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2023-2024

STUDY DAYS ON VENETIAN GLASS

Cross-Influence between Two Glassmaking Traditions: Venice and the Islamic World

IstitutoVeneto diScienzeLettere edArti

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STUDY DAYS ON VENETIAN GLASS

CROSS-INFLUENCE BETWEEN TWO GLASSMAKING TRADITIONS: VENICE AND THE ISLAMIC WORLD

edited by
ROSA BAROVIER MENTASTI and CRISTINA TONINI

VENEZIA
2024

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Higher Education Course. Study Days on Venetian Glass.
Cross-influence between two glassmaking traditions: Venice and the Islamic World

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INDICE DEL FASCICOLO PRIMO-SECONDO-TERZO

Rosa Barovier Mentasti and Cristina Tonini

THE SUCCESS OF LUXURY VENETIAN GLASS IN CONSTANTINOPLE DURING THE RENAISSANCE

Before the 15th century the Venetian upper classes, as well as noble and rich Europeans, aimed to own and display Islamic luxury glass vessels in their palaces. Indeed, artefacts comparable to those made in the East for technical and aesthetic qualities were not produced in Europe. Thanks to the maritime traffic managed by patrician families, Venetians could quite easily import artefacts from Levant countries, besides rare products arrived at the Mediterranean coasts from the Far East.

The inventories of rich Venetian families sometimes include Islamic vessels. Here, we do not consider the Tesoro di San Marco, which was a state treasure, whose oldest part consists of the booty brought to the city between 1204 and 1261 after the Venetian conquest of Constantinople. The San Marco collection includes items in gold, silver, precious stones and glass (late antique, Byzantine, pre-Islamic and Islamic glass) and it was deeply studied and published.

On the contrary, we know much less about the artefacts arrived at Venice thanks to sea traffic and kept in private residences before the 15th century. Indeed, specific archival researches about this matter are rare and what we know is mainly based on scattered data. Some years ago, in her PhD thesis Stefania Coccato transcribed the inventories of movable properties, owned by forty patricians and citizens living in the city in the 14th century. These inventories list very few functional glass vessels, even if Murano glassworks were already flourishing. We find two «*pladene de vero*» or big glass bowls in 1344 and one in 1367 together with basins («*cadini IIII de vero et I pladena de vero*»)[1]. As far as we know, such bowls are mentioned in a document concerning Murano glassworks in 1397,

[1] Coccato 2016: 242, 376.

when the blower Paolo Liziero is paid «*pro duabus pladenis vitri*»[2]. We find also «*botaçi III de vero*», big glass bottles, in 1344, and «*botaçi de vero et de legno*», glass and wooden big bottles, in 1367[3]. They are mentioned in Murano archival papers in 1362, 1363 and in 1380, when eighty five «*butaci de vitreo cum cassis*» turn to be covered with straw or wicker[4]. Moreover in 1405 and 1440 are mentioned «*forme da botazo*», that means moulds for such big bottles. Consequently, we know that they might be blown in moulds[5].

In the private inventories are also mentioned an inkwell, «*caramal de vero*» (1395)[6], and a hourglass, «*I relogio de vero zoè I ora*» (1399)[7]. A Murano glassworks document mentions hourglasses in 1380[8]. Among other items of the forty inventories are listed two urinals, «*orinali de vero*» (1367)[9] which were useful, if made of clear glass, also for medical diagnosis so that the urinal was frequently depicted, in paintings, as the attribute of Cosmas and Damian, patron saints of medicians. Also, the pumpkin shaped bottle (*çucha*) is listed in 1344 and in 1353[10]. It will be produced and used also in the following centuries and the «*tre zuche de vero cum le casse de venchi*» (three pumpkin shaped bottles covered with wicker) owned by the painter Jacobello del Fiore and auctioned after his death in 1439 turn to be wicker wrapped[11].

Indeed, wealthy Venetians generally preferred functional vessels made of more durable materials, like pewter and copper. As to luxury artefacts, they liked more expensive ones, like gold or silver items, or exotic ones, like Islamic metalware or glass vessels, and since the 15th century, Chinese porcelain.

As to Islamic metalware, Nicolò da Carrara owned only a «*cadin de Damasco*», a basin of Damascus (1344), Cristoforo Sola a «*ramin*

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[2] Zecchin 1987: p. 32; Zecchin 1990: 14.
[3] Coccato 2016: 246, 386.
[4] Coccato 2016: 246, 386.
[5] Zecchin 1990: 141, 143.
[6] Coccato 2016: 554, 569.
[7] Coccato 2016: 610.
[8] Zecchin 1990: 140.
[9] Coccato 2016: 418, 554, 569.
[10] Coccato 2016: 244, 299.
[11] Zecchin 1990: 143.

inarzentado damaschin», a silvered damascened ewer (1399), and Alvise Bembo two «*mensori de Damascho*» (1395)[12]. On the contrary, the inventory of Michele Contarini (1398) includes several damascened metal items: «*chandeler damaschini picoli 12*» (twelve small damascened candle holders), «*chandelieri damaschini 2*» (two damascened candle holders), «*chandelieri damaschini cho pé 1*» (one footed damascened candle holder), «*bacili a ovra damaschina 2*» (two basins with damascened work), «*chonca damaschina 1*» (one damascened bowl) and «*çesendi damaschini de rame 5*» (five copper damascened cesendelli [?])[13].

«Mensori, mersori»

All the names which describe the above mentioned items are more or less precisely understandable today, except for the damascened *mensori*, a term which has not been in use in Venice in the course of the last three centuries, at least. In these forty inventories we find also a «*mensor enpento*» (painted), a «*mensor de piera*» (made of stone), a «*mensor de peltro*» (made of pewter), two «*mensori de argento*» (made of silver)[14]. The most interesting is the «*mesior I de Damasco de vero*» (one glass *mesior* of Damascus), mentioned in the inventory of Bertuccio Grimani (1361), which is one of the few luxury glass vessels together with the three «*pladene de vero damaschina*» (big Damascene glass bowls) of Michele Contarini inventory (1398)[15].

We have to understand and explain what is the *mensor* or *mesior* type and what means *de Damasco* or *Damaschin* in relation with late medieval Islamic glass. Most probably *Damaschin* and *de Damasco* meant

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[12] Coccato 2016: 247, 563, 611. *Damaschin*, *de Danmasco*, *de Damascho* did not specify the origin of the listed items but the technique: damascening. Damascening (Ital. Damaniscatura, agemina) is the art of encrusting wires of a soft metal, like gold, silver or copper into narrow undercuts, obtained with a chisel, of a harder metal like iron, steel or brass by means of a hammer.

[13] Coccato 2016: 586, 589, 598. The Correr Museum in Venice houses a small damascened candle holder with the Contarini coat-of-arms, which was dated around 1400. Carboni 2006: 217, 327, n. 95.

[14] Coccato 2016: 154, 184, 375, 563,

[15] Coccato 2016: 322, 593.

glass enamel and gold decorated with patterns similar to the ones which characterized damascened metalware of the same period. Moreover, such glass artefacts, as well as damascened metalware, were not named after the city of production but after the technique and the decorative style for which Damascus was renowned. Therefore, *Damaschini* metal and glass artefacts might be made either in Syria or in Egypt.

The term *mensor* or *mesior* – we suppose correctly transcribed – corresponds with the term *mersor*, documented in other Mediaeval and Renaissance Venetian papers. Actually, the kind of vessel designated is never clearly described, but some clues may come from some of these papers. A Venetian codex of the 14th century, quoted by the historian Emmanuele Antonio Cicogna in 1853, mentions *mersori* containing small sweets (*buxoladi*) donated to the bishop by the Benedictine nuns of San Lorenzo. The historian wrongly supposed they might be baskets[16]. Later, in 1537, as the chronicler Marin Sanudo records, the nuns of San Zaccaria and San Lorenzo had to gift two *mersori*, containing small sweets (*calisoni*), as *regalia* to the Doge, seventeen times per year[17]. Such *mersori* surely were capacious vessels.

Mersori might also be made of porcelain and they arrived at Venice from China starting from the 15th century. In 1479 Pietro Diedo was sent as an extraordinary ambassador to the Sultan of Egypt by the Doge Giovanni Mocenigo and he brought precious diplomatic gifts back to Venice. The inventory of such gifts includes several porcelain vessels, among which are «*mersori de porzelana lavoradi de azuro n. 2*» (two porcelain *mersori* with blue decoration)[18]. Again in 1499, the Signory of Venice received eight porcelain *merzori* as a gift[19]. As far as we know, the first diplomatic gift including porcelain vessels arrived at Venice in 1442, when the recipient was the Doge Francesco Foscari and the donor was the Sultan of Egypt[20].

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[16] Cicogna 1853: 853.

[17] Sanudo 1903: col. 506. *Notizie* 1840: 24-25.

[18] Rossi 1988: 225, doc. 138.

[19] Sanudo 1879; col. 615.

[20] Clarke 1974: 25. The Mamluk Egypt was the last stop of the long journey of Chinese porcelain before it could be shipped by sea to Europe, The Sultans had a huge quantity of porcelain but, generally, their diplomatic gifts included not more than thirty pieces. The oldest paper which mentions a porcelain vessel in Venice, as far as we know, is related to the painter Jacobello del Fiore, whose porcelain tankard («*bochal de porzenagya*») was auctioned after his death in 1439. Paoletti 1894: 6. Zecchin 1989: 348-349, note 10.

If the *mersor* received by Giovanni Mocenigo clearly belonged to the typical blue and white Ming porcelain, in 1527 the Venetian rich collector Bernardino de' Redaldi, ducal chancellor, owned four small *mersori* («*doi mersoreti*, *doi altri mersori picoli*») and two larger ones («*doi piati in foza de mersor de uno color che traze al verde smorto, de tenuta de uno terzo de sechio*») whose colour tends to be pale green (today called Celadon) and capacity is of ca. three litres. Moreover, this inventory *post mortem* describes the larger ones as «two plates in the shape of *mersor*»[21], therefore we deduce that *mersori* were similar to plates but, evidently, with some distinctive feature. We think that the *mersor* can be identified with a type of Islamic damascened salver or tray, which is characterized by a large round flat bottom, a low vertical wall and, generally, an overhanging flat rim. Several damascened or *Damaschini* metal salvers of this type are known today. A quite early such salver, produced in Mamluk Egypt, is kept in the Bargello Museum, Florence, and it is decorated with traditional arabesque patterns including the coats of arms of the Venetian Molin and Venier families, which allows its dating to ca. 1460 (Fig. 1)[22]. Other later but similar inlaid *mersori,* dated from 1536 to 1561, bear different Venetian coats of arms and are local products[23]. Indeed, Venice produced inlaid metalware in the style of Damascus in the late 15th and in the 16th centuries[24].

As to glass *mersori*, like the «*mesior de Damasco de vero*» owned by Bertuccio Grimani (1361), the Metropolitan Museum of Art houses a rare glass salver, enamelled and gilded, which is a glass version of the above mentioned damascened salvers. It was attributed to a Mamluk workshop (Egypt) and dated mid 14thcentury[25] (Fig. 2). This type was already produced in Islamic lands in the first half of the 13th century. Indeed, a very large gilt and enamelled plate, dated 1237-1246 and probably made in Raqqa, was excavated in Kubadabad (Turkey) and now it is exhibited in the Beykoz Glass and Crystal Museum of Istanbul[26] .

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[21] Jestaz 1990: 33-34, 37, 56. The *sechia* (it. secchia, lit. bucket) was a liquid measure corresponded to 10,73 liters, therefore the third of a sechia corresponded to ca. three liters. *Ibid*.: 33.

[22] Spallanzani 1985: 465-472, f. 2a-b.

[23] Spallanzani 2013: 384-389, f. p. 836.

[24] Jestaz 1990: 41-52.

[25] Carboni 2001: 31. Carboni and Whitehouse 2001: 275, f. 105.

[26] Bakirer and Redford 2017: 171-191. *The Art of Glass in the Palaces* 2021: 22-23.

Murano blowers began to produce glass *mersori* in the second half of the 15th century. «*Mersori doradi*» (gilt) are mentioned in a local document of the year 1483, related to the enamel painter Valentino Ungaro, and three *marsori* made of chalcedony glass, thirteen of gilt *cristallo*, six, larger, of *cristallo* with low foot («*marsori de cristallo ... con pe' basso*») and a small undecorated lattimo one («*uno marsoretto de lactimo schietto*») are included in Giovanni and Marietta Barovier's glassworks inventory (1496)[27]. Later, in 1508, several gilt crystal and blue glass *mersori* are mentioned in a Dragan glassworks inventory[28]. In the meanwhile, after the invention of *cristallo*, every new Venetian *bailo* (resident ambassador)[29] who leaved for Constantinople with gorgeous diplomatic gifts, began to consider the products of Murano to be worthy of the Sultan and his court and he used to bring hundreds or thousands of luxury glass vessels. A quite early gift including luxury glass vessels made in Murano was brought to Constantinople by the ambassador Antonio Ferro in 1486. Among the four hundred thirty three glass pieces listed we find four gilded *mersori*[30]. We do not know any Venetian glass piece, dated to the last quarter of the 15th century or to the early 16th century and belonging to museum collections, which is shaped as the Islamic metal and glass plates or trays called *mersori.* However, we can identify some later Venetian glass manufacts which- we suppose- are *mersori.* One of them is a *cristallo* dish, diamond-point engraved, cold painted and gilded, of the late 16th century. It is housed in the British Museum (Fig. 3)[31]. As to the style of its decoration, it is very similar to some blown vessels, such as reliquaries, kept in Venetian and Italian churches. Two Venetian diamond point engraved glass pieces which can be identified as *mersori* are an almost whole glass tray and a fragmentary one[32] rescued

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[27] Zecchin 1987: 59. Zecchin 1989: 212.

[28] Zecchin 1990: 59.

[29] Very expert diplomats were appointed *baili* in Constantinople because the relations of Venice with the Sultan were delicate and their appointment lasted two years. Also during this period ambassadors received new items from Venice, sometimes upon request of the Ottoman court.

[30] Bertolini 1881: 137.

[31] Tait 1979: 132-133, no. 229.

[32] Petricioli 1973: 90, f. 20. Lazar and Willmott 2006: 47, pl. 11-12 (here called *tazze*). Filep and Jurdana 2013: 143, no. 103 (here called tray). Šelendić and Radić Rossi

together with thousands of manufacts and raw semifinished products of the cargo of the Venetian ship *Gagiana* (official name *Gagliana grossa*), sank off the islet of Gnalić, along the Croatian coast, in 1583 (Fig. 4). The glass findings here recovered are significant examples of Venetian export to the Levant. Starting from 1967, several rescue campaigns were organized. In 1973 and in 1975-76 Astone Gasparetto, Venetian glass historian, published two articles following his researches in the Venice Archivio di Stato, where he could find the name of the Venetian sunk ship and, consequently he could explain all the details of the occurrence[33]. Recently, further archival researches led to the discovery of some documents proving that the Sultan Murad III requested five thousand round window panes (*rui*) for his harem to the Serenissima, through the Venetian ambassador, Giovanni Francesco Morosini, in June 1583. Moreover, these window panes, with other artefacts and glass items, were loaded on the *Gagiana*, the latter for the Istanbul market. Some months later, the Venetian Senate was informed of the *Gagiana* shipwreck and promised to send a new shipment of glass panes to the Sultan[34]. Several round window panes (*rui*), over 700 pieces, of various sizes, plain or with a mould blown pattern, were recovered[35]. Murano *rui* were in fashion in Istanbul, proofed by findings, in archaeological excavations in the city, at Marmaray-Sirkeci, with other Venetian vessels *a fili* (bottle necks, 5 *inghistere* feet and an oil lamp)[36]. The majority of other glass items

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221: 166, f. 8. Gasparetto wrongly identifies such trays with the *tapsi* mentioned in old Venetian papers, Gasparetto 1975-76: 438, 442 no. 57.

[33] Gasparetto 1973: 79-84. Gasparetto 1975-76: 421-446. Sofija Petricioli first published some items recovered from the wreck (Petricioli 1973, pp. 85-92) and Robert H. Brill, research scientist in the Corning Museum of glass, analyzed the fragments of six items, concluding: «The glasses are generally quite uniform in composition, so much so, in fact, that all appear to have been made in the same factory» (Brill 1973: 93-97). Again, in more recent times the catalogue of the glass recovered from the wreck was committed to Irena Lazar and Hugh Willmott, scholars not deeply familiar with Venetian glass.

[34] Filep and Jurdana 2013: 75-88. Radić Rossi, Nicolardi and Batur 2016: 243-247, 247, nota 53. Radić Rossi, Nicolardi, Bondioli and Batur 2021:11-24. ASVe, *Senato, Dispacci degli ambasciatori e residenti, Constantinopoli*, f. 17, cc. 277v-278r; *Senato, Deliberazioni Costantinopoli*, reg. 6, ff. 138r-139r.

[35] Lazar and Willmott 2006: 70-72, figs. 89-93.

[36] Canav- Özgümüş 2009: 353-358, fig.12; Özgümüs and Kanyak 2015: 325-326, figs.1-7.

recovered in Gnalić are in clear glass. Some are diamond-point engraved, mould-blown, a *retortoli* and a *fili* and ice-glass. A few are coloured: clear blue or decorated with red and white spots, opaque red and chalcedony. While the window panes were clearly intended for the Ottoman Sultan, on the contrary, the other glass items, including small circular and rectangular mirrors (over 500), were most probably intended for the market on Constantinople[37]. Also Venetian window panes, however, were shipped to Constantinople to be sold in the city market. For instance, in 1540 Guglielmo da Sommaia, Florentine merchant in the Ottoman capital city, bought nine thousand six hundred eighty window glass panes from the glassmaker Nicolò dall'Aquila, through the Florentine middleman Francesco Lioni in 1540[38].

In the list of the glasses supplied to the *bailo* Vincenzo Gradenigo by Pietro Ballarin, owner of a renowned glassworks at San Marco sign, in 1599, are included nine *mersori.* They are diamond-point engraved and gilt (*tagiadi d'oro*) or clear and entirely gilt and cold painted on both sides («*chiari tutti d'oro coloridi dentro e fuori*»), all of them with foot («*con il pie*»)[39].

«Achanini»

Among the glass vessels *de Damasco* in Venetian inventories of the 14th century we can mention the «*chatino vitreo damaschino*» (*damaschino* glass basin) owned by Andrea de Alemannis *fisico* (internist) in 1382[40]. The 1351 inventory of Marin Falier, who will be elected doge in 1354 and beheaded for attempting a coup d'etat in 1355, includes «*una fiala de vitro cum auro et coloribus*» (a glass flacon or bottle decorated with gold and colours)[41]. It might be a manufact from Damascus as Falier belonged to a wealthy patrician family and travelled in the eastern Mediterranean

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[37] Šelendić and Radić Rossi 2021: 189.

[38] Spallanzani 2023: 102-104.

[39] Molà 2018: 59-61. ASVe, *Senato*, *Deliberazioni Costantinopoli*, filza 9, 6th July 1599 (see the following pages for Ballarin and the appendix for the complete inventory with glass items).

[40] Cecchetti 1887: 53.

[41] Levi 1900: XXXVI-XXXVII, note 2.

Sea. It might be, more precisely, an Islamic glass sprinkler, a *qumqum*, which was used as a rosewater flacon.

Indeed, in Mediaeval centuries the fashion, in Europe, of scented waters and burned perfumes had an eastern origin, waters and solid perfumes were imported from Asia, sprinklers (Fig. 5) and burners were often Islamic products. Venice was one of the main European ports where exotic merchandise arrived. Therefore, it was not strange that a Sicilian merchant lived in Venice and owned «*marasi de vitra de damascu plini di acqua rosa dechi et dui voti*» (sprinklers of Damascene glass, ten full of rose water and two empty). They are mentioned among his belongings in the will of the wealthy and notable Sicilian merchant Pino Campolo, written in Sicilian Italian language in June 1380, few days before his death in Venice. The Sicilian term *marasi,* meaning sprinklers, derived independently from the Arabic *miraššah,* as the Catalan *almorratxa*[42].

The Venetian Procuratori di San Marco, a court whose jurisdiction covered the execution of wills, ordered a copy, written in Venetian Italian language, of the inventory included in Campolo's will. In this version of the list we find «*marasie de acqua ruoxa*»[43]. This proves that the term *marasia* was clearly understandable by Venetians even if it did not belong to their lexicon. Actually, at least from the 15th century Venetians called the rose water sprinkler *acanino* or *achanino*, a name which derived from the Arabic al-qinnïna, meaning flask or flacon. As far as we know, this term was already used in Venice in the first half of the 15th century. Indeed, in a Venetian handbook of seamanship dated 1444-1445 are mentioned «*aquamine 5 d'aqua ruoxa*» among the presents, that the captain of every Venetian ship which arrived at *Le Schiozes* (Sluis, today in Netherlands), then belonging to the Duchy of Burgundy, had to give to the chief of that important port[44].

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[42] Caricausi 1883: 67-68, 81, 279-280.

[43] Lombardo 1969: 61. Eminent archivist and scholar, Antonino Lombardo published Campolo' s will, when he had already transferred from Venice to Rome, where he was allowed to bring the Campolo folder (ASVe, *Procuratori di San Marco de Citra*, Busta 118, inv. 394/2, Commissaria Campolo), which is now kept in some unknown shelf in the Archivio Centrale dello Stato, Rome. Luckily, the photos of the inventory in Venetian language are kept in the Archivio Lombardo in the Archivio Centrale dello Stato, Rome (Busta 2, Fascicolo 1, Fascicolo 5, Inventario in dialetto veneziano dei beni di Pino Campolo).

[44] Pittarello: 2006: 150. The Duke had to receive «*aqua ruoxa zuche 4*» (four big

Glass sprinklers similar to Islamic prototypes are mentioned in the inventory (1508) of the renowned Dragan glassworks at Murano: «*acchanini grandi et mezzani lavoradi a la damaschina*» (sprinklers of large and medium size with Damascene decoration)[45]. The production of glass sprinklers in Murano is confirmed by other archive sources, by a few pieces housed in public collections, by archaeological findings in Venice (city and lagoon), in Padua, and by Italian paintings, mainly of Veneto area (Figs. 6-7). Some of them, dated to the first decades of the 16th century, are enamelled and gilt as the *achanino*, recovered from archaeological excavations of Santa Chiara Convent (Padua), and the two sprinklers, with Nuremberg families coat of arms, housed in the Victoria & Albert Museum and in the MAK, Wien; others, just colourless or transparent with greenish hues, were recovered in Venice (Rialto, Giudecca, San Marco), in the lagoon and in Padua (Santa Chiara convent), dated to the 16thcentury[46]. These sprinklers, produced by Murano glassworks and used by Venetians alongside the sixteenth century, show a globular body, sometimes flattened, one constriction or two at the base of its long neck and a very narrow mouth and they were also shipped to the Levant, as attested by two archive sources. One is the «*Memoria di vetrerie che si cava di Murano*», a report, which is undated, but considered a document of 1592 by scholars, and unsigned, written by an unknown Tuscan, resident in Venice. It was found among the correspondence of the Medici's secretary, Lorenzo Usimbardi[47]. This *Memoria* is particularly interesting in showing the products of Murano's glassworks, which encountered the taste of foreign markets with different shapes for each country. Among the favourite types shipped to the Levant, Constantinople and Alexandria of Egypt, we can identify sprinklers for scented waters i.e. *achanini*. Indeed, the *Memoria* clearly reports that long neck bottles with lattimo threads were shipped to Constantinople; glasses similar to the ones sent to Constantinople and some small bottles with thin and long neck were sent to Alexandria of Egypt[48]. These were similar to an example housed

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pumpkin-shaped bottles of rosewater) and other gifts sent by the Signory of Venice.

[45] Zecchin 1990: 55.

[46] Rialto: inv. no. ve IG erP 00 sP. Minini 2009: 173. Minini 2011: 150. Ferucci, Barovier Mentasti and Tonini 2020: 98-103, figs.10-11;14-15.

[47] Corti 1971: 649-654.

[48] Corti 1971: 653-654: «*Per Costantinopoli … Guastade con il collo lungho con*

in the British Museum (Fig. 8) and the one depicted in the *Bichierografia* (1604) by Giovanni Maggi. Moreover, *achanini*, as well as *mersori,* are listed among the glass items, made by the Murano glassmaker Pietro Ballarin, in 1590 and 1599, brought by two new Venetian ambassadors in Constantinople, Girolamo Lippomano (1589-1591) and Vincenzo Gradenigo (1599-1600), as diplomatic gifts for the Sultan, Mehmed III, and his court[49]. Glass vessels were highly appreciated and several times specifically requested by Islamic authorities, therefore the amount of the glass objects, sent as diplomatic gifts, was considerable. In the first Ballarin's list, dated April 1590, are recorded nine hundred twenty six glass items and in the second one, an archive paper of the *Ufficiali alle Rason Vecchie*, Venetian state office in charge of diplomatic gifts, dated June 1599, approximately one thousand and two hundred vessels are numbered. In the two Ballarin's lists are mentioned clear and gilt sprinklers («*acanini chiari indoradi* or *doradi*, *acanini indoradi*, *acanini chiari*»). The export of *acanini* to the Levant is also confirmed by Gnalić findings. These are plain, or ribbed or with white trails (Fig. 9)[50].

The assumption of some scholars that this «is not a form typically found in European contexts although their exact provenance is as yet uncertain»[51] is contradicted by the above mentioned Venetian examples and archive sources. Also, the hypothesis that these sprinklers were transported with their contents of scented waters is not persuasive[52]. These glass vessels were made in Murano, shipped to Constantinople, to be filled with scented waters, usually damascene rose waters, and to be sold in the city's market or sent back to Europe. As well, the assumption that these sprinklers were «designed so that its narrow top could easily be snapped off and the contents dripped out»[53] is not sure. Probably the

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laticino biancho … In Alessandria d'Egitto vetreria simile a quella di Costantinopoli … Alcune guastade pichole con il collo sottile e lungho». Barovier Mentasti and Tonini 2014: 9-13, fig. 2.

[49] ASVe, *Dispacci degli Ambasciatori al Senato: Costantinopoli*, filza 4, folios 104-105v. 1569. Carboni 1986: 147-166. Ballarin 1590: cfr. Zecchin 1989: 166; Ballarin 1599: Molà 2018: 59-61 and ASVe, *Senato*, *Deliberazioni Costantinopoli*, filza 9-6th July 1599 (see appendix for the complete inventory with the glass items of 1599).

[50] Lazar and Willmott 2006: 124-125.

[51] Lazar and Willmott 2006: 5. Šelendić and Radić Rossi 2021: 167.

[52] Lazar and Willmott 2006: 73.

[53] *Ibid.*: 54.

irregularity of the top is related to the technique of the glassblower to make this type of vessel. After having hot shaped the sprinkler, the master pulled the tip of the vessel, already attached to the pontil, as much as possible. Then he broke the upper part of neck lightly hitting it with an iron tool[54]. This might produce an irregular rim.

The glass vessels listed in both Ballarin inventories were diamond-point engraved (*tagiadi*), *inquartadi* (diamond-point engraved with a specific design), gilt (*d'oro* or *indoradi*), silvered (*d'arzento* or *inarzentadi*), cold painted (*coloridi*), with pine-cone patterns (*a pigna*). Few were without decorations (*schietti*) or decorated white canes (*a fili*). Some were coloured: blue (*azuri*), aquamarine (*acqua marina*) and yellow (*zali*). When the colour is not mentioned, the items were probably made of colourless glass. In the list of 1599, other types and techniques, such as ice-glass (*giacio*), big ribs (*a costoni*) and applied strawberry prunts (*fragole*), are listed. Moreover, these two documents offer a repertory of the Venetian glass items sent to the Levant, the main export market for these goods. There are different kinds of vessels, some of them are Islamic types and others Italian ones. Among the latter, are mentioned: *inghistere* which are bottles with globular body and long neck, frequently depicted in Renaissance Venetian and Italian paintings; *cesendelli*, i.e. cylindrical oil lamps, often displayed, in Italy, in front of sacred images and sent to the Levant for mosques, such as the ones s*chietti* and *a redeselli*, ordered by the vizier Sokollu Mehmed Pasha, alongside with Islamic style lamps, at the time of the resident ambassador, Marcantonio Barbaro, in 1569, and later, long diamond-point engraved «*cesendeli tagiadi e d'oro grandi da moschea*» mentioned in Ballarin's list (1599) or round shaped oil lamps (*cesendelli tondi*) listed in another document, dated 1602 (Figs. 10-11)[55]; *ziati,* i.e. beakers; *cadini* with *bembi*, i.e. basins with ewers; «*vasi da fiori*», i.e. vases for flowers; «*vasi a grapele*, *zame*, *sotocope*, *canevette, mersori* and *quari*».

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[54] We thank Andrea Zilio glassblower in Murano.

[55] ASVe, *Senato, Deliberazioni Costantinopoli*, Filze 9 (18th or 28th June 1599) see appendix and London, National Archives, Public Record Office [pro], 30/25/18, file 5 (23th November 1602).

«Vasi da Fiori con pipii»

In both lists, related to Pietro Ballarin, are mentioned vases for flowers with spouts, some of them also with handles. In the first one (1590), are recorded: «*Vasi da fiori con pipii inquartadi; Vasi detti con pipii et maneghi inquartadi*»; in the second one (1599): «*Vasi da Fiori tagiadi e d'oro coloridi con 3 e 6 pipii*» and «*Vasi da Fiori con tre manegi e 3 pipij*»[56]. The term «*tagiado con il diamante*», or, more simply and frequently, *intagiado* or *tagiado*, refers to the technique of engraving glass surfaces with a diamond point, invented by Vincenzo d'Anzolo del Gallo at Murano. He obtained a ten years patent from the Venetian government, the 3rd August of 1549, to apply this kind of engraving on blown glasses[57]. We assume that the word *inquartadi* has to be connected to the Italian expression «*arme inquartade*» (quarterly heraldic shields), i.e. shields divided by means of two intersected lines (one horizontal and the other vertical, or both diagonal), in order to create four different fields or quarters to accommodate different coats of arms; some Italian maiolicas vessels of the 16th century, especially dishes, are ornamented with a radial partition of the surface in sectors, each decorated with different patterns and such decoration is called *a quartieri*[58]. The word *inquartadi* is found for the first time in Murano papers, as far as we know, in G. Antonio Zanchi dal Castello's glassworks inventory (1578). Here the word is used in reference to «*Goti intagiadi e inquartadi d'oro*»[59] (diamond-point engraved and gilt quartered beakers or goblets). Similarly, Ballarin's *inquartadi* vases with spouts, may have been diamond-point engraved with horizontal and vertical lines in order to create different fields, inside ornamented with patterns obtained by the same technique. Therefore, we may identify these vases with a few pieces housed in Italian collections. Some of them are only diamond-point engraved, others are also gilt and cold painted, as the ones, listed in 1599, as *tagiadi* and *d'oro coloridi.* Some of them

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[56] The word *pipio* (singular) and *pipii* (plural) in Venetian language means, like *pippio* in the 19th century Italian language tubular spout and is still used today in Murano glassworks.

[57] Fifteen years early, he applied this technique on mirrors: Gallo 1953: 755. Zecchin 1990: 66.

[58] Barovier Mentasti and Tonini 2023: 11-12.

[59] Zecchin 2009: 33.

have only tubular spouts, others the same spouts and also handles or only handles. Examples are kept in: Florence, Museo Bargello (Fig. 12); Bologna, church of San Giovanni in Monte; Padua, Museo di Scienze Archeologiche e d'Arte, former Marco Mantova Benavides (1489-1582) collection; Urbino, archaeological find from Santa Chiara Convent; Gnalić, Gagiana shipwreck find[60]. Moreover, several Italian figurative sources of the last 16th and early 17thcenturies attested the diffusion of this type of vase, documented also in one archive paper, related to the Florentine family, Strozzi, prestigious bankers. It is remarkable for the drawings of glass vessels connected to the inventoried items. Among them, a vase with spouts, is clearly depicted and described[61]. Therefore, this type of vase has to be considered an Italian design, which influenced the shape of glass vessels made elsewhere.

Finally, we have to take into account that more than one hundred glass vases for flowers with three or six tubular spouts (*pipij*), in small and big sizes, are recorded in the list of 1599, some of them diamond-point engraved. Their number has considerably increased in comparison with the 20 (twenty) of this kind, in the first Ballarin inventory (1590). Vases with spouts might have been increasingly in fashion in the Levant, judging from an Ottoman figurative source of the early seventeenth century where a vase for flowers with spouts, decorated with patterns similar to the ones of Iznik ceramics, is depicted (Fig. 13)[62]. This Ottoman watercolour is contained in an album of fifty-nine paintings of Turkish costumes, which also includes floral and vegetal decorations, dated 1618 and signed «P.M.», i.e. Peter Mundy. He was a British merchant, living in Constantinople in the years 1617-1620, employed by the Levant Company. His album, housed in the British Museum, is a complement to his travel journals in the Near and Middle East[63].

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[60] Barovier Mentasti and Tonini 2013: no. 36. Barovier Mentasti and Tonini 2023: 34-37, figs. 15-17-18. Lazar and Willmott 2006: 51, fig. 60.

[61] The Strozzi inventory with drawings, drawn up in 1742, shows some earlier glass objects such as «*2 due vasetti da Fiori alti con tre beccucci con collarino e bocchette turchine, tutto di cristallo*» which correspond to glass vases for flowers with tubular spouts of the late 16th- early 17th centuries: Spallanzani 2024: 85-96, fig. 2. Other figurative sources: Barovier Mentasti and Tonini 2013: 46, no. 53; Barovier Mentasti and Tonini 2023: 10, 35, fig. 16.

[62] Iznik ceramics, dated 1590-1600: Victoria & Albert Museum: inv. no. C.2044-1910.

[63] Inv.no. 1974, 0617,0.13.47.r, Series, *A briefe relation of the Turckes, their kings,*

We have to take into account that diamond- point engraved and gilt vases with spouts for flowers were also sent to Morea, part of the Venetian republic, modern Peloponnese, in 1605 and 1607, with others glass vessels[64].

«Vasi da Fiori indoradi a pigna; Vasi da fiori indoradi a pigna coloradi»

These types of bouquètieres are only mentioned in the first Ballarin document (1590). They are decorated with a pine-cone pattern gilt and painted or obtained with a mould and highlighted by gold. Some of them are probably colourless and gilt, others are gilt and cold painted.

«Vasi a grapèle»

Vases *a grapèle* are listed in both documents, related to Pietro Ballarin. In the first one (1590), «*Vasi a grapele inquartadi grandi*» (big vases a *grapele* diamond-point engraved with particular patterns) and in the second one (1599), «*Vasi a grapela con coperchio a fragole doradi*» (lidded gilt vases with *grapele* and strawberry prunts) are mentioned. We don't know the shape of these vases but the word *grapele* gives some information regarding a feature of these vessels. This term occurs in the description of two 'Magdalene glass vases' characterized by a handle *a grapella*, mentioned in a late sixteenth century inventory of the Buselli's glassworks at Murano[65]. *Grapele,* plural, and *grapella* or *grapela,* singular, derive from the word *grapelus,* which means iron hook or staple[66]. Furthermore, a 'Magdalene glass vase' is depicted by Dominíkos Theotokópoulos, called El Greco, in one of his canvas, *Penitent Magdalene* (1576-1577), painted

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Emperors, or grandsigneurs, their conquests, religion, customes, habbits, etc: https://www. britishmuseum.org/collection /object/ W_1974-0617-0-13-47-r Accessed January 20, 2022; Bate and Thornton 2012: 30. Scarce 2020: 109-132.

