for the staging of the traditional *Twelfth Night* celebration (which corresponds to the Epiphany).⁷⁰

Much more evident changes were seen in the Germanic world with the spread of the Basque beret fashion, which was positioned to fall softly on one side of the head. This new style of headgear was unable to support the ostrich feather in a straight position, as was the fashion during the Middle Ages so laying a decorative

n. 3, pp. 471-488, 472-473; W. HINZ, *Islamische Masse und Gewichte, Umgerechnet ins metrische System*, Leiden 1955, p. 29).

⁶³ A. DAVID, *The Role of Egyptian Jews in Sixteenth-Century International Trade*, cit., p. 117.

⁶⁴ Z. BRAND, S.W.P. CLOETE, *An exploratory analysis to determine the impact of fixed effects and to establish genetic parameters across six types of ostrich feathers*, in "South African Journal of Animal Science", 45, 2015, n. 1, pp. 20-29, tab.2 p. 25.

⁶⁵ I. HOUSSAYE MICHIEZI, *Le commerce des plumes d'autruche de l'Afrique*, cit., pp. 22-23.

⁶⁶ A. DAVID, *The Role of Egyptian Jews in Sixteenth-Century International Trade*, cit., pp. 116-118.

⁶⁷ *Isabella d'Este and Lorenzo da Paria*, cit., p. 243.

⁶⁸ G. CAMPORI, *Raccolta di cataloghi ed inventarii inediti*, cit., doc. III, p. 36.

⁶⁹ F. CRUCIANI, C. FALLETTI, F. RUFFINI, *La sperimentazione a Ferrara negli anni di Ercole I e Ludovico Ariosto*, in "Teatro e Storia", 9, 1994, pp. 131-217, p. 144.

⁷⁰ *Letters and Papers, Foreign and Domestic, Henry VIII*, cit., *Revel Accounts n. 3*, p. 1497.

feather horizontally on the upper part of the headgear became popular. However, this was a bourgeois fashion, no longer a noble and military prerogative, and which soon moved from male to female headgear. The commemorative medals of Gaspar von Frundsberg and his wife Margherita Firmian in 1529 illustrate this new fashion, showing how feathers had now become the object of both male and female ornamentation. Margherita's wide-brimmed hat which has numerous white ostrich feathers, is very similar to the one depicted in the painting of "Judith with the head of Holofernes" by Lucas Cranach – *il vecchio*.

The new bourgeois fashion was affirmed and developed thanks to new supplies of feathers, coming not only from the caravan routes of Africa in the 16th century, but directly from the East or the Americas thanks to the new naval routes. Gradually the city shops were filled with ostrich plumes and feathers, but of a great variety of tropical American, African and Asian birds. These exotic feathers were no longer a product intended for a narrow male elite, but became a decorative object of common use even among women. The considerable change in the offer of plumage is clearly documented in Venice, one of the main sales hubs: in December 1549, in fact, the inventory of the Venetian comb workshop, "*Croce*" lists the incredible figure of over 7,000 various bird feathers of the most varied shapes, colours and sizes (*negre rize lavorade, folle lavorade, fine negre lavorade, grise lavorade, rize lavorade bianche, bianche lavorade, penachini bianchi lavoradi e infine penne de caravana*).⁷¹ In the same period the Venetian merchants could afford to produce coloured ostrich feathers no longer destined to decorate hats, but simply to be used as writing instruments (*mandame 4 pene de struxo da scriver*)⁷².

With the modern era, the medieval concept of ostrich feather as a representative object of knightly virtue, of nobility and courage in battle, has now disappeared and the decorative and aesthetic use of the feather now prevails over every ethical and symbolic consideration.

⁷¹ G.L. RESTELLO, *Spiegel und Toilettenutensilien in Venedig zur Zeit der Renaissance*, in "Italienische Forschungen", 1, 1906, pp. 187-387, doc. V, pp. 358-360.

⁷² *Lettres d'un marchand vénitien Andrea Berengo*, cit., doc. 99, p. 112.