





THE ART OF IMITATION

European Glassmaking 1450 to 1700



INTRODUCTION

In the forward to his book *L'Arte Vetraria* (1), first published in 1612, the Florentine priest and alchemist Antonio Neri discusses the nature of glass. Whilst accepting that it is akin to naturally formed rocks and minerals, he concludes that it is “a compound, and made of art”. In the ensuing Chapters of the book, he describes in extraordinary detail recipes and techniques for making glass of different colours and types. The beauty of such glasses, he describes “it will be seen as if nature herself could not arrive to the like perfection, nor art imitate it”.

Neri himself worked as a glassmaker in Florence under the patronage of Don Antonio de Medici, to whom the book is dedicated. He is also known to have worked in Pisa and in Antwerp. Far from being academic, therefore, the descriptions he gives are of a very clear and practical nature. He often invites his reader that if he follows his recipes precisely, then an immediately perfect result will be achieved.

Although now dubbed “The World’s Most Famous Book on Glassmaking”, Neri’s work did not attract much attention at the time. This is testament to the fact that the jealously guarded secrets of the Venetians, which they had fought to retain for two centuries were being freely practised in many glassmaking centres throughout Europe with equal success.

To understand the importance of Neri’s work it needs to be put in its historical context. Whilst we regard the Renaissance as a blossoming of the arts, it was to no less an extent a period of huge scientific discovery. Quite understandably, this was driven by a desire to unravel the secrets of the natural world around us. A manuscript of Neri’s from 1599 (2), recently discovered at the Glasgow University Library, illustrates the preoccupation of the period with understanding the Earth’s natural forces and elements. In glassmaking, therefore, the early alchemists found a perfect vehicle to experiment with recipes to produce glass which imitated nature. As Neri’s recipes show there is a consistent theme in them to replicate minerals and semi-precious stones.

Before the technological discoveries of the Renaissance, nature had been regarded as the producer of all things beautiful and perfect. Consequently, man-made objects of comparable beauty to those of the natural world, and which thereby demonstrated the potential supremacy of human ability, were collected and highly prized.

The commercial opportunities created by these discoveries were also a major driving force to the Renaissance. In glassmaking, the Venetians were uniquely placed to exploit these to the full (3). Even today the strength of the Venetian ‘brand’ is acknowledged by our use of the expression *Facon de Venise*, being glass made elsewhere in the Venetian style as if to imply that it is of inferior quality. Whilst expensive, glass was nevertheless considerably cheaper than the minerals and stones the glassmakers sought to copy.

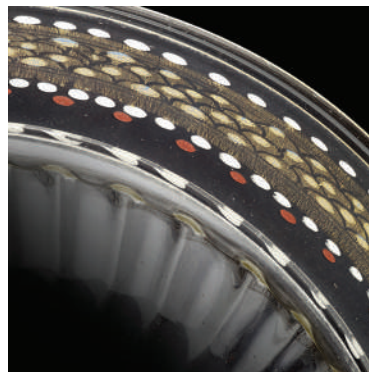
CRISTALLO GLASS

Rock crystal is a naturally occurring and perfectly clear form of quartz. Being rare and expensive, its use was confined to religious objects, such as reliquaries and monstrances, and to high status domestic objects (Catalogue nos 1,2 and 3). Understandably, early glassmakers sought to find recipes to replicate the clarity and translucence of rock crystal. Hence, it became known as Cristallo glass. (Catalogue nos 4 and 5). Quite when and who made the breakthrough discovery is a matter of conjecture. It is often credited to the Venetian glassmaker Angelo Barovier in the mid 15th century. The commercial success of this Cristallo glass was enormous.



