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WORK IN PROGRESS: 'VENETIAN AND *FAÇON DE VENISE* ALL-GLASS COMPOSITES OR HYBRIDS: MANUFACTURE, DETECTION AND DISTRIBUTION'

Background

During the second half of the 19th century demand for certain types of works of art, including historic Venetian and *façon de Venise* glass, exceeded supply. Rich collectors were avid buyers and this, combined with political upheavals and other factors, resulted in entire collections changing hands. Repairs of varying complexity ensured that damaged objects could continue to be enjoyed. Such is the case with all-glass hybrids - damaged glass vessels repaired by the addition of one or more pieces from one or more other glass objects in order to make up a complete glass vessel. Metal and other materials may have been used in the repairs only to secure the glass parts. Little is known about who was carrying out the work or the scale of production. It seems increasingly likely that some enterprising antique dealers and talented craftsmen were working together in order to find more works of art to introduce into the market.

In the middle of such a feeding frenzy, it was probably not difficult to introduce the hybrids into the art market. Production included examples intended to appeal to the most elite and discerning buyers: even hybrids of highly prestigious Venetian Renaissance enamelled glasses changed hands. Were the buyers advised of the repairs? Or were they deceived into thinking the glasses were in good condition? Perhaps the fact that the object was a hybrid was of no consequence?

We now know that collector and dealer Frédérick Spitzer (1815-1890), who opened a shop in Paris in 1852, and his highly talented collaborators Alfred André (1839-1919) and Reinhold Vasters (1827-1909), were particularly active in the lucrative field of 'old' art manufacture[1]. Might Spitzer and his collaborators have been involved in the production of hybrid Venetian Renaissance glasses and, if so, were they created with the intention to deceive? An all-glass hybrid enamelled goblet was bought by the South Kensington Museum, London[2], from the posthumous Spitzer sale, held in Paris from 17 April to 16 June 1893[3]. The bowl dates to the 15th century but the stem and foot may have been made in the 19th century. The goblet was illustrated in the sale catalogue, where there was no reference to its being a hybrid. Its hybrid status was not detected by the museum's representatives when they went to Paris to select items of interest to the museum, prior to the sale[4]. Nor was it discovered when the glass entered the museum's collections. In fact, the repair remained undetected until about 1982[5]. Another hybrid Venetian enamelled glass in the Spitzer sale, a footed bowl dating to around 1500, was also described without reference to its hybrid status in the sale catalogue, where it, too, was illustrated[6]. The bowl is now in the Musée Curtius, Liège[7].

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[1] See Truman 1979; Distelberger 1993: 282-87; Distelberger 2000; the Baroness Batsheva de Rothschild sale, Christie's, London, 14 December 2000, essay on Vasters, Spitzer and André, '19th Century "Renaissance" Works of Art: A Question of Supply and Demand': 102-07.

[2] Now the Victoria and Albert Museum. The glass is inv. 698-1893.

[3] Twenty-sixth day, 31 May 1893, lot 2017.

[4] V&A Archive, nominal file for acquisitions from the Spitzer sale, MA/2/S16.

[5] For the description of the glass on its entry to the museum see V&A Archive, Central Inventory for inv. 698-1893. For information concerning the dating of the goblet's components and when the goblet's hybrid status was first noted by the museum, the authors are grateful to Reino Liefkes. As Reino Liefkes and Rainer Zietz observed during discussion following the presentation of this paper in Venice, this glass would originally have been a beaker (for an example of the type see Barovier Mentasti and Tonini 2013, cat. 19, illus. p. 60).

[6] Spitzer sale, twenty-sixth day, 31 May 1893, lot 1983.

[7] Inv. B/1057 (Chevalier and Merland 1999, cat. 41, illus. on the cover). The authors are grateful to Erwin Baumgartner for drawing their attention to this glass.

Another hybrid glass at the Victoria and Albert Museum belonged to the jeweller, collector and museums advisor Alessandro Castellani (1823-1883). The enamelled goblet (inv. 674-1884) was acquired on behalf of the South Kensington Museum by Charles Drury Fortnum (1820-1899) at the posthumous sale of Castellani's collection, held in Rome from 17 March to 10 April 1884. The glass was illustrated in the sale catalogue, where its hybrid status was not mentioned[8]. Until about twenty years ago, the museum was unaware that the piece was a hybrid, its Venetian bowl and upper stem made around 1500-1525, the lower part of the stem and the foot probably made for Castellani in the 19th century[9]. It seems unlikely that the auctioneers for the Castellani sale realized that the goblet was a hybrid, since in the case of another hybrid glass in the sale, illustrated in two views in the catalogue, the cataloguer made a point of noting that, «Le pied, y compris le nœud, a été refait»[10]. This glass appears not to have been sold. The lot entry is inscribed 'Riservato' in the National Art Library's annotated copy of the sale catalogue and Alessandro's son, Torquato Castellani, lent it to an exhibition in Rome in 1889[11]. Might this mean that the glass failed to sell because it was described as being a hybrid?[12]