[64] ASVe, *Senato Deliberazioni Costantinopoli*, filza 11 (September/July1605), filza 12 (18th July 1607).

[65] «V*asi della madalena con doi [?] e manego a grapella*»: Zecchin 2003: 25.

[66] *Glossarium mediae et infimae latinitatis* 1884: vol. III: 556. Pandiani 1915: 273, 365.

just after his sojourn in Venice and kept in the Museum of Fine Arts of Budapest. This vase is similar to a reliquary, housed in Museo del Vetro, Murano, coming from San Martino Church at Burano[67], a village in the Venetian lagoon. Both vessels show curled handles, which might resemble a hooks, surmounted by strawberry prunts on their lower ends. The latter were solid glass decorations with different patterns, such as raspberries or strawberries, or larger medallions with stamped lion, male human or Medusa heads[68]. We don't know the precise shape of the vases a *grapele*, made by Pietro Ballarin and sent to Constantinople. Nevertheless, we know some features of these glass vessels as the handles, which were curled, and the prunts, similar to strawberries. We suppose that «*vasi a grapele*» might resemble the Burano reliquary and similar blown vessels (figs. 19-20).

«Cadini e cadinelli con li su benbi»

Other glass vessels mentioned in the two lists are *cadini* and «*cadineli con li sui benbi* or *bembi*». We identified the *bembo* as an ewer, often related to a basin (*cadin*), such as in one inventory related to the glass entrepreneur Nicolò di Francesco Savonetti (1599), in which an ewer for the large crystal basin («*bembo per il cain grando de cristallo*») is listed[69]. Basins (*cadini*) and ewers (*bembi)* are tools, employed, mainly, during Italian banquets or religious ceremonies, to wash hands, often with scented waters[70]. The ones mentioned in the two lists related to Pietro Ballarin, are gilt, cold painted, diamond-point engraved, *inquartadi*, i.e. diamond-point engraved with specific patterns, as the vases for flowers before mentioned, or with pine-cone pattern, obtained with a mould and then highlighted by gold or silver («*bembi indoradi a pigna*» and «*inarzentadi a pigna*»). These are usually connected to their basins as in

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[67] Barovier Mentasti and Tonini 2023: 78, fig. 10; Stocco 2023: 87-97. The handles (*grapele*) of the Burano reliquary are partially damaged. Other similar vases housed in the Kunstsammlungen Veste-Coburg, Museo della Floridiana-Naples, Wallace Collection-London and Museum of Decorative Arts-Prague have similar handles well preserved.

[68] Barovier Mentasti and Tonini 2019: 11.

[69] Zecchin 2003: 25.

[70] Barovier Mentasti and Tonini 2015: 3-15.

the list of 1599 («*cadin mezan con il suo benbo inquartado d'oro*»). The origin of the word *bembo* is unknown. Until now we have no clues to connect it to the Venetian patrician family Bembo or to the humanist and cardinal Pietro Bembo (1470-1547), even if they had shown some interest in Venetian glassware[71]. Anyway, a few Murano glass vessels derive their names from contemporary eminent personalities in Venice, such as the *aretini*, referring to the Tuscan writer Pietro Aretino (1492-1556)[72]. In the 17th century, the term *bembi* continued to be used in Murano glassworks inventories. Very rarely the term *brocca* or *brondin*, a lexical variant of *bronzin*, similar to bronze ewer, is found in two lists of glass items sent to the Levant[73]. The word *brocca* is still used today in Italian language and is found in a later glassworks inventory of the *quondam* (late) Ettore Bigaglia (1714), where are also listed some glass vessels in Turkish style[74]. Among these items, a coloured filigree basin and a cover for a basin are listed. As far as we know, an ewer and a basin in Eastern style, in opal glass (*girasol*), made in Murano, are housed in Copenhagen, Rosenborg Castle, belonging to the collection of the king Frederik IV, dated to the years 1708-1709[75].

«Zame»

In the two Ballarin's lists other vessels are called *zame*. Some are diamond-point engraved with particular patterns (*inquartade*). Others are «*zame d'arzento a pigna coloride*» (pine-cone shaped, silvered and cold painted); some with foot, others with lid. *Zame* are mentioned in an earlier Venetian document, dated 1424 as: «*cietos qui vocantur zame de foza*», literally translated: beakers which are called *zame* of/for style[76]. Therefore,

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[71] *Ibid.*: 7-8, note 8.

[72] Zecchin 1989: 182. Barovier Mentasti 2019: 327-329.

[73] List 17th November 1604: «*cadini diversi n. 8*, *brocca n. 2*»; list 23rd November 1602: «*Cadini diversi nove*, *brondini diversi sei*». Both London, National Archives, Public Record Office [pro], 30/25/18, file 5 and Public Record Office [pro], 30/25/18, file 5.

[74] Zecchin 2015: 57,61.

[75] Boesen 1960: 82.

[76] Zecchin 1989: 142. We do not know the precise meaning of *zame*, while *de foza* means: of fashion, of style.

we know they are beakers or goblets but their form is unknown. Some of them have '*a pigna*' (pine-cone) pattern, which might be obtained by blowing in a mould. Large and medium pine-cone moulds, alongside small ones, which were used for different vessel types and sizes, are recorded in Murano glassworks inventories (1569, 1578)[77]. As far as we know, some pine-cone shaped goblets made in filigree, *a retortoli* or *a fili* are housed in a few public collections. Some scholars consider such goblets to be Venetian; others are uncertain, attributing them either to Venice or to *Façon de Venise*[78].

«Canevette»

These glass vessels are mentioned in a later inventory of the first decade of the 17th century. The glassblower, Battista Bigaglia, made «*veri con oro*» (several gilt glass vessels), «*lastre schiette colorade*» (coloured plain window panes), *bozze* (big bottles) and *canevette*, as diplomatic gifts of the Serenissima, related to the new resident ambassador in Constantinople, Cristoforo Valier, in 1611[79]. The *canevette* derive their name from *caneva* which means cellar in Venetian dialect. Therefore, they were containers filled with snow, ice or cold water. Small bottles or flacons containing wine were put in the vessel itself to cool them. In archive papers of the 17thcentury, such bottles are called *pestoncini* or *bozze*[80]. Probably the shape of the *canevette* was different from the one of the wine coolers (*renfrescadori*), simple large bowls with or without foot. Perhaps they were similar to the later Venetian cylindrical *canevette* with lid.

«Mastrapà»

Several *mastrapà* or *mastrapani* (plural form of *mastrapan*), whose name derive from the Arabic word *mašraba*, meaning tankard, are listed

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77 Zecchin 2019: 78-79, fig. 9.

78 Saldern 1995: 212, no. 200. Bauer and Gabbert 1980: 77, no. 148.

79 ASVe*, Senato, Deliberazioni Costantinopoli*, Filza 12 (5th November 1611).

80 Barovier Mentasti and Tonini 2015: 19-29, figs. 6-7.

in the two documents, related to Pietro Ballarin, and in the *Memoria di vetrerie che si cava di Murano* (1592). In the latter archive paper *mastrapani* are described as lidded tankards or jugs «*bochali di vetro coperti, detti mastrapani*»[81]. These are mentioned in several inventories of Murano glassworks from 1483 to 1590[82]. Their shape is characterized by a globular body and a large cylindrical neck, without spout, and are clearly inspired by Eastern prototypes such as Islamic inlaid brass tankards of the 15th- early 16th centuries (Fig. 14)[83]. *Mastrapani* became a Venetian and Italian product. Some Venetian glass vessels of the first half of the 16th century, characterized by this form, are housed in public collections. These are made of crystal, blue glass or *lattimo* (white opaque glass), gilt and enamelled with different patterns or mythological subjects, or in filigree and with white or turquoise canes[84]. Moreover, a jug, clearly shaped as the Venetian *mastrapà*, made with two rare type of opaque glass, one translucent white (*marmorino*) and the other turquoise, enamelled with *candelabra* and arabesque patterns, is kept in the Grand Curtius Museum, Liège (Fig. 15).

Perhaps, the one thousand six hundred «*bocaleti da pè*» (small tankards with foot) exported to Constantinople by the Venetian Giacomo Badoer in 1437, before the Ottoman conquest, were made in the shape of eastern *mastrapà*[85]. The identification of the shape of glass tankards mentioned in later papers is quite sure. Several filigree (*a redesello*) *mastrapà* are listed in an inventory related to the glassmaker Andrea Ferro in 1569, to be

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[81] Corti 1971: 653-654.

[82] Barovier Mentasti and Tonini 2014: 9 -11.

[83] *Ibid*.: 9-14. Several Eastern vessels similarly shaped are documented from Medieval times: enamelled and gilded clear glass tankard of the second half of the 13th century made in Egypt or Siria, formerly in the collection of Batsheva de Rothschild: *The Collection of The Late Baroness Batsheva de Rothschild* 2000: 58-65. Turquoise opaque glass tankard made in Syria, 12th13th century: Tait 1991: fig. 160. Syrian blue glass tankard of the first half of 14th century in Ashmolean Museum, Oxford (inv. no. EA.1977.9). Metal *mashraba* of the 15th century in the V&A: inv. no. 433-1876; one, inv. no. 750-1889, originally, had a handle; Berlin Islamische Kunst Museum (inv. no I.3606, I.6052). Chinese porcelain of the 15th century: Carswell 2007, 81-83. Timurid *mashraba* in jade (Museu Calouste Gulbenkian in Lisbon, inv. no. 328). Later metal Islamic *mashraba*, dated around 1550, are kept in Copenhagen, David Collection: Folsach, 2001: 330, nos. 531-532.

[84] Barovier Mentasti and Tonini 2014: 12-13.

[85] Dorini and Bertelè 1956: 136. Zecchin 1987: 242.

sent to Constantinople and to be sold in the city market, and other gilt «*lattimo mastrapà*» («*de latimo doradi*») are reported in Zanchi's dal Castello glassworks inventory (1577)[86]. Later, in the two Ballarin's lists, ninety-six, in 1590, and one hundred eighty-one, in 1599, *mastrapani* are included. These are colourless, light blue (*azuri*), silvered (*inarzentadi*), diamond-point engraved and gilt («*tagiadi e d'oro*»), pine-cone shaped and entirely gilt («*a pigna tutti d'oro*»), made of ice-glass («*a giazo*»), gilt with garlands («*a zogia … doradi*»), with strawberry prunts («*a fragole*»), with frames («*cornise*»), illuminated with gold («*miniadi d'oro*»)[87]. Many are lidded. We may identify some glass tankards recovered in Gnalić as *mastrapani*[88]. These are of clear glass, undecorated, with opaque white trailing, with diamond-point engraving or in «*vetro a fili*» (Fig. 16)[89]. In the earlier decades of the 17th century, *mastrapà* continued to be shipped to the Levant with other luxury glassware, as attested by later papers in the State Archive of Venice. Among them, a document related to the new *bailo*, Francesco Contarini (1602) mentions «*mastrapani dorati a stelle, et lune*»[90] (gilt tankards or ewers decorated with stars and moons). The star and the crescent, Ottoman symbols, never decorated the Venetian glass vessels made for the European market. Murano blowers made *mastrapà* still in early 18th century. Indeed, a transparent red *mastrapà* (lidded)

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[86] ASVe, *Notarile Atti*, busta 8256, notaio G.B. Monte, cc. 30r-31r, esp. 30r. We are grateful to Luca Molà who kindly sent us a copy of this archive document. Zanchi in Zecchin 2009: 34.

[87] Garlands (*a zogia*): Barovier Mentasti and Tonini 2019: 23-25. As to frames (*cornise*), iceglass buckets with gilt frames («*sechieli a giacio cornisadi d'oro*») are listed in Bortolo d'Alvise glassworks inventory (1569): Zecchin 2009: 3. An example with *cornise* in Musei Civici Brescia: Barovier and Tonini 2012: 97, no. I/21.

[88] Their form is of Islamic origin and not Northern European as wrongly supposed by the authors of Gnalić publication: Lazar and Willmott 2006: 41, fig. 43, pl.7:1; Lazar 2015: 271. The same can be said for goblets called by the authors 'ladder' stems that are considered an English product: Lazar and Willmott 2006: 35, S6, S6a, fig. 34. Their assertion is contradicted by an archaeological stem find, recovered in Rio dei Vetrai at Murano, a reliquary with similar stem, originally from San Pietro Martire church in Murano, and other Italian finds. Therefore, these glass items are Venetian products and their stems might be called 'diamond' (*a diamante*): Barovier Mentasti, Tonini 2019: 18-19, figs. 19-20.

[89] Lazar and Willmott 2006: 40-42, 75-76, 114-115. Filep and Jurdana 2013: 140.

[90] ASVe, *Senato*, *deliberazioni Costantinopoli* Filza 9 (7th June 1602).

and a yellow opaque one are included in the glass collection donated to Frederik IV of Denmark by the Signory of Venice in 1708-1709 and housed in the Rosenborg castle, Copenhagen[91].

In conclusion, the Venetian *mastrapà* derived from the Islamic *mašraba* and became a Murano glass type used in the city of Venice and in other regions. In the 16th century *mastrapan*i were shipped also to Constantinople. Sometimes their shape lightly changed, as does the shape of the Gnalić pieces, which have a shorter neck. They were jugs and their function as tankards for drinking beer, proposed by Irena Lazar and Hugh Willmott[92], is historically unfounded because beer was not in use neither in Venice nor in eastern countries. Moreover, they would have been unfunctional as drinking glasses.

«Oche»

Other vessels, recorded in the two Ballarin's lists, are «*occhе con cenbola dorada con fili*; *oche grande con cenbola dorade con fili*» (gilt 'geese' with base ring and applied threads), «*ochete con fili*» (simpler small 'geese' with applied threads) and «*ocha granda schieta*» (a big plain 'goose'). The term *oche* is found in other Venetian documents regarding glass items sent to the Levant; they were probably made explicitly for this market, as suggested by Bortolo d'Alvise's glassworks inventory (1569) in which «*oche turchesche*» ('Turkish geese') are included[93]. They are also mentioned in an archive paper of glassware belonging to the patrician Vincenzo Dandolo, who was appointed consul in Aleppo, Syria, in 1599. A list that evidently contains gifts to be delivered to the local authorities upon his arrival. In this list are included no less than twenty-four «*hoche doro*», i.e. gilded geese[94]. In 1602, «*ochete dorate a stelle, et lune*» (small geese gilt with stars and moons) were part of luxury glass vessels, related to the arrival of the new *bailo*, Francesco Contarini, at

[91] Boesen 1960: nos. 80, 82.

[92] Lazar and Willmott 2006: 40. Lazar 2015: 271.

[93] Zecchin 2009: 33.

[94] Venice, Biblioteca del Museo Correr, Mss. Dandolo, Provenienze Diverse, C-943, doc. 205. We thank Paolo Zecchin for the transcription of this inventory. Barovier Mentasti and Tonini 2013: 218-219.

Costantinople[95]. The word *oche* almost certainly did not derive from the homonymous measure of capacity or weight in use in the East, *oca* or *ocha* od *oka*, because in 1589 in Medea Savonetti's glass furnace, «*oche picole*, *mezane chiare lavorade*» (small and medium size, clear and hot decorated 'geese') are found. Therefore, attesting different measures of capacity[96]. Moreover, Marco Barovier's inventory (1636) mentions a large number of gilt *oche* as well as a few small *oche* («*ochette dorade*»)[97]. An important clue, regarding the shape of these glass items, comes from a document of the year 1569 mentioning «*inghistere oche a redesello et lavorade de retortoli et fili*» (*oche inghistere a reticello*, *a retortoli* and *a fili* decorated). Indeed, the *inghistere* were bottles with a large body and long neck[98]. Therefore, the *oche* were probably bottles with a particular mouth and neck resembling some features of a goose (Fig. 17). We think, that alternatively, *oche* might be also identified with a different type of bottle. Among the Gnalić findings, some blue bottles, with a particular mouth, were recovered. Similar shaped metalware vessels were in fashion in the Levant, judging from some figurative sources, such as some Persian miniatures[99]. Therefore, these bottles, characterized by a globular body, a constriction (not always) at the base of its long neck ending with a typical large mouth, were appreciated in the Eastern world and their presence in a Venetian ship sent to Constantinople is not surprising. Bottles similar to the Gnalić ones, missing their bodies, were recovered in the Venetian lagoon, as scattered finds (Fig. 18). These findings contradict the hypothesis of some scholars who consider that these vessels, were manufactured in the West for Eastern markets or in the Islamic world, but exclude the possibility that they originated in Murano; these scholars also consider that a similar blue bottle with coloured glass blobs «cannot be paralleled by examples from known centres of Western European glass production»[100]. Anyway, we know a few scattered finds, retrieved

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[95] ASVe, *Senato, Deliberazioni Costantinopoli,* Filza 9 (Contarini 7th June 1602).

[96] Pasi 1503: s.p. Zecchin 1990: 104.

[97] Zecchin 2020: 124-125.

[98] ASVe, *Notarile Atti*, busta 8256, Notaio G.B. Monte, cc. 30r-31r, esp. 30r.

[99] Illustrated manuscript Shahnamah, 1648, Windsor, Royal collection (inv. no. RCIN 1005014).

[100] Lazar and Willmott 2006: 60, 62-64, 65, 85, 131, figs. 80-81. Lazar 2015: 275; fig. 4. Šelendić and Radić Rossi 2021: 168. Another glass scholar published similar

from the Venetian lagoon, which show similar coloured blobs. We have to underline that Murano glass vessels, sent as diplomatic gifts by the Serenissima, were also coloured (blue, yellow, acquamarine), as attested by archive papers, such as the Ballarin's ones. Another assumption of these scholars looks not so consistent. This regards once again the origin of vessels made of red opaque and chalcedony glass retrieved from the Gagiana's wreck, which they consider not of Venetian production[101]. Red opaque glass was in production in Murano as attested by a bowl of opaque red glass, found in Padua, in Santa Chiara's convent from archaeological excavations, dated to the second half of the 15th- first half of the 16th century, by scattered findings in the lagoon and by a saltcellar, mentioned in the *post mortem* inventory (1479) of an Italian painter, Antonello da Messina, who sojourned in Venice, while painting an altarpiece for the church of San Cassiano[102]. Chalcedony glass vessels, very expensive items, were produced in Murano, from the time of its invention, in 1460. In the second half of the 16th century, these were probably less common than the colourless diamond-point engraved, gilt or silvered glass items, which were most in demand, judging from the finds of Gnalić shipwreck and from several inventories of the same period. Nonetheless, they were still requested in the Levant. Indeed, in 1590, the Sultana Safiye ordered 75 chalcedony glass vases to be made in Murano and some drawings were sent to Venice showing the models she loved or preferred the most[103].

«Soltanie»

A large number of items in the two Ballarin's lists are *soltanie* (three hundred thirty-five) which are also called, in other documents, *sultanie*, *saltanie* and *sultanine*. A description of a banquet, at the court of the Sultan

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bottles found in Thessalonica, Greece, and he attributed them to Venice: Antonaras 2003: 199-202.

[101] Lazar and Willmott 2006: 60-61, figs. 75, 77.

[102] Publication regarding Venetian glass vessels of Santa Chiara convent is forthcoming. As to Antonello da Messina, who owned four vases of chalcedony glass and two saltcellars, one of lattimo and one of opaque red glass; see: Lucco 2006: 365.

[103] Fabris 1991: 52. Molà 2018: 73-74.

in Constantinople (1533), attended by the *bailo* Nicolò Giustinian, whose letter is reported by Marin Sanudo the Younger (1466-1536) in his Diaries, offers some clues: «*fu portato da bever in sultanie de porzelana una per uno, el bassà principiò a bever, li altri bassà tenevano in mano la soa*» (we were brought a drink in porcelain *sultanie*, one for each of us, the gran visir [Ibrahim Pasha] began to drink, the other pashas held their *sultanie* in their hands)[104]. Therefore, their use is clear, not their shape. These were probably small bowls or goblets or tankards used for drinking. *Soltanie* are, also, mentioned in one of Bortolo d'Alvise's inventories (1569) as «*Saltanie grande con gropo schiete*» (big undecorated *saltanie* with knop), which were probably goblets due to the presence of the knop[105]. Moreover, in 1573, the glass entrepreneur Sebastiano Bortolussi, with the sign '*alla Nave Negra*', sent to the Serenissima territories in Dalmatia: «*24 soltanie grande coperte*» (24 big covered *soltanie*) and «*16 soltanie mezzane*» (16 medium size *soltanie*)[106]. This last archive source, also, might confirm, once again, that *soltanie* were goblets or tankards, sometimes with covers. The covers were used, in this period, in Europe, to preserve the aroma of the wine or to taste it during lavish banquets to avoid poisoning, filling the lid, a task assigned to the constable[107]. A large amount of *soltanie,* two hundred and sixty-four, are included in one of the two Ballarin's lists (1599), compared to the seventy-one of the first list (1590). Some types are similar in the two documents with variants in colours (blue, clear and gilded) and techniques such as diamond-point engraving («*intagiade*» e «*inquartade*»). Some *soltanie* were probably mould blown with a pine-cone pattern, gilded and cold painted, or silvered («*a pigna colorade* or *coloride et indorade*, *inarzentade*»)[108]. In the first list are also mentioned some silvered *soltanie* which are not included in the list of 1599. In the latter, on the contrary, lidded twisted *soltanie* entirely yellow («*tutte zale con coperchio torte*») are mentioned as well as others, yellow coloured or

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[104] Sanudo 1903, vol. 58: col. 637-638. In an inventory, dated 23 November 1602, related to the *bailo* Agostino Nani (The National Archives, London, Public Record Office [pro], 30/25/18, file 5) are mentioned *sultanine dorate*. It has been suggested that these *sultanine* might be small glass raisins: Hanβ 2013: 51. This hypothesis is not consistent.

[105] Zecchin 2009: 33.

[106] Zecchin 2003: 26.

[107] Barovier Mentasti, Borrelli and Tonini 2019: 187-188.

[108] Zecchin 1989: 166; see Appendix.

with yellow strawberry prunts («*soltanie a fragole zale*») and ice-glass. Few had a lid.

«Tapsi»

In the two lists *tapsi* are mentioned. The same word was used both for the singular and the plural. Indeed, the term *tapsi* or *tepsi* derives from the Arab language *tās*, from which also the word *tazza* in Italian language[109]. Which kind of objects are they? Some Venetian documents enlighten us on their use in the Levant. The first one dates to the time (1473-1477) of the sojourn of the Venetian ambassador Ambrogio Contarini, in Persia. He narrated of a banquet, in his *Viaggio ad Usun Hassan re di Persia* (1487), mentioning the use of a copper *tapsi,* sometimes filled with rice, sometimes with wheat soup and containing some meat («*tapsi de rame, hora cum risi, hora cum menestra di formento cum un poco de carne dentro*»)[110]. A page of the *Diaries* by Marino Sanudo, chronicler of the Venetian republic, reports one gift from the Gemen ambassador to the Turkish Sultan, in December 1518, consisting in a gold *tapsi*, «which is a gold vase bigger than a basin»[111]. Later, in the early 17th century, Ottavio Bon*, bailo* in Constantinople, in his book, *Il Serraglio del Gransignore* (1608), describes the *tapsi* as a capacious and big dish («*in un piatto, chiamato da loro tapsi, capace e grande*») used to contain viands during lunch[112]. Therefore, we may suppose that *tapsi* were capacious bowls of different sizes. Some of the *tapsi* listed in the two Ballarin's lists, are colourless or light blue, with gilded or silvered pine-cone pattern, obtained with a mould («*indoradi e inarzentadi a pigna*»); others are gilt and diamond-point engraved («*tagiadi e d'oro*» and «*inquartadi*»). A few, in the second Ballarin's list (1599), are: yellow with applied prunts («*zali a fragole*»), blue with applied strawberries or with blue applied strawberries («*a fragole azuri*») or with garlands («*a zogia*»).

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[109] Basile 2002: 122.

[110] Contarini 1487: f. 4v; I *viaggi in Persia* 1973: 198.

[111] «*In uno tapsi d'oro, zoè un vaso d'oro più grando di uno bacil, nel quale erano posti do balasi come do ovi de gallina et in mezo altro balaso come un ovo di oca*»: Sanudo 1889, vol. 26: cols. 273-274.

[112] *Il Serraglio* 1865: 20.

Other documents of the first decade of the 17th century reveal a consistent presence of Murano luxury glass in Constantinople. Two lists of goods belonging to the Venetian Embassy, in this city, shows a significant amount of glass items. These goods, including glassware, were handed by Agostino Nani, predecessor of the new *bailo* Francesco Contarini, in 23rd November 1602, and by the same Contarini, to the new ambassador Ottavio Bon, in 17th November 1604[113]. In both documents, glass vessels, similar to Ballarin's ones, are mentioned as «*mastrapani*, *sultanine, tapsi, oche, cesendelli, vasi da fiori*», generally gilt or without decorations *(schietti*). Different glass items are also recorded: buckets (*secchietti*, *secchiette*) in 1602 list; mirrors with ebony frames and a particular type of mirrors in a velvet booklet («*specchi in libretto di velluto*»), which were portable pocket mirrors, in 1604[114]. The latter are also mentioned among the goods of a Venetian ship, Zena, going to Constantinople[115]. In Gnalić, handles of buckets and mirrors, which seems to have been unframed, were recovered[116].

In the 18th century, Murano luxury glass items continued to be shipped to Constantinople as highly appreciated gifts of the Venetian republic to the Sultan and his court. The majority of these glass vessels were different from the ones sent in the 16th and 17th centuries. Among them, mirrors with flowers, centrepieces in form of a garden (*deseri*), water pipes or hookahs (*pipe*), candlesticks, chandeliers (*cioche* o *chioche*), all of them decorated with flowers, and even also furniture with glass inlays, are recorded in documents[117].

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[113] Both documents are in London, National Archives: 23rd November 1602, London, National Archives, Public Record Office [pro], 30/25/18, file 5; 17th November 1604, Public Record Office [pro], 30/25/18, file 5.

[114] These mirrors booklets are listed in an inventory of a perfumer shop in Venice, Francesco da l'Anzolo, dated 1547. Ludwig 1906: 321; Zecchin 1990 :167; Zecchin 2018: 329-330.

[115] Gasparetto 1975-1976: 424-425, note 30.

[116] Lazar and Willmott 2006: 66-67, 68. Filep and Jurdana 2013: 142.

[117] Zecchin 2011: 171, 174. Barovier Mentasti and Tonini 2015: 31-38, figs. 8-10. Riggs Miller 1776, vol. III: 283: Anne Riggs visiting Murano glassworks noticed «a complete furniture for a room in the Grand Signior's seraglio … the most remarkable article was the principal sofa» with blue glass inlays and inserted round looking glasses.

Conclusions

Different archive papers of the second half of the 16th and the first two decades of the 17th centuries were taken in consideration, revealing types of Murano glass vessels, much in fashion, sent to the Levant, as diplomatic gifts of the Venetian republic for the Sultan and his court, or as private trades for wealthy members of the Islamic society. These papers are kept in the State Archives of Venice, Museo Correr, Venice, and National Archives, London. There are still unexplored funds, regarding Murano luxury glassware sent to the Levant and Constantinople, which may hold other new information, useful in composing a broader picture of Venetian glass production and export to the Eastern world.

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APPENDIX

Spese fatte per il bailo Vincenzo Gradenigo, 28 giugno 1599

ASVe, *Senato*, deliberazioni Costantinopoli, Filze 9

Gasparo ochialer
Ochiali de cristal de montagna n. 72
Ochiali de cristal bogido con osi sotili et fileto lustro n. 500

Da ser Piero Balarin
Mastrapa tagiadi e d'oro n. 24
Mastrapa a fragole n. 24
Mastrapa coloridi tutti d'oro a pigna n. 3
Mastrapa aqua marina n. 6
Mastrapa chiari doradi n. 3
Ziati con 3 manigi et tre pipij tagiadi e d'oro n. 6

Ziati con 6 pipij tagiadi e d'oro n. 6
Vasi da fiori con 6 pipij n. 5
Ziati con manigi tagiadi e d'oro n. 7
Ziati a fragole coloridi con manigi doradi n. 15

Vasi con coperchio a fragole zali n. 2 de forma più granda
Vasi con coperchio tagiadi e doro dela grandeza sopradeta n. 9
Soltanie tagiade e d'oro con coperchio n. 36
Soltanie a fragole zale n. 18
Vaseti da fiori chiari doradi n. 12

Vasi grandi con coperchio a fragole n. 2
Vasi ditti grandi tagiadi e d'oro con coperchio n. 2
Vaso grando d'arzento colorido con coperchio n. 2
Cesendeli con 6 ruose et 6 manigi schieti n. 4
Vasi da fiori con 3 pipij tagiadi e d'oro n. 38
Mastrapa chiari torti n. 8
Vaseti da fiori chiari doradi n. 16
Soltanie d'arzento coloride n. 8
Cesendeli da moschea longi tagiadi e d'oro n. 2
Soltanie tutte d'oro coloride a pigna n. 9
Zame (?) d'arzento con il pie coloride a pigna n. 4
Soltanie d'arzento coloride a pigna con coperchio n. 9
Soltanie d'aqua marina n. 9
Tapsi zali a fragole n. 13
Tapsi coloridi a pigna d'arzento n. 5
Tapsi tutti doro a pigna coloridi n. 3
Cadin mezan con il suo benbo inquartado e d'oro n. 1
Tapsi d'aqua marina n. 4
Vasi da fiori doradi con 3 pipij n. 20
Acanini chiari doradi n. 2
Soltanie tutte zale n. 2 con coperchio torte

Cesendeli tagiadi e d'oro grandi da moschea con 6 ruose et 6 manigi n. 3
Cesendeli detti a fragole n. 2
Cesendeli da moschea chiari doradi et coloridi n. 20
Vasi da fiori tagiadi e d'oro coloridi con 6 pipij n. 21
Vaseti da fiori picolj tagiadi e d'oro coloridi con 3 pipij n. 9
Ziati tagiadi e doro coloridi con tre pipij n. 7
Ditti tagiadi e d'oro coloridi con doi manigi n. 4
Vasi a fragole doradi con 2 manigi n. 4

Soltanie chiare dorade con coperchio n. 23
Mastrapa tagiadi e d'oro con manego e coperchio coloridi n. 11
Mastrapa d'arzento a pigna coloridi con manego e coperchio n. 4
Mastrapa d'oro a pigna coloridi con manegi et coperchio n. 4
Soltanie tagiade e d'oro con coperchio coloride n. 12
Ferali grandi doradi con festoni e lune n. 6

Mastrapa chiari doradi con coperchio n. 13
Mastrapa a zogia e peceti con coperchio doradi n. 9
Mastrapa tagiadi e d'oro azuri n. 4
Mastrapa azuri tutti d'oro con coperchio n. 4
Mastrapa a pigna tutti doro con coperchio n. 4
Mastrapa a pigna coloridi con coperchio tutti d'arzento n. 5
Mastrapa azuri a fragole con coperchio n. 6
Cadini grandi tagiadi e d'oro con li suoi benbi n. 7

Cadini a pigna coloridi dentro e fuora con i sui benbi n. 2
Cadin tutto d'oro colorido a pigna con il suo benbo n. 1
Cadin tutto intagiado e dorado con cornise con il suo bembo n. 1
Cadini de crestal rifinado a costoni con li suoi bembi n. 2
Cadineto senza cornise intagiado e d'oro con il suo bembo n. 1
Tapsi a fragole azuri n. 3
Tapsi a pigna tutti d'oro coloridi n. 6
Cadineli a pigna coloridi d'arzento doradi con li sui benbi n. 4
Cadini intagiadi e d'oro coloridi con li sui benbi n. 4
Cadineli chiari tutti d'oro coloridi dentro e fuori n. 4
Cadineli chiari doradi con il suo benbo n. 2
Mersori con il pie chiari tutti d'oro coloridi dentro e fuora n. 7
Mersori grandi tagiadi e d'oro a costoni con il pie coloridi n. 2
Tapsi a pigna coloridi tutti d'arzento n. 6
Soltanie a zogia e peceti (?) con coperchio dorade n. 12
Tapsi a zogia doradi n. 7
Soltanie a pigna d'arzento coloride dentro e fuori con coperchio n. 7
Ferali grandi doradi con festoni e lune (?) n. 6
Soltanie a pigna tutte d'oro con coperchio coloride n. 6
Soltanie azure tutte d'oro n. 3
Zame d'arzento a pigna con coperchio coloride n. 3
Tapsi chiari doradi n. 7
Tapsi chiari tutti d'oro coloridi n. 4
Tapsi tagiadi e d'oro n. 3

Mastrapa a giazo con coperchio de cristal refinado n. 9
Mastrapa con dui peci (?) n. 8
Mastrapa a scachi n. 8
Mastrapa a onde n. 8
Mastrapa ala drita n. 12
Mastrapa schieti con la cornise n. 4
Soltanie a giacio n. 10
Vasi da bever (?) aqua con coperchio e dui peci (?) n. 3
Vasi ditti schieti con dui rigarini n. 4
Vasi ditti ala dreta senza manegi et senza pipij n. 2
Ziati ala dreta con dui manigi n. 4
Ziati ditti schieti n. 3
Vasi da fiori con 6 pipii n. 3
Vasi da fiori schieti con 3 pipii n. 6
Vasi diti ala dreta con manegi roversi n. 6
Vasi diti ala drita n. 4
Vasi diti con 3 manegi n. 2
Tapsi dele sorti sopradite n. 6
Vasi da fiori con 3 manegi e 3 pipij n. 12
Soltanie con doi peci (?) n. 12
Soltanie a scachi n. 10

Soltanie intagiade e d'oro coloride con coperchio n. 24
Soltanie azure inquartade e d'oro n. 7
Soltanie azure a fragole coloride n. 4
Vasi a grapela con coperchio a fragole doradi grandi n. 4
Vasi a grapela tutti d'oro n. 2
Vasi con coperchio e doi manegi inquartadi e d'oro n. 2 grandi
Sotocope d'arzento e d'oro coloride n. 2
Oche grande con cenbola dorade con fili n. 4
Ocha granda schieta n. 1
Ochete con fili n. 6
Soltanie chiare schiete con coperchio n. 36
Soltanie a onde n. 13 de cristal refinado
Goti da cesendelj grandi n. 20
Goti da cesendelj da 6 ruose n. 13
Vasi chiari doradi con 3 pipij n. 2
Vaso dito con coperchio n. 1
Soltanie a zogia schiete n. 11

…..
Mazolao a Muran

Bichieri de cristal refinado la copa con manegi n. 100 et carafine de crestalo ditto n. 100

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Abbreviation
ASVe = Venice, Archivio di Stato

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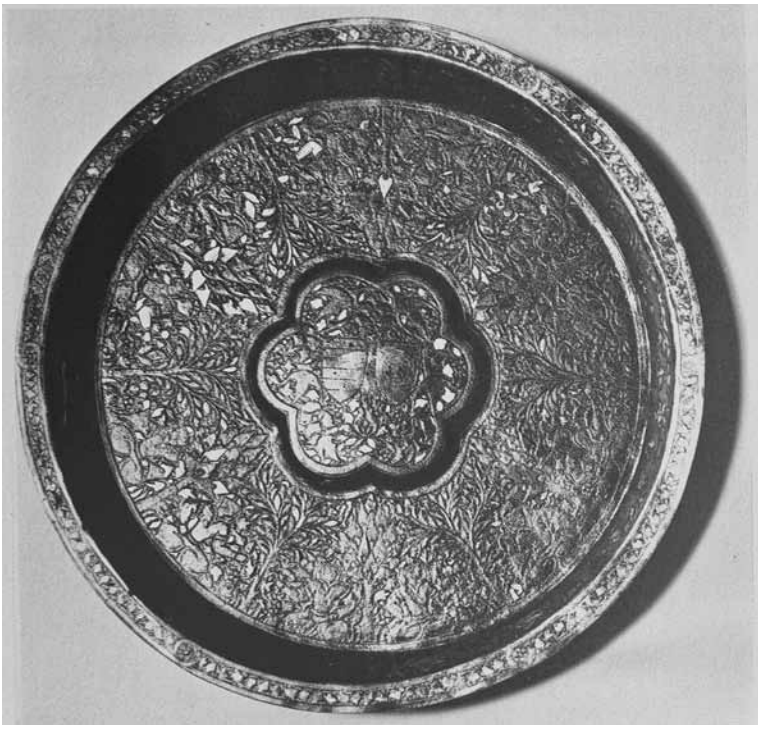

Fig. 1 - *Salver with Venier and Molin coats of arms, silver inlaid*, Syria or Egypt, 1460 ca, diam. 41,7 x h 4 cm. Florence, Bargello National Museum (photo Spallanzani, 1985, fig. 2a).
Fig. 2 - *Salver*, enamelled and gilded glass, Syria or Egypt, 1350-1357, diam. 22 x h 2,2 cm. New York, Metropolitan Museum of Art, Edward C. Moore Collection, Bequest of Edward C. Moore, 1891, inv. no. 91.1.1533 (photo public domain).