GILDED, ENAMELED & COLOURED GLASS

To enhance the attractiveness of the glass, it was often decorated with enamels and gold leaf, or different coloured canes (Catalogue nos 6,7,8 and 9). Writing in the late 15th century, the humanist Marcantonio Sabellico observed that the Venetian glassmakers “began to turn the materials into various colours and numberless forms. Thence come cups, beakers, tankards, caldrons, ewers, candlesticks, animals of every sort, horns, beads ... there is no kind of precious stone which cannot be imitated by the industry of the glass workers, a sweet contest of nature and of man” (4). Rather than being made for use, many such objects were made as collector’s pieces to go straight into Kunstkammer cabinets, perhaps alongside naturally occurring hardstones such as chalcedony, agate, jasper, bloodstone, amethyst, ruby and garnet. Such stones were often worked and polished, and then mounted by goldsmiths with gold or silver gilt.



CHALCEDONY GLASS

Chalcedony is a natural mineral identical in chemical composition to quartz or silica, but with a network of interlocking crystals and impurities that are responsible for the swirls of colour. In the 15th and 16th centuries jewellery and other decorative items were made with chalcedony, agate, malachite and onyx, and were of high value. (Catalogue nos 10 and 11). For early glassmakers the challenge was to find recipes for cheaper alternatives, but with similar characteristics. (Catalogue no 12).

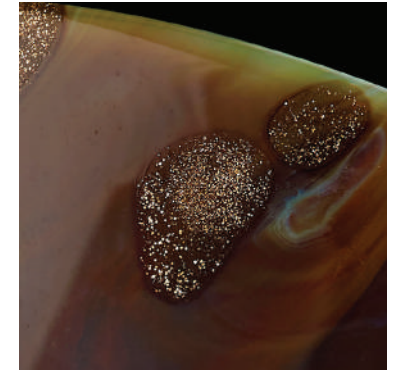
The production of chalcedony glass was a labour-intensive process. Metal oxides, such as silver, tin, iron, copper and mercury, were added to the molten glass mixture, and deliberately roughly mixed to produce a marbled effect. Neri describes these processes in Chapters XLII, XLIII and XLIV of his book.

Such pieces commanded a high price. It is recorded that in 1475 the Florentine banker and statesman Filippo Strozzi paid the princely sum of 55 ducats for a commission of eleven chalcedony vases. Further evidence of the high status of such objects is shown by the painting of ‘The Madonna and Child Enthroned with Saints’ c.1483 by Domenico Ghirlandaio, where a chalcedony flower vase is depicted in the central foreground to the picture.



AVENTURINE

This technique owes its name apparently to its discovery having happened when a workman accidentally dropped some metal shavings into the glass mixture. Italians say it happened “all’vventura” meaning by chance. Quite when this occurred is uncertain. No mention is made of this type of glass in Neri’s book. The first recipe is found in a manuscript of 1644 (5) by Murano master glassmaker Giovanni Darduin, but already in a letter of 1614 there is mention of “a sort of stone with golden stars inside”. Darduin describes the recipe as involving adding various metal oxides such as copper and iron to the hot glass mixture causing tiny particles of the metals to crystallize as the glass mixture cools off. (Catalogue no 12 shows the beautiful effects achieved by such inclusions).



In the 18th century a variety of natural quartz was discovered which had a shimmering effect due to the inclusion of various minerals such as chrome, haematite and others. Interestingly this quartz was named Aventurine, after the glass. It is wrong therefore to regard the glass as having been named after the stone; in this rare instance the glass preceded the natural phenomena rather than trying to recreate it.

OPALINE

Venetian glassmakers experimented with copying the milky iridescence of opal in the 1570s. Neri describes the technique in Chapter LXXIV of his book. He concludes “At Antwerp I made good store, and amongst them, some of them were of fair Opal colour and some of the Girasole”.



The high prices of such objects suggest that they were regarded as rare and exclusive pieces, often designed to have gilded mounts, and to go straight into Kunstkammer collections. The Buquoy glassworks in Gratz, South Bohemia were noted for the production of such items. A 1685 inventory of such opal glasses in their Vienna store (published in Hirsh 1936, p.60) (6) mentions ‘2 grosse Bacher mit Teckel und Figurn pr. 5 fr ‘(two large beakers with cover and figural decoration for five florins). (Catalogue no 13).