At least one hybrid Venetian glass in the Wallace Collection was sold privately by Alfred Beurdeley (1808-1882), a Parisian dealer[13], to Alfred-Émilien O'Hara, comte de Nieuwerkerke (1811-1892), in 1865 (Fig. 3). In the receipt that Beurdeley gave to Nieuwerkerke, the glass is described as «une aiguière avec émaux à anse bleue dentelée avec goulot» [an enamelled ewer with jagged blue handle

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[8] Eleventh day, 28 March 1884, lot 407.

[9] The authors are grateful to Reino Liefkes for information about the discovery that the glass is a hybrid. For further discussion of the glass see Barovier Mentasti and Tonini 2013, cat. 9, illus. p. 54.

[10] Eleventh day, 28 March 1884, lot 405.

[11] The glass, with Castellani named as the lender, is illustrated in Wallis 1890: 273. It is now in the Metropolitan Museum of Art, New York, inv. 17.190.730a, b.

[12] The other glass annotated 'Riservato' in the 'Verrerie' section of the sale catalogue is lot 406, which is not described as being a hybrid glass.

[13] Beurdeley's business address was Pavillon de Hanovre, Au coin du Boulevard des Italiens & rue Louis-le-Grand, 32.

and neck], without reference to its hybrid construction (described in case study 3 below). At least two more hybrid Venetian-style glasses in the Wallace Collection also appear to be identifiable as items sold by Beurdeley to Nieuwerkerke in the mid-1860s. Again, the receipts do not describe them as hybrids (case study 2 below is one of these; see Fig. 2). At that time, as *surintendant des Beaux-Arts*, Nieuwerkerke held the key post in Napoleon III's art establishment. Following the fall of the Second Empire, he sold his extensive art collection to Richard Wallace in Paris in 1871[14].

Among the forty-five glasses acquired by the British Museum from the posthumous sale of the collection of Venetian glass owned by the artist Edward William Cooke (1811-1880), held at Christie, Manson & Woods, London, on 15-16 June 1880, there were three hybrid examples[15]. None was described as such in the sale catalogue, but each was recorded as a hybrid glass in the museum's accessions register[16]. Cooke travelled extensively in the years when he was assembling his collection[17], so further research into its formation may shed more light on the ways in which dealers satisfied the demand for historic Venetian glass in the mid-19th century.

Current research continues in order to find out more about historic repairs and whether Spitzer, Castellani, Beurdeley and other dealers were knowingly associated with the production and/or sale of all-glass hybrids.

Judging by the uneven quality of the repairs it seems likely that some buyers must have been aware of them because of their poor quality. Or an owner may have wanted a damaged glass to be made

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[14] The receipts that Beurdeley gave to Nieuwerkerke were among those that the latter passed on to Wallace with his collection. They are in the Wallace Collection Archive. Wallace Collection C559 was sold to Nieuwerkerke by Beurdeley in 1865. C530 and C555 were probably sold by Beurdeley to Nieuwerkerke, either in 1865 or 1867 (Higgott 2011, cat. 48, 19 and 44 respectively).

[15] The forty-five glasses are inv. 1880,0617.1-45. The three hybrid pieces were lots 63, 208 and 527 in the Cooke sale, respectively British Museum inv. 1880,0617.15, 1880,0617.16 and 1880,0617.17.

[16] British Museum, P&E, Antiquities Register, vol. 14, February 1879-December 1884.

[17] Munday 1996.

whole, with the addition of alien components when necessary. In certain cases the repairs are so incredibly well hidden and difficult to detect that the temptation for a dealer to 'forget' to mention the repair must have been irresistible. Some repairs were almost certainly carried out with the intention to deceive the buyers.

The 19th century was a time when the synthetic adhesives we commonly use today had not been invented. Plant or animal-based materials, such as gelatine and other animal glues, were often used for bonding glass. When freshly applied, and depending on their thickness, some adhesives were relatively translucent and colourless and therefore 'invisible' to the untrained eye. As these adhesives age they darken and become more visible and unsightly, but more importantly, they also become brittle, weaken and may not be able to support the weight of the glass. A variety of 'cements' suitable for glass were also used. These were usually white, sometimes very strong and insoluble in water. When old repairs are removed, all treatments should be fully documented and a sample of the original adhesive should be kept when possible for future reference.