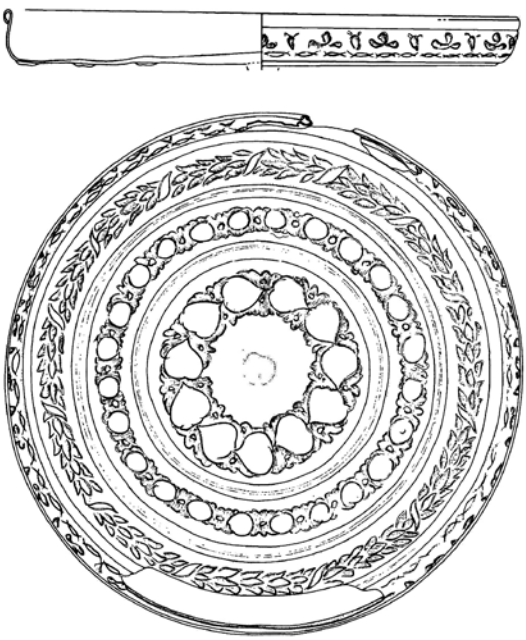

Fig. 3 - *Salver* (*mersor*), diamond-point engraved, gilded and cold painted glass, Venice, last quarter of the 16th century, diam. 19,5 x h 2,8 cm. London, British Museum, inv. no. S.404 (© The Trustees of the British Museum).

Fig. 4 - *Salver* (*mersor*), diamond-point engraved glass, archaeological finding from Gnalić, Venice, 1583, diam. 23 x h 2,5 cm. (Photo: Lazar and Willmott 2006: plate 11).

Fig. 5 - *Sprinkler* (*qumqum*), enamelled and gilded glass, Syria or Egypt, first half of 14th century, diam.12,5 x h 20,3 cm. New York, Metropolitan Museum, inv. no. 06.1036.2 (photo public dominion).

Fig. 6 - *Sprinkler* (*achanino)*, clear glass, finding from the Venetian lagoon, 16th century. Private collection.

Fig. 7 - Girolamo Marchesi da Cotignola, *Young woman at the toilette with maid*, 1516. Avignone, Museo Calvet (photo© Raffaella Zama, *Girolamo Marchesi da Cotignola: pittore. Catalogo generale*, 2007).

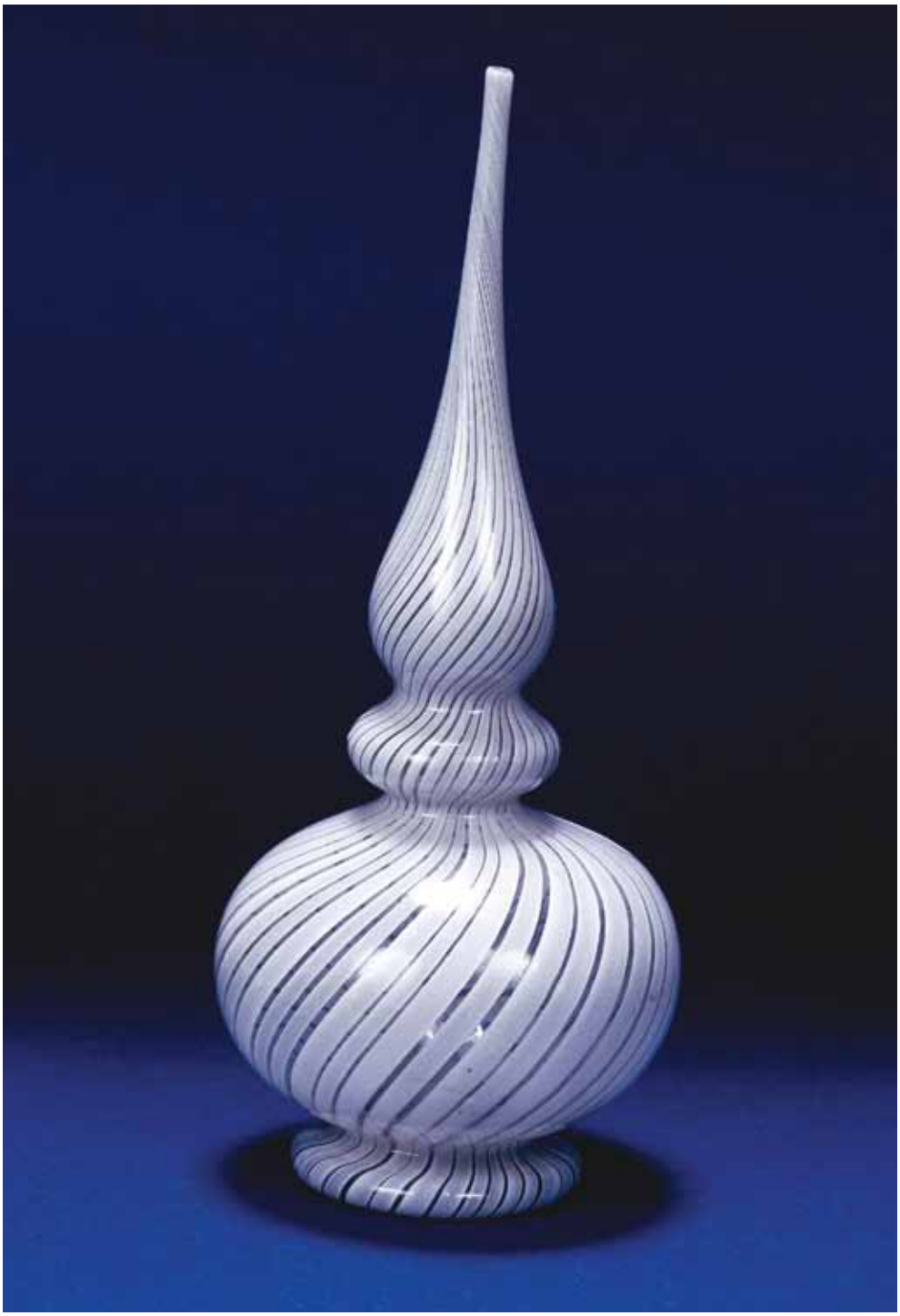

Fig. 8 - *Sprinkler* (*a fili)*, Venice, late 16th century. London, British Museum, inv. no. S.609 (© The Trustees of the British Museum).

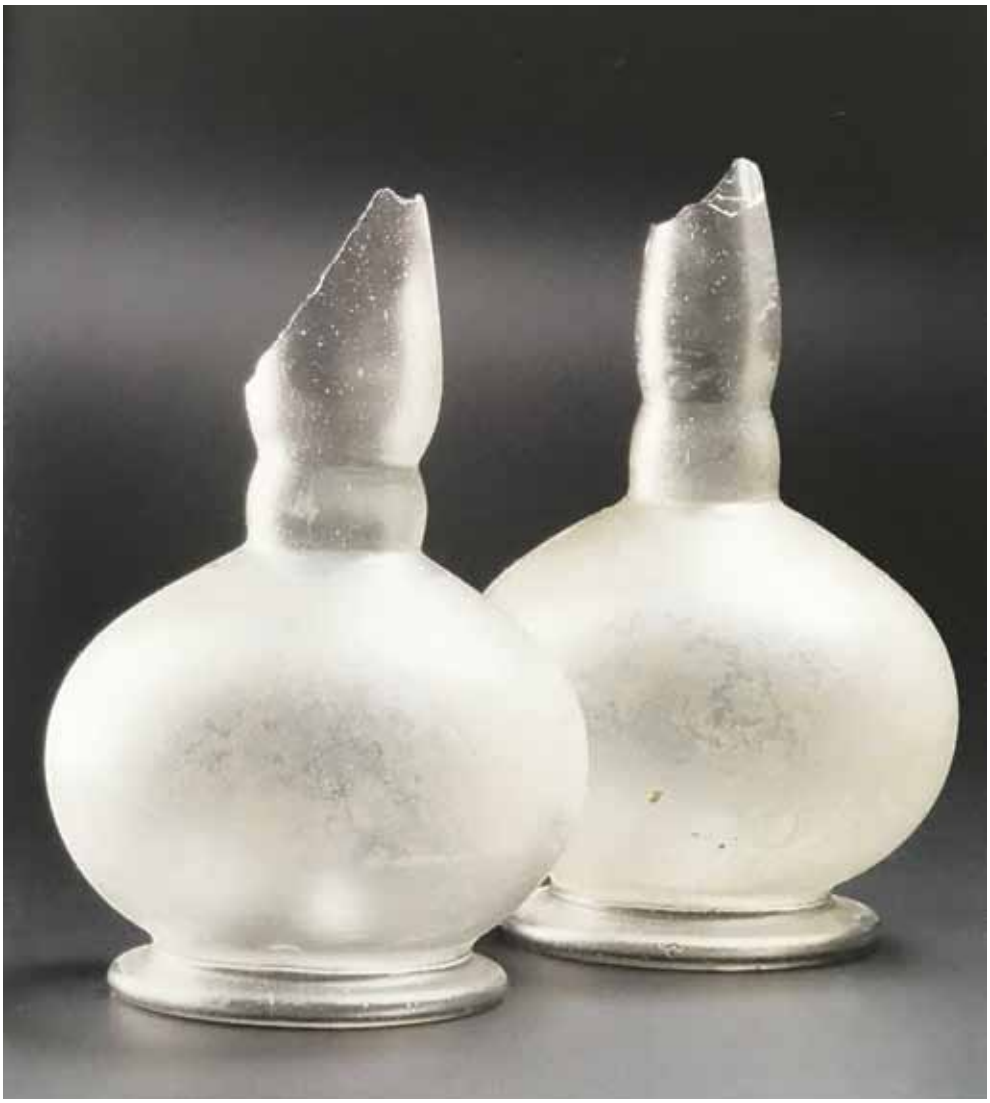

Fig. 9 - *Sprinklers* (*achanini*), clear glass, archaeological finding from Gnalić, Venice, 1583, h 21,4 (photo: Lazar and Willmott 2006: 53).

Fig. 10 - *Oil lamp* (*cesendello*), filigree with twisted blue and *lattimo* canes (*retortoli*) and red and *lattimo* straight canes (*a fili*), Venice, second half of the 16th century. Istanbul, National Palaces Palaces (photo: *The Art of Glass in the Palaces*, s.d. [2021]: 116).

Fig. 11 - *Islamic-shaped lamp*, 1550-1580. Istanbul, Turkish and Islamic Art Museum (photo: *Venezia e Istanbul in epoca ottomana,* edited by Giampiero Bellingeri, 2009).

Fig. 12 - *Vase for flowers with tree spouts*, diamond-point engraved, Venice, late 16th-early 17th century, largh. 7,2 x h 17,8 cm. Florence, Bargello National Museum, inv. no. 2002 (© Bargello).

Fig. 13 - Istanbul Ottoman drawing, *Vase of flowers*, in Peter Mundy, *Series: A briefe relation of the Turckes, their kings, Emperors, or Grandsigneurs, their conquests, religion, customes, habbits*, album, folio 47r 1618, inv. no. 1974,0617,0.13.47.r (© The Trustees of the British Museum).

Fig. 14 - *Ewer* (*mašraba)*, brass, gold and silver, Herat, early 16th century. New York Metropolitan, inv. no. 91.1.607 (public dominion).

Fig. 15 - *Ewer* (*mastrapà*), white opaque traslucent (*marmorino*) and turquoise opaque glass enamelled and traces of gilding, Venice, 1510-1520, h 21 cm. Liège, Grand Curtius Museum, inv. no. B/457 - Département du Verre (Photo Marc Verpoorten © Ville de Liège).

Fig. 16 - *Tankard* (*mastrapà*) with white trails, archaeological finding from Gnalić, Venice, 1583, largh. max 11,4 x h 8,3 cm. (photo: Lazar and Willmott 2006: 42).

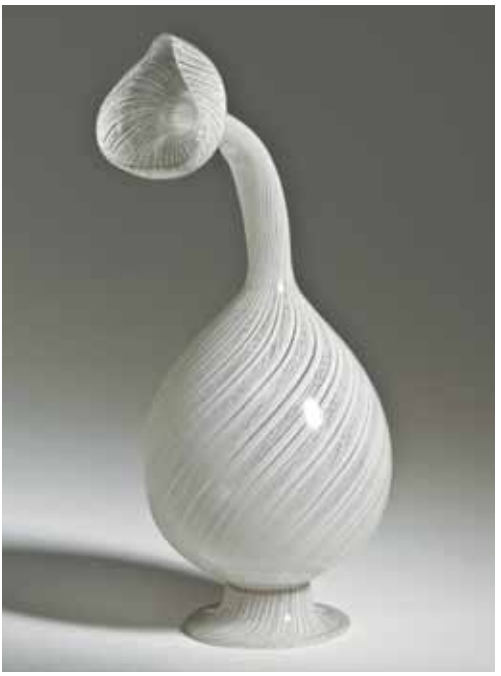

Fig. 17 - *Filigree bottle*, clear glass and *lattimo* (*retortoli*) canes and *lattimo* straight canes (*a fili*), Venice, late 16th-early 17th century, diam. 6,4 x h 23 cm. Coburg, Kunstsammlungen der Veste Coburg, inv. no. HA.0502 (© Kunstsammlungen Coburg).

Fig. 18 - *Upper part of a bottle*, blue glass, finding from the Venetian lagoon, 16th century. Private collection.

Fig.19 - *Reliquary*, diamond-point engraved and cold painted, Venice, last quarter of the16th-early 17th century. Murano, Museo del Vetro, inv. no. CL VI 1124 (courtesy of), originally in Burano, Church of San Martino.

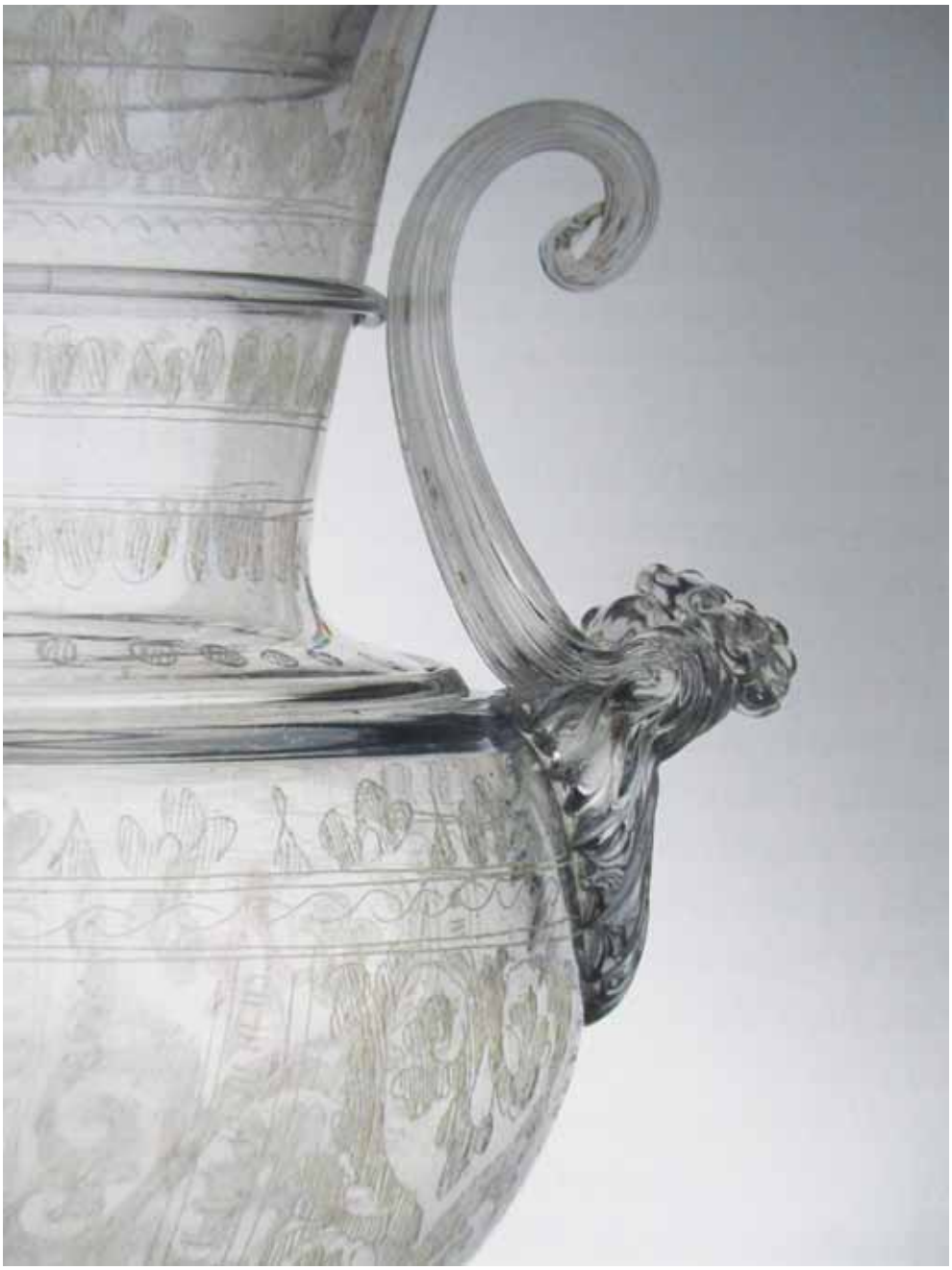

Fig. 20 - *Vase* or *reliquary*, diamond-point engraved Venice, last quarter of the16th- early 17th century, detail. London, Wallace Collection (photo: Higgott, Suzanne. 2011. *The Wallace Collection Catalogue of Glass and Limoges Painted Enamels*. London: The Trustees of the Wallace Collection, no. 18).

Paolo Zecchin

ROCK CRYSTAL LENSES AND GLASS LENSES IN VENICE

The first centuries

As everyone knows, Friar Giordano da Pisa, in a sermon given in Florence in 1306, magnified the technical progress made in those times, and in particular recalled that «It is not yet twenty years since there was found the art of making eyeglasses, which make for good vision, one of the best arts and most necessary that the world has»[1].

In Venice glasses were made by crystal-makers with rock crystal, but soon also with glass[2]. But the Giustizieri Vecchi, the Magistrates responsible for the control of the Arts, were very flexible: in 1317 a certain Francesco «*condam magistri Nicolai chirurgici [surgical]*» was authorized to make and sell in Venice «*oglarios de vitro*» [spectacles with glass lenses] even though he did not belong to the crystal-makers' guild[3].

On 11 April 1321 the Senate set the duties of goods leaving Venice: among them there were also the «spectacle glasses»[4]. It is not certain that they were made in Venice, because the same list shows the «*veri da Fontego*» [fondaco glass] coming from German towns (because they passed through the 'Fontego'[5]) and the «mirrors of all sorts» which are known to have been made import. Certainly in

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[1] «Non è ancora venti anni che si trovò l'arte di fare gli occhiali, che fanno vedere bene; ch'è una delle migliori arti e delle più necessarie che 'l mondo abbia». Ilardi 2007: 5.

[2] Zecchin L. 1988-91, vol. 2: 246. Luigi Zecchin published many essays on the invention of glasses, which were collected in the chapter *Vetri per occhiali* of the second volume.

[3] Monticolo and Besta 1914: 138.

[4] «*Veri da occhiali*»; Archivio di Stato di Venezia (=ASVe), *Compilazione Leggi*, prima serie, b. 162.

[5] The 'fontego' was the Fondaco de Tedeschi, a collection point for the goods transported by German merchants.

1446 the spectacles also arrived at the 'Fontego' to be sold by the Venetian merchants[6]. The «spectacle glasses» of 1321 were probably rough glasses, like the «thirty-one pairs of glasses from Germany» for a Tuscan friar who made spectacles[7].

From quartz to glass

The transition from quartz to glass lenses was slow. On 12 June 1573 «*master Livio ochialer alla Vechia sotto el Relogio*» (a Venetian spectacle-maker) delivered to the ambassador leaving for Constantinople 24 pairs of «mountain crestal glasses» at 4 lire per pair and 100 pairs of «Muran crestal glasses» at 10 sous the pair[8]. They were gifts for the local authorities, like those that another Bailo brought to Constantinople in 1590, purchased from two «spectacle-makers»; one provided 16 pairs made of rock crystal (still at 4 lire per pair) and 200 pairs of «Christalin with lustrous thread» («*christalin con filetto lustro*») at 5 ducats per hundred, and the other 20 pairs of the first type (still at 4 lire per pair) and 150 of «*cristal da Muran*» at 5 ducats and 12 grossi ones at a hundred[9]. If we remember that a ducat was equivalent to 6 lire 4 sous and one lira was made up of 20 sous, the strong difference in price between natural crystal glasses and glass glasses is evident. In 1624, two types of glasses were sent to Constantinople: 12 pairs of the first and 36 of the second, including 24 «with lustrous thread»[10].

Then the natural crystal glasses perhaps end. In 1679, «fist telescopes» («*canochiali da pugno*»), «3-piece long view telescopes» («*canochiali di longa vista da 3 pezzi*»), in 1680 «nose glasses» («*ochiali da naso*») and «fist glasses» («*ochiali da pugno*») were sent to Constantinople[11]. «*Domenico Selva ochialer in calle larga*» in 1732 supplied the Proveditor General of Dalmatia and Albania with «2 telescopes of 4 crystals, long

[6] Ilardi 2007: 10.
[7] *Ibid*.: 177.
[8] ASVe, *Ufficiali alle Rason vecchie*, b. 379.
[9] Biblioteca del Museo Correr di Venezia, Mss. P.D. C 943, doc. 6.
[10] ASVe, *Bailo*, b.301. This time there is no indication of the price.
[11] Ivi, b. 313. In 1720 also «theatre glasses» and «microscopes»; ivi, b. 314.

5 quarte[12], with frame of English-style brass» («*2 canochiali di 4 cristalli longhi 5 quarte fornimento di otton all'inglese*») at 25 ducats each[13].

On November 5, 1665, a petition was sent to the «Most Serene Prince» which began like this: «The spectacle-makers of this city don't have a particular guild but there are some aggregated to the Marzeri guild, while others are dispersed without any contribution». The spectacle-makers asked to «form a separate guild» and to be able to sell, only they, «glasses made in Venice» and «glasses that come as merchandise from Fontego». They did not have an association of their own (and would never have had one) because they were too few: from another petition of the same period we learn that those enrolled in the Marzeri art and wanted to dissociate were 11[14]; another 5 wanted to continue enjoying the benefits of being part of the Marzeri[15].

In the «*libri dei Registri di Uscida*» («books of the Registers of Exit») from Venice from the 1720s, in addition to «*ochiali* made in Venice» and «*ochiali de fontico*», «*canochiali*» are indicated (without indication of origin). In 1736 among the «merchandise that came into this *Ser.ma Dominante* and went out over the course of 4 years» there are: «glasses and telescopes» and «glasses of different types» made in Venice, «brass glasses» made in Nuremberg, «common glass from rough spectacles» and «assorted glass from spectacles» made in Germany and «assorted glass from spectacles» made in Bohemia[16].

«Mirror-makers» and «spectacle-makers»

As is known, no matter how smooth the slabs produced by the glassmakers were (even after the end of the fifteenth century, when the «cylinder» slab technique was introduced in Murano), there always remained many surface irregularities left by the hot working, which it had to be remedied mechanically. It was the work of the «mirrors-

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[12] The «*quarta*» was the fourth part of the «*brazzo*» (of wool), a Venetian unit of measurement corresponding to approximately 68 cm.

[13] ASVe, *Ufficiali alle Rason vecchie*, b. 380.

[14] ASVe, *Arti*, b. 373.

[15] *Ibid.*, 5 dicembre 1665.

[16] ASVe, *V Savi alla Mercanzia*, I serie, b. 867bis.

makers» and consisted of a roughing with sand and water and a refinement with tripoli, emery or pumice[17].

The preparation of the lenses was very similar. Giambattista Della Porta had already taught it at the end of the sixteenth century[18]. It was necessary to fix with rosin a glass disk to a sturdy wooden handle and shape its surface by rubbing it on an iron mold sprinkled with water and white sand from Vicenza called «*saldame*»; it was then brought to perfect polishing with «*tripoli*» powder. This is how the Venetians made concave and convex lenses, but, according to Della Porta, they imported the glass from Germany[19].

The technique illustrated by Della Porta eliminated only superficial defects. Two centuries later Francesco Griselini addressed the problem of inhomogeneities and bubbles in the vitreous mass. «The cast mirror – he wrote – is the most suitable material than any other for optical glasses, as it is less subject to glass threads, points, or bubbles», which are usually found in blown mirrors.

Instead, when they used Murano glass**,** the best plates that Venetian opticians could find were those of the Mirror-makers, made by blowing and not by casting. For example, Galileo Galilei, for the lenses of his telescopes at the beginning of the seventeenth century, used Murano glass, without directly asking Murano glassmakers, and instead looking for it among the best '*quari*' of the Venetian Mirror-makers[20].

Some tables in the Diderot and D'Alembert Encyclopedia illustrate the art of the «*lunetier*». The laboratory is represented and (in the last figure) the shaped handle on which the circular glass plate was fixed to smooth it onto the mold (fig. 1); the work was manual or performed with the help of simple hand-operated machines[21].

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[17] Zecchin P. 2018: 330-331.

[18] The first edition was: Io Bapt. Portae Neapolitani *Magiae Naturalis libri XX*, Neapoli 1589.

[19] In the Italian edition it is written: «Certain bales of glass are made in Germany, the diameter of which is one foot long, more or less. That bale is marked with an emery stone and sawed into many small mirrors, which are then taken to Venice». «*Si fanno in Germania certe balle di vetro, di cui il diametro è di lunghezza di un piede, o più, o meno. Quella balla poi segnandola con la pietra smeriglio, si segna, e seca in molti specchietti piccioli, i quali poi si portano a Venetia*» (*Della Magia Naturale* 1677: 508).

[20] Zecchin L. 1988-91, vol. 2: 256.

[21] *Recueil de Planches*.

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Fig. 1 - Antonio di Puccio Pisano called Pisanello, *Heads of three men*, drawing, first half of the 15th century. Paris, Louvre, Départments des Arts Graphiques, from Vallardi's collection, inv. NV 2623, recto.

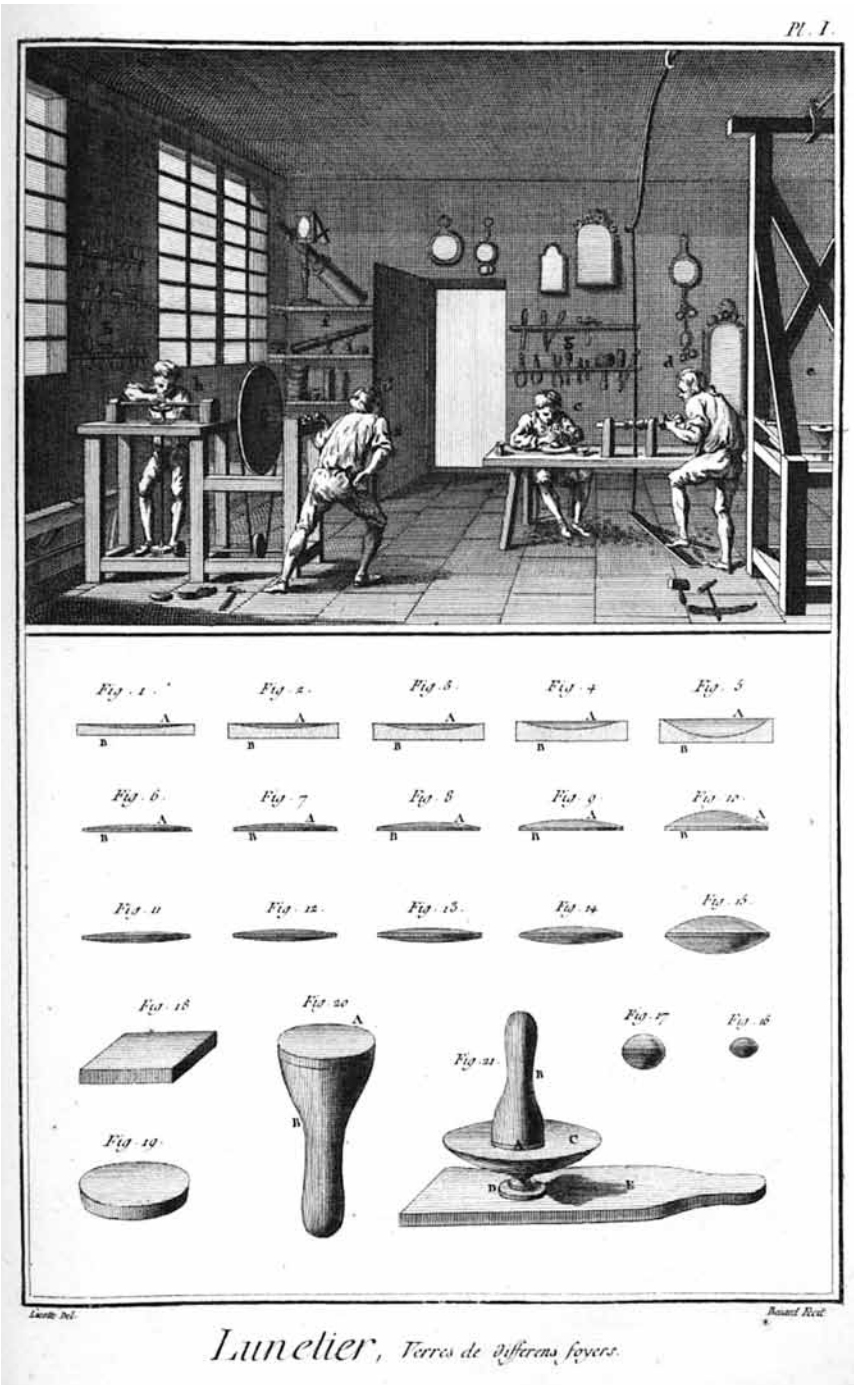

Fig. 2. - *Lunetier*. Planche 1. The round glass plate is mounted «*sur la molette*» (fig. 20); «*le même verre monté sur la molette et posé sur le bassin*» (fig. 21). *Recueil de Planches* [lunetier 1].

Silvia Ferucci and Elena Betti

RENAISSANCE GLASSES FROM SANTA CHIARA MONASTERY, PADUA: LATEST ADVANCEMENTS IN THE CONSERVATION TREATMENT OF A SPRINKLER

Introduction

Santa Chiara in Cella Nova convent's first image is dated 1325[1], it was constructed outside the Padua old circle of walls and it flourished during the renaissance period, then it started its decadency that ended in 1797[2], when the nuns' order was finally suppressed. A new construction project caused its demolition in the 1960s[3]. In 2000, during an archaeological excavation in the courtyard, an underground hexagonal structure came to light[4]. Probably primarily used as an ice chamber, at some point it changes its use, becoming the nuns midden. Many different objects were found: ceramics, bones, metals etc[5]. The high level manufacture of the items showed that the nuns belonged to very wealthy families. Glass fragments were also found in a very large number, they showed a great variety of shapes and decoration. Some of them were chosen for many exhibitions, and the conservation of a selection of five items become a graduate work of a Single Cycle Degree programme in Conservation and Restoration of Cultural Heritage.

The conservative project

This project was possible thanks to a collaboration between the SABAP per l'Area Metropolitana di Venezia e le province di Belluno, Pa-

[1] Cozza 2011: 12.
[2] Cozza 2011: 13-16.
[3] Cozza 2011: 16-17.
[4] Cozza 2011: 29-33.
[5] Cozza 2011: 35.

dova e Treviso, and the University of Bologna. Our intervention, carried out in the University labs, was part of a huge conservation project and started from the examination of thousands of fragments coming from the site, with the aim of finding connections between them and identifying some objects. After this long work it was possible to isolate some artefacts and reconstruct them.

Among them there was a sprinkler, a bottle with a long neck called *acanino*, inspired by Arab production, which will be the focus of this paper. It differed from the other artefacts because it required a different approach to reconstruct it. The aim of our intervention was to improve the stability and the readability of the object, making it suitable for the study or for a possible exposition.

In order to project a tailored intervention for this glass, a precise observation of its features was necessary, starting from the realization technique. The sprinkler was blown in a slightly grey base glass and then decorated with the application of gold leaf and coloured enamels, with a lower melting point than the base glass[6]. The decoration then needed to be fixed by re-heating the object[7].These variations in the composition of the glass are important to understand some deterioration phenomena: different types of glass demonstrate different behaviours within the same environment. For instance, a well conserved blue enamel may be found next to a badly conserved red enamel within the same fragment (Fig. 1a-b).

The surrounding environmental condition during the burial is equally important and differences in the conservative state between the same-coloured enamel can occur on two fragments coming from two different areas of the hexagonal structure. This phenomenon is very common in this kind of archaeological sites, where fragments of different objects are mixed through different stratigraphic layers.

The burial environmental condition is also the main cause of the presence of iridescence layers. Water present in the ground next to the fragments leads to the removal of alkali or alkaline-earth cations by the formation of a hydrated surface layer. In some areas, these layers were delaminated, uplifted, and risked detachment[8].

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[6] Verità and Biron 2015: 180-189.

[7] Tait 1979: 26.

[8] Berducou 1990: 130-140.