GIRASOL

Girasol is a variety of quartz, pale pink in colour. The name appears to derive from the Italian ‘girasol’ meaning ‘turn towards the sun’. In glass form it is like opal glass, but more opaque. This is due to the presence of lead hydrogen arsenate crystals in the glass mixture. Due to their size, they confer an original colour to the glass, which appears bluish under reflected light. (Catalogue no 14).





FOOTNOTES

1. Published by The Society of Glass Technology 2006, edited by Michael Cable.
2. See 'Glass of the Alchemists' published by The Corning Museum of Glass, 2008, pages 48 to 61, contributed by Paul Engle.
3. Due, inter alia, to the presence of pure quartz pebbles from the nearby Ticino river, and access to the best plant ash from the Levant.
4. De situ Venetae urbis, published around 1495.
5. Palatina Library, Florence – Manuscript 1024 – recipe LXXV.
6. Ernst Hirsh 1936 – Mitteilungen des Vereins für der Deutschen in Böhmen.

1

A Silver Gilt Standing Salt from the English Renaissance, c.1550.

The gilt base stands on three little ball feet. There is a central rock crystal tube inside which there is the gilt figure of Longinus, the Roman soldier who, according to legend, pierced Christ in the side to hasten his death when he was on the cross.

The rock crystal was almost certainly recycled from an earlier Catholic object. As Hugh Tait, a former curator at the British Museum, has observed, the large number of objects from the English Renaissance incorporating rock crystal suggests that this rare, valuable material was salvaged by goldsmiths from Catholic monstrances, reliquaries and other such religious objects that had been seized and broken up during the Reformation.

Surviving examples of these 'architectural salts' are extremely rare. There is an example in the Museum of Fine Arts in Boston – See E. A. Alcorn, 'English Silver in the Museum of Fine Arts, Boston, vol.1, Silver before 1697' Boston 1993, cat.no.10 pp 58-60. In Helen Clifford's book 'A Treasured Inheritance 600 years of Oxford College Silver' an example from Trinity College is illustrated on page 75, plate 74. She explains that these salts were once common at high tables at Oxford. An inventory of 1592 from Exeter College refers to "one little salt with a cover double gilt, a greater salt parcil gilt without a cover". At Balliol in 1608 there was "a great white Salte without a cover, that is silver, ungilded".

The piece is 10.5 cm tall and 8 cm in diameter across the top, and weighing 8 ounces approximately.



2

A Rock Crystal Flask with Silver Gilt Mounts and Chain; 16th century, Italian; probably Florence or Venice.

Each side of the rock crystal is reverse painted, with, on the one side, a scene of Christ praying in the Garden of Gethsemane; the other side with Christ carrying the cross.

The height of the piece excluding the chain is 6.6 cm.





3

Two Little Rock Crystal Boxes with Silver Gilt Mounts, c.1600; probably Italian.

The use of such boxes would almost certainly have been to house reliquaries; the slightly larger box measures 4.7 cm in length and the other 4 cm.



4

A Venetian Cristallo Wine Glass; second half of the 16th century.

The broad spreading bowl is 13.5 cm in diameter at the top; over a hollow 'cigar' stem; overall height of the glass is 18 cm.



5

A Small Cristallo Glass Tazza; the Low Countries, first half of the 17th century.

The bowl with 'nipt diamond waies', blown stem and folded footrim; the height is 10 cm and the diameter across the top 10.2 cm.



6

A Venetian Low Footed Glass Bowl,
c. 1500 – 1525.

The shallow tray of the bowl moulded with a series of ribs radiating from the raised centre; the broad rim decorated with an intricate pattern of gilded scales embellished with white, red and blue enamel dots, and the centre decorated with a gilt rosette edged with a band of white enamel dots; approx. 25 cm in diameter.

Provenance: From a private collection Stuttgart.