Alien glass components have been discovered in wine glasses, goblets, ewers, cruets and vases. The stem or foot areas are the most likely places for the repair, but they were also made to spouts, handles, etc. To detect the all-glass hybrids close examination of the object is required.

Setting up to have a close look

Often an object will be closely examined because it looks 'wrong'. Similar objects may be available to be used as comparatives, always bearing in mind that examples studied from available images may have undetected repairs themselves.

Most repairs should become apparent after a visual examination. The following are needed:

- A strong table or similar surface with a soft protective cover. The glass ought to be held as close to the table as possible. All parts of the object should be supported, especially the base, in case the old adhesive fails and a part of the object falls off [and they

do!]. The table should be uncluttered and large enough to move the object safely.

- A good general light source placed far enough from the main examination area, e.g. ensuring the overhanging part of a lamp with a flexible arm is out of the way.

- A torch, preferably plastic and not too large, with a strong ray. Large, heavy or metal torches tend to be unwieldy and are more likely to cause damage.

- Magnification is crucial, either a strong magnifying hand-held lens, preferably mounted in plastic rather than metal, or a binocular magnifier. A small hand-held microscope connected to a computer is not crucial but may be useful.

A conservator/restorer will be familiar with the appearance and behaviour of restoration materials and may use precision tools to explore the repairs.

Examination and detection of the repairs

During examination the object or light source should be turned around so that reflected light on the surface exposes any discordant features or discontinuities such as changes of texture or manufacturing features. A torch will be useful for close-up examination and it is preferable to move the torch rather than a heavy or delicate object, or one where the adhesive may be weak. Its focused ray can be placed under a foot to see if the light goes through the stem unhindered.

The first stage of examination is an overall look at the object and, if possible, a comparison with similar objects. Does anything look 'wrong'? Are there components out of central alignment? Are there any 'illogical' components? Are there colour differences in the glass, such as in paired handles? Does enamelled or engraved decoration appear to be by different hands? This is not final evidence, but adds weight to other observations.

If there are obvious repairs: the main giveaway is the texture caused by grinding, such as rough surfaces or deep scratches. Are there any straight lines which do not make sense? Straight edges

result from fitting the spare parts by grinding. And is there fine chipping along the lines? Does the line cut through any tooling, surface textures or decoration, e.g. enamel?

Do inclusions, quantity, type or shape of air bubbles 'match' on both sides of a repair? Comparing wear patterns, abrasion, stains and the way dirt has accumulated in recesses can yield crucial evidence. Are there any signs of chemical instability on one side of the repair but not on the other? These include a smeared surface or crystallised soluble salts on the surface, opacity, crizzling (micro-cracks), etc. Note that an unstable vase may have a chemically stable feature applied during the original production process, such as a handle or foot, and colourless and coloured glass may behave differently, etc. Each case is different and anything that does not seem 'right' should be questioned.

Features to look for in the repairs include:

- Evidence of glass preparation: grinding marks (the strongest evidence for repairs; uncharacteristic straight edges and chipping along those edges, deep rough scratches).

- Change to the original adhesives and ageing materials (originally: colourless and relatively invisible to the untrained eye; later: yellowed, shrunk and cracked, peeling or flaking, weak, brittle). Note that there may be raised lines, adhesives may have a different colour from the surrounding area, there may be excessive adhesive around the repaired area and/or adhesive dribbles or smears).

- Additional materials may have been used to hide or strengthen the repairs (such as metal bands and supports, metal and wooden dowels, opaque fillers and putties, paint and other unfired colorants). Some of these materials also undergo noticeable ageing processes (becoming yellow/brown, opaque; bronze powders which were once golden acquire a greener appearance caused by metal corrosion, etc.) Note: dowels have been used in 'genuine' repairs to add structural strength and do not necessarily imply that the two parts do not belong together.

- Later adhesive replacements (such as two-part epoxies and cellulose nitrate adhesives, which are usually more difficult to detect).

Scientific analysis and other examination

Generally speaking, scientific analysis is not the top priority but may help in some instances. Practical considerations include: cost of procedure and time required for the procedure, e.g. overnight, distance to the facilities, logistics of transporting the object and personnel required, insurance, etc. The choice of technique depends on the questions to be answered and must be carefully thought through.