The deterioration of the glass caused the loss of part of the decoration. Only traces remain of the half feminine figure that was painted on the body, inside a circle of red enamel dots. Moreover, the gold leaf is not homogeneous, and in different areas is missing (Fig. 1c-d).

All these processes make it into a very delicate surface. Even though the object had been previously consolidated after the excavation, it remained very fragile[9].

Furthermore, the reconstruction of this object was made difficult by its fragmentation and by the number and extent of the losses. Only 6 fragments remained, but not all of them had connections. Nearly 50% of the lower body was missing while the upper point was well conserved, as well as the foot. After gluing the connecting fragments (using Paraloid B72 in acetone, 70% w/v), it was clear that there was no connection between the upper and the lower part. All glass fragments coming from the site were examined but none of them belonged to the sprinkler, due to different shape, thickness, and colour.

To figure out what the original shape should have been, a technical drawing was made. Pushing its shape into a profile gauge, the profiles of the two sections were drawn and aligned; missing parts were then reconstructed. The image obtained was later digitalized, using AutoCAD software (Fig. 2a). Thanks to this drawing, it was possible to estimate the sprinkler's height and obtain a clear vision of its original profile, emphasizing both the external decoration and the internal structure, from the glass thickness to the curving points.

The object stability needed also to be improved, as well as its readability.

The choice of a support was preferred to loss compensations because there were no certainties about the precise collocation of the two portions of the object and such a solution made the intervention more easily reversible and adjustable through time.

While realizing a support, different aspects should be taken into account. Traditional methods such as handcrafting the structure were immediately excluded, due to the fragility of the sprinkler's surface. The object needed to be handled as little as possible, making a mould or constantly verifying the support's shape directly on the object would have

[9] Gasparetto and Emanuele 2001.

compromised its conservation. Moreover, the process would be time consuming, and the result would not have been as precise as this shape required[10].

Plexiglass structures, both external and internal, were also considered. However, this material is not ductile enough, and supports realized could be very impactful and interfere with the object readability. It also requires a specialist to be cut and shaped[11].

Lastly, examples of supporting structures created from a digital drawing were examined, but they were found inaccurate, as the fragments of a handcrafted object could not adhere correctly to a regular shape[12]. However, 3D printing proved to be an efficient substitute of the methods previously discussed, if a precise model to start with can be obtained[13].

Thus, to create an accurate digital reconstruction, it was decided to start from a 3D acquisition of the sprinkler.

The first step was the identification of the best acquisition technique. Usually, laser scanners are employed, but the transparent and reflecting glass makes it difficult to obtain a precise model. The problem could be avoided by covering the surface with an opaque layer, but the removal of it could compromise the decorations' conservation[14].

Micro-CT (Computed Tomography) was the preferred technique, as using X-ray beams to detect the artefact's surface can solve the problem of transparency and reflection completely. The setup consisted of the X-ray source, a rotating base and the detector (flat panel)[15].

Two acquisitions of the two main portions of the sprinkler were made (Fig. 2b).

The files obtained were then processed with Avizo software first, to elaborate the Dicon files: black and white ranges and thresholds of the

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[10] Cfr. Fisher and Norman 1987: 49-58; Herold 2002: 1-4; Quiñones López and Sandoval 2009: 269-273.

[11] Cfr. Fontaine-Hodiamont 2012: 11; Martinez 2011: 44-45.

[12] Petrović 2020: 12-20.

[13] Cfr. Kritzeck 2017; Barack 2016: 202-203; Cheam 2014: 117-130; Conticelli, Mercante and Speranza 2016: 63-68.

[14] Barack 2016: 201.

[15] M.P. Morigi (2017). [Slide PowerPoint "Lezione tomografia" del corso "Archeometria - modulo 1"].

objects were adjusted. Finally, the surfaces had been created and the volumes exported in 'STL' format.

Then, a second software was used: Geomagic Design X. This was used for correcting and elaborating a printable model by working on a mesh that represented a simplification of the original surface of the object. The surface was optimized, and errors eliminated, and finally the two portions were aligned, trying to place them as they were originally.

Once done, the existent parts were copied, mirrored, and united to the rest in order to close every hole, fill the gaps, and obtain a close shape. This model was the starting point for our support.

The external shape was then deleted and only the lower part of the internal one conserved, as the base of the support. For the upper part, a cone needed to be drawn to fit into the shape of the point, so a cone was built around a central vector (Fig. 2c).

The sketch thus made was then converted into a surface and united to the lower part.

As for the print, after having tested different materials, PLA (Azurefilm translucent) was chosen, a bio-polymer resistant to yellowing through time. To guarantee a high precision printing, the base of the support was raised inserting supporting cones using Ultimaker Cura 4.7 software, then the model was imported on the Fuse Deposition Modelling printer Creality CR-10. the separation lines between the printing layers were erased with sandpaper, then the surface was coated with Paraloid B72 in acetone to isolate the material from the environment and from the glass (Fig. 2d-e).

Finally, the fragments were collocated on the support, which proved to fit perfectly (Fig. 3a-b).

Conclusions

This work is a starting point in the 3D glass artefacts' reconstruction and further studies are needed, such as testing different printing materials and their compatibility with archaeological and deteriorated vitreous objects. Another topic to be developed is giving more accessibility to softwares employed in 3D files processing, to enable conservators to use them in everyday practice.

Our project, in fact, proved that these methods can be effective, with a well-planned project, as they allow to reconstruct fragile objects with minimum handling and the prints are also easily replicable.

Aknowledgments

We want to thank the Soprintendenza SABAP dell'Area Metropolitana di Venezia e delle province di Belluno, Padova e Treviso and the conservator Sara Emanuele, for the possibility to work with this precious material. We also thank the University of Bologna, for making it possible to test different materials and new approaches for the glass conservation field, especially Professor Stefano Benazzi, Professor Maria Pia Morigi, Professor Mariangela Vandini, Doctor Tania Chinni and Doctor Antonino Vazzana.

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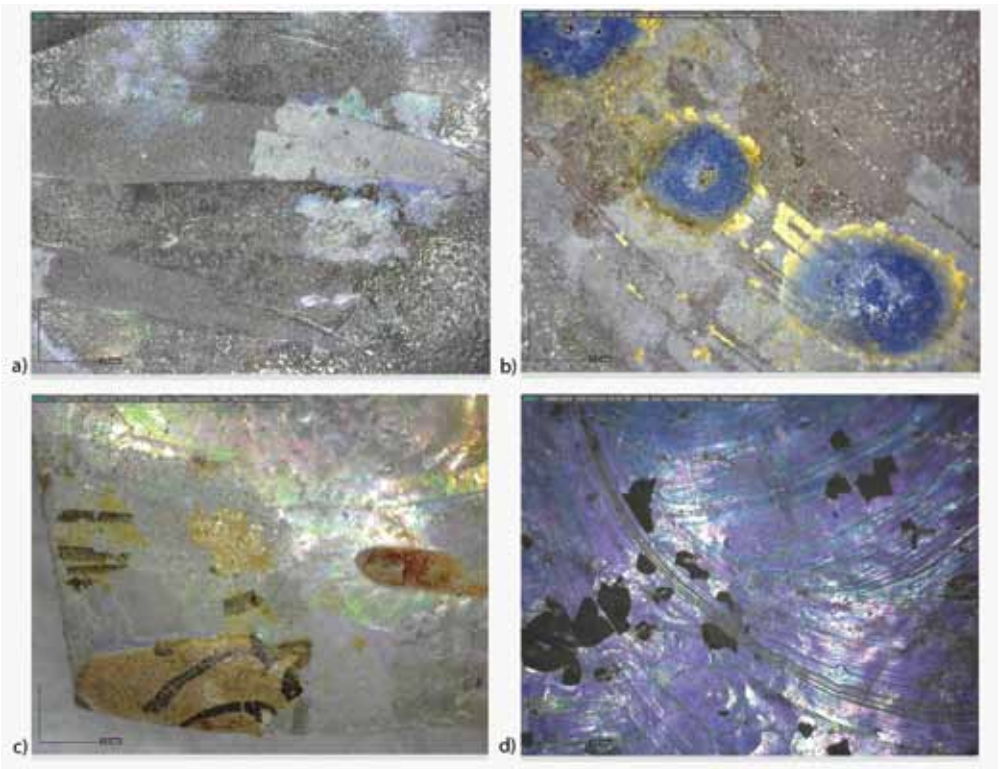

Fig. 1a - *Red enamel deterioration*.
Fig. 1b - *Well conserved blue enamel and loss of the gold leaf*.
Fig. 1c - *Loss of the painted decoration*.
Fig. 1d – *Iridescence*.

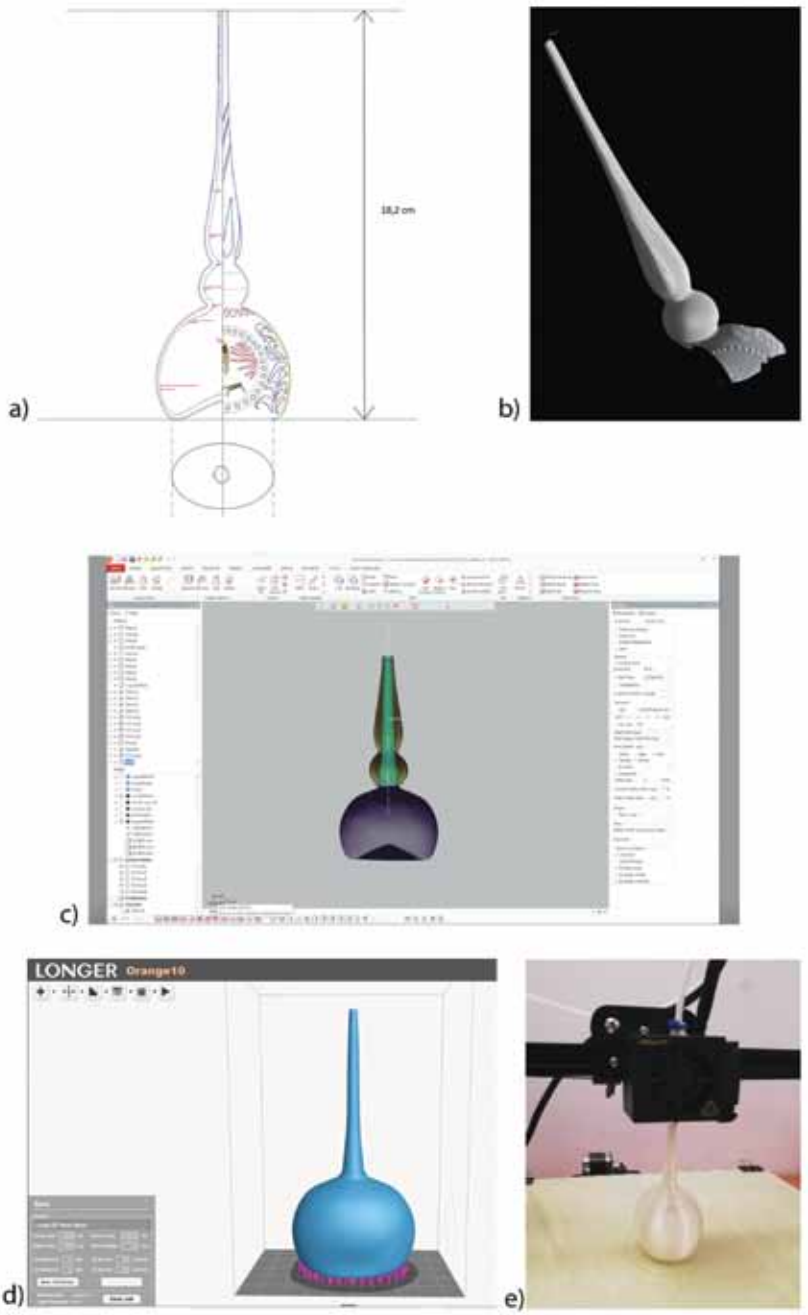

Fig. 2a - *The technical drawing*.
Fig. 2b - *CT results*.
Fig. 2c - *Elaborating the files with Geomagic Design X*.
Fig. 2d - *Preparing the print*.
Fig. 2e - *Prin*

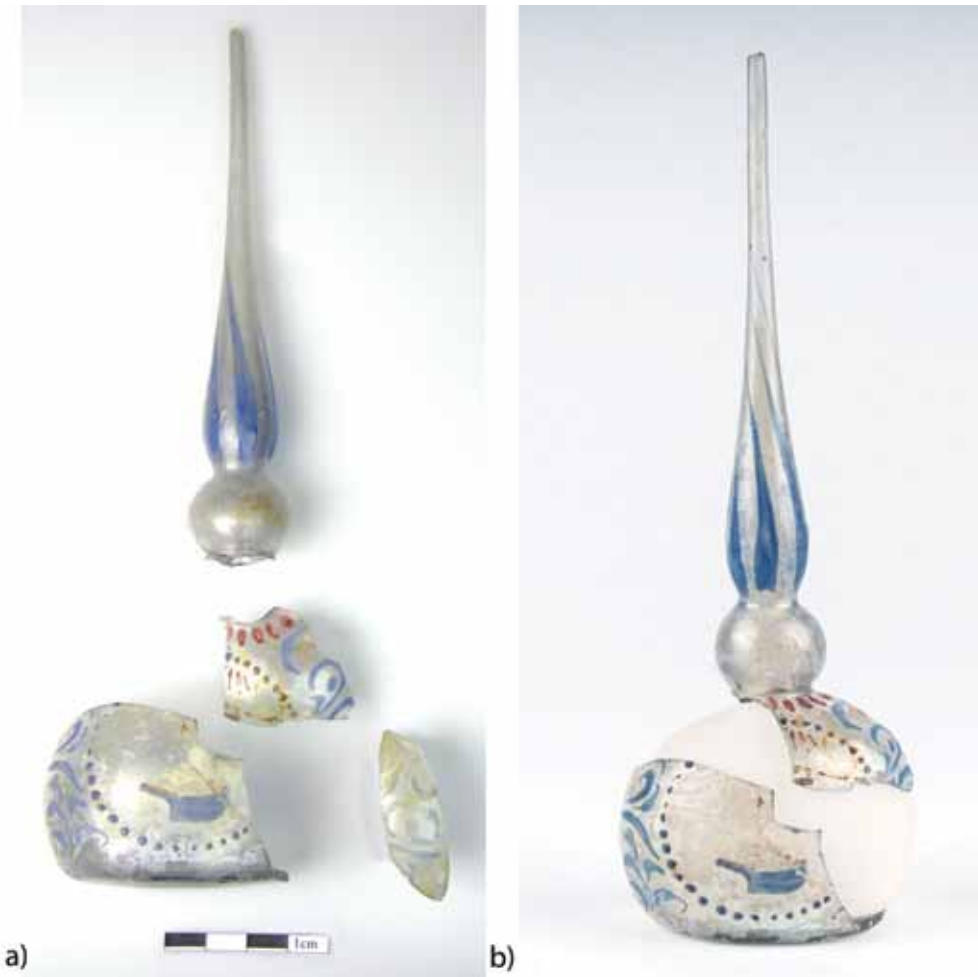

Fig. 3a - *The sprinkler before the intervention*.
Fig. 3b - *The sprinkler after the intervention* ©SABAP per l'Area Metropolitana di Venezia e delle Province di Padova, Belluno e Treviso.

Reino Liefkes

MIDDLE-EASTERN GLASS AND ITS INFLUENCE: VICTORIA AND ALBERT MUSEUM IN LONDON

One of the most precious objects in the V&A's Middle-Eastern collection is a rock crystal ewer, known as the Jameel Gallery Rock Crystal Ewer[1]. The ewer, which is on display in the Jameel gallery, was made in Egypt, probably in Cairo, around 975-1050. This rare vessel was carved from a single piece of rock crystal. The cut decoration shows, on either side, a bird of prey attacking an antelope, which may have symbolised the ruler's ability to overcome his enemies. The plain surfaces, such as the band around the neck, were probably once covered with mounts of gold and other materials. These would have contrasted with the clear crystal, which one writer of the time described as combining the properties of air and water. Such high-quality rock crystal objects are known to have been made for the Fatimid Caliphs of Cairo. A ewer which is closely related to the Jameel Ewer is in the Treasury of San Marco in Venice. It can be dated through its inscription, naming the Caliph al-'Aziz who reigned between 975-996[2].

The V&A has a fragmentary glass version of this type of ewer, thought to have been made in Iraq or Iran around 950-1050[3]. It is known by the name of its donor, the 'Buckley Ewer'. The shape and decoration of this glass ewer is clearly related to the rock-crystal examples, but ultimately are derived from examples made in silver. The thumb-rest on the glass ewer shows how the missing thumb-rest on the rock-crystal ewer may have looked. The glass ewer was blown, and the handle was attached at the furnace before the ewer was gradually annealed and subsequently wheel-

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[1] Inv. no. 7904-1862; Stanley 2004: 94-95, pl. 106.

[2] Alcouffe 1984: 222-227, cat. 31.

[3] Inv. no. C.126-1936, given by Mrs Wilfred Buckley in memory of her husband; Stanley 2004: 94-95, pl. 107.

cut. The closest comparison to this glass ewer is a more complete example is in the Corning Museum of Glass[4].

A fragmentary plate of pale blue glass has a deeply cut decoration, with a central medallion of bird with smaller medallions featuring running animals around the rim[5]. The plate is typical for the period after 800, when cut-glass vessels produced in Iraq and Iran became more sophisticated. The thick walls were ground or cut away to leave the decoration in bold relief. Designs like the stylised plants and animals on these objects were inspired by Sasanian models. When Iran was ruled by the Sasanian dynasty (about AD 224 to 631) the techniques used to cut precious and semi-precious stones were also used on glass.

Perhaps the best know object of Middle-Eastern glass in the V&A is the so-called Luck of Edenhall (Fig. 1)[6]. It is a slender beaker, elegantly decorated with blue, green, red, and white enamel colours and with gilding. Its beauty and perfect condition alone make it one of the Museum treasures. But its name reflects its rich, later history, when magical powers were attributed to this beaker.

This type of beaker was exported from Syria and Egypt to Renaissance Europe. Our beaker must have reached England by the 15th century, where it was evidently considered an item of great value, as it was provided with a finely decorated leather case. This bears the IHS symbol on the cover, an abbreviation of the Latin phrase *Iesus Hominum Salvator*, meaning, 'Jesus, Saviour of Mankind'. It has been suggested that this Christian religious symbol was placed there as a charm, to protect the beaker from damage[7]. The beaker had already acquired its nickname, the Luck of Edenhall, by the 1670s. In 1677 it was recorded in the will of Sir Philip Musgrave, the owner of the house called Edenhall in Cumbria, in the north of England. But this name may date from much earlier. In northern England, the term 'luck' was sometimes given to fine vessels that were thought to have a

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[4] Whitehouse 2010: 296-300, cat. 522.

[5] Inv. no. C.128-1936, Given by Mrs Wilfred Buckley in memory of her husband.

[6] Inv. no. C.1 to B-1959; Davies 2010: 4-7; Carboni and Whitehouse 2001: 203-204.

[7] Davies 2010: 4-7.

talismanic role: as luxury objects, they were owned by people blessed by wealth, and good fortune, and if they were broken, this good fortune would be lost. The Luck of Edenhall was thought to play this role for the Musgrave family of Edenhall. In the 18th century local antiquarians took an interest in the Luck of Edenhall, and they recorded (or invented) a legend that explained the presence of this exotic and beautiful object at Edenhall. According to this, «a party of Fairies were drinking and making merry round a well near the Hall, called St Cuthbert's well; but being interrupted by the intrusion of some curious people, they were frightened, and made a hasty retreat, and left the cup in question: one of the last screaming out: "If this cup should break or fall - Farewell the Luck of Edenhall"»[8].

Fortunately the 'luck' remains intact, though Edenhall itself was demolished shortly after the glass was placed on loan at the V&A in 1926.

Some of the Museum's best enamelled glass was acquired in 1900 from the Meyers collection, which included no fewer than 10 mosque lamps. Major William Joseph Myers (1858-1899), an Eton educated soldier served time in Egypt during his military service from 1882 and became an avid collector of Egyptian and middle-eastern objects. In his will, he stipulated that his collection of 'Arab' glass was to be offered to the South Kensington Museum for £3000. After his death in 1899, the objects were acquired by the Museum and divided in three parts. Two parts were sent to the Museum's sister institutions in Edinburgh and Dublin[9]. The third and largest part remained at South Kensington.

A splendid bottle is an example of the fine gilded and enamelled glass manufactured under the Mamluk dynasty, which ruled Egypt and Syria between 1250 and 1517[10]. The design, dominated by a large-scale inscription in blue enamel, is typical of work produced around 1300 to 1350.

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[8] The Rev. William Mounsey of Bottesford. 1791, in *The Gentleman's Magazine.* August 1791. See: Davies 2010: 4-7.

[9] The Royal Scottish Museum, now the National Museum of Scotland and the National Museum of Science and Art, now the National Museum of Ireland.

[10] Inv. no. 328-1900; Stanley 2004: 34-36.

A relatively small lamp is decorated with three mounted falconers[11]. It is the only known example of an Islamic lamp with human figures in the gilded and enamelled decoration. Their presence indicates that it was a secular object, probably commissioned by a wealthy Muslim for his home or hunting lodge. Furthermore, according to Meyers' notes, this lamp was not found in a mosque, but in a Christian monastery in Syria. It is thought to have been made around 1250 in Syria where most secular enamelled glass was produced. Unlike larger mosque lamps, this lamp has a narrow tube attached to the interior at the bottom of the lamp, which would have helped to hold the wick in place.

The glass acquired from the Meyers Collection included two clear glass mosque lamps which, according to Meyers' notes, were «from Cairo» (Fig. 2)[12]. Syrian and Egyptian enamelled glass was exported to Italy as a luxury product from at least the thirteenth century onwards but, by the mid-fifteenth century, the quality of Venetian glass was superior, and the situation reversed. The glassmakers of Egypt and Syria produced Mosque lamps in quantities during the fourteenth century, but by the fifteenth century, local production of high-quality glass had all but died out. Even mosque lamps had to be imported. In 1569, Grand Vizier Sokullu Mehmed Pacha in Istanbul, placed an order for nine hundred Venetian glass lamps. The accompanying drawings, published by Rosa Barovier and Stefano Carboni, are in the Venetian State Archive[13]. The authors illustrate and discuss the lamp on the right in this context, and in relation to a lamp from the Museum of Turkish and Islamic Arts in Istanbul [14]. The unpublished lamp on the left is of an unusually tall shape. Both these clear glass lamps betray, on close inspection, traces of cold decoration, as can be seen on a Venetian, 16th-century filigree example in the Topkapi Palace Museum in Istanbul[15].

The influence of middle-eastern objects on Venetian glass is illustrated by an enamelled sprinkler bottle (Fig. 3)[16]. Its shape is derived

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[11] Inv. no. 330-1900; Stanley 2004: 44-45; Carboni and Whitehouse 2001: 226-27; Liefkes 1997: 34-35, fig. 35.

[12] Inv. no. 331 and 332-1900.

[13] Carboni 2006: 260, 270, cat. 162.

[14] Carboni 2006: 260, cat. 162, fig. 7.

[15] Carboni 2006: 271, cat. 171.

[16] Inv. nos. 1851-1855; Barovier Mentasti and Tonini 2013: 66, cat. 26.

from silver objects more commonly found in the Middle East, where they were widely used to sprinkle scented water. Some metal sprinklers were made in the Middle East especially for the Italian market, which indicates that this practice must have spread to the West. Other examples of this shape are known in Venetian glass, including a filigree version in the British Museum bequeathed in 1868 by Felix Slade[17]. No fewer than 16 plain glass sprinklers of this shape, as well as twenty-eight others, were discovered in the cargo of the so called Gnalić Wreck[18]. This wreck has been identified as that of the Venetian galley Gagliana Grossa, which sank in 1583, on its way to Istanbul[19]. This is further evidence of Venetian glass exports and of the glassmakers of Murano creating objects specifically for the Middle-Eastern market.

The arms on the V&A sprinkler can also be found on a glass beaker in the National Museum in Stockholm and have been recognised by Axel von Saldern as those of the Hirschvogel and Holzel families, both of Nuremberg[20]. The same arms can be found on an almost identical example in the MAK[21]. This indicates that these vessels must have formed part of a glass table service. It is certainly unusual to include sprinklers in a glass service, and it is unlikely that they were much used, which explains why two of these unusual objects have survived.

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[17] Tait 1979: 66-67, cat. 84.

[18] Lazar and Willmott 2006: 53-55.

[19] Radic Rossi 2022.

[20] Saldern 1965: 36-37, fig.13.

[21] Barovier Mentasti and Tonini 2013: 66, cat. 26.

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Fig. 1 - *Beaker, the 'Luck of Edenhall'*, Egypt or Syria, ca. 1350, h. 16 cm. *Leather case*, probably England, 1450-1500. London, Victoria and Albert Museum, inv. no. C.1A&B-1959 (©Victoria and Albert Museum, London).

Fig. 2 - Two mosque lamps, Venice, 1550-1600, h. 23.7cm. Historic photographs. London, Victoria and Albert Museum, inv. no. 331 and 332-1900 (©Victoria and Albert Museum, London).

Fig. 3 - *Flask*, Venice, 1500-50, h. 22.5 cm. Victoria and Albert Museum, inv. no. 1851-1855. London (©Victoria and Albert Museum, London).

Sven Hauschke

ALFRED'S LAMP: THE FUNCTIONAL CHANGE OF AN ISLAMIC MOSQUE LAMP

The core of the rich holdings of the glass collection of the Veste Coburg Art Collections is a large group of Venetian glass from the 15th to 19th centuries compiled by Duke Alfred of Saxe-Coburg and Gotha (1844-1900), the eldest son of Queen Victoria and Prince Albert[1]. Part of his collection is a mosque lamp made between 1330 and 1341 in Syria or, more likely, in Cairo[2] (Fig. 1). It is the oldest and only oriental object in the extensive Duke Alfred collection. The mosque lamp was in extremely poor condition, which is why conservation measures were necessary. Not only was the lamp broken many times, heavily soiled and poorly glued together, large parts of the surface had also been worked on with rough tools, causing the calligraphic inscription to be irretrievably lost. After careful preliminary conservation investigations, it was decided to remove the old adhesive connections.

Heiner Grieb, restorer of the Veste Coburg Art Collections, cleaned the lamp and completely reassembled it (Fig. 2). The lamp was glued at an unknown time using an adhesive that swells in water. The adhesive was yellowish in color and brittle. It was probably for this reason that the mosque lamp was surrounded by a supporting corset made of thin brass wire at an unknown time. During the old restoration, the shards were assembled imprecisely, with steps and sometimes with a lot of space. Overall, the vessel was very dirty. There was a fine brown layer over the entire surface, but especially in the scratch marks of the erased areas, which prevented a detailed

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[1] For the glass collection of Duke Alfred of Saxe-Coburg and Gotha: Theuerkauff-Liederwald 1994.

[2] Veste Coburg Art Collections, inv. no. HA. 747, height 30 cm.

examination of the surface condition. The vessel is fragmented into 45 shards, plus small splinters that were archived as sample material together with the removed brass wire. The gilding and enamel painting have been largely lost. However, the remaining remains are surprisingly stable. Large parts of the neck and shoulder are covered with extensive scratch marks. Closer observations showed that these are sharply defined zones. There is by no means any form of corrosion because, for example, three coat of arms motifs and the edge frieze were deliberately left out on the neck, while the rest is heavily rubbed.

After a compatibility test on the enamel and gold, the old bond could be dissolved with warm water in an immersion bath and then dissolved. The shards were subsequently cleaned with warm water on cotton swabs and mechanically using a scalpel, and the surface was cleaned to remove the dirt deposits with spit and acetone. The shards were then put together using adhesive strips made from packaging tape and water-soluble glue. The actual bonding was carried out with epoxy resin Araldit 2020, and the adhesive strips were removed mechanically with a scalpel (Fig. 3). The findings clearly show that the enamel painting was not lost through wear or aging, but rather through deliberate removal using mechanical processing.

When it comes to the question of why the enamel decoration was removed, a comparison with an almost identical mosque lamp in the British Museum can help[3] (Fig. 4). The London lamp has three identical shields, tapering at the bottom, with an eagle and a chalice. It also has an insightful donor inscription: «That which was made for His Excellency, the elevated, the master, the emir Sayf al-Dīn Tuquztamur, Emir of the Assembly of Malik al-Nasir». This gives us the coat of arms of Saif al-Dīn Toquztimur al-Hamawī (+1345), the emir and saqi (cup-bearer) of Sultan Nasir al-Din Muhammad ibn Qalāūn, who died in 1341. Accordingly, the mosque lamp must have been made between 1330, when Toquztimur took office as cup-bearer, and 1341, the year of the Sultan's death. A second inscription also appears between the coats of arms. It is taken from the Koran and names the beginning of sura 24, verse 35. This sura is dedicated to

[3] London, BM, Oriental Dept. 1869.624.1, see Carboni and Whitehouse 2001: 235f.

light and fits in brilliantly with a mosque lamp: «God is the light of the heavans and the earth, the likeness of His light is as a wickholder the light in a glass. The glass as it were a glittering star» [4].

This leaves us with two identical mosque lamps bearing the coat of arms of Toquztimur. They were probably commissioned together and for the same context.

In the British Museum there is a second mosque lamp with the coat of arms of Saif al-Din Toquztimur and the donor's inscription[5]. However, the ornamentation has slight differences and although the height is the same at 33 centimeters, the latter has a diameter that is 6 centimeters larger.

According to Stefano Carboni, Sayf al-Din Toquztimur al-Hamawi was a cup-bearer (saqi) and then Emir of the Assembly of sultan Nasir Muhammad ibn Qalaun (r. 1293-1341) [6]. During Mamluk times in Egypt, the royal cup-bearer was one of the sultan's close cohorts. He served the sultan wine and other libations. Toquztimur's emblem shows an eagle and a cup within a pointed shield. The cup is refering to his position as cup-bearer and the eagle above eventually to Toquztimur's interests and appointments in Syria. Carboni further mentions that «some time before his death in 1345, Toquztimur followed the example of many important emirs and erected a small khanagah [dervish lodge] with a mausoleum in the so-called City of the Dead, in the southern section of Cairo»[7]. And it is obvious that for this mausoleum lamps like our mosque-lamp were neccessary.

Toquztimur was apparently an important patron of handicraft objects. In addition to the three mosque lamps, there are other works with his coat of arms-like symbol. Made out of enamel glass is a sprinkler in the Louvre (around 1330/1340); and made out of bronze is a large ewer in the former collection of R.A. Harari in London[8].

A hand written (later) entry in the Duke Alfred inventory of the

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[4] Carboni and Whitehouse 2001: 235.

[5] London, British Museum, Oriental Dept. 1869.624.2; Carboni and Whitehouse 2001: 236.

[6] Carboni and Whitehouse 2001: 236.

[7] Carboni and Whitehouse 2001: 236.

[8] Mayer 1933: 235 (pl. XVI). See also about mamluk glass and metal works with cup-bearer blazons: Atil 1981.

Veste Coburg Art Collections mentions that the Coburg mosque lamp was acquired in 1858 in «an old Coptic monastery in Cairo». At that time, Prince Alfred was 14 years old. Nevertheless, the entry in the Duke Alfred inventory seems to be reliable. In 1858 the prince was on his first sea voyage in the Mediterranean (Malta) as a midshipman. He then traveled to Morocco, Tunis, Egypt, Palestine and Syria as a sailor in 1859. Based on the travel route, it might be possible that the mosque lamp was purchased in 1859, when Alfred was also in Cairo. And even if Alfred did not received the mosque lamp in Cairo personally, but at a later date, the former provenance «Coptic monastery» could be transmitted during a purchase[9].

Overall, only little is known about his collecting activity; neither when this started nor what his sources of supply were[10]. But his main focus was the glass. A hint gives Karl Koetschau, director of the Veste Coburg Art Collections from 1897 and 1902, who received the Duke Alfred Collection after his death in 1900 from the widow Duchess Marie. Koetschau wrote that the Duke's collecting activity was focused on glass, which he approached quite systematically, first with the help of Sir Augustus Wollaston Franks (1826-1897), who was curator at the British Museum[11].

With the reference to the mosque lamp's origins in a Coptic monastery, the 'cleaning' of the mosque lamp – the removal of the inscriptions – also takes on a logic. Apparently, it was not appropriate to use an object with an Arabic inscription in a Christian monastery and therefore the inscription with the sura from the Koran was removed.

Without the Islamic inscription the glass lamp was an appropriate and useful item in a sacral building. Even the shield with the image of the cup and eagle was harmless for a Christian setting. The cup can be read as a chalice and the eagle is an established iconographic element as one of the four evangelist symbols (St. John). The Islamic mosque lamp changed its function: Without it's inscription it was

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[9] Clementine Schack von Wittenau thinks that the information about the provenance Coptic monastery is misleading; Schack von Wittenau 2007: 139.

[10] Theuerkauff-Liederwald 1994: 14-19.

[11] Koetschau 1905: 42; Schack von Wittenau 2007: 137f.

somehow profanized, even when it was used in a Coptic monastery. The inscription was erased when the lamp was still undamaged. We do not know when the old restoration was done, but it was a sign of great appreciation. The recent restoration and cleaning of the Coburg mosque lamp revealed the interesting history of this special glass object. After all, we gained a new showpiece of our collection, whose destruction of the inscription has now been clarified.

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Fig. 1 - *Mosque lamp*, Syria or Egypt, 1330-1341. Coburg, Kunstsammlungen der Veste Coburg, inv. no. HA.747 (after restoration) (© Kunstsammlungen der Veste Coburg).

Fig. 2 - *Mosque lamp*, Syria or Egypt, 1330-1341. Coburg, Kunstsammlungen der Veste Coburg, inv. no. HA.747 (before restoration) (© Kunstsammlungen der Veste Coburg).

Fig. 3 - *Mosque lamp*, Syria or Egypt, 1330-1341. Coburg, Kunstsammlungen der Veste Coburg, inv. no. HA.747 (during restoration) (© Kunstsammlungen der Veste Coburg).

Fig. 4 - *Mosque lamp*, Syria or Egypt, 1330-1341. London, British Museum, inv. no. 1869.0624.1 (© The Trustees of the British Museum).

Hedvika Sedláčková

ISLAMIC GLASS IN THE COLLECTION OF THE MUSEUM OF DECORATIVE ARTS IN PRAGUE V. ARCHAEOLOGICAL FINDS

One of the most important collections of glass was assembled by Vojtěch Baron Lanna (1839-1909), a Czech-Austrian businessman, art patron and collector and one of the founders of the Museum of Decorative Arts in Prague (1885). When building his collection, Lanna strove to gather evidence of the development of the material in time and space, and the collection thus covers, albeit unevenly, the period from antiquity to the 19th century, with products not only from European countries but also from the Eastern Mediterranean, the ancient East and Egypt. Glass described as Islamic made up the smallest group in Lanna's collection, part of which is now in the Museum of Decorative Arts, while some specimens were sold at an auction in Berlin in 1911.