Such a bowl appears in the painting of the 'Madonna and Child' in the Royal Collections, Stockholm, that Piero di Cosimo (1462 to 1521) painted in the early 16th century. There are examples in many of the major museums in Europe, and an example in the Robert Lehman collection in the Metropolitan Museum of Art in New York.

7

A Small Glass Bottle decorated with white
Filigree; Venice or Catalonia, 2nd half of
the 16th century.

12 cm in height.

Comparative literature:

- ✦ 'Venezianisches Glas der Veste Coburg' by Anna-Elisabeth Theuerkauff-Liederwald; Luca Verlag 1994; page 449, plate 421.
- ✦ A. Chevalier, The Golden Age of Venetian Glass. Le Verre de Venise, ses origines, son rayonnement. Collections du Musée du Verre de la Ville de Liege, Exh. Cat. Tokyo, 1999, p.92.



Height is 14.5 cm; diameter at the top is 14.3 cm.

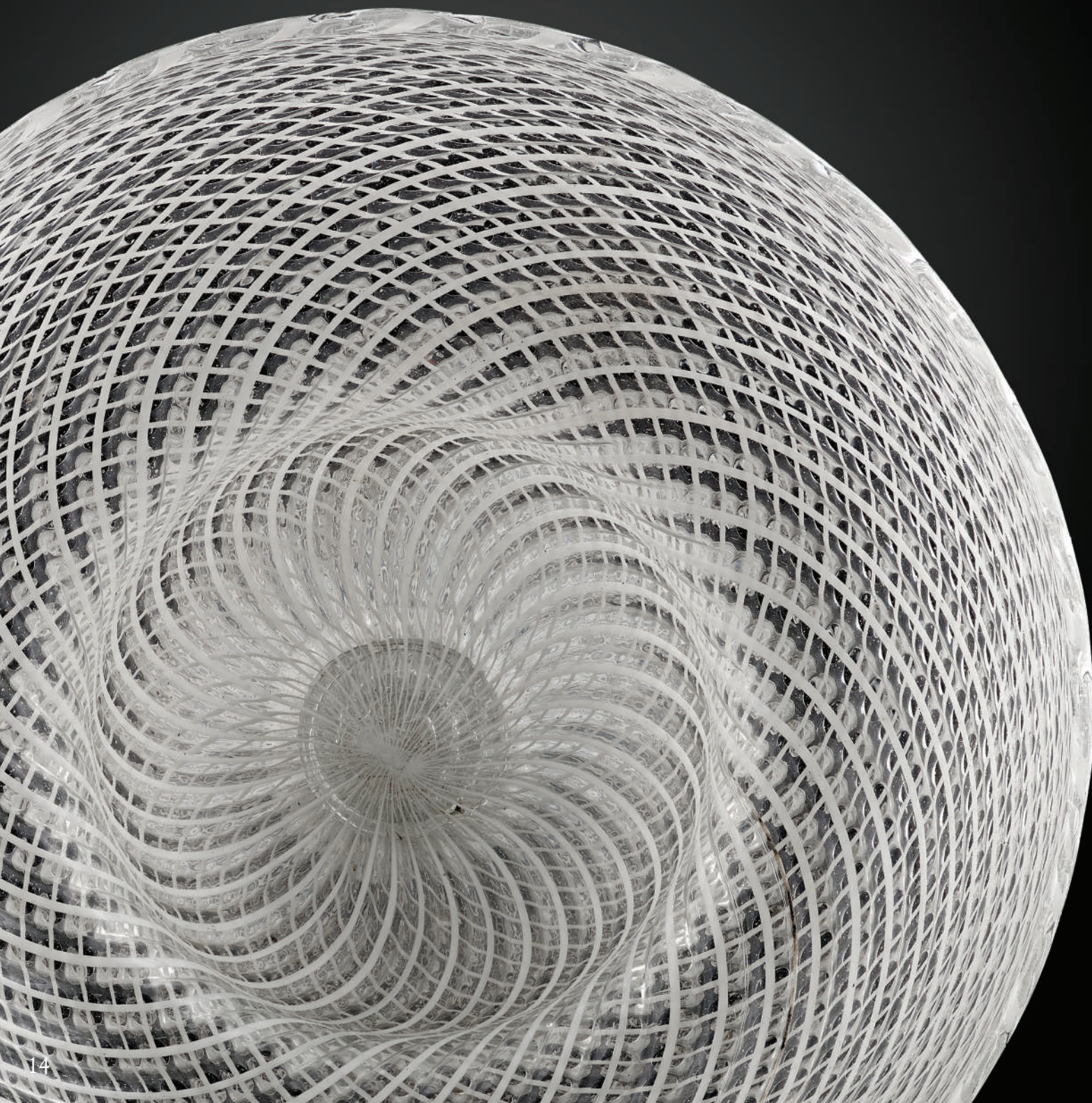
Provenance:

