Philip Steadman

Canaletto’s camera

There are two Canaletto’s in GoogleDrive that were not listed for this essay:

Canaletto_Campo Santi Giovanni e Paolo_Royal Collecton

Canaletto_Campo Santa Maria Formosa_No. 23.jpg

The popular idea, in caricature, is that Canaletto was a supplier of superior postcards of Venice to English aristocrats on the Grand Tour. There is some truth in this, especially for those paintings produced in quantity in Canaletto’s studio in the 1730s and early 1740s. The apparently ‘proto-photographic’ character of the works can, it is tacitly assumed in this idea, be attributed to the use of an optical method. The reality is more complicated, and more interesting. Canaletto certainly made many view paintings or *vedute*; but he also produced large numbers of finished drawings for sale, as well as pictures of apparently fantastic buildings in imaginary settings, the *capricci*.

We know that Canaletto was a camera user. His contemporaries said so.[1] There is a small box camera in the collection of the Correr Museum in Venice labelled ‘A. Canal’, meaning of course that its owner was Antonio Canaletto.[2] Most important, more than a hundred pencil sketches survive, made with a camera by Canaletto and perhaps also by his nephew and assistant Bernardo Bellotto. The majority of these are in a single notebook or *quaderno*, now in the collection of the Gallerie dell’Accademia.[3]

Typically, Canaletto divides a panoramic view into a series of sections, traced on successive pages of the book. There can be between four and ten sketches for a single picture. Figure 1 reproduces four pages of drawings from the *quaderno,*

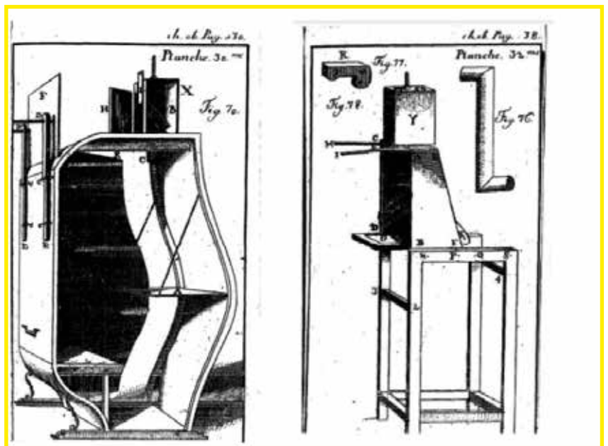
of San Simeone Piccolo and buildings either side of the church, along the Grand Canal. This is the view that still confronts visitors to Venice today who arrive by train and step out of the station, straight into the 18th century. Because Venice is in many parts so little changed, it is often possible, as here, to compare the works directly with the scenes they depict. Canaletto and Bellotto both made finished drawings of this subject. There is no known painting.

The four sketches are made on the fronts and backs of two pages. The paper is thick and opaque. This means that they could *not* have been made with a box camera of the type in the Correr, which demands transparent paper. The pages of the *quaderno* must have been placed *under* the projected image of a larger camera, taking the form of a tent or booth. Such cameras were illustrated in contemporary books with which Canaletto could have been familiar, as for

example W J Gravesande *Essai de Perspective* of 1711 (fig. 00).[4] Decio Gioseffi built a tent camera of this type in the 1950s and demonstrated something of how Canaletto might have worked.[5]

Several qualities of the graphic character and layout of the sketches in the Accademia *quaderno* are strongly suggestive of a camera method. It is clear that the drawings were executed quickly, only rarely with any shading. The images are flattened and lack depth. Lines can run continuously around many overlapping buildings and roofs, even though these are at very different distances. There are few corrections or second thoughts. The majority of the sketches have no guidelines, ticks or dots to set out the regular spacing of openings – although there are places where Canaletto uses construction lines to straighten up columns or position rows of windows, some of which are ruled. The elliptical curves of domes are drawn smoothly without kinks or wavering.

1 Four pages from Canaletto's quaderno (52V to 54R) in the Gallerie dell' Accademia (see note 4), showing the church of San Simeone Piccolo in Venice, and adjoining buildings