Lanna donated these three cosmetic bottles to the museum in 1896. According to an entry in the inventory book, he purchased them from Robert Forrer, an archaeologist and antiquities dealer, in Strasbourg, for 10 crowns (Fig. 1a-c). They are made of clear light-green glass with patches of corrosion and all three are decorated with cut geometrical motifs. The mouths are missing. The first two have bottoms in the form of a massive base and four spiked feet (two are missing), which classifies them as 'molar flasks'. The third, with a cylindrical body, has no base or feet. Molar flasks were widespread in the area from Fustat in Egypt to Samar in Iraq and northern Iran and are mostly dated to the 9th-10th centuries, possibly as late as the 11th century[1].

The work is part of a project of the Museum of Decorative Arts, "Reconstruction of the Lanna Collection of Glass," and was produced with the support from the Ministry of Culture of the CR (ref. MKoooo23442).

[1] Whitehouse 2010: 60-72, cat. nos. 87-112.

Another vessel was part of the generous gift of 1,114 vessels donated to the museum in 1906. The small bowl with the body diameter of 6.7 cm, made of deep green glass without corrosion, bears on the perimeter of the low body relief decoration of seven stamped six-pointed rosettes, some of which overlap (Fig. 2). Carl Lamm included bowls with this decoration found in European collections in the repertoire of Islamic glass produced in the 8th-10th centuries[2]. Their number was later supplemented by Beato Rütti, particularly with examples from Swiss collections[3] and Ursula Liepmann added a find from Syria held by the August Kessner Museum in Hanover[4].

The prime specimen from the Lanna collection, a giant beaker, was sold at the second auction in Berlin in 1911[5]. According to the report published by the later director of the Museum of Decorative Arts in Prague František X. Jiřík[6], the «rare Assyrian beaker from the 14th century was purchased for the high price of 41,000 German marks by the Durlacher company in London» and «the museum could not even think of this price». The unique 29.5 cm tall beaker of colourless (yellowish) glass has an optical decoration of vertical ribs and paintings in gold and colour enamels in five horizontal bands is now held in Freer Gallery in Washington. Arabesques and flowers are complemented by circular medallions with figures of riders on horseback, interpreted as polo players or falconers (Fig. 3). Lanna's specimen was placed in the context of the four completely preserved 'giant beakers' of around 30 cm in height and another two documented only in fragments by Ingeborg Krueger, noting that the beaker from the Bavarian National Museum in Munich in particular has similar decoration[7].

The collection of Islamic glass weights and coins made its way to the museum from a deposit kept in 1938 at the Czechoslovak Ministry of Education and National Enlightenment. The cassette with two layers of 18 and 15 items came from the collection of the well-known Orientalist Adolf Grohman (1887-1977) and is believed to include finds from

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[2] Lamm 1930: 64, nos. 11-14.
[3] Rütti 1981: 131.
[4] Liepmann 1982: 116, cat. no. 152.
[5] Lepke 1911: 97, cat. no. 798.
[6] Jiřík 1911-1912: 104-105.
[7] Krueger 2015.

Fayyum and Fustat in Egypt. The glass objects represent weights from the early Islamic period and 8th-century Fátima and Mamluk tokens, as well as two late Roman pendants with broken loops, a small copper coin and a small wooden figure[8]. Alongside the Josef Michera collection, it is the largest series of this type of glass in the Czech lands[9].

A larger quantity of Islamic glass comes from excavations and archaeological research in Prague, Brno, Znojmo and Rokštejn Castle. It includes not only beakers but also three table bottles.

A simple beaker with painted decoration was handed over to the Museum of Decorative Arts in an unspecified period of time, and listed in the collection in 1961 among 'old finds'. Judging by the remains of mortar-like matter inside the beaker, it may come from a building in Prague. It is made of thick-walled yellowish glass, with heavily damaged enamel decoration in three horizontal fields. Two circular blue discs on the opposite sides of the vessel, 10 cm tall, are well preserved (Fig. 5a). According to Summer S. Kenneson, the beaker represents a cheap 'E' type ware, with a distribution mainly in southern Russia, the Crimea and on the Black Sea coast in the Tartar graves of the 14th century[10]. If it was indeed found in Prague, it is the only example from Europe so far.

The archaeological excavation of the well at the White Tower at Prague Castle in 1937 yielded an almost complete beaker with an Arabic inscription and a decoration of three golden fishes (sharks?) on the body (Fig. 5b)[11], as well as the body fragment of a bottle(?) with an architectural motif[12]. The inscription on the beaker is an anonymous praise of Allah. The beakers of this shape belong to Kenneson's Group B, produced between 1225 and 1250[13]. The motif of golden fish also appears on the body fragments of probably two beakers from Brno, younger than the Prague specimen (Fig. 5c)[14]. They had cylindrical bodies and can be classified with Group C, dating to ca. 1250-1310[15]. The fishes on the Brno beakers are densely spaced and framed by red-

[8] Novák 2023.
[9] Novák 2006.
[10] Kenneson 1998: 47-48.
[11] Černá ed. 1994: 60, cat. No. 48.
[12] Černá 1994: 60, cat. no. 49.
[13] Kenneson 1998: 46.
[14] Sedláčková 2019: 267, Me220-04.
[15] Kenneson 1998: 46.

brown lines. Analysis has shown that the 'golden' colour of the bodies corresponds to the chemical composition of brass[16]. According to Carl Lamm, numerous vessels decorated with golden fish date from Egypt around 1300, while another group with this decoration was widespread in the Caucasus[17]. They are virtually unknown in Europe, I found only one jar with 'golden' fish from Lübeck (Germany)[18].

Fragments of five beakers are reported from Prague - the city[19]. The largest body fragment of a cylindrical bowl with gilded and enamel decoration of architecture, probably minarets, and an inscription comes from Celetná Street and is dated to the second half of the 13th century (Fig. 5d)[20]. The decoration of architecture and trees with green leaves is reminiscent of the decoration of the so-called Baltimore beakers, the buildings on which are presumed to represent Christian churches[21].

Unique finds in the European context include three vessels, fragments of bottles or lamps. All of them had bulbous bodies, but only the find from Znojmo features a cylindrical mouth evidencing a bottle. It comes from a well functioning in the 13th-15th centuries at a house near the Přemyslid castle. The decoration consists of as yet unidentified Arabic inscriptions in circular medallions, with additional inscriptions scattered between the medallions (Fig. 5e)[22]. Fragments of two other vessels may come from lamps. On the specimen from Prague Castle, colour depictions, probably of two minarets(?), covered the surface of the upper part of the body, with ornaments in the interspace[23]. A similar depiction is on a bottle of Syrian provenance from the mid-13th century, yet these are believed to be Christian churches[24]. The last bottle or lamp comes from a well in the convent of the Cistercian nuns in Old Brno, founded by the last wife of Přemyslid King Wenceslas II, Eliška Richenza. The decoration is only on the upper part of the body, and a fragment of it

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[16] My thanks for the information go to Petr Vachůt from the Brno City Museum.
[17] Lamm 1929: figs. 127-138, 141-154 and 157; tabs. 163-167.
[18] Steppuhn 1996: 326, fig. 10.
[19] Černá *et al.* 2012: nos. 5, 6, 13, 14 and 16, including analysis.
[20] Černá *et al.* 2012: 405, fig. 4.
[21] Carswell 1998.
[22] Sedláčková 2019: 268, DN-24, analysis A 52.
[23] Černá 1994: 60, no. 49.
[24] Carboni 2001: 241-245, no. 121.

has survived with a representation of a small figure of a dog(?); the second bears the capital 'M', the third flowers (Fig. 5f)[25]. Some similarity in decoration can be found on the earliest dated bottle with an inscription attributed to the Ayyubid Sultan of Aleppo in 1237-1260[26].

A brief survey shows that the Islamic vessels mentioned were made in the 13th century. It is very tempting to associate these finds, especially of bottles or lamps, with the Přemyslid kings on the Czech throne. King Premysl Otakar II (1253-1278) and his successor Wenceslas II (1278-1305) are the most likely candidates, yet this is truly probable only for the beaker and bottle or lamp from Prague Castle.

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Fig. 1a,b,c - *Cosmetic bottles*. MDA, inv. nos. 5556a-c.

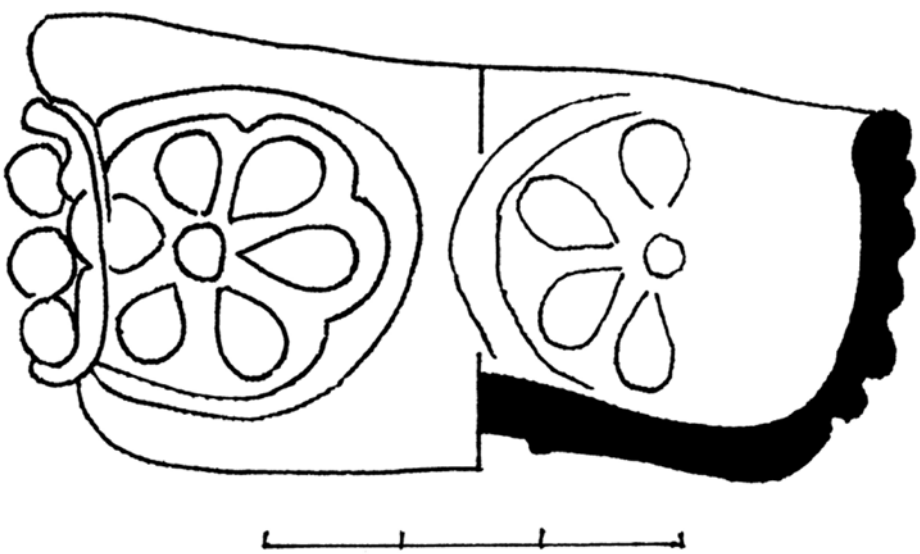

Fig. 2a,b - *Small bowl with rosetes*. MDA, inv. no. 10486.

Fig. 3. - *Giant Islamic beaker*. Freer gallery, inv. no. F1948.14.

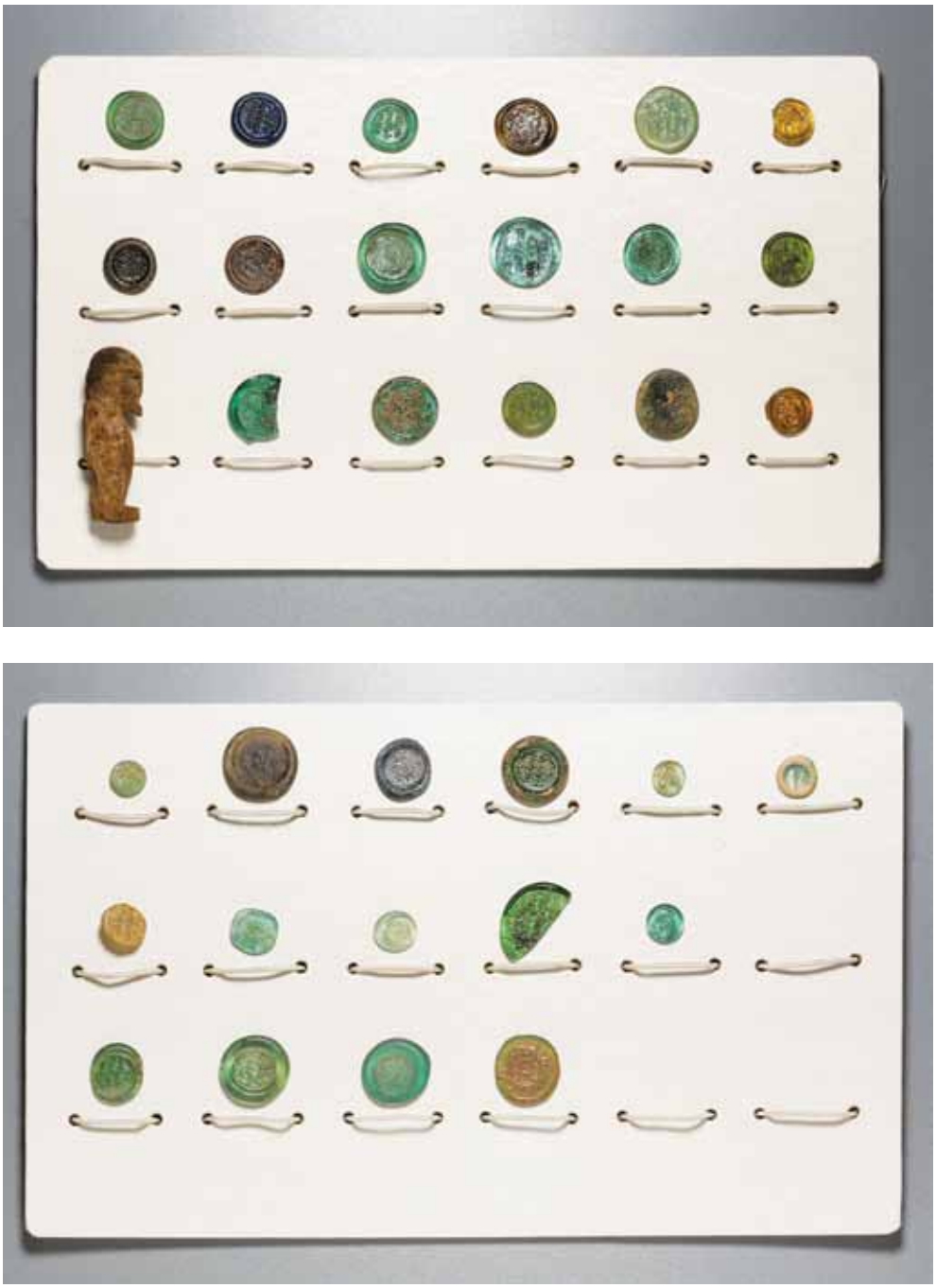

Fig. 4a,b - *Collection of Islamic glass weights and coins*. MDA, inv. no. 1 156/43 and 44.

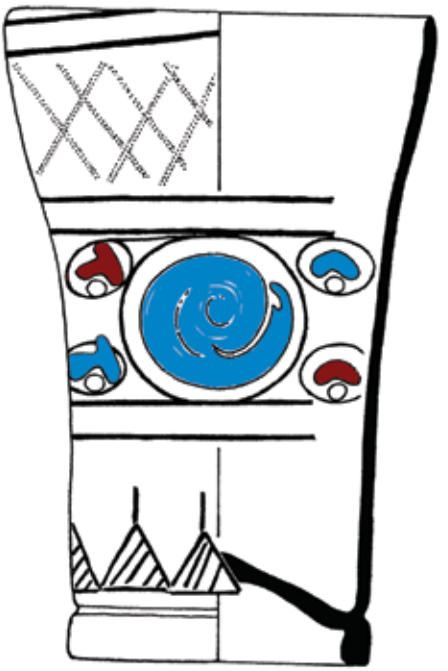

Fig. 5a. (1-2) - *Painted Islamic beaker*. MDA, inv. no. 53 085.
Fig. 5b - *Islamic beaker with inscription and 'golden' fishes*. Prague Castle.
Fig. 5c - *Islamic beaker with 'golden' fishes*. Brno, Mečová Street.

Fig. 5d. - *Painted Islamic beaker with inscription and architecture*. Prague, Celetná Street.
Fig. 5e. - *Islamic bottle with inscriptions and medaillons*. Znojmo, well in the house near the castle.
Fig. 5f. - *Fragment of the Islamic bottle or lamp*. Brno, Convent of the Cistercian nuns of Old Brno.

Stefania Peluso and Marco Verità

14TH-16TH CENTURY MAMLUK AND VENETIAN GLASS SHERDS FROM AN EXCAVATION IN THE OLD CITY OF JERUSALEM

Introduction

The glass materials illustrated in this paper come from the old city of Jerusalem, exactly from the Franciscan monastery of Saint Saviour located inside the ancient wall of the town close to the modern New Gate. The monastery is the seat of the custody of the Holy Land constituted in the 14th century in the old Monastery of the Holy Mount Sion with the intent of protecting the Christian Holy places and to take care of the pilgrims travelling to see them[1].

Restoration works were carried on between 2015-2018 under the Saint Saviour church of the monastery close to the old library. During the works between the buildings a filling formed by discarded materials was discovered. The filling was not layered, but chaotically mixed, so it consists of a secondary drain.

The filling constitutes an assemblage of artefacts dated from the 1st century AD (very few and out of contest material) until the 17th century. The majority of the assemblage is, indeed, dated to the Mamluk period between the 14th and 16th century. The Mamluk sultanate (1250-1517) arose from the disintegration of the Ayyubid realm in Egypt and Syria (1250-60). In few years, the Mamluks created the largest Islamic empire of the later Middle Ages including Jerusalem. They also managed to take control of the holy cities Mecca and Medina. They established their capital in Cairo, which became the economic, cultural and artistic center of the Islamic Arab world[2].

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[1] For a historical presentation of the Franciscan Monastery od Saint Savior see: Horn [1962] 2004: in part. 161-185.

[2] Petry 2022: Iii.

Many materials were found mixed on the soil. The filling consisted of pottery, glass, iron and bronze objects, mosaic tiles, marble objects, food waste etc. Moreover, what is of particular interest, processing wastes of pottery and metal were also found, testifying that in the area existed workshops centres for the production of some of the most common object found in the dig.

In the assemblage of Saint Saviour have been found different typology of glass that constitutes the 30% of the quantity of the sherds. Around 1200 fragments of glass were classified, drawn and catalogued in the final report of the study. In the assemblage is predominant the transparent natural colored glass, that is glass colored without a voluntary addition of colorants in hues from greenish (the most abundant) and the bluish until the green-yellow. The presence of colorless glass is also attested (Fig. 1). Voluntary coloured glass is represented by nice samples of green (the prevalent color), followed by blue and red brown samples. Opaque white glass fragments are quite rare, while white inlays were applied on some colored transparent blown glass.

Most of the fragments belong to glass objects shaped by blown freehand or mold-blown technique. Some are decorated with marvered trailed of opaque white glass, while enameled colorless glass fragments are quite rare. The most popular shape in the assemblage is bottle (359 fragments), followed by beakers (192) and bowls (176).

The Mamluk glass is very well documented in Jerusalem[3], even if until recently, the publication of Mamluk-period glass was limited. Fragments of such vessels were found in salvage excavations, usually in small numbers, and only part of the material was published[4]. Very few well dated assemblages were unearthed[5] and unfortunately our assemblage cannot provide a close well documented contest. Anyway the materials find generally good parallels with the publications available, even if the quantity and the variant of the shapes are remarkable. Many shapes didn't find until now a suitable parallel, being part of rare items, as well as, the reconstruction of some shapes were complicated, but despite it all, carried on in a complete and detailed publication forthcoming.

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[3] Gorin-Rosen 2019.

[4] *Ibid.*: 101.

[5] *Ibid.*

The samples of Saint Saviour can be divided in two macro groups, according to the shaping technique: the closed shapes to which belong bottles, perfume bottles, lamps, jars and jags and the second group represented by bowls and beakers. Each group was divided in sub-groups according to its specific function and the technique used for the manufacturing.

In the assemblage it was evident the presence of two samples that can be considered of genuine Venetian provenance. It is a couple of mold-blown bowls with *meza stampaura* ribbings, with the rim decorated with gold leaf and enamel drops (Fig. 2). The Venetian origin of some of the glass objects is not surprising because the presence of the Venetian Consul in the Jerusalem pilgrim hospice during the XV century is documented[6] and the presence of other Venetian glass sherds cannot be excluded. Despite the Venetian glass objects, the presence of abundant imported pottery of *padano-veneta* production is also attested, possibly related to the pilgrim Hospice and to the Franciscan monastery. The quantity is very noteworthy that direct shipments to the Custody are rightly conceivable.

The aim of this paper is to analyze a first set of transparent colorless and colored in natural hues glass sherds of different shapes that were considered worth of a preliminary archaeometrical investigation. A group of items surely of Mamluk production was also selected for analysis (Fig. 3). The analyses are compared with datasets of Renaissance Venetian glass and the composition of some prunt glass sherds indicate their probable Venetian origin.

Experimental

The large amount of glass fragments suggested to direct a first round of quantitative chemical analyses to samples of transparent glass not colored with addition of specific elements. They were classified with the naked eye in three groups: colourless glass (group A), colored in natural blue-greenish hue glass (group B, exclusively composed of prunt glass fragments) and slightly colored glass in natural hues (group C).

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[6] Golubovich 1923: 17.

Sixteen samples were selected and analysed by energy dispersive X-ray micro-fluorescence spectrometry (μEDXRF) at the LAMA laboratory (Iuav University, Venice, Italy) using a Bruker M4 Tornado. X-rays were collected for 200 s. The raw data were corrected for the matrix effect with a program supplied by Bruker. The concentration values were further verified by measuring a set of reference glasses (Corning A, B, NBS-620) at the same analytical conditions. Under the selected experimental conditions an analytical accuracy for SiO_2, Na_2O and CaO below 1% and for the remaining oxides below 5% was estimated. Low limits of detection in the range 0.005%-0.01% for most of the oxides were calculated (0.10% for As_2O_3 and P_2O_5).

Results

The quantitative chemical compositions of the glass samples are reported in wt% of the oxides in Tab. 1. All samples are made of soda-lime-silica glass. The low magnesium, potassium and phosphorous (under the limit of detection) contents of two colorless samples (A1 and A6b) correspond to the composition of the so-called natron glass prepared by melting a batch of a silica-lime sand and natron (a mineral sodium carbonate) as a fluxer. This type of glass was produced in great amounts during the Roman and Byzantine periods until the 8th-9th c. Remelting of ancient natron glass to make new objects probably continued until the 12th-13th c[7]. These two samples will not be further discussed.

The other samples are made of the so-called soda plant ash glass, obtained by melting a batch of a silica source and soda ash obtained by firing halophyte plants like salicornia and salsola kali, growing in salt desert areas. Manganese was used to control the final color of the glass.

To identify glasses of possible Venetian origin, the compositions of the Saint Saviour samples were compared with datasets of Renaissance Venetian colorless and naturally colored glass compositions[8]. In the

[7] Freestone 2015.

[8] Verità 2021.

diagram of Fig. 4a the concentration of calcium versus potassium (elements that entered the glass composition through the soda plant ash) are reported for samples of groups A and C of Saint Saviour assemblage and compared to the Venetian *vitrum blanchum* and *cristallo* datasets. Their concentrations match the *vitrum blanchum* composition and differ from the *cristallo* dataset. Similar results are observed for phosphorous, magnesium and chlorine. These data allow to conclude that the glasses of the group A and C of Saint Saviour were melted with the same soda ash (the same fluxer) as Venetian *vitrum blanchum* glass. This conclusion is not a surprise, since soda ash from Levant was imported in Venice for a long time and was considered by Venetian glassmakers as the best fluxer to melt high quality glass[9]. On the other hand, these results exclude the presence of *cristallo* glass composition between the analysed colorless samples of Saint Saviour.

In the diagram of Graph 1 it is evident that the concentrations of iron and titanium of the groups A and C of the Saint Saviour samples differ from Venetian *vitrum blanchum* and *cristallo* dataset because of their larger content of these two elements. Iron and titanium enter the glass composition mainly through the silica source; therefore the results allow to conclude that the glasses of the A and C groups were melted by using a silica source of different provenance (and more contaminated) of the one used in Venice during Renaissance.

In the diagrams of Graph 2a,b the concentration of calcium versus potassium and of alumina versus iron of the samples of group B of Saint Saviour are compared with the analyses of Venetian common glass dataset and of Venetian prunt glass dataset[10]. Unlike the A and C groups, the composition of the samples of the group B match the composition of Venetian glass both for the elements entering the composition through soda ash as well as elements entering the glass composition through the silica source. These results indicate that the blue-greenish prunt glasses of the Saint Saviour assemblage are not a local production but they were probably imported from Venice.

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[9] *Ibid.*

[10] Verità, Zecchin and Tesser 2019.

Conclusions

The quantitative chemical analyses of a limited number of transparent glass samples from the Saint Saviour archaeological assemblage (Jerusalem) evidenced the presence of a large majority of soda plant ash glass and two natron type glass sherds. Natron glass was probably in use not later the 12th-13th c. AD.

The chemical composition of the majority of the colorless (group A) and slightly colored (group C) soda ash glass sherds of Saint Saviour assemblage analysed up to now, differs from the Venetian Renaissance glass datasets (*vitrum blanchum* and *cristallo* compositions) and they probably belong to a local production. Further analyses of colorless and colored glass sherds from the Saint Saviour glass assemblage are in progress to identify their possible provenance.

Surprisingly, the composition of blue-greenish prunt glass sherds (group B) from Saint Saviour matches the composition of Venetian common glass and Venetian prunt glass datasets attesting their probable import from Venice. Once more one of the many 'legends' occurring on Venetian glass (*A low quality greenish glass cannot have been made in the Murano glassworks)* has to be reconsidered. Venetian glassmakers made and exported any kind of glass, following the taste of the customers.

Acknowledgements

In memory of Fr. Sergey Loktionov

The Franciscans friars of the Custody of the Holy Land: Fr. Stephane Milovitch (for the permission to study the materials and the support to the research) and Fr. Eugenio Alliata (for the scientific contribution to this study), as well as Yael Gorin-Rosen, Rosa Barovier Mentasti and Cristina Tonini for their precious suggestions, are kindly acknowledged. Special thanks to the parish of Santa Rita (Taranto, Italy) and to Don Gino Romanazzi for the financial support.

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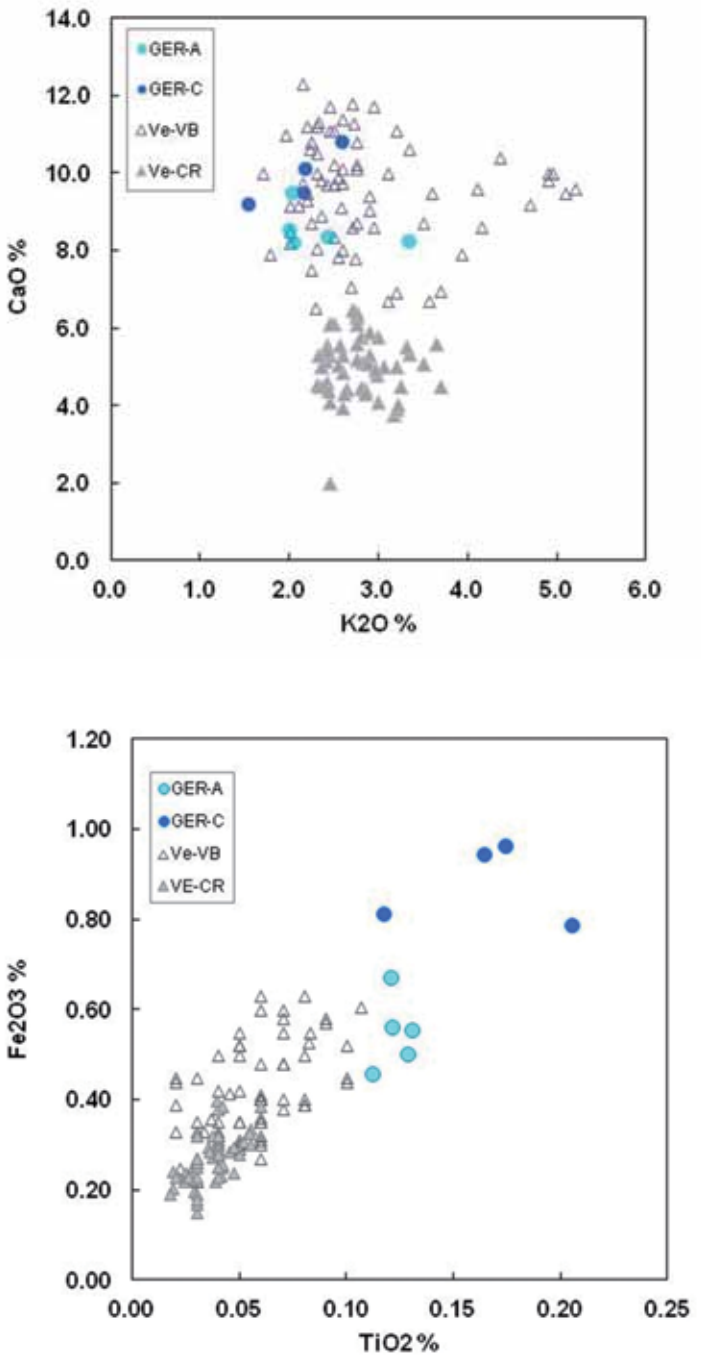
Tab. 1 - *Quantitative chemical composition (wt% of oxides) of glass samples from* Saint Saviour *assemblage. Colorless (A), slightly coloured in natural hues (C); greenish coloured (B). In sample A6b antimony (Sb_2O_3 0.25%) was also detected. Searched for and not detected: Pb, Sn, Sb, Co, Cu, Zn, Ni.*

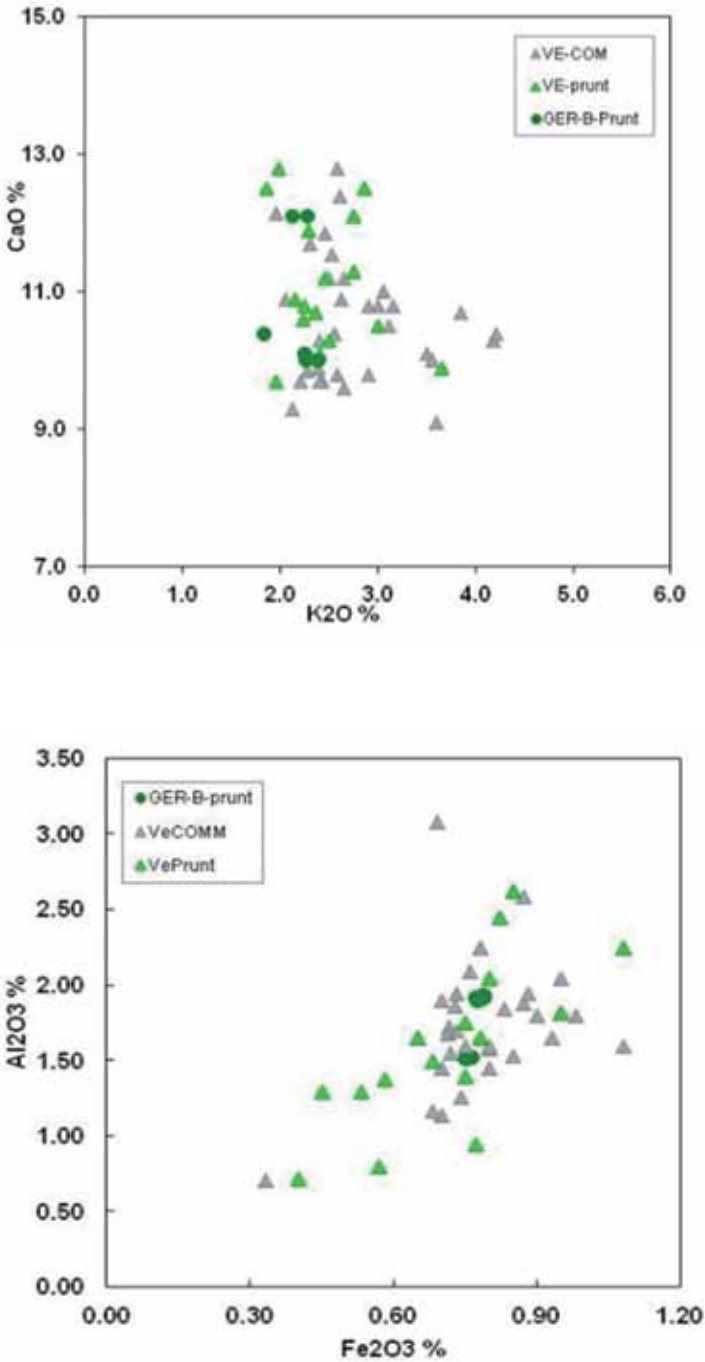
Sample	Colour	SiO_2	Al_2O_3	Na_2O	K_2O	CaO	MgO	SO_3	P_2O_5	Cl	TiO_2	MnO	Fe_2O_3
A1	colourless	64.5	2.43	19.5	0.62	7.7	0.88	0.32	n.d.	1.00	0.12	1.68	1.00
A6b	colourless	72.2	1.85	18.3	0.42	5.4	0.35	0.27	n.d.	0.80	0.05	n.d.	0.30
A2	colourless	70.5	1.10	11.5	2.00	8.5	3.45	0.10	0.33	1.10	0.13	0.58	0.56
A3	colourless	68.5	0.90	12.2	3.35	8.3	3.85	0.17	0.35	1.22	0.11	0.55	0.46
A4	colourless	67.8	1.48	14.3	2.05	8.2	2.74	0.20	0.26	1.10	0.12	0.94	0.67
A5	colourless	69.0	1.17	12.7	2.44	8.3	3.35	0.15	0.32	1.13	0.12	0.69	0.56
A6a	colourless	68.6	1.06	11.7	2.04	9.5	3.44	0.22	0.40	1.14	0.13	0.88	0.50
B7	greenish	64.0	1.52	12.6	2.27	12.1	4.80	0.20	0.19	1.11	0.07	0.23	0.76
B8	greenish	68.4	1.97	11.0	1.83	10.4	3.55	0.20	0.22	0.95	0.11	0.25	1.03
B9	greenish	67.0	1.93	11.8	2.37	10.0	4.30	0.20	0.24	1.14	0.07	0.13	0.79
B10	greenish	67.6	1.92	11.3	2.26	10.0	4.35	0.18	0.22	1.11	0.07	0.13	0.77
B11	greenish	64.2	1.52	12.5	2.12	12.1	4.94	0.20	0.20	1.08	0.07	0.24	0.75
B12	greenish	67.2	1.90	11.6	2.38	10.0	4.33	0.20	0.24	1.11	0.07	0.13	0.78
B13	greenish	67.0	1.92	11.8	2.24	10.1	4.32	0.20	0.20	1.15	0.07	0.13	0.79
C15	slightly coloured	68.7	1.80	10.0	2.18	10.1	3.60	0.24	0.26	1.05	0.16	1.00	0.94
C16ab	slightly coloured	67.4	1.65	11.3	2.16	9.5	3.95	0.21	0.24	1.16	0.12	0.83	0.81
C17b	slightly coloured	65.8	1.74	10.8	2.60	10.8	4.90	0.16	0.41	1.04	0.20	0.66	0.79
C18	slightly coloured	68.8	2.15	10.7	1.54	9.2	4.18	0.11	0.30	0.95	0.17	0.87	0.96

Fig. 1 - *Saint Saviour glass assemblage. Some of the analysed samples: A2 (top left); A6 (bottom left); A3 (natron glass, top centre); two Venetian prunt glasses B12 (bottom centre) and B7 (right).*
Fig. 2 - *Saint Saviour glass assemblage. Two Venetian mold-blown bowls with "meza stampaura" ribbings, with the rim decorated with gold leaf and enamel drops (samples not analysed).*

Fig. 3 - *Saint Saviour glass assemblage. Mamluk production glass fragments.*



Graph 1a, b - *Diagrams of calcium versus potassium (top) and iron versus titanium (bottom) of Saint Saviour colorless (A, turquoise circles) and slightly colored (C, blue circles) glass samples compared with Venetian vitrum blanchum glass dataset (VE-VB open triangles) and cristallo glass dataset (VE-CR gray triangles).*



Graph 2a, b - *Diagrams of calcium versus potassium (top) and aluminium versus iron (bottom) content of* Saint Saviour *green-blue colored sherds (B, green circles) compared with Venetian common glass dataset (gray triangles) and Venetian prunt glass dataset (green triangles).*

Katherine A. Larson

SOME FRAGMENTS OF ENAMELED ISLAMIC GLASS IN THE CORNING MUSEUM OF GLASS

Although the exact mechanisms of transfer remain uncertain, the luxury glass industry of the Islamic world was deeply entwined with the emerging Venetian glass industry in regards to raw materials, technology, and style, perhaps even through shared craftsmen[1]. The Corning Museum of Glass in Corning, New York, holds one of the world's greatest collections of historical glass, including intact masterworks of Islamic enameled glass of the 13th and 14th centuries[2]. Less well known and largely unpublished are dozens of examples of Islamic gilded and enameled glass that only survive in fragmentary form. These fragments showcase a wide variety of decorative patterns, shapes, quality of glass, elaborateness of composition, and styles exemplary of the creativity and diversity of the Islamic enameled glass industry that have not survived intact. The focus of this paper is to highlight a small number of this expansive collection.