Dating the glass components: it is possible to date some glasses by their chemical composition when crucial markers are present, e.g. a colorant that became available only after the supposed manufacturing date. A comparative database may be needed and the results may be inconclusive or the range of dates too wide. A preliminary consultation with the relevant scientist is necessary. Examination by X-radiography and ultraviolet light (UV) is more easily accessible and may prove useful.

X-ray examination may show what is under certain paints or patterned glass, but metal and metallic paints may be too opaque for the X-rays to yield any answers. Also the radiographs may not show enough contrast or be detailed enough to provide useful information.

An ultraviolet (UV) light source is used in the dark; a variety of low intensity hand-held lamps are easily available. A more powerful UV light source must be used with specific personal protection equipment. The heat produced by the lamp may damage the repairs or the glass, for instance opening up cracks. Working in the darkness may also lead to glass breakages. UV light usually makes plant and animal-based adhesives, fillers, putties and painted areas fluoresce a brighter colour than the glass. Synthetic adhesives, such as epoxies and cellulose nitrates, are less likely to fluoresce sufficiently to be noticeable, especially when occurring as thin lines in joins.

Finally, a hand-held metal detector of the type used for detecting metal pipes in walls may help to find hidden metal dowels.

Mechanics of the repairs

The simplest repair method consisted of grinding flat the two surfaces to be joined until they fitted. Adhesive was applied and the two pieces were brought together. This is a structurally weak join which depends on the strength of the adhesive to hold the weight. These repairs often fail as the adhesives age and are more likely to have been removed and replaced by synthetic adhesives.

A metal or wooden dowel could be added to strengthen the join. Both sides would need to have cavities for the dowel, either already present (e.g. a hollow knop) or drilled out. The dowel would be held in place with adhesive fillers or putties. These are opaque, generally white or a light colour and very obvious in translucent glass. This is a stronger repair, but when the adhesive fails all the components may be replaced by clear synthetic adhesives, becoming difficult to detect. The craftsmen had clever stratagems to hide the repairs, perhaps within patterned glass, or by placing a metal band around the repair. These repairs may be visible but they appear to be 'honest' repairs and do not give away the fact that the two parts do not belong together.

A more invisible and stronger repair could be achieved by leaving an integral stump-shaped end on one component and preparing a 'receptacle' for it on the other. Patterned glass could hide the repairs very successfully.

Separate discs were added to a stem repair for height, colour, etc. More complex and specific repairs are being discovered, demonstrating the ingenuity and adaptability of the craftsmen. Each object posed a new challenge and there appears to have been no shortage of raw materials.

Case studies

The following examples show a range of the repairs found on all-glass hybrids with Venetian or *façon de Venise* components[18].

[18] For discussion of these and two additional all-glass hybrids in the Wallace

1. Goblet, Venice or *façon de Venise*, 1650-1700, The Wallace Collection (inv. C553); in Sir Richard Wallace's collection by 1890

Fig. 1 shows a goblet with an aubergine-coloured bowl, one light green knop and five translucent blue knops, all hollow, above a colourless folded foot. The goblet is listed in the Hertford House inventory taken in 1890, following Sir Richard Wallace's death. The foot is thought to be larger than usual for this kind of goblet and comparatives show that this type of stem would have only four or five knops. There was an unsightly band of putty under the top knop to strengthen the repair, which appeared to date from the 19th century. Why was the top knop not blue? Close examination showed the glass was colourless with a coating of green paint inside. It seems probable that the paint was originally blue but the ageing process had yellowed the medium, turning the blue to green. It became clear this object was a hybrid but evidence was needed.

By 2001 the old unsightly repair had become brittle and there was a risk that the top section could give way and break, maybe damaging another object in the display. This danger justified replacing the adhesive and provided an opportunity for a closer look. It was decided to retain the green paint because of its historic significance. Once the repair had been removed, the ground surfaces were exposed – the final evidence this object was made up from two separate objects.

A bonding method was designed to prevent any damage to the green paint and allowed the future removal of the adhesive if it should become necessary. The new repair is strong and visually unobtrusive. Although the old repair was obvious, the craftsman used his ingenuity to hide the deception. It is likely that the colourless top knop was left in place to achieve a longer stem that would balance the proportionately large foot.

Collection see Navarro 2011: 376-79, 'Conservation: Case Studies, 4. Composite objects'.