Italian private collection. Purchased at Galleria Rossella Junck, Venice;

Private collection, Vienna, Austria.

Comparative literature:

- ✦ Hugh Tait. *The Golden Age of Venetian Glass*. British Museum, London 1979, p.77 no.112.
- ✦ Jean-Luc Olivie et al. *Domestic and Ceremonial Glassware from the Renaissance to the 19th century*. The du Mesnil Collection. Musée des Arts décoratifs, Bordeaux, 2013, no.17.



Height is 10.2 cm; length is 8.2 cm; width 5.3 cm.

Comparative literature:

- ✦ Bernard Perrot 1640 – 1709, *Secrets et chefs-d'oeuvres des royales d'Orleans*. Exhibition catalogue, Musée des Beaux-Arts d'Orleans 2010, pp. 105 & 148 – 149.





10

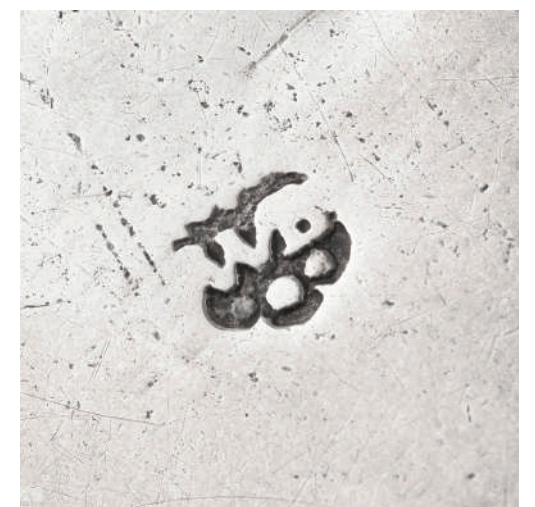
An Agate Cup with Gold Mounts,
Italian, 16th century.

The top mount is decorated with a band of red, white and
blue enamels. The height is 8 cm.



An English Silver Box with an Agate set lid, Charles I c.1640.

The sides neatly engraved with stylized flower head decoration typical of this period; maker's mark WB underneath. Height is 2.4 cm, and weighing 1 oz approx.