Provenance of the Collection

Approximately 140 objects and fragments with enameled or gilded decoration made in Islamic glasshouses are now in Corning. These may be associated with the peak of production during the 13th and 14th centuries. A majority were acquired in Egypt:

- Approximately 71 from Phocion Tano, a Cypriot antiquities dealer with office in Cairo. Corning acquired a group of approximately 275 fragments of Islamic glass from Tano in 1951, of which a large number were enameled.

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[1] E.g. Carboni 1998; Ward 2015.

[2] Carboni and Whitehouse 2001: 246-247, cat. 122; 265-266, cat. 131; 270-272, cat. 134.

- 5 were excavated from Fustat as part of the American Research Center in Egypt excavation project, and came to Corning as part of the excavation agreement in 1969 and 1979. These were described and published in black and white by Scanlon and Pindar-Wilson in 2001, where they are described as 'surface finds'[3]. Although absent clear stratigraphic context, they indicate the variety of enameled glass circulating in the Mamluk capital in the 13th and 14th centuries.
- 14 enameled fragments from the Ray Winfield Smith collection are also likely to have been acquired in Egypt. Smith took frequent collecting trips to the country and served as the Director of the American Research Center in Egypt in Cairo from 1963-1965[4]. The enameled fragments entered the collection in 1974 and 1976.

The origins of the remaining 49 fragments, consisting of 18 from the American collector George McKearin (acquired by Corning in 1973), 19 from American collector Jerome Strauss (acquired by Corning in 1979), and 12 from miscellaneous ancient art dealers and European collectors in the mid-20th century, are more difficult to ascertain at this time.

Enameled Colored Glass

Among the most distinctive categories of Islamic gilded and enameled decoration are those with richly colored blue or purple base glass, of which four examples have been identified among the material in Corning (Fig. 1). Martine Newby dated the group to the end of the 13th through mid-14th century based on two examples from the group with ruler names – a sprinkler flask in the V&A from about 1295, and a jug in the Ashmolean dated to the 1360s[5]. Newby noted a predominance of Egyptian origin among this group, and the Corning examples uphold this pattern.

58.1.21 (Fig. 1a) is the shoulder of a small dark blue bottle or vase, narrowing to the neck. The upper band of decoration is white script with a gilded vegetal motif. Below the curve of the shoulder

[3] Scanlon and Pinder-Wilson 2001: 114-119, no. 46e, 46f, 46i, 46l, 46p.
[4] Larson 2021.
[5] Newby 1998.

are abstracted blue and red enamel pointed lobes set within gilded filigrees. The edge of a rondel is visible to the right of the red lobe.

96.1.1 (Fig. 1b) is a flattish body fragment of dark blue glass with decoration on one surface. The elaborate gilding fills the surviving area fully with the vegetal ornament. Additional enameling appears in white, blue, and turquoise. The edges of two rondels flank a pointed red lobe, creating the beginnings of a pattern which was likely repeated around a center point. The fragment is unusual as it is quite flat, with a gentle upward curve beginning around the solid gold band. As the decoration is on the interior, the vessel must have been open. Whitehouse estimated that the edge of the plate would have been about 25 cm in diameter. Enameled plates are rare, and Newby did not document any open vessels or plates from this colored glass group. A sense of the general shape and configuration of the motifs comes from a related plate from the Moore Collection, now in the Metropolitan Museum of Art[6]. The color, decorative motifs, and potentially shape also evoke a fragment found at Fustat, now in the Princeton University Art Museum[7].

The colors and decoration of these two fragments relate closely to the Cavour Vase, now in the Museum of Islamic Art, Doha, with its registers of overlaid gilded and enameled vegetal and pseudo-architectural lobed ornament[8].

Two additional fragments from bottles or beakers on purple glass (76.1.650 and 79.1.339) belong to the well-recognized decorative group with a repeating hexagonal motif of white enamel, interspersed with colored enamel dots or gilded stars (Fig. 1c-d). Parallels include a bottle now in Bologna, fragments found in Cairo and Stockholm, and a bowl fragment in the Al-Sabah collection[9]. The tight curvature of 79.1.339 (Fig. 1d) suggests it comes from a miniature beaker similar to an intact miniature beaker of blue glass, also from the Strauss collection (79.1.110), on which the original decoration is scarcely visible due to weathering.

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[6] Carboni and Whitehouse 2001: 273, fig. 105.

[7] Scanlon and Pinder-Wilson 2001: 116, no. 46g.

[8] Carboni and Whitehouse 2001: 260-263, no. 129.

[9] Newby 1998: 36-37; Carboni 2001: 348, cat. 94e.

Courtly Scenes

Several enameled Islamic fragments contain figural decoration. 51.1.167-30, from the Tano acquisition, is a fragment from a beaker with a cross-legged figure holding a red conical beaker (Fig. 2a). Likely male, the figure wears a blue jumpsuit with white, red, and yellow dots, sitting upon a red groundline. This common visual trope of a seated, elaborately dressed, drinking courtier appears most famously on the Palmer Cup at the British Museum, but is common enough on enameled glass fragments, with examples in the V&A and al-Sabah Collection, to suggest it was a rather conventional scene[10]. The shape of the vessel held in the subject's right hand resembles the shape of the beaker itself, creating a visual jest; we can envision such a vessel in use in a courtly banquet in which the courtier holds the cup, which shows a similarly dressed courtier also holding a cup.

Additional examples of drinking or feasting scenes in the Corning collection include a fragment of a perfume flask with a bearded figure in a rondel with blue backdrop, holding aloft a red conical beaker, which resembles the decoration on a perfume flask in the Al-Sabah collection (51.1.167-31)[11], and a fragment of a vessel of unknown shape, showing a blue turbaned figure holding a red enameled perfume bottle with ring neck, of similar form with contemporary glass vessels (63.1.14).

Another common courtly scene in Islamic art in general, and enameled glass in particular, is depictions of sport, of which polo was the most popular[12]. 79.1.340 is the center of a wide shallow dish, with enameled decoration one side. The scene is of a rider on a white horse, holding a long thin shaft in his hand, presumably that of a polo mallet (Fig. 2b). He is elaborately dressed in a turban with red stripes, a long-sleeved garment with gilding and yellow trim and red band on upper arm, and red pants. The rondel is flat, beginning to curve upward on opposite sides. It has a convex dome in the center and pontil mark on the underside. This fragment was first documented in the collection

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[10] Contadini 1998: 58-59, fig. 14.1-14.2; Carboni 2001: 353, 341, no. 90g.

[11] Cfr. Carboni 2001: 353, no. 96a.

[12] Beyazit 2016.

of Dr. Fouquet in Cairo in 1893[13]. The placement of the scene in the interior of the vessel, perhaps a belonging to a wide cup or plate, lacks good parallels.

79.1.341 depicts a polo player or musician (Fig. 2c). It features a figure with similar profile and body posture to the rondel fragment, holding a thin shaft aloft. The figure is wearing a blue robe with white dots. A final fragment which may depict a polo player is 79.1.344, also from the Strauss Collection (Fig. 2d). Although there is no clear indication of a polo mallet or horse as on the other two figures, Whitehouse suggested it may depict a polo playing scene based on compositional similarities with an intact beaker, now in the Louvre, which was reportedly found beneath the altar of the Church of Santa Margherita at Orvieto in 1897[14]. The Orvieto beaker – and all three Corning fragments – have curvilinear patterns in the background, and the figures wear turbans indicated by thick bands of vertical lines. Additional examples of enameled glass vessels with elaborate polo scenes include a beaker in the Green Vault in Dresden, a jug once in the Rothschild Collection, and a bottle in the Museum für Islamische Kunst in Berlin[15].

Architectural and Zoomorphic Scenes

Two fragments in Corning's collection depict architectural structures. Both fragments show buildings with bricks outlined in red, surmounted with further embellishment. 51.1.167-35, from Tano, preserves parts of three towers: at left, a tower with pointed roof in red, yellow, and green enamel, adjacent to a second tower with a red gable and white embellishment at the top (Fig. 3a). The building appears to have been symmetrical, as at the right edge of

[13] Lamm 1930: 325, no. 4, with references.

[14] Whitehouse 2010: 232-233, no. 114.

[15] Dresden: Lamm 1930: 332, no. 3; Rothschild: *The Collection of the Late Baroness Batsheva de Rothschild* Christies London, December 14, 2000, lot 15; Berlin: Porter 1998, fig. 21.6, Museum für Islamische Kunst I.2573. An additional unpublished fragment in the same collection also depicts a polo player astride a horse (I.2540: https://id.smb.museum/object/1861194).

the fragment is the edge of a third tower mirroring the one on the left. The left tower has a window, rendered in blue, while the central tower has a larger opening with a thick yellow and red object, perhaps a bell or lamp. 73.1.44-3 is less well preserved, showing part of a building or tower with white gable, and a vine motif at the right.

There are three strong parallels of scenes with architectural settings known from Islamic enameled glass: two closely related beakers now in the Walters Art Museum in Baltimore, and a bottle in a private collection which has been on view at the Met. Interestingly, all three architectural scenes seem to have some sort of religious setting. Carswell argued that the Baltimore beakers were souvenirs of pilgrims commemorating a trip to Jerusalem, with the buildings representing the Dome of the Rock, the Church of the Holy Sepulcher, and other shrines and features of the holy city[16]. For the bottle, Carboni has suggested that the buildings – one of which is clearly a church, with a cross positioned at the peak of the gable – could represent a monastic complex somewhere in Syria[17].

Not enough of the Corning architectural fragments has been preserved to determine the original scene or setting, but the possibility that these are either churches or mosques seems likely. The pointed turret on 51.1.167-35 (Fig. 3a) lacks the clear dome shape of the mosques and is therefore perhaps a Christian structure.

At least three fragments in Corning's collection belong to a group of beakers with large figures on the body, surmounted by colorful flying cranes or herons around the rim[18]. The three Corning fragments (51.1.167-47, 69.1.50, and 79.1.299) all show birds flying left, wings spread, and legs outstretched (Fig. 3b). The birds are all filled with thick enamel coloring, with some red outlines or gilding. Neither religious nor courtly in subject, they may represent a literary narrative.

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[16] Carswell 1998.

[17] Carboni and Whitehouse 2001: 242-245, no. 121; cfr. Carboni 2001: 341, cat. 90h and 90l.

[18] See discussion and parallels in Carboni 2001: 330-333.

Conclusion

This is but a small number and brief foray of the diversity of enameled glass fragments in the Corning collection awaiting further investigation and publication. Such was the visual richness made possible on glass by painting it with enamel. This emergent technology in the Islamic world, which allowed for the creation of colorful, figurative, ornamental scenes on glass, would inspire its neighbors, and soon to be competitors, in Venetian glasshouses to the west.

Acknowledgements

Preliminary cataloguing of the enameled fragments was conducted by David Whitehouse, whose notes were consulted in the preparation of this text. Rachel Ward also examined the Islamic enameled glass in Corning in 2015. Additional cataloguing, provenance information, and images for unillustrated fragments can be found on the Corning Museum of Glass online collection catalogue at https://glasscollection.cmog.org/.

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Fig. 1a - *Enameled and gilded glass with blue or purple base glass*. Late 13th-mid-14th century. a) *Fragment from bottle*, h. 6.6 cm, inv. no. 58.1.21.
Fig. 1b - *Fragment from dish*, h. 11.3 cm, inv. no. 96.1.1, bequest of Jerome Strauss.

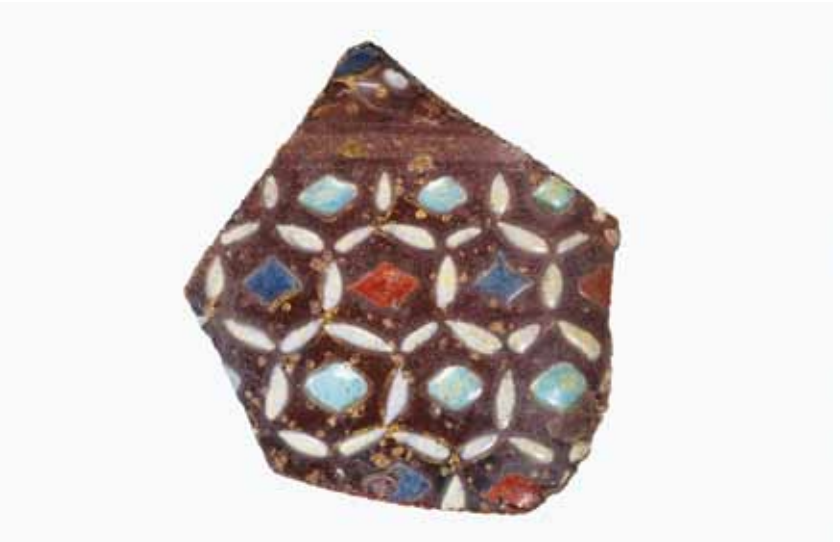

Fig. 1c - *Fragment from beaker*, h. 4.7 cm, inv. no. 76.1.650, gift of Carl Berkowitz and Derek Content
Fig. 1d - *Fragment from miniature beaker*, h. 4.8 cm, inv. no. 79.1.339, bequest of Jerome Strauss.

Fig. 2a - *Enameled and gilded glass with figural decoration of courtly scenes*. a) *Fragment from beaker*, h. 5.9 cm, inv. no. 51.1.167-30
Fig. 2b - *Fragment of dish or plate*, w. 9.7 cm, inv. no. 79.1.340, bequest of Jerome Strauss.

Fig. 2c - *Fragment of beaker*(?), h. 4.8 cm, inv. no. 79.1.341, bequest of Jerome Strauss
Fig. 2d - *Fragment of vessel*, h. 4.7 cm, inv. no. 79.1.344, bequest of Jerome Strauss.

Fig. 3a - *Additional enameled and gilded scenes*. a) *Fragment of vessel*, w. 5.4 cm, inv. no. 51.1.167-35 Fig. 3b - *Fragment of beaker*, possibly 1250-1275, w. 6.5 cm, inv. no. 79.1.299, bequest of Jerome Strauss.

Rainald Franz

ORIENTAL GLASS FORM AND DECORATION AND ITS INFLUENCE ON AUSTRIAN GLASS MAKING IN THE SECOND HALF OF THE 19TH CENTURY:

THE EXAMPLE OF THE MANUFACTURE OF J. & L. LOBMEYR IN VIENNA

The fashion of journeying the Arabian Peninsula and Egypt, new ways of publication and presentation in exhibitions renewed the interest in oriental art and decorative arts in Europe in the second half of the nineteenth century. This lead to a style within the Ecclectic Period, which came to be known as Orientalism, expressing itself in the Arts from Literature to Music, Decorative Arts and Architecture[1].

The Habsburg Empire looked back on a long history of trade and warfare with the Ottoman Empire, Islamic Art objects were luxury goods imported since the Medievals and were seen as an exotic source of inspiration for the Austrian Decorative Arts. Especially glass objects from Syria were traded in Europe since the 11th century, making their way into the treasures of cathedrals and monasteries and the Kunstkammer of the 16th century[2].

The 'Great Exhibition of the Works of Industry of all Nations' held in 1851 in London started the period of World Exhibitions, fostering the international trade and worldwide competition of mass products and Decorative Arts and Art Industry. One of the few Austrian glass producers present in the 1862 World Exhibition in London was the Viennese firm J. & L. Lobmeyr, winning a medal of honour for the exquisite crystalglass, services and chandeliers they showed. In London Ludwig Lobmeyr got in contact with the Viennese art historian, critic and journalist Rudolf Eitelberger (1817-1885), founding director of the Royal Imperial Museum of Art and

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[1] Macfie 2000; MacKenzie 1996; Al-Madhi 1973; Koppelkamm 1987; Said 2003.

[2] Pollig 1987.

Industry, opened in 1864 in Vienna according to the model of the London South Kensington Museum. The Royal Imperial Museum of Art and Industry was to become the first Museum of Decorative Arts on the continent, second only to what nowadays is the Victoria & Albert Museum in London. Lobmeyr was one of the first Austrian Art industrialists to take up Eitelbergers ideas, developing new glass forms and whole sets of glasses from ancient pattern pieces and printed and drawn models he found in the museum for his workshop and serving as a curator for the museum, which soon showed Lobmeyr glass in the exhibitions. The taste of the time was dominated by French Art Industry products. In France, the style of Oriental Glass had been established in the 1860ies by glass artists like Emile Gallé in Nancy. In Italy, the Venetian firm of Francesco Salviati copied ancient oriental glass. Philippe-Joseph Brocard, the Paris based glass painter, had developed from the conservation of ancient Syrian glass new techniques of decorating glass with enamel colouring, using the historic forms of Arabian Mosque lamps, bowls and beakers. Inspirations and patterns for the Oriental glasses and their ornaments came from magazines and collections of prints like *L'Art pour tous* or *Gewerbehalle* and the pattern books, illustrated with the new developed chromolithographs. In England, Owen Jones published with Jules Goury *Plans, Elevations, Sections and Details of the Alhambra* (1836-1845) and after the Great Exhibition *The Grammar of Ornament* (1856), while in France, the archeologist Achille-Constant-Théodore-Émile Prisse d'Avennes published *L'Art arabe d'après les monuments du Kaire* (1869-1877) and Auguste Racinet edited *L'Ornement polychrome. 100 planches en couleurs or et argent contenant environ 2000 motifs de tous les styles art ancien at asiatiaque, moyen age, renaissance, XVII^e^ et XVIII^e^ siècle*, (1869-1873). Brocard participated successfully in the 1867 Paris and the 1873 Vienna World Exhibition. Ludwig Lobmeyr took up the idea and tried to compete with French luxury glass in Oriental style.

Once more, the close friendly relations between Ludwig Lobmeyr and Rudolf Eitelberger and the Royal Imperial Museum of Art and Industry proved helpful in this effort. Ludwig Lobmeyr got in contact with the most important designers of Oriental glass for his firm via the Royal Imperial Museum of Art and Industry: Franz Schmoranz

and Gustav Machytka[3]. Franz Schmoranz (1845-1892) was one of the leading figures in documenting, publishing and practical use of oriental forms, glasses and ornaments. The son of the synonymus architect, Franz Schmoranz the Younger began his studies in Prague at the Technical University, traveled and became assistant of the Berlin architect Karl von Diebitsch (1819-1869), well known for his deep interest in Moorish architecture. From the early 1860ies on, Diebitsch had been the architect of the Egyptian Vice king Ismail Pasha, who had been appointed Khedive by the Sultan in 1867. Franz Schmoranz worked with Diebitsch in Eypt, building the palace of the Khedive in Ismailia, the city founded in 1863 supposed to become the administrative center on the Suez canal, just under construction. When Diebitsch died in 1869, the year of the opening of the canal, Schmoranz took over his position. He finished the palace of the Khedive and continued working for him, planing and executing the Egyptian pavillons for the 1873 Vienna and 1878 Paris World Exhibitions. The 1873 Vienna World Exhibition, the fifth one to be held, was also only the second one to draw special interest on Art Industry[4]. Already the Paris World Exhibition of 1867 had shown oriental pavillions as part of the setting. In Vienna, Franz Schmoranz included in the building of the Palais of the Viceking of Egypt an exact copy of the burial-Medrasa of Sultan Kait Bey in Cairo (1472-1474). The group of islamic buidlings comprised a town house, a farm house, a Turkish coffee house, a mosque and a copy of the rocktomb of Ben Hassan. The Austro Hungarian Empire laid special interest in building up new trade relations with Egypt, Turkey and Persia. The Pavillion of the 'Circle Oriental', built according to plans by Emil Hardt, was the home of the Austrian Association founded to support economic relations between the Monarchy and the Arabic and Asian Countries. This lead to the founding of the Oriental Museum after the end of the 1873 Vienna World Exhibition. In 1881, Crown Prince Rudolf traveled to Egypt, Cairo and along the Suez Canal, where he developed an apprectiation for Arabian lifestyle. After his return he had a room in the Hofburg, the Imperial residence since Medieval

[3] Franz 2015: 23-27; Sekler 2000: 260-265.

[4] Pemsel 1989.

times, refurbished as a masters room or study for his personal use in Arab style. The 'Turkish salon' of Crown Prince Rudolf of Habsburg in the Hofburg was published in 1886[5]. The imperial oriental room inspired many an aristocratic and bourgeois copy of such rooms, which needed appropriate refurbishment with furniture, carpets and glass and ceramics. This started a market for art industrialists for goods in Oriental Style to fulfill the wishes of the wealthy costumers. Also Ludwig Lobmeyr saw the need to produce glass in Oriental style. The first patterns developed by Franz Schmoranz and Johann Machytka, used for a vase decorated in Arabian style ('arabisch decorirt') by Lobmeyr were taken from Arabian tiles Schmoranz had sold to the Viennese k. k. Österreichisches Museum für Kunst und Industrie (Royal Imperial Museum of Art and Industry) after the 1876 exhibiton: *Historische Ausstellung des islamitischen Orients, Darstellungen von Cultus- und Profanbauten umfassend*, he had organized there[6]. Around 1878 Schmoranz and Machytka designed vessels, bowls and lamps decorated in Arabian style for Ludwig Lobmeyr. The coloured drawings for these are still today kept in the Archive of the Lobmeyr firm and the pattern and drawing books Ludwig Lobmeyr donated to the k. k. Österreichisches Museum für Kunst und Industrie (Royal Imperial Museum of Art and Industry) in two portions in 1883 and 1892 with the obligation to keep them in the library. Two of the folio-size drawing books comprise Oriental and Arabian vessels[7]. While Schmoranz and Machytka did glass series in Arabian Style with gold- and enamel colours on transparent glass, other designers specialized on translucent and opaque glass with brightly coloured gold and enamel decorations on it. On the occasion of the Vienna World Exhibition in 1873, a catalogue was published, documenting the glasses shown by Lobmeyr[8]. Going through this catalogue of most prominent objects out of the production of J. & L. Lobmeyr, it becomes clear that at this point of the development of styles in artistic glass in Austria, which

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[5] Ottillinger and Hanzl-Wachter 2002: 132.

[6] Scholda 2000: 201.

[7] Neuwirth 1981.

[8] Weltausstellung 1873 in Wien. Catalog von Ausstellungen von J. & L. Lobmeyr. K. K: Hof-Glaaswaaren-Lieferanten und Glasraffineure in Wien.

was lead by the firm of J. & L. Lobmeyr, Oriental, Persian, Turkish, Moresque and Arabian and Egyptian ornaments had achieved the same status as European styles and ornamental forms. Orientalism in Vienna, which influenced the Austrian Art and Architecture, found his way at an early stage into artistic glass due to the efforts of the firm of J. & L. Lobmeyr, who had made artistic glass of outstanding quality from Vienna compatible again in the period of World Exhibitions in Europe. Arabian Ornament had become a primary source of inspiration.

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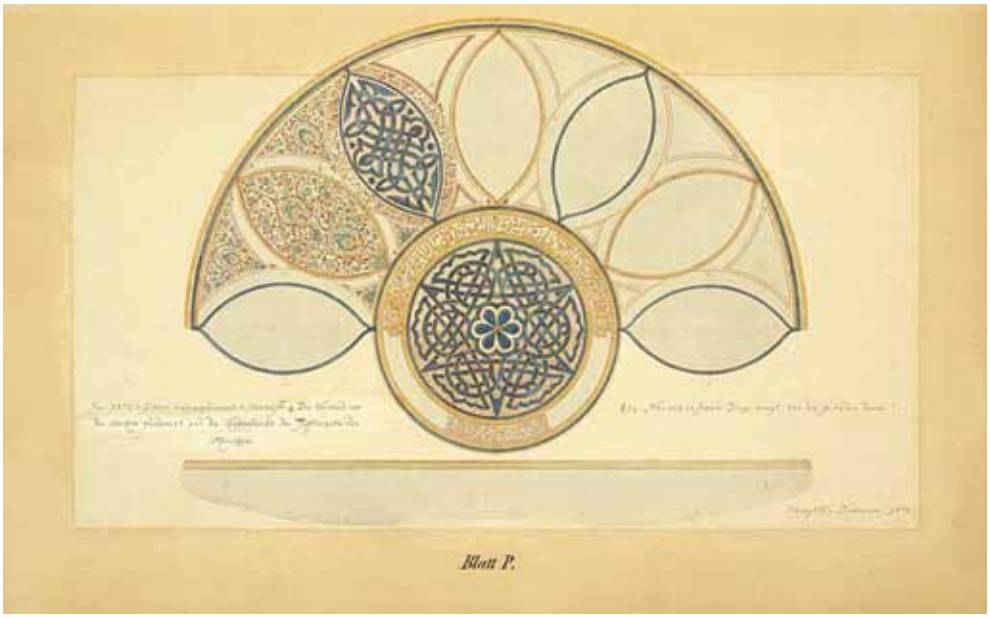

Fig. 1 - Franz Schmoranz and Jan Machytka for J & L Lobmeyr, *Design for a Bowl in Arabian Style*, Vienna, 1878. Vienna, MAK/Museum of Applied Arts, BI 7380-15-17-1-1 (© Photo MAK).

Fig. 2 - Franz Schmoranz and Jan Machytka (designers), J & L Lobmeyr (executor), *Bowl in Arabian Style*, Vienna, 1878, enamel decoration, gold decoration. Vienna, MAK/Museum of Applied Arts, Gl 1430 (© Photo MAK).

Fig. 3 - Franz Schmoranz and Jan Machytka for J & L Lobmeyr, *Design for a Vase in Arabian Style*, Vienna, 1878. Vienna, MAK/Museum of Applied Arts, BI 7380-15-12-1-1 (© Photo MAK).

Fig. 4 - Franz Schmoranz and Jan Machytka (designers), J & L Lobmeyr (executor), *Vase in Arabian Style*, Vienna, 1878, enamel decoration, gold decoration. Vienna, MAK/Museum of Applied Arts, Gl 2597 (© Photo MAK).

Maria João Botelho Moniz Burnay

ORIENTALISM IN THE COLLECTIONS OF THE PORTUGUESE ROYAL HOUSE: THE KINGS' GLASSWARE

The romantic period

Within the Romantic spirit, the Oriental subjects with their different cultural themes, had an important impact and strong influence in the European Architecture and Arts in the 19th century and early 20th century. According to José Luís Porfirio, «Orientalism, as it is commonly referred to is born and lives in that time, if we want to be rigorous, in a more restricted sense, it is born already near the end of the century [19], in the 70s and 80s, when the European imperialisms were most interested in the Middle East, while on the other side of the world, in a Far East, China and Japan were forced to open themselves to the will of Europeans and Americans»[1].

Oriental motifs had been found in architecture in Portugal since the 1860s, namely the Mudéjar style, which had nothing to do with the Portuguese Orient, but rather with the Andalusian Moorish influence that was effectively in vogue.

In Portugal, these artistic subjects were visible in the interior decoration of the royal palaces and in the collections of the Portuguese royal house: in the Ajuda Palace, the Chinese room was designed from 1864 onwards to house the diplomatic gifts from Japan to King Luís I (1838-1889), among other oriental pieces, and the winter garden was garnished with chalcedony agate, an offering from Khedive of Egypt to King Pedro V. Orientalism is also transversely present in furniture, jewellery, painting, sculpture, ceramics, textiles and glass.

The watercolour by Enrique Casanova (1850-1913) of the room of Prince Afonso (PNA, inv. no. 56518), painted in 1886, shows the ex-

[1] Porfírio 1999: 127.

otic neo-Islamic taste of its decoration; on the west wall a hanging cloth, two large fans, the portrait of King Luís, a photograph of the queen Maria Pia, and a painting of the sea. On the north wall, two cloths were hanged, with one of them falling over a set of four crossed sabers, almost as in a Berber tent (Fig. 1).

Orientalist art in the late 19th century became pure colonial art, and it concerns two types of artists: resident ones, and those who travelled through the Orient, some supported by grants[2].

This new movement, which began in the early 18th century, soon became a veritable fashion for everything and has found in Alberto Pasini (1826-1899), painter and traveller, one of its most refined interpreters. Pasini's works are like travel diaries, stories within stories, imaginative horizons in which the viewer can immerse himself in a distant imaginary of countries such as Turkey, Persia and Egypt; true journalistic reports of the 19th century.

The painting "Arab Hunters"[3] (PNA, inv. no. 3534) dated 1865, would have been acquired by D. Luís in the Oporto International Exhibition, in 1866, and belonged to his collection exhibited in his Painting Gallery (Fig. 2).

The Salon in Paris was a stepping stone that ensured Pasini's fame: in 1859, the artist won the third-class medal for the Landscape section with four paintings inspired by his trip to Persia. After a second trip to Egypt, Palestine and Lebanon, Pasini exhibited paintings from his travel memoirs at the Salon and this ensured him even greater success[4].

The depiction of the exoticism of the Mediterranean Orient was also followed by Portuguese artists such as Marciano Henriques da Silva (1833-1867), painter at the court of King Luís, and curator of his private collections of Art.

The work *A Moor* (PNA, inv. no. 4117) from 1867, owned by D. Luís' painting collection, was displayed in the Noble Corridor and then transferred to the Library, where it is still kept. Eduardo de Noronha (1859-1948) would say that the model used for this work was «a soldier,

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[2] Richemond 2008: 25.

[3] http://raiz.museusemonumentos.pt/DetalhesObra?id=991218&tipo=OBJ (30/09/24).

[4] Saint-Raymond 2018: 43-49.

a cook from the military asylum of Mafra, such a beautiful African figure that D. Luís had him portrayed, in July 1867, by the painter of his chamber, Marciano da Silva»[5] (Fig. 3).

The constant quest for luxury: the orientalist glassware of kings

In the selection of luxury glassware they bought throughout Europe, the kings of Portugal, Luís I and Maria Pia (1847-1911) chose sets such as Japanese-style liqueur services, and jugs, engraved, cut and gilded with decoration based on the famous Japanese woodblock prints, and artefacts that from 1860 onwards 'flooded' the European art markets, models that the Baccarat factory presented with great success at the Universal Exhibition of Paris in 1878.

At the same time, in the collection of the Ajuda Palace, we can see *Verre d'eau* and toilette services (known as 'bedroom services') and liqueur sets, in the Islamic style, richly decorated with elaborate enamels and gilding, made by the best Bohemian factories: the firms J & L Lobmeyr, in Vienna, and Moser, in Carlsbad (now Carlovy Vary). In addition to Western Europe, these companies also supplied the Eastern market, namely the Ottoman Empire. One of the most spectacular examples is the vase presented by the Lobmeyr firm in 1878; neoclassical in form, it was richly decorated with enamels of neo-Renaissance, arabesque and Indian motifs. The piece, which had a major impact on the exhibition, was acquired by the South Kensington Museum (now The Victoria & Albert Museum).

From around 1870 onwards, in the Bohemian glass production, a more refined style of polychrome enamel painting was used, inspired by Arab, Persian or Indian models. The importance of these decorative techniques can be seen in the works of Lobmeyr, and Moser and Holzner (Carlsbad). The Czech glassworks of Adolfov created models by Viennese architects of the time, and also by Frantisec Schomranz. In France, Brocard and Imberton used the same techniques, and the discovery of Far Eastern art, namely Japan and China, particularly in France, it was

[5] Vaz, João in http://raiz.museusemonumentos.pt/DetalhesObra?id=991220&tipo=OBJ.

starting point for breaking away from traditional rules and developing a decorative taste inspired by forms from nature, recreating a variety of stylised plant elements[6]. In this text we will show concrete examples of this fashion which has exerted such a fascination on Western culture.

Bohemian production

Around 1870, there was an artistic revival by nationalist themes and the establishment of new museum collections of antique glass. These factors that would influence and inspire a new generation of artists. They introduced enamel techniques from the 16th and 17th centuries, and the Neo-Renaissance style was in vogue from 1870 to 1890; the Ajuda Palace has several pieces from this period in its collection.

But it was the Islamic-style decoration, with the application of interlaced geometric shapes, was the novelty, introduced by the Lobmeyr, Meyer's Neffe and Moser firms during the 1870s. In 1878, Moser also exhibited enamelled pieces with floral japonic motifs[7].

In 1873, at the Universal Exhibition in Vienna, the lavish decorations with Indo-Persian and Islamic motifs presented by numerous founding artists of Austrian Historicism, including Joseph Stock (1830-1902), Joseph Salb (1845-1904), and Gustave Machytka, were extremely successful. The introduction of new techniques and the incursion of Bohemian artists into high-level international competition paved the way for the adoption of the Art Nouveau style – 'Jugenstil' in Germany, and Secession in Austria-, from around 1880[8].

In the important and considerable group of Bohemian crystals, we highlight the Liqueur Service made by Holzner in Carlsbad (PNA, inv. no. 22947), consisting of fifteen pieces: a tray, two elegant bottles with spherical bodies and tall, slim necks, with stoppers, and fifteen small goblets.

In Islamic style, the pieces, in fine transparent and pink crystal with gradation of colour, are decorated with a geometric pattern in relief in white and gold enamel. The «candy-coloured with m. and c.» service

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[6] Drahotova 1983: 192-193.

[7] Baldwin 1997: 50-51.

[8] Cappa 1998: 32.

(monogram and crown), which was purchased by Maria Pia in 1901, was kept in cabinet no. 19[9] in the Queen's House of Silverware, Crockery and Glassware Storeroom, when the Ajuda Inventory[10] was being drawn up after the establishment of the Republic. In 1907, it was on the list of Glassware services.[11] We date it to between 1880-1901 (Fig. 4).

We should also highlight the exquisite drinking set, or *verre d'eau*, (PNA, inv. no. 45749-45754), acquired on 25 October 1888, in Vienna, on the last trip of King Dom Luís, before his death in 1889. It consists of 6 pieces: circular tray, water bottle, cruet for orange essence, cup, glass with stem and a sugar bowl. With Islamic-style decoration, it has geometric and floristic motifs in polychrome and gold enamels and the LP monogram (Luís Filipe) with a royal crown on the top. The pieces feature the J & L Lobmeyr brand. It was part of the drinking sets 'for the bedroom'[12] (Fig. 5).

The *verre d'eau* service was kept in the bedroom to serve the orange blossom infusion drink, with a tranquilizing effect, normally taken before sleep.

It was used by the Queen as it was stored in the Sovereign's silverware, crockery and glassware storeroom, located on the ground floor[13] in cabinet no. 19, as part of the set of items acquired from the 'Glasfabrik Meierhöfen Karlsbad'[14] factory, the Moser factory, one of Maria Pia's chosen ones. It also appears in the 'Glass Service List' dated 1907[15].