2. Ewer, Venice, late 16th century, The Wallace Collection (inv. C530); known provenance possibly 1865 or 1867; in Sir Richard Wallace's collection by 1890 (Fig. 2)

This ewer does not have a particularly complex repair, but it is very well hidden and its discovery was a complete surprise while studying the manufacturing technique under magnification. What gave it away? Immediately above the merese, and noticeable on one side, there is a tiny matt area which is the characteristic texture left by grinding (Fig. 2, right). There was no possible reason for grinding marks here except in a repair. Further examination revealed all that could be seen of the adhesive - a very thin white line of some sort of cement. However, a ray of light travels unhindered down the stem: there is no filler in the hollow knop to stop the light. The glass pattern and internal reflections of the glass hide the construction method completely when looking from the side.

The construction method appears to be as follows: the top of the foot was shaped by grinding leaving a short stump of colourless glass. The knop was prepared so as to accommodate the stump. The two components would fit tightly together and a very small amount of cement would be required and only around the 'shoulder' of the stump, which is why the light travels through the stem. This is not the work of a beginner, but of someone who had a lot of practice and a choice of high-quality parts available for use. It was not possible to remove a sample of the cement for chemical analysis. The cement appears to be in good condition and strong and the repair remains in place.

3. Cruet, Venice, late 17th - 18th century, The Wallace Collection (inv. C559); known provenance since 1865

The cruet in Fig. 3 has a known provenance since 1865, when it was acquired by the comte de Nieuwerkerke in Paris from the dealer Alfred Beurdeley. There are two repaired areas: at the base of the spout, and the stem and foot. On the right image there is a straight line behind a mask prunt. The line is the join of an alien spout to the body. Both edges are badly chipped from the grinding.

A mask prunt covers up the obvious join line and grinding marks are visible around its sides. The old repair was removed, probably in the 1970s and most likely due to adhesive failure. A new adhesive was applied then but unfortunately no record has been found of the old repair.

The repair to the foot is more complex and visibly aged; luckily the original materials are still in place. The repair is mostly opaque, but visual examination indicates it was probably constructed as follows:

- The merese below the hollow knop was ground down flat, leaving an opening into the knop, but ensuring the inner surface of the cruet was undamaged.
- The hollow knop was 'gilded' inside with bronze powder in an organic paint medium and allowed to dry. (The bronze paint has now degraded and is patchy with dark spots.)
- A foot with a long stump was prepared and a separate blue disc. The disc was inserted onto the stump, bonded with translucent adhesive and allowed to dry.
- The gilded knop was half-filled with soft white putty and the stump (with the blue disc) was pushed into the putty. Excess putty was removed and the repair allowed to set.

A ray of light travels through the stem because there is no putty on the tip of the stump where it touches the bottom of the cruet.

Originally the adhesive was not as noticeable as it is now. The adhesive is probably a water-soluble gum or gelatine and it is visible underneath the foot. Over the years the clear adhesive has yellowed and become more visible.

This repair required planning, expertise based on previous work and a range of spare parts. The complex and accomplished repair to the foot is clear evidence that a lot of this kind of work was being carried out and undoubtedly testifies to the market demand for historic Venetian-style glass even of a relatively modest type.

Conclusion

Nineteenth-century repairs to translucent glasses are sometimes difficult to see. Opaque glass could be even more challenging. It

is important to identify these hybrid objects. From the point of view of scholarship, we cannot construct reliable knowledge and theories about authentic objects on inaccurate foundations, and it is also crucial to our understanding of the history of collecting in the second half of the 19th century to find out as much as possible about who was creating hybrid glasses, who knew about it and to what extent it mattered at the time.

It is clear that they are the work of highly accomplished craftsmen who had developed their 'repair' techniques over a period of time and had many opportunities to acquire a great deal of experience. A picture is starting to emerge of a well-established market in which damaged glass objects were available to craftsmen who drew on their knowledge of historic glass to carry out the work required using the spare parts available to them.

Venetian glass was highly sought after in the later 19th century, leading to the production of a high number of repairs and all-glass hybrids. The same repair techniques were used for other glasses with selling potential. Research continues into the originators of all-glass hybrids, the techniques used to produce them and the routes by which they entered public and private collections. Further results of this research will be presented at the AIHV Congress in Switzerland in 2015.

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Fig. 1 - Goblet, Venice or *façon de Venise*, 1650-1700. London, The Wallace Collection, inv. C553 (© by kind permission of the Trustees of the Wallace Collection).

Fig. 2a-b - Ewer, Venice, late 16th century. London, The Wallace Collection, inv. C530. Left: ewer; right: detail of join (© by kind permission of the Trustees of the Wallace Collection).

Fig. 3a-b - Cruet, Venice, late 17th - 18th century. London, The Wallace Collection, inv. C559. Left: cruet; right: detail of spout base showing straight line and applied mask prunt (© by kind permission of the Trustees of the Wallace Collection).