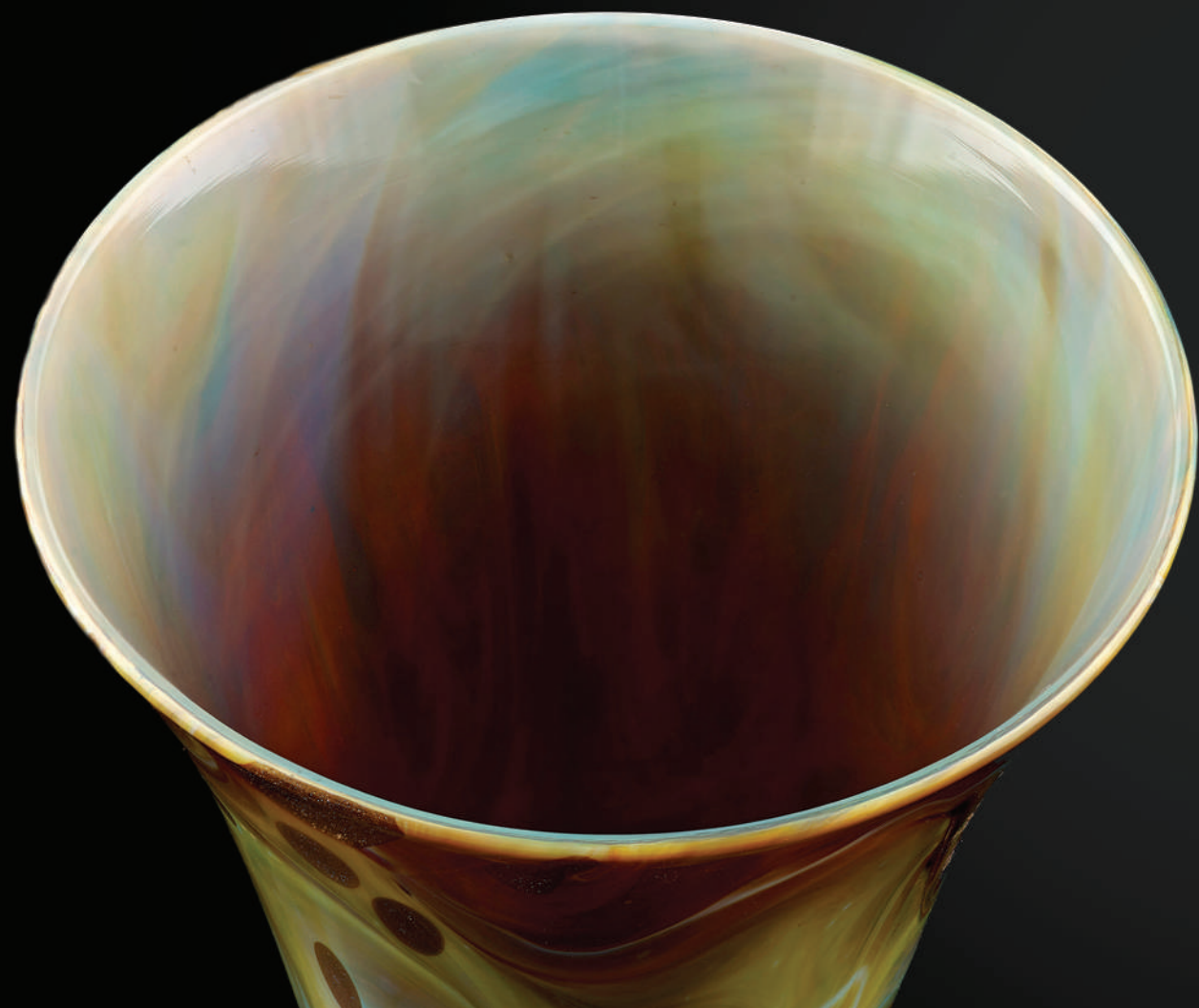
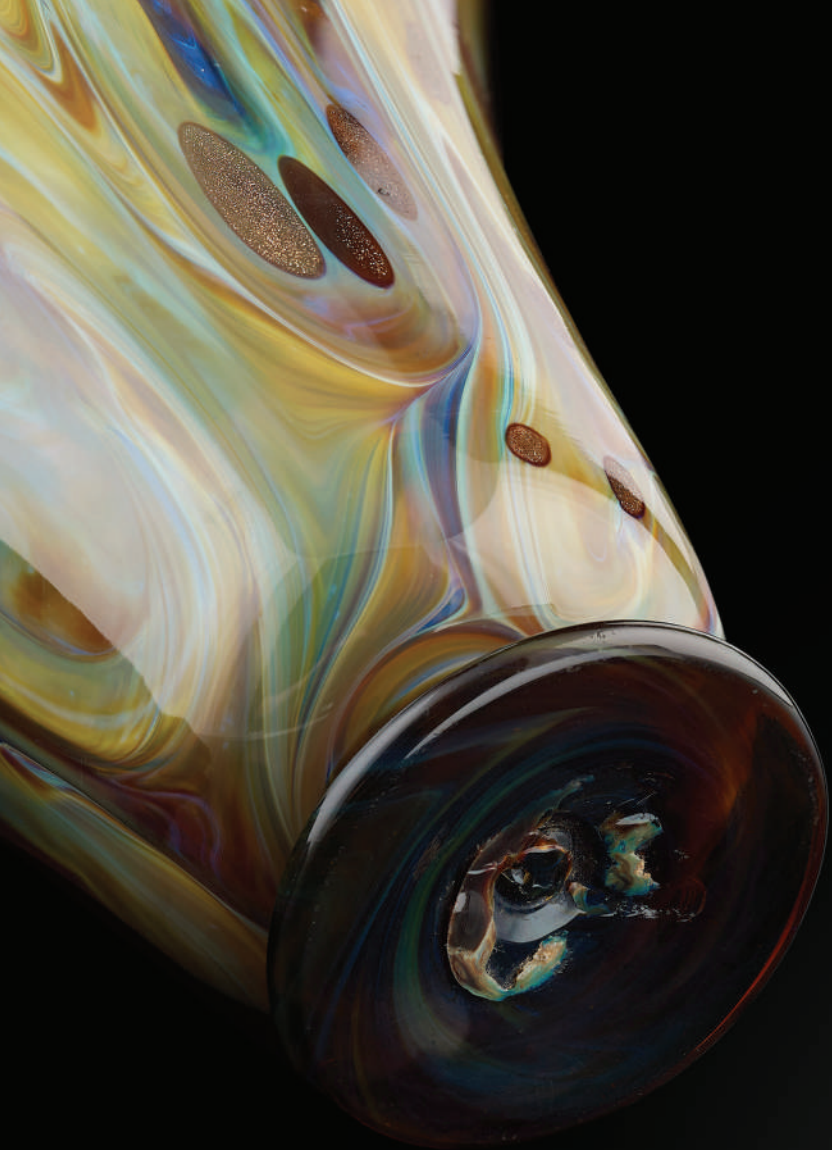