For the toilet, there is also a toilet set, for 'washbasin' (PNA, inv. no. 43093-43102) probably by Moser. Of the thirty-one original pieces,

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[9] APNA, 5-II-1(b), *Inventário pratas, louças, e vidros*, fl. 113: «Serviços de vidros da fábrica de Glasfabrik Meierhöfen Karlsbad pertencente a S. M. a Rainha D. Maria Pia - Armário nº19/ Viagem de 1901».

[10] APNA, *Arrolamento do Palácio Nacional da Ajuda*, vol. 5, 1911, fl. 1428.

[11] APNA, 5-II-5 (164), *Relação dos Serviços de Vidro*; 1907; fl. 67: «Licoreiros diftes. - nº22/ (...)/ 1 bandeja côr de vinho, corôa, monograma/ 2 garrafas para licor/ 2 rolhas das ditas/ 12 copos feitio de taça». Observação a lápis: «viagem 1901/ Glasfabrik Meierhöfen Karlsbad».

[12] ANTT. CR. CX. 7329. Factura da J & L Lobmeyr datada de 25 de Outubro de 1888.

[13] APNA, *Arrolamento do Palácio Nacional da Ajuda*, vol. 5, 1911, fl. 1429.

[14] APNA, 5-II-1(b), *Inventário pratas, louças, e vidros*., fl. 113: "Serviços de vidros da fábrica de Glasfabrik Meierhöfen Karlsbad pertencente a S. M. a Rainha D. Maria Pia - Armário nº19/ Viagem de 1901".

[15] APNA, 5-II-5 (164), *Relação dos Serviços de Vidro*; 1907; fl. 69: "Serviços diftes. para quartos - nº23/ (...)".

only eleven remain: three perfume bottles and four flat-lid boxes for nailbrushes, toothbrushes, soap and toothpowder, a powder box with plate and lid, a high-footed bowl for pins, and finally a palm-tree[16].

With Islamic forms and decoration, the set presents stylised floral, geometric, polychrome enamelled and gilded motifs (Fig. 6).

In this chapter we should also highlight the beautiful vase in the shape of a lamp-stand (PNA, inv. no. 45539). The decorative piece, with three handles on the body, bears the label of the Testolini house of Venice, the establishment where it was purchased, although it is very likely to have come from a Bohemian glassware house; it shows a beautiful gilded relief decoration of foliage and Oriental-style flowers (Fig. 7).

French production

In the century of the great Universal Exhibitions, such important events for the development of the applied arts, each producer endeavoured to present technical innovations in line with the aesthetic trends emerging. It was a world of diversity and change that was on offer, and the Far East was present; but it was particularly Japan that was to make a huge impact, after being opened up to the world, especially since the Universal Exhibition of 1867 in Paris, an exhibition that was visited by the kings of Portugal at the invitation of Napoleon III.

Industrialization brought with it a wide range of tools and resources; the enormous advances in glass chemistry gave rise to numerous techniques such as iridescence, new colours, the reproduction of semi-precious stones, increasingly complex enamelling techniques and the creation of paste of glass (*pâte de verre*). Phillipe Joseph Brocard was the man behind the re-establishment of elaborate enamel decorations; the artist had in-depth studied ancient pieces such as medieval goblets and lanterns originating from Syria[17]. From 1880, in Nancy, Emile Gallé, began to paint enamel decorations and acid-etching, a style which was followed by Antonio Daum[18].

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[16] APNA, *Arrolamento do Palácio Nacional da Ajuda,* vol. 9, 1912, fls.3218 a 3220.

[17] Liefkes 1997: 120.

[18] *Ibid*.:119.

The Baccarat and Saint-Louis factories, separated in 1855, competed for the mastery and exceptional beauty of their pieces, as well as Clichy, Mäes and Clémendot[19]. They presented innovative items, such as models decorated with Arabic-inspired enamels, and others replicating shapes from Japanese ceramics and metal objects.

These trends, which were in vogue from 1878 onwards, did not escape the notice of the Queen Maria Pia who acquired a series of Japanese-style Baccarat flower vases, and also from the Art Nouveau period; we give as an example the pair of crystal vases (PNA, inv. no. 45589-45590), dated between 1878 and 1898, which were kept in the painting studio[20]. The wheel engraving decoration, inspired by Japanese print motifs shows elements of japonising taste of dragons, floral motifs and foliage (Fig. 8).

From the Art Nouveau period, the Queen chose a superb vase with gilded bronze mounting (PNA, inv. no. 45567), a piece dated between 1878 and 1900. The mount is delicately decorated with gold leaf, applied in relief and composed of foliage and floral motifs, imitating branches of leaves that 'grow' halfway up the body of the vase (Fig. 9).

England's production

In 1858, Thomas Webb, a distinguished glassmaker, founded the Dennis Works factory in Stourbridge. After his death in 1869, his three sons Thomas, Charles and Walter Wilkes took over. It was with Thomas that the glass factory achieved a leading position in the British crystal producing hierarchy. At the 1878 Exhibition, the so-called 'Denise vase', became the iconic piece of Webb & Sons' production period. From then on they invested in major technical innovations, specializing in multi-layered glass in a variety of colours, the introduction of 'hot' inlays and the creation of glass replicating old ivory[21].

In the PNA collection there is a sumptuous vase in colourless and polychrome crystal (PNA, inv. no. 45593) dating from around

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[19] Ennès 2006: 179-180.

[20] APNA, *Arrolamento do Palácio Nacional da Ajuda,* vol. 9, 1912.

[21] Cappa 1998: 460-461.

1890, acquired in Lisbon, in the establishment 'Vª de Caetano José da Costa e Fº', located at no. 68 in Rua Nova do Carmo, Chiado, according to the label placed on the base. The large piece (ca. 40 cm high), quite heavy, made of overlayered glass, has an elaborate and complex decoration on the inside, with a 'splashed' effect in red, white and brown on the colourless glass and floral motifs printed in relief over the whole area. On the outside there is a beautifully gilded relief japonized motif with a bird and cherry blossoms (Fig. 10).

Murano production (Venice, Italy)

Last but not least, the Murano glassworks.

With the rebirth of the glass industry after the Austrian occupation, from 1866 onwards, by the hands of Antonio Salviatti and Abbot Vincenzo Zanetti, and with the introduction of British capital, a new phase of production began in Murano; the best glass masters of the time started copying and recreating, with much imagination, fantasy and colour, the models of the 16th and 17th centuries. It was a kind of souvenir production, which was extremely successful among the elites of the European continent and in the United States[22].

As there was an exchange of artistic influences between Venice and the Far East in distant times, as is well known, the pieces with oriental features were recreated with great virtuosity by the masters, namely those of *Salviatti & Co* and the *Compagnia Venezia Murano*. This is the case of the vase (PNA, inv. no. 45663) with fine filigree *reticello* decoration, a piece inspired by the shapes of 19th century Turkish coffee pots. It appears, together with other similar models, in the international catalogues of the Salviati firm in 1868[23], 'for claret wine' and were sold in London[24]. The jug in the Ajuda Palace has a label marked '581', which corresponds to the model number. We date it to between 1866-1872 (Fig. 11).

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[22] Bova, Junk and Migliaccio 1999: 199.

[23] Bova, Dorigato and Migliaccio 2008: 120.

[24] Burnay 2015: 25.

Conclusion

Orientalism, a current that emerged in Portugal from the 18th century onwards, has its origins in the National Exotic style and served as an apparatus discourse. The collection of Oriental art, such as furniture, textiles, emblazoned porcelain, jewellery, etc., was an important part of the heritage of the manor houses, in particular those connected to India, and the Portuguese court was no exception to the rule[25]. In fact, the attraction for the exotic is also reflected in the abundance of oriental objects in the royal palaces. The quantities of objects that arrived in the country via the rich artistic market with the Orient and Brazil were also significant. Countless manifestations of this taste appear in the documentation of the Royal Household.

The Orientalist, trend of the 19th century and the fascination for exoticism is also evident in the preferences of the kings of Portugal, including in the glass collection where there is an important presence of the best European production of that period. It is a legacy that deserves to be studied in more depth.

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Abbreviation
PNA = Palácio Nacional da Ajuda.

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Fig. 1 - Enrique Casanova (1850-1913), *Infante Afonso bedroom*,1886, watercolor, 76.7×55.3 cm PNA, inv. no. 56518.

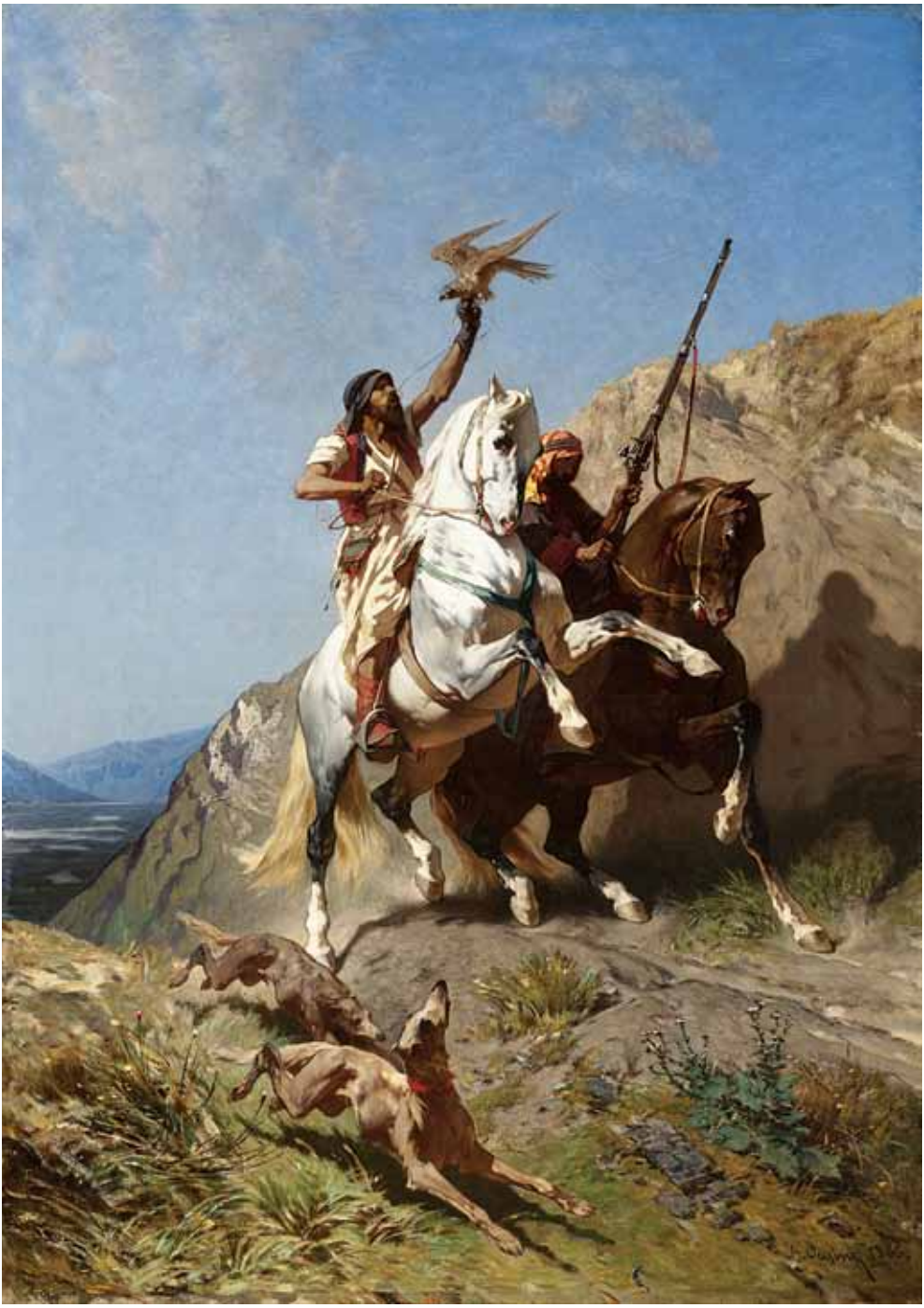

Fig. 2 - Alberto Pasini (1826-1899), *Arabian Hunters*, *Circa* 1865, oil on canvas, 100×71.5 cm PNA, inv. no. 3534 (photo ADF/DGPC José Paulo Ruas).

Fig. 3 - Marciano Henriques da Silva (1833-1867), *A Moor,* 1867, oil on canvas, 90×72 cm PNA, inv. no. 4117 (photo ADF/DGPC M. Silveira Ramos).

Fig. 4 - *Liquor Set* (15 pieces), 1880-1901, Holzner, Carlsbad, Bohemia. Colorless and pink transparent crystal, blown glass?, polychrome enamels, gilded; overlay, color gradation. PNA, inv. no. 22947 (Photo ADF/DGPC Luisa Oliveira).

Fig. 5 - *Drinking service* or *Verre d'eau* (6 pieces), 1888-1889, J&L Lobmeyr, Austria, Bohemia. Colorless crystal, blown glass, engraved, polychrome enamels and gold. PNA, inv. no. 45749-45754 (photo Pierre Roffe).

Fig. 6 - *Boxes for rice and tooth powders, and candlesticks* (11 pieces), ca. 1880. Bohemia. Colourless crystal, blown (molded?) glass, polychrome enamels and gilded decorations, h. 15 cm, Ø 12.6 cm (top), 5.5 cm (base), 7.3 cm (base), 11.6 cm (lid). PNA, inv. no. 43093-43012 (Photo ADF/DGPC Luisa Oliveira).

Fig. 7 - *Vase*, ca. 1880, Bohemia?, Green transparent crystal, blown glass, gilded decoration, h. 11.1 cm, Ø 7.7 cm (top), 5.5 (base). PNA, inv. no. 45539 (photo ADF/DGPC Luísa Oliveira).

Fig. 8 - *Vase* (pair), ca. 1878, Baccarat, France. Colorless crystal, wheel engraved, blown glass for mould, h. 25 cm Ø 7.1 cm (top); 5.3 cm (base). PNA, inv. no. 45589-45590 (photo ADF/ DGPC Luísa Oliveira).

Fig. 9 - *Vase*, ca. 1890, Baccarat, France. Clear crystal, gold, gilded bronze, h. 32 cm, Ø 8,8 cm (cup). PNA, inv. no. 45567 (photo ADF/DGPC Luísa Oliveira).

Fig. 10 - *Vase*, ca. 1898, Thomas Webb & Sons, Sourbridge, Great Britain. Colorless and polychrome crystal, blown glass, engraved, acid etching, moucheté effect, overlay (multicouche), enamels, gilding, h. 40 cm PNA, inv. no. 45593 (photo ADF/DGPC Luísa Oliveira).

Fig.11 - *Jug*, 1869/1872, Salviati & Co., Murano, Venice. Colorless glass, opaque white glass, blown glass, filigree 'reticello'. PNA, inv. no. 45663.

Mauro Stocco

VENETIAN MOSQUE LAMPS OF THE SECOND HALF OF THE NINETEENTH CENTURY: AN EXAMPLE FROM THE MUSEO DEL VETRO OF MURANO

The glass mosque lamp painted with Arabic inscriptions and stylized vegetal patterns (Fig. 1) is one of the most interesting pieces of the second half of the nineteenth century kept in the Museo del Vetro of Murano, both for its complex decoration and for its peculiar context of realization[1].

In the catalogue written around 1888 by Giuseppe Marino Urbani de Gheltof, director of the Museo del Vetro from 1883 to 1892, and the secretary Angelo Santi, the mosque lamp is listed under the number 503, among the «*Lavori e doni della Compagnia anonima di vetri e mosaici di Venezia (Salviati e Co.) denominata dall'agosto 1877 Compagnia per vetri e mosaici Venezia-Murano*» (Works and gifts of the Venice Glass and Mosaic Company Limited (Salviati & Co.) denominated since August 1877 Venice and Murano Glass and Mosaic Company). The lamp is described as a «*Lampada orientale di vetro bianco smaltato a colori con ornamenti e caratteri arabi*» (Oriental lamp of transparent glass, enamelled painted, with ornaments and Arabic characters)[2]. The glass objects realized by the aforementioned glassworks were exhibited in the Galleria Manin, on the ground floor of the Museum, as Vincenzo Zanetti (1824-1883), founder and first director of the Glass Museum, reported in his 1881 guide *Il Museo Civico-Vetrario di Murano*. The pieces, which dated back to 1867-1869, were 504 and documented the recovery of the ancient traditional techniques after the deep crisis that

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[1] Inv. Classe VI, n. 1777; Barovier Mentasti 1976: 259, n. 3; Barovier Mentasti 1978: 27, n. 162; Barovier Mentasti 1982: 193, n. 192; Barovier *et al.* 1982: 224, n. 417; Bova *et al.* 2011: 125-126, n. 160; *Wonder and Inspiration* 2022: 108, n. 3.41.

[2] Inventario manoscritto del Museo del Vetro Gheltof-Santi, post 1888: Cl. VIII. Vetri muranesi e veneziani del sec. XIX, n. 503.

affected the glass production at Murano in the first half of the century[3]. From an earlier guide by Vincenzo Zanetti, published in 1873 on the occasion of the Vienna World's Fair, we learn that 570 «*Vetri di lusso ad uso antico*» (antique style luxury glass) realized between 1866 and 1873 by the Salviati Company were exhibited in the Galleria Manin, including enamelled and gilded glass[4]. Even if in the two guides the pieces are not listed, we can reasonably state that this lamp was part of that group, as I will explain later, and that it was probably donated to the Museum before 1873. A specific act of donation has not survived.

The mosque lamp has a globular body, flattened at the base, with a wide, flaring neck and a low folded foot. The foot did not have a practical function since the lamp was intended to be suspended from the ceiling. Six suspension rings were originally attached around the body, but now two are missing[5]. The enamelled and gilded decoration is organized into six bands, two on the neck and four on the body. The two main registers bear inscriptions. The broad register on the neck is enamelled with the first words from verse 35 of the sura 24 of the Qur'an, the so-called Sura of Light: «God is the light of the heavens and the earth, the likeness of His light is as a niche, wherein is a lamp». This inscription, written in blue letters outlined in red against a gold backgroud, was very common in the Islamic lamps of the second half of the thirteenth and the fourteenth centuries. It is in *thuluth* script, a calligraphic cursive style favoured by the Mamluks, characterized by its accentuated verticality and rounded endings[6]. The inscription is interrupted by three circular medallions containing small-scale pseudo-inscriptions, of which the only clearly legible word is 'the sultan'[7].

The main register on the body includes a calligraphic inscription in *thuluth* script in gold enamel outlined in red against a blue background with golden leaves. Despite the difficulty of reading the inscription,

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[3] Zanetti 1881: 73-74. Works realized by Antonio Salviati's glassworks in 1866 were exhibited in another section.

[4] Zanetti 1873: 28.

[5] In addition to the two missing suspension loops, another is detached (see the second part of this article dedicated to the recent conservation treatment of the lamp).

[6] Carboni 1989: 936-937; Higgott 2011: 38-40, n. 1.

[7] Carboni 1989: 937.

Stefano Carboni pointed out that it can be certainly associated with the group named 'Nasir', which includes all the mosque lamps produced during the three reigns of the Mamluk sultan al-Nāṣir Nāṣir al-Dīn (1293-94; 1299-1309; 1310-1341)[8].

The band on the base of the flattened globular body has a more specifically ornamental character and was intended to be viewed from below, once the lamp was hanging. The decoration includes three medallions, identical to those painted on the neck band, interrupted by stylized ornaments and palmettes in blue, green, red and white on a golden background[9].

The form and the enamelled and gilded decoration of the lamp is based on the original glass lamps produced in Mamluk Cairo from the late thirteenth to the late fourteenth century[10]. They were commissioned by sultans and their amirs (princes or military officers) for mosques, madrasas (Qur'anic schools), tombs, hospices and other public buildings. Mosque lamps usually bear the patron's name, often incorporated in an explanatory or eulogistic inscription, and the blazon indicating the amir's office at the Mamluk court[11]. Large glass lamps were suspended from the ceiling by three, or sometimes six, long chains, that were bunched together above the lamps by being passed through the hole in the top of a glass globe, then branched out as they exited through the bottom opening of the globe and were attached to the lamp's suspension loops. In the Mamluk period lamps were usually illuminated by using a shallow bowl containing a wick floating on oil held by metal chains hooked to the lamp rim[12]. Lamps hung from the

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[8] Carboni 1989: 937.

[9] Carboni 1989: 938; Bova *et al.* 2011: 126, n. 160.

[10] The shape of the enamelled and gilded glass lamps produced in Egypt and Syria from the thirteenth to the fifteenth century was the result of a development that lasted at least four centuries. At first (ca ninth-eleventh centuries) glass lamps consisted of a bowl in the shape of a truncated cone with attached suspension loops and a foot, indicating that they could either be suspended from a hanger or placed on a flat surface. The shape of the lamps gradually developed and the dimensions slowly increased until they attained their definitive profile, characterized by a nearly globular body, a wide flared neck and an attached splayed foot (Carboni 2001: 226-227).

[11] Carboni 2001: 360-361; Higgott 2011: 40-41.

[12] Higgott 2011: 41. In pre-Mamluk production another system of illuminating the lamps was mostly used: a narrow glass tube, which functioned as the wick holder, was

ceilings of religious buildings were the symbol of God's presence and guiding light, but they also demonstrated the patron's piety[13].

The enameling technique was developed in Syria and Egypt between the twelfth and the thirteenth centuries. The most important glassworks in the fourteenth century were based in Cairo, the Mamluk capital, and as a consequence most enameled and gilded glass from that time may be attributed to Egyptian, rather than Syrian, workshops[14]. The late fourteenth century was characterized by a decline in the production of Islamic enamelled and gilded glass, described by Stefano Carboni in terms of «a decline or, better yet, an artistic fatigue».[15] A progressive reduction of patronage – and a consequently decline in technical and artistic qualities – in the glass factories of Cairo under the Mamluk period became dramatically evident during the course of the fifteenth century: only four enameled and gilded glass lamps from that period survive[16]. On the other hand, in the second half of the fifteenth century Venice became the most important centre of production for luxury glassware in the Mediterranean, including enameled pieces. Documents from the late fifteenth century onwards provide documentary evidence of the export of Venetian glass objects, including mosque lamps, to Islamic lands[17]. Venetian glass objects were very appreciated by the Ottoman court in Istanbul (the Ottomans formally ended the Mamluk dynasty in 1517). In 1569 the Ottoman Grand Vizier Mehmet Sokollu Pasha ordered to Venice through the Venetian *bailo* Marcantonio Barbaro 900 glass lamps, 300 traditional mosque lamps and 600 long and thin hanging lamps corresponding to the cylindrical *cesendelli,* as named in Venetian language[18].

The imitation of enamelled glass mosque lamps in Venice in the second

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attached to the interior at the bottom of the vase. The bowl was partially filled with oil (or a mixture of oil and water) to fuel the wick (Carboni 2001: 226).

[13] Higgott 2011: 41.

[14] Carboni 2001: 323-325; Carboni and Whitehouse 2001: 203-205.

[15] Carboni and Whitehouse 2001: 207.

[16] Carboni 2004. While three of these lamps were undoubtedly produced in Cairo, one bearing the name of the sultan al-Malik al-Ashraf Qait-bay who ruled from 1468 to 1496 is most likely an import from Europe.

[17] Barovier Mentasti and Carboni 2007: 268-69; Higgott 2011: 42; Barovier Mentasti and Tonini 2014: 14.

[18] Barovier Mentasti and Carboni 2007: 269-270; Kilercik 2009: 182.

half of the nineteenth century is strictly related to the great European interest in medieval glass from the Islamic world starting from the later 1860s. Mamluk hanging lamps became the most highly valued items of Islamic art among European collectors, especially in Paris, and thus the most imitated enamelled and gilded Islamic glass vessels[19]. In the specific case of Venetian imitations, it is also important to take into consideration the particular artistic period that Murano was experiencing in those years, with the recovery of the ancient traditional glass techniques, in particular the revival of the technique of enamelling. In 1864 Antonio Tosi and Giovanni Albertini presented some pieces decorated with this technique at the First Murano Glass Exposition held at the Glass Museum: they were considered to be the first stage in the recovery of this technique. Actually, some attempts were previously made by Gaetano Negrisiolo, a Venetian artist specialized in ceramic painting. In 1846 he was awarded a silver medal by the Reale Istituto Veneto di Scienze, Lettere ed Arti for his pieces decorated with «*pittura a fuoco sul vetro*» (fire painting on glass). In 1867 at the Universal Exhibition in Paris, even if the Venetian glassworks obtained a really great success, there was no trace of gilded and enameled objects between all the kinds of traditional blown glasses. A real rebirth of this technique was possible thanks to the initiative of Antonio Salviati, who in that very year in Paris met Giuseppe Devers, a Turin ceramic decorator working in Sèvres, and convinced him to come to Venice and teach the techniques of enameling and gilding on glass to the masters and decorators of the Salviati & C. Among his pupils, there were the aforementioned Antonio Tosi, the young Venetian painter Leopoldo Bearzotti and Lorenzo Bernardi[20].

In 1868 the Salviati & C. glassworks presented for the first time at the Industrial Exhibition in the Doge's Palace «*la ripetizione di una lampada del secolo XIV lavorata e dipinta nelle veneziane lagune con scritture arabe e bizzarre decorazioni*» (the reproduction of a fourteenth century lamp realized and painted in the Venetian lagoons with Arabic inscriptions and bizarre decorations); the original model, made for the Egyptian mosques, was therefore strangely considered to be a Venetian

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[19] Higgott 2011: 42-43. Imitations of historic Islamic glass were realized among others by Philippe-Joseph Brocard in Paris, Émile Gallé in Nancy, the firm J. & L. Lobmeyr in Vienna and Antonio Salviati in Murano.

[20] Stocco 2020: 210-211.

product[21]. Unfortunately we do not know what model was actually used by the Murano glassmakers and decorators to create mosque lamps in imitation of the fourteenth century originals, but in any case it undoubtedly had to be a Mamluk glass lamp.

At the beginning of 1869 Isma' il Pasha, the khedive or viceroy of Egypt, ordered fifty glass mosque lamps based on fourteenth-century Egyptian and Syrian originals from Antonio Salviati glassworks[22]. Isma'il Pasha was in Paris for the Exposition Universelle in 1867, the same year in which he received the khedive title and more autonomy from the Ottoman Empire, and on that occasion he most likely had the opportunity to see the grace and perfection of Salviati's glasses. Then he was surely informed about the progress obtained by Salviati on enamel decorations thanks to Devers' presence in Venice[23]. Furthermore, Salviati had already had some contacts with Egypt some years before, when in 1861 Ismail's predecessor, Sa'id Pasha, commissioned Salviati a mosaic floor for his palace in Mex, near Alessandria, floor later destroyed[24]. The ordering of the fifty mosque lamps was undoubtedly a very important occasion for the worldwide relaunch of Murano artistic glass.

Just over two months before the Murano exhibition opening, which took place on 13 June 1869, the local newspaper *La Gazzetta di Venezia* reported with enthusiasm and great admiration some precious information about the realization of the fifty lamps for the viceroy of Egypt, ordered to be placed in a mosque. Unfortunately the exact destination of these pieces is not specified. The way the lamps were suspended is well described: *«Queste lampade che devono servire per una moschea del Vicerè, vanno appese con tre cordoni dorati, fatti passare per tre degli orecchioni, mentre dagli altri tre pendono invece al basso pure tre cordoni dorati, con fiocchi d'oro alla fine»* (These lamps, which are intended to be used for a mosque of the Viceroy, have to be hung with three golden cords passed through three of the loops, while from the other three rings, on the other hand, three golden cords also hang downwards, with golden

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[21] *La Voce di Murano* 25 luglio 1868: 123.

[22] Salvadori 1869: 41-42.

[23] Carboni 1989: 945.

[24] Barovier Mentasti 2013: 17.

bows at the end). The article insists on the big size of the glass lamps and on the constancy and diligence of the executors of the pieces, who had to overcome many difficulties: *«La grandezza di queste lampade fece sì che sulle prime si provassero grandi difficoltà per eseguirle, così nel soffiato del vetro, come nella seconda cottura di esso dopo compiuti i disegni e gli smalti»* (The size of these lamps ensured that at first there were great difficulties in making them, both in blowing the glass and in the second firing of it after the drawing and enamels were completed). The glassblower was Antonio Seguso, one of the most skilled masters of the Salviati, the decorators were Leopoldo Bearzotti and Lorenzo Bernardi, while the final difficult operation of the refusion of the enamels was executed by Antonio Tosi. The article best expresses the great expectations about this hard and innovative work, which would have brought important advantages to the Murano glass industry: «*Questa commissione del Vicerè d'Egitto, alla quale faranno, certo, seguito molte altre per varie Moschee, apre un nuovo campo all'industria vetraria, ed una fonte di prosperità per le nostre fabbriche che non mancano certo di valenti artisti in ogni ramo*» (This order by the Viceroy of Egypt, which will certainly be followed by many other for different Mosques, inaugurates a new field for the glass industry, and a source of prosperity for our factories that undoubtedly are not lacking in talented artists in every branch)[25].

A few days before the opening of the second Murano Glass Exposition, the Viceroy of Egypt, during a stay in Venice on the occasion of a diplomatic trip, had the opportunity to see the fifty lamps he had commissioned and he was truly satisfied with the result. Thanks to Vincenzo Zanetti we also know that even Prince Napoleon Bonaparte appreciated the glass lamps, so much that he bought two of them for his collection[26].

The islamic lamps were exhibited on the ground floor in the Galleria Manin[27]. The glass artefacts made by Salviati & C. glassworks

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[25] *Gazzetta di Venezia* 2 aprile 1869: 2; *La Voce di Murano* 5 aprile 1869: 34.

[26] Zanetti 1869: 14; Carboni 1989: 947-948.

[27] *Seconda Esposizione Vetraria Muranese 1869. Elenco degli oggetti* 1869: 7. The Galleria Manin was realized in 1867, closing the arches of the arcade in the inner

were cataloged under number fifty-nine and included luxury blown glasses, enameled painted glasses, our «*Lampade riprodotte da antichi tipi egiziani commessi da S.A. Reale il Vicerè d'Egitto*» (Lamps reproduced from ancient Egyptian models commissioned by the viceroy of Egypt) and gas chandeliers[28]. Many prizes were awarded to the Salviati & C., not only to the glassworks itself but also to the individual masters and workers. Salviati & C. won one of the «*Premi d'onore*» (Honor Awards), important excellence rewards in the glass sector, «*che si dichiarano superiori alle medaglie d'oro, consentiti solo ai sommi dell'arte*» (that are considered superior to gold medals and were intended only for the the greatest people of the art). The prize was awarded for the following reason: «*Società Salviati e Comp., come continuatrice dell'opera intrapresa dall'animoso Avv. Vicentino per restituire a Venezia, all'Italia, al mondo, l'arte dei musaici veneziani, dei vetri a soffio muranesi, della pittura ne' smalti fusi, ecc. ecc., con dispendio di capitali, intelligenza amministrativa, e con progressi e zelo superiori ad ogni elogio*» (Salviati & C., as the continuation of the work begun by the courageous lawyer from Vicenza in order to give back to Venice, to Italy, to the world, the art of Venetian mosaics, of Murano blown glasses, of the fused enamel painting, etc. etc., with expenditure of capital, administrative intelligence, and with progresses and diligence beyond all praise)[29]. Furthermore, Antonio Seguso was awarded a gold medal for his many impressive blown glasses, realized with the flying-hand technique, while a silver medal was awarded to Antonio Tosi, «*esperto alla muffola per la fusione degli smalti nella pittura su vetro, per cui contribuisce alla riuscita delle grandiose lampade per S.A. il Viceré d'Egitto, e delle altre opere che in tal genere si ammirano nello Stabilimento Salviati e C. ed all'Esposizione. Fu nel 1864 primo iniziatore col bravo Giovanni Albertini di Murano nella pittura sul vetro*» (expert at the muffle furnace in the fusion of enamels painted on glass, thus contributing to the success of the

courtyard. This new gallery was dedicated to the exhibition of contemporary glass production, but also to a permanent exhibit of a commercial nature. The Gallery was opened and inaugurated in March 1868, on the occasion of the arrival in Venice of the ashes of the Venetian patriot Daniele Manin (Zanetti 1881: 69-70).

[28] *Seconda Esposizione Vetraria Muranese 1869. Elenco degli oggetti* 1869: 7.

[29] *Sulla seconda esposizione vetraria* 1869: 53.

grandiose lamps for His Majesty the Viceroy of Egypt, and of the other works of this kind that can be admired in the Salviati & C. and in the exposition. In 1864 he was the one who started together with the skillful Giovanni Albertini of Murano the technique of painting on glass)[30].

The lamps satisfied totally the expectations that had spread during the months before the opening of the exhibition that, initially supposed to last until August 15th, was then extended until October 17th. In a letter dated September 1st 1869, the director of the Salviati glassworks Mattia Montecchi wrote to Vincenzo Zanetti to take away at least one of the painted lamps from the exhibition, because of an immediate order of thirteen lamps for Egypt. The withdrawal would actually take place on October 1st. The removed lamp probably should have served as a model to realize the other pieces[31].

The glass mosque lamp now kept in the collection of the Glass Museum was therefore most likely part of the group of lamps realized by Salviati & C. glassworks for the Viceroy of Egypt in 1869 and represents a precious evidence of this flourishing period for the Venetian glass art.

The taste for the East and the interest in Islamic glass continued until the end of the century. In a picture of a stand of the *Salviati Dott. Antonio* firm at an unidentified exhibition around 1880 a glass mosque lamp is clearly visible hanging from the ceiling[32]. Glass mosque lamps continued to be produced by *The Venice and Murano Glass Company* glassworks, after the separation of Antonio Salviati: the Company exhibited mosque lamps at the Italian Industrial Exhibition held in Milan in 1881[33] and at the 1983 World's Columbian Exposition in Chicago, together with other enamelled pieces[34].

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[30] *Sulla seconda esposizione vetraria* 1869: 54.

[31] Archivio del Museo di Murano b. 36.

[32] Bova *et al.* 2011: 24. In 1872 *Salviati & C.* company changed its name to *The Venice and Murano Glass and Mosaic Company Limited* (Salviati & Co.). In 1877 Antonio Salviati definitely broke with his principal shareholders and started two companies from his own, *Salviati & C.* for mosaic and *Salviati Dr. Antonio* for blown glasses.

[33] *L'Esposizione italiana del 1881* 1880-1881: 157.

[34] *The Venice and Murano Exhibiting Co* 1893: 24.

Some enamelled and gilded glass lamps similar to the one kept in the Murano Glass Museum, with some variations concerning the shape or the polychrome decorations, are preserved in different public and private collections. The collections of the National Museums of Scotland, in addition to two Mamluk mosque lamps made during the reign of al-Malik al-Salih Isma'il (1342-1345) and al-Malik al-Salih Salih (1351-1354), also include a nineteenth-century mosque lamp bought from Salviati and Co. in 1874[35]. Another venetian nineteenth-century lamp in Mamluk style is kept in the Casa Museo Pogliaghi in Varese and it has been attributed to the Salviati dott. Antonio firm or the Compagnia di Venezia Murano and dated to the last three decades of the century. Today the hanging wires of the lamp are embellished with two XIXth century *rosetta* beads, one *girasol* bead and an ostrich egg, but it is not clear if this arrangement and the collocation of the lamp in the Galleria Dorata was originally conceived by the collector Lodovico Pogliaghi or if it is the result of a later arrangement after his death in 1950[36]. Another example is housed in the Museo Antonio Borgogna in Vercelli, also attributed to the Compagnia Venezia Murano or to the Salviati dott. Antonio and dated to the last three decades of the XIXth century[37]. A glass lamp was formerly in the Salviati-Camerino-Tedeschi collection and it differs from our example by the presence of a conical foot[38]. A lamp in a private collection differs in decoration from the other examples: the main register is enamelled with a geometrical leaves pattern instead of the usual inscriptions[39].

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[35] Eremin and Al-Khamis 2001: 195-196.

[36] Tonini 2017: 42-44.

[37] *Suggestioni* 2002: 90-91. The same museum also preserves an enamelled painted Islamic glass bottle, inspired by the 14th century originals and realized by the Compagnia Venezia Murano in the last decades of the XIXth century (*Suggestioni* 2002: 88-89).

[38] Carboni 1989: plates CIVa, CIVb, CVa. Two miniature glass lamps, similar in both shape and decoration to the larger examples were also formerly part of this collection (Carboni 1989: plates CVb, CVIb).

[39] *L'avventura del vetro* 2010: 541-542, no. VII.10.

The conservation treatment[40]

The glass lamp underwent conservation treatments in 2022. The restoration was conducted by the Istituto Veneto per i Beni Culturali in Venice under the supervision of the conservator Beatrice Falconi (Fig. 2).

The object was covered with a layer of dust, so that the glass transparency and the brilliance of the enamels could not be appreciated. The lamp was affected by remarkable breakage points, probably due to a significant fall damage, that had been reconstituted correctly and did not present any stability problems. The structure of the vitreous artefact has undergone internal tensions and settling movements which have created new lateral cracks which however present a stable situation at the moment. Two suspension loops were missing, while another was detached.

The first necessary step of the conservation treatment of the enamelled and gilded lamp was a detailed analysis of the state of preservation of the object in order to determine the most tailored conservation strategy. The removal of any deposits left on the surface was initially carried on with cotton swabs soaked in demineralized water. Since this solvent proved to be not fully satisfactory, it was decided to proceed with the application of Nevek gel, through Japanese paper. The entire external surface was then rinsed and cleaned with cotton swabs, in some cases minimally soaked with acetone. The internal part of the lamp was washed only with deionized water on a cotton swab and immediately dried. Before continuing with cleaning, all the breakage points were made safe by the introduction of epoxy resin. After consolidation, the cleaning phase continued, mechanically removing the dirt and dusk with cotton swabs soaked in deionized water and Tween 20, a non-ionic detergent, only for the internal part of the lamp.

The areas already restored were respected and not dismantled and reassembled, since their state of health and mechanical performance was still almost perfect. After a first necessary consolidation, as described above, further checks and reviews of the areas already restored were carried out. Every crack was filled with epoxy resin.

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[40] I want to thank the Istituto Veneto per i Beni Culturali for providing me with the necessary material for writing this part of the essay.

The reconstruction phase of the two missing loops (Fig. 3) was made easier by the presence of the detached one. A silicone cast was prepared using the detached loop as a matrix, from which two copies were made in epoxy resin to be joined to the object with B-72 adhesive. In this way the fill is detachable or removable.

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Fig. 1 - Salviati & C., *Mosque lamp*, probably 1869, 30×24 cm Murano, Museo del Vetro, Classe VI, n. 1777.

Fig. 2- Mosque lamp after restoration (© Istituto Veneto per i Beni Culturali).

Fig. 3 - *Mosque lamp after restoration* (© Istituto Veneto per i Beni Culturali).

Atti dell'Istituto Veneto di Scienze, Lettere ed Arti
Tomo CLXXXII (2023-2024) - Classe di scienze fisiche, matematiche e naturali

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Study Days on Venetian Glass 2022

Higher Education Course

Cross-influence between two glassmaking traditions: Venice and the Islamic World

Istituto Veneto di Scienze, Lettere ed Arti
19, 20, 21 September 2022

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ITALIAN GLASS WEEKS

The Study Days on Venetian Glass 2022, in its tenth edition, takes place in the context of The Venice Glass Week and registers the presence of thirty or so glass experts from all over Europe and the United States, including museum curators, scholars, collectors, restorers, and glass artists. In three Study Days a rich programme features seminars, lessons, visits and practical demonstrations of the ancient techniques, with papers and communications by scholars, all specialists in the field, making this event one of the most important of its kind organized on an international level.
Our aim is again to offer an opportunity for in-depth study and encounters, with an ample exchange of knowledge and experience, to glass historians.

Thanks to this initiative, started in 2012, Venice may become the world centre for the study of antique and contemporary glass and at the same time an outstanding meeting place for scholars, artists and collectors.

2022 - Study Days on Venetian Glass

Cross-influence between two glassmaking traditions: Venice and the Islamic World

With the support of:
The Corning Museum of Glass, Ecole du Louvre, Fondazione Musei Civici Venezia, LE STANZE DEL VETRO, Venice Foundation, Victoria & Albert Museum

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Istituto Veneto di Scienze, Lettere ed Arti
Venice, 19, 20, 21 September 2022

Organised with the collaboration of:

AIHV- *Association Internationale pour l'Histoire du Verre* - Comitato Nazionale Italiano

LAMA – Laboratorio Analisi Materiali Antichi dell'Università Iuav

Museo del Vetro - Fondazione Musei Civici Venezia

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William Gudenrath, Corning Museum of Glass

Lorenzo Lazzarini, LAMA- Iuav University of Venice

Sandro Pezzoli, Collector

Lino Tagliapietra, Artist and glass master

Cristina Tonini, Glass historian

Marco Verità, LAMA - Iuav University of Venice

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The “Study Days on Venetian Glass” are an opportunity for the in-depth study of Venetian glass and are geared towards an audience of glass scholars, museum curators, conservators, scientists and collectors.

The program includes lectures by art historians and glass experts. All the participants are invited to present the results of their studies and research on this subject. Every lecture is followed by a discussion. Lectures and discussions will be held in English.

The theme of 2022's edition is:

Cross-influence between two glassmaking traditions: Venice and the Islamic World

Medieval Byzantine and Islamic glass played a significant role in the development of Venetian glass, which inherited the legacy of luxury glassmaking when production in those areas ended. However, Islamic art never stopped being a major source of inspiration for Murano glass production.

Moreover, Venice always had exclusive commercial and political relationships with Constantinople; and despite that city falling under Ottoman rule in 1453, such exchanges continued. In fact, for almost five centuries, a large quantity of luxury glass from Murano arrived in Constantinople, the capital of the new rulers, as purchases or diplomatic gifts for the Sultan's court. Enameled and gilt vessels as well as diamond-point engraved and filigree glass items are recorded in diplomatic papers.

Furthermore, Venetian techniques and style might have influenced the production of glass vessels in Eastern Mediterranean countries. Recent archaeological findings in that area may be very revealing.

Lastly, Islamic glass was highly admired in the 19th century, influencing Venetian Revival-glass production during that period.

Monday, 19th September

Session I

Chairperson Rosa Barovier Mentasti

9.30 a.m.

Rosa Barovier Mentasti

Opening remarks

10.00 a.m.

Stefano Carboni

Glass between Venice and the Islamic world: exchanges, stories, influences across the Mediterranean

Abstract: The Republic of Venice played an important part across the centuries in bringing the Islamic world a little closer to Europe. The special position of the Serenissima as a political power without significant land ownership, her natural projection towards the Adriatic and the Eastern Mediterranean seas and her disposition to trade and commerce provided an ideal combination to engage closely and directly with the Muslim-majority, Arab- and Turkish-speaking countries bordering the southern and eastern coasts of the "White Sea" (as the Mediterranean is called in Arabic) and having the control over the Red Sea naval traffic, thus opening up enormous possibilities of trade with both Eastern Africa and South Asia. The practical and pragmatic approach of the Venetian oligarchy who always favored self-serving interests to common European political goals allowed the Republic to open diplomatic posts in a large number of key Muslim cities and countries, which provided that needed "hinge" for the exchange of information, ideas, knowledge, culture and of course political intelligence. In this context, the soft power of cultural and artistic exchanges played an important role, which is famously epitomized by the presence of Gentile Bellini as an artist in residence at the court of Mehmet II "the Conqueror" in Constantinople/Istanbul in 1480-81. Specific to the context of this year's Study Days on the "Cross-influence between two glassmaking traditions: Venice and Islam", it is possible to assert that this particular medium – among all other artistic traditions – has the richest history in demonstrating mutual exchanges over the centuries, both on the technological and the artistic sides.This general talk will briefly present such history from the technical and artistic dominance of the Islamic world at a time when the Venetian glass factories were in their infancy (9th-13th centuries); to the moments during which the pendulum started to swing in the opposite direction (14th-15th centuries); to the market and influence being solidly in the hands of the Venetian factories (16th-18th centuries); and to the fascination and revival of Islamic influences in Venetian 19th-century glass production.

11.00 a.m.

Coffee break

11.15 a.m.

Rosa Barovier Mentasti and Cristina Tonini

The success of luxury Venetian Glass in Constantinople during the Renaissance

Abstract: Murano luxury glass products were usually offered by the Venetian Republic to the Sultan as diplomatic gifts, alongside precious fabrics, perfumes, sugar, and parmesan cheese and would usually accompany the new resident ambassador in Constantinople (bailo). Moreover, the Sultan, his relatives and his court, continuously asked the Serenissima for specific types of glass which were most appreciated and loved, sending, sometimes, drawings showing the shape of the desired glasses. Venetian archives offer a wide variety of papers documenting thousands of glass items sent to Constantinople: merchants' letters and accounts, dispatches of the baili, deliberations of the Venetian Senate and Muranese glassworks' inventories show clear evidence of this. These documents -also- give an insight into the types of glass items. These are mentioned in old Venetian language or dialect, often difficult to interpret. Despite this, some clues permit us to identify many of them. Some of these objects are inspired by Islamic objects and even their names derive from the Arabic language, while others are characterized by an Italian design. The influence of Islamic artefacts on Venetian glass vessels concerns not only shapes but also patterns. These decorative motifs were often enamelled on glass items, both on Westernern and Levantine shapes; the latter were also exported to German countries. Enamelled and gilt vessels as well as diamond-point engraved and filigree glass items are often recorded in diplomatic papers. Some of them were also recovered in archaeological finds in Near Eastern countries and in ships wrecked off the Dalmatian coast, whose intended final destination was Constantinople. Different kinds of sources trace the success of the Venetian glassworks in the Levant. When Islamic production came to an end in the late 14th- early 15th century, Murano took up its inheritance, in terms of raw materials, technology, some forms and decorations, also satisfying the requests of the elites living in Constantinople.

12.15 p.m.

Speeches or comments by participants

Silvia Ferucci and Elena Betti

Renaissance vessels from Santa Chiara monastery, Padua: latest deve-lopments in the conservation treatment

Abstract: During the excavation of Santa Chiara in Cella Nova Monastery (Padua), a considerable number of fine glass vessels were found. The conservative intervention of

five precious objects will be discussed: a sprinkler and an amber beaker both enamelled and gilded, a flask in calcedonio, a saltcellar in lattimo and a footed bowl in emerald glass. The conservation of glass artefacts needs a specific approach, due to the features of this particular material. The choice of materials and methods to be employed is fundamental, for this reason the conservation treatment of each object was preceded by an accurate research. Two consolidants were tested. Accelerated ageing tests were made to find out the most ageing-resistant products. Experiments were also carried out using 3D modelling and printing.

12.45 p.m.
Lunch

Session II

Chairperson Cristina Tonini

2.00 p.m.
Speeches or comments by participants

Reino Liefkes
Middle-Eastern glass at the Victoria and Albert Museum in London

Abstract: This paper presents highlights from the collection of Middle-Eastern glass at the V&A. It will feature cut and enamelled glass objects, mainly from Iran, Iraq and Egypt. The paper will also present some objects made in Western Europe for the Middle-Eastern market and others with shapes and decorations derived from Middle-Eastern examples.

2.30 p.m.
Irena Radic Rossi
The ship Gagliana grossa *(1569-1583) and her last glass cargo*

Abstract: The ship *Lezza, Moceniga* e *Basadonna* was launched in Venice in 1569. After some adventures, in 1581 she was sold to Odoardo da Gagliano, who used her for trading between Venice and Constantinople. At that time, she was renamed *Gagliana grossa*. For unknown reasons, she sunk at the islet of Gnalić (Croatia) in early November 1583, while transporting 5000 windowpanes for the reconstruction of the Old Palace of Sultan Murad III. At the time of sinking, she was also loaded with various cargo, containing raw materials and semi-products, as well as finished products for the Constantinople market. Among the cargo, there was a great quantity of other glass objects. The research of the shipwreck site is supported by the Croatian Science Foundation, through the NEREAS Project (Numerical Reconstruction in the Archaeology of Seafaring).

3.00 p.m.

Coffee break

3.15 p.m.

Sven Hauschke

Two identical mosque lamps – two different stories: The functional change of an Egyptian mosque lamp of the early 14th century

Abstract: The Veste Coburg art collections own a mosque lamp made before 1341 for Saif al-Dīn Toquztimur al-Hamawī. It was acquired, according to an old tradition, in 1858 by Duke Alfred of Saxe-Coburg and Gotha in a Coptic cloister in Cairo. The lamp was broken into more than 40 pieces and was presumably restored in the 19th century using a supporting brass wire. One striking feature was the massive scratches on its surface where the Arabic inscription had been removed. An extensive restoration of the mosque lamp together with analysis of its history and comparison with other objects, especially an identical mosque lamp at the British Museum, shed new light on the provenance, the donor of the lamp, the special esteem of the enamel-painted and partial-gilt glass, and the iconological meaning of the glass in the Middle Ages.

3.45 p.m.

Hedvika Sedláčková

The story of lost fragment of diatret and his exciting discovery - or the secrets of connection between Bartholdy and Lanna Glass-collections

Abstract: One of the most beautiful and excellent ancient vessels are vasa diatreta, produced in the 3rd – 4th centuries in Italy. To the number of complet vessels and numerous fragments we can add fragment, discovered twice: first times it was introduced in Bartholdy catalogue of Glass from 1820, second time it was unexpectly found in the refuse of National Museum in Prag 2020. The presentation shows the curious and hyphotetical way from Roma to Prag. Advencerous story of diatret fragment is hypotheticaly, but possibly connected with austrian-bohemian collector Adalbert Lanna. In his collection were some 15 ancient fragments from Bartholdy collection, 1911 sold in Lepke´s Auktion in Berlin. Several of them were bought for Römisch-germanisches Museum in Cologne, for Kunst und Gewerbe Museum in Hambug, and Victoria and Albert Museum in London.

5.00 p.m.

Visit to the Basilica of S. Marco

Tuesday, 20th September

Session III

Chairperson Suzanne Higgott

9.00 a.m

William Gudenrath

Medieval-period enamelled and gilded beakers from the East and the West: A search for technical connections

Abstract: A large group of thinly-blown beakers decorated with enamels (and rarely gold) were likely made in Murano (Venice) in the late 13th-early 14th centuries. From the impressively wide geographic distribution of find-sites of these vessels and their fragments, along with the inscriptions and heraldic imagery many bear, it is safe to say that they were made for a sophisticated, nearly pan-European clientele. These were apparently the first highly refined products of Venice's glass industry to be widely sought outside the lagoon. Borrowed from part of the inscription on a much-published example acquired by the British Museum in 1867, these objects are often described as members of the 'Aldrevandin Group'. During roughly the same period, somewhat heftier beakers decorated with enamels and gold were being made at the eastern end of the Mediterranean, likely in Syria. From the opulence of the decoration, the nature of the imagery, the frequent quotations from the Quran, and the abundant archaeological evidence, we can be sure that they were made for a discriminating, probably pious clientele within the Islamic World. Partly through the use of custom-made videos of the author's experimental demonstrations at the glassworking furnace, this presentation will focus on similarities and differences in the manufacturing and decorating processes of these two groups of objects.

10.00 a.m.

Speeches or comments by participants

Yael Gorin-Rosen

Crusader glass from the Holy Land, between East and West

Abstract: Two hundred years of Crusader occupation in the Holy Land have left civil, religious, and military architecture including fortifications, churches, ports, cities, and villages, and widely diverse material culture, including glass artifacts. During the last three decades in Israel, excavations mainly by teams of the Israel Antiquities Authority have

shown that a large variety of plain and highly decorated glass vessels were widely used. These vessels were found in settlements, public and private buildings, religious and secular, urban and rural. Glass was used everywhere, by all classes, by the religious elite and the aristocracy, knights, merchants, and laymen. This paper will present the daily wares, most of which were probably locally manufactured, the luxurious vessels, and some decorated windowpanes, all found in well-documented excavations. Moreover, ʿAkko/Acre, the capital of the second Crusader Kingdom (1187-1291 CE), where quarters of Venetian, Pisans and Genoese merchants were established, is the source of the richest and best-preserved glass assemblages. Most of the vessels are locally made, but nonetheless, some clearly show western characteristics and origin, while others present eastern origin or inspiration.

10.45 a.m.
Coffee break

11.00 a.m.
Marco Verita[1], Stefania Peluso[2]

15th-16th century Mamluk and Venetian glass sherds from a Christian monastery in the Old City of Jerusalem

Abstract: In the Old City of Jerusalem stands one of the most important Franciscan monasteries in Israel, San Salvatore. It is located inside the ancient wall of Jerusalem, close to the modern New Gate. This monastery served as custodian of the Holy Land's Christian sites and welcomed Catholic pilgrims from around the world. The monastic complex changed owners over centuries until 1559 when it was bought by the Franciscan friars. Since then, the complex has undergone various physical modifications, leading to its current plan. In 2009, restoration work began on its church, which is close to the old library. Under the church of San Salvatore workers found a unique filling made with discarded material. It is quite possible that this mix of material had been used to fill gaps between structures erected in the 18th century. The filling constitutes an assemblage of materials dating from the 1st century to the 17th century. These include pottery, glass, iron and bronze objects, mosaic tiles, marble, and pieces of pottery and metal. The glass discovered in the filling traces back to the Romans, between the 2nd and 3rd centuries, as well as the Byzantine period. However, most of the glass dates to the 14th and 16th centuries. Known as Mamluk glass, it was blown, moulded or enamelled. Some of the glass specimens were hypothesized, based on type and shape, to be Venetian, including half-moulded cups. To support the claim that the glass was indeed Venetian, about twenty pieces were sent for quantitative chemical analysis, including the Mamluk glass and others whose shape and color could not be immediately identified as part of any specific group. The analysis confirmed the presence of Venetian finds among them.

[1] Marco Verità - LAMA Laboratory, Iuav University, Venice (Italy)
[2] Stefania Peluso Custodia Terrae Sanctae, Jerusalem (Israel).

12.00 p.m.

Speeches or comments by participants

Veronica Occari

Medieval glass from Venice: the technology, the raw materials and the connection with the eastern Mediterranean

Abstract: The emergence of Venice as one of the major centres of glassmaking in the Middle Ages depended on several factors, one of which was certainly the use of high-quality materials, including raw glass, plant ash and sand, often imported from the eastern Mediterranean. While some information on the type of raw materials used and their sources can be found in the Archives of Venice, mentions are sporadic and evidence from the glass is required to evaluate their relative importance. Very few chemical analyses of medieval archaeological finds from Venice are available to compare with the historical evidence, and moreover, most studies have focused on the 'mature' Venetian glassmaking industry of the 15th-17th centuries. The present paper explores the development of the medieval glassmaking industry in Venice, investigating the technological practices, the raw materials procurement, and the connection with the eastern Mediterranean. Major, trace elements and isotopic data are presented for 181 glass samples from Venice and the sites of Cividale, Asolo and Padova and are dated mainly between the 12th and the 15th centuries. Other glass assemblages have been analysed for comparison, including the famous Aldrevandin beakers and Mamluk enamelled vessels. The results identified the presence of six main compositional groups, consistent mainly with the use of different types of silica sources. All the samples appear to have been made with Levantine plant ash as flux, possibly from different regions in the Levant. The largest group of glasses presents a distinctive trace elements composition, not encountered anywhere in the eastern Mediterranean, and which likely reflects the use of pebbles from the Ticino River or high-quality local sand. A sand richer in alumina, probably sourced locally, was employed for the manufacture of the second largest group. The data suggest that sand or raw glass of a high quality was also imported from different regions in the eastern Mediterranean, including possibly Palestine. Two small groups which are made with a silica source rich in impurities were probably manufactured in other glassmaking centres in northern Italy.

12.30 p.m.

Lunch

Session IV

Chairperson Marco Verità

2.15 p.m.

Katherine Larson

Enamelled Islamic glass in the Corning Museum of Glass

Abstract: The Corning Museum of Glass houses a diverse collection of enamelled and gilded glass from the Islamic world, largely acquired between 1950 and 1980. While the most monumental and impressive pieces have been widely exhibited and are well known, the majority of the collection, including fragments and smaller objects, is unpublished. Expanding on a preliminary draft catalogue compiled by David Whitehouse, this presentation will showcase the range of decorative techniques, forms, and designs practiced by glass artists in the Islamic world. The relationship of Islamic motifs to early Venetian enamelled glass in Corning will also be explored.

2.45 p.m.

Rainald Franz

Oriental glass form and decoration and its influence on Austrian glass making in the second half of the 19th century: the example of the manufacture of J. & L. Lobmeyr in Vienna

Abstract: The fashion for travelling in the Arabian Peninsula and Egypt, new ways of publishing, and presentation in exhibitions, renewed interest in Oriental art and decorative arts in Europe in the second half of the nineteenth century. This led to a style within the Ecclectic Period, which came to be known as Orientalism, expressing itself in the Arts from literature to music, decorative arts and architecture. Orientalism in Vienna, which influenced Austrian art and architecture, found its way at an early stage into artistic glass due to the efforts of the firm of J. & L. Lobmeyr, which had made artistic glass of outstanding quality from Vienna fashionable again in the period of World Exhibitions in Europe. Arabian ornament had become a primary source of inspiration. The lecture focuses on the development of modern glass in Vienna, taking up Oriental decoration and decorating techniques, developed by the Lobmeyr firm with architects and designers of their time, and shows examples and rarely seen original drawings from the Lobmeyr pattern books held in the MAK collection, as well as comparing similar products by producers in Venice and France.

3.15 p.m.

Maria Joao Burnay

Orientalism in the glass collections of the Portuguese Royal House

Abstract: Within the Romantic period, Oriental themes with their different cultural strands had an important impact on European architecture and arts in the 19th century. In Portugal, these artistic subjects were revealed in the interiors of the royal palaces and in the collections of the Royal House: the Chinese room was created in the Ajuda Palace in 1864 to house the diplomatic gifts from Japan to King Luís among other Oriental objects, and the winter garden was covered with chalcedony agate, an offering from Quedive of Egypt to King Pedro V. The watercolour representing the room of the Infante Dom Afonso, painted in 1886 by Enrique Casanova, shows the exotic Neo-Islamic taste of its decoration. Orientalism is also present in furniture, jewellery, painting, sculpture, ceramics, textiles and glassware. In the selection of luxury glassware that she bought during her travels in Europe, D. Maria Pia chose sets such as engraved, cut and gilded Japanese-style liqueurs and jugs with decoration based on the famous Japanese engravings and artefacts which from 1860 onwards 'flooded' the European art markets, models which the Baccarat factory presented at the Universal Exhibition in Paris in 1878 and which were extremely successful. Parallel to this, in the Ajuda collection, are the *Verre d'eau* and toilette sets (known as bedroom sets) and liqueurs, richly adorned with elaborate enamel painting and gilding from the best Bohemian factories: the J & L Lobmeyr and Moser houses. Finally, Salviati, and Compagnia Venezia Murano factories also created models inspired by Oriental shapes which were extremely successful. In this presentation we will see concrete examples of this fashion that has held so much fascination in Western culture and for the Portuguese elite.

3.45 p.m.

Coffee break

4.00 p.m.

Jean Luc Olivié

Islamic-influenced enamelled glass in XIXth-century France

Abstract: At the end of the 1860s, Philippe Joseph Brocard (1831-1896), a Belgian-French "conservator" of precious Mamluk enamelled glass, started to show in Paris enamelled glass copies of originals together with Arabic-inspired pieces. Quickly present in London (1871) and Vienna (1873), he was also selling very early in the United States thanks to the support of the famous dealer Samuel P. Avery. This historicist and exotic production soon disseminated, and many others started to enamel glass

in the Arabic traditions, some of them staying specialist, others, such as Emile Gallé, including this technical and stylistic influence in a larger and more open career. Even hobbyists, such as the wife of Doctor Charcot or the collector Mrs Magnin, started to enamel glasses. We will give a general view of this trend and fashion in France during the second half on the century.

4.30 p.m.

Mauro Stocco

Venetian mosque lamps of the second half of the 19th century: an example from the Museo del Vetro of Murano

Abstract: Glass Islamic lamps with enamelled decoration were largely produced in Murano by different glasshouses during the final third of the XIXth century, after the renaissance of the enameling technique in the 1860s. Such lamps were not only realized to be actually used, but they rapidly came to be bought as decorative objects and they were much appreciated by collectors. The success of this production is linked to the European taste for the East typical of that period. In 1868 Salviati & C. exhibited for the first time a reproduction of a XIVth-century painted Islamic lamp at the Industrial Exhibition in the Doge's Palace. In 1869 Isma' il Pasha, the khedive and viceroy of Egypt, ordered from Salviati 50 enamelled mosque lamps, a type of object that had not been produced in the Near East for centuries. The shape and decoration of a crystal lamp kept in the Museo del Vetro of Murano derive from XIVth-century Syrian and Egyptian originals. The surface is organized in three main large registers, which bear different kinds of real and fake Arabic inscriptions and stylised vegetal patterns, and three narrow bands. The decorators were probably Antonio Tosi and Leopoldo Bearzotti, who were responsible at Salviati & C. for the fusing of enamels and painting.

6.00 - 7.30 p.m.

Palazzo Contarini Polignac

(The Palace is situated just across Palazzo Franchetti – 874 Dorsoduro)

2022 The Venice Glass Week. Murano-Istanbul. A Glass Making Journey V

This year's fifth edition of 'Murano-Istanbul: A Glass Making Journey' will be in the footsteps of the conferences initiated in 2018 and will be exploring the influence of Islamic Art on Murano glass making.

Dr. Stefano Carboni, the CEO of the Museums Comission in the Saudi Ministry of Culture

From Constantinople to Qustantiniyya to Istanbul: the making of a new identity and the role played by the Venetian glass industry in its development

While Constantinople turned into Qustantiniyya and with time it became Istanbul, the Ottomans established an empire that encompassed a large part of the Arab-speaking Muslim world as well as the Balkans and sections of Eastern Europe that presented ethnic and religious complexities to the ruling Muslim sultans. Istanbul itself became an international hub that acknowledged and to some extent embraced its Greek and Byzantine cultural past at the same time building a new identity as a Sunni Muslim capital and incorporating different communities such as the Jewish diaspora expelled from Spain in the late 15th century. Key to this new identity was the period of rule of the city's conqueror, Mehmet Fatih, who saw himself not only as the sultan of a large portion of the Muslim world but he strived to adopt some of the customs and manners of the European royal circles. The arts and crafts, including glass production, had a similar development continuing established traditions and adopting new ones. Venice became an ideal "partner" in this transmission and glass production had an important part in this conversation becoming a source of mutual influence and exchange.

Frederick Lauritzen, historian, byzantinist at the Scuola Grande di San Marco will discuss the Byzantine heritage in Islamic glass making also by covering Constantinople /Istanbul.

The creation of byzantine aesthetics: Glass making from Constantinople to Venice

Constantinople continued Roman glass making with a new aesthetic. Pagan mythological representations and Christian religious imagery became part of the Byzantine artistic repertoire. The interaction with the Persian Sassanids first and with the Muslim Emirates and Caliphates promoted decorative designs. This innovative mixture of pagan, Christian, Persian and Arab designs inspired both Muslim and Venetian glass making.

The conference will be curated by Dr. Sema Postacioglu.

An aperitif will be served at the end

Wednesday, 21th September

10.00 a.m.
Visit to the Museo di Arte Orientale

11.30 a.m.
Visit to Daria Perocco's house
Interior design by Ettore Sottsass

1.00 p.m.
Lunch at Palazzo Franchetti

3.00 p.m.
Guided tour of Palazzo Fortuny

Teaching Staff

Rosa Barovier Mentasti

Descending from one of Venice's ancient glass making families, Rosa Barovier Mentasti was awarded a degree in Ancient Literature by the University of Padua in 1973 with a thesis on antique glass. Since then, she has been dedicated to studying the history of both ancient and modern Venetian glass. In addition to many articles and publications, including *Il Vetro Veneziano dal Medioevo ad oggi,* published in 1982, she has curated several international exhibitions of ancient and contemporary glass, including *Vetri. Nel Mondo. Oggi*, hosted by the Istituto Veneto di Scienze, Lettere ed Arti in Venice in 2004.

Stefano Carboni

Dr. Stefano Carboni is currently the CEO of the Museums Commission in the Ministry of Culture of the Kingdom of Saudi Arabia. Born and raised in Venice, he studied Arabic language and Islamic Art at the University of Venice, earning his Doctorate in Islamic Art and Archaeology at SOAS, University of London. His professional career has been in the museum world however always with an eye on the research and academic sides: he was Curator and Administrator in the Department of Islamic Art at The Metropolitan Museum of Art, New York (1992-2008); and Director / CEO of the Art Gallery of Western Australia, Perth (2008-2019). He taught several courses in Islamic Art and Curatorial Studies in New York colleges and he is an Adjunct Professor at the University of Western Australia. He has published widely in particular in the field of Islamic glass, illustrated manuscripts, and the relationship between Islamic art and European and Asian art. He is the curator and catalogue editor of the exhibition *Venice and the Islamic World, 828-1797* (Paris, New York, Venice 2006-2007).

William Gudenrath

As resident advisor for the Studio of the Corning Museum of Glass, he teaches introductory and advanced courses in Venetian techniques. A glassblower, scholar, lecturer and teacher of glassblowing, he is an authority on historical hot glassworking techniques from ancient Egypt through the Renaissance and has presented lectures and demonstrations throughout the world. He demonstrates techniques he believes to have been employed by glassmakers of the past and these are described in a number of books and video segments including: *Chronicle: the Portland Vase, Five Thousand Years of Glass, Journey through Glass: A Tour of the Corning Museum Collection* and *MasterClass Series II: Introduction to Venetian Techniques, Glass Masters at Work: William Gudenrath, Glassworking Processes and Properties.* Mr. Gudenrath's most recent major publication is *The Techniques of Renaissance Venetian Glassworking,* available free of charge on the Corning Museum of Glass website, or renvenetian.cmog.org. His numerous glassworking videos have a world – wide audience with viewings currently well over 50 million in number. Mr. Gudenrath's most recent ebook, *The Techniques of Renaissance Venetian-Style Glassworking,* was published in 2019; in 2023 *The Techniques of Roman Glass blowing* will become available also.

Lino Tagliapietra

Exceptional glass master and well-known world-round glass artist. He was born in Murano and was just a young man when he first entered a glass-maker's shop: he became a glass *maestro* in the 1950's and has worked for some of the most prestigious glass-makers on the island. Since the late sixties his creativity has resulted in models of great quality, both from the point of view of technique and beauty, that were a clear success on the market. He has been an independent glass artist since 1990 and is now committed to creating unique pieces that are exhibited in the most prestigious private collections and museums worldwide. In 2009, the Tacoma Art Museum dedicated a retrospective to his works with an exhibition that was then lent to other US museums. In 2011, the Istituto Veneto dedicated the exhibition *Lino Tagliapietra, da Murano allo Studio Glass* to him.

Cristina Tonini

Degree in History of Art awarded by the State University of Milan; curator of the Bagatti Valsecchi Museum in Milan. She is author of museums glass catalogues: Pavia Musei Civici; Pinacoteca Ambrosiana, Milan; Museo Pogliaghi, Varese; Museo Bagatti Valsecchi; she co-curated several exhibitions on Renaissance and contemporary glass: *Artisti e designer del vetro 1960-2010*; *I fiori di Murano*; *Miniature di vetro. La bomboniera d'artista*, 2012; *Fragile, chefs-d'oeuvre de verre de la Renaissance au XXI siècle*, Maillol Musée Paris, 2013 ; *Contemporary glasses. The Bellini Pezzoli collection*, Castello Sforzesco,2017. She is one of the curators of the European Glass Context Bornholm, Royal Danish Academy School of Design (2021); editorial advisor of the Journal of Glass Studies of the Corning Museum of Glass; member of the "Projet CRISTALLO verres émaillés vénitiens de la Renaissance», Musée de Louvre; member of the board of AIHV, Italy.

Marco Verità

Holding a degree in Chemistry, he worked for over thirty years in the Stazione Sperimentale del Vetro in Venice-Murano, performing research and assessments on glass materials, both modern and ancient, the latter for archeometric purposes and also to assess issues relating to conservation and restoration. Member of numerous international organisations, since 2009 he has been working with the Laboratory for the Assessment of Ancient Materials (LAMA) of the Iuav University of Venice.

List of Participants

François Arnaud

Erwin Baumgartner

Elena Betti

Johanna Bird

Maria Joao Burnay

Silvia Ferucci

Rainald Franz

Yael Gorin-Rosen

Sven Hauschke

Suzanne Higgott

David Landau

Katherine Larson

Reino Liefkes

Veronica Occari

Jean Luc Olivié

Stefania Peluso

Antonio Pires de Matos

Paola Pisani

Eva Preiswerk

Irena Radic Rossi

Hedvika Sedláčková

Mauro Stocco

Rodica Tanasescu

Study Days on Venetian Glass

2022	Cross-influence between two glassmaking traditions: Venice and the Islamic Word
2021	Diamond-Point Engraved and Cold-Painted Glass of the Renaissance and Baroque Periods
2019	Enamelled and Gilded Glass of the Renaissance
2018	Moulding and Applying Hot Glass through the Centuries
2017	Venetian Filigrana Glass through the Centuries
2016	The origins of Modern Glass Art in Venice and Europe.About 1900
2015	The Birth of the Great Museums: the Glassworks Col-lections between the Renaissance and Revival
2014	Approximately 1700'S
2013	Approximately 1600'S
2012	Glass in the Venetian Renaissance in approximately the year 1500

Enamelled sprinkler, 1511-1525, Wien MAK (Museum für Angewandte Kunst).

Graphic project, Laura Padoan

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ATTI

TOMO 182 (2023-2024)

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CLASSE DI SCIENZE FISICHE, MATEMATICHE E NATURALI

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In copertina:
Enamelled sprinkler, 1511-1525. Wien, MAK
(Museum fur Angewandte Kunst).

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The "Study Days on Venetian Glass" are an opportunity for in-depth study on Venetian glass and are tuned to an audience of Museum conservators, collectors and experts.
The programme includes lessons by experts who, after a general overview, will guide participants through the direct study of methods and pieces, encouraging participants to actively take part, also through presentations.

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