A Chalcedony Glass Beaker, with
Aventurine Inclusions; Venice, 17th
century/ early 18th century.

The height of the piece is 9 cm.

Comparable objects:

- ✦ See Lameris 'Venetiaans & Facon de Venise Glas 1500 - 1700'; Nationale Stichting Nieuwe Kerk, Amsterdam, 1991, page 80, no. 53.
- ✦ 'Venezianisches Glas der Veste Coburg' by Anna-Elisabeth Theuerkauff-Liederwald; Luca Verlag, 1994; pages 487 and 488, nos. 597, 598, 599 and 600.
- ✦ Hugh Tait, 'The Golden age of Venetian Glass'; British Museum Publications 1979, page 106, no. 169.





13

An Opaline Glass Cup and Cover, with Silver Gilt Mounts; Buquoy glasshouse, South Bohemia, c.1675 – 1690.

Height 12 cm; diameter 7.9 cm.

Comparative literature:

- ✦ Olga Drahotova et al. Buquoy Glass in Bohemia. Prague 2001.
- ✦ Dora Thornton, Andrew Meek & William Gudenrath. "Opal Glass in the British Museum attributed to the Buquoy Glasshouse" in *Journal of Glass Studies*, vol. 57, Corning Museum of Glass 2015, pp. 167 – 182

Comparative objects:

- ✦ Silver gilt mounted tankard, The British Museum (no. S.763).
- ✦ A covered bowl, a perfume bottle, a goblet with a pruned stem, and a trick glass. Buquoy glassworks, c.1680. Museum of Decorative Arts, Prague (nos. 586, 9.720, 9.717, 9.746).



14

A Girasol Glass Beaker with cover; Venice, late 16th /early 17th century.

The moulded beaker with descending and alternating bands of colour; the moulded cover with a finial consisting of three knobs. Height is 15.8 cm; the diameter 8.7 cm.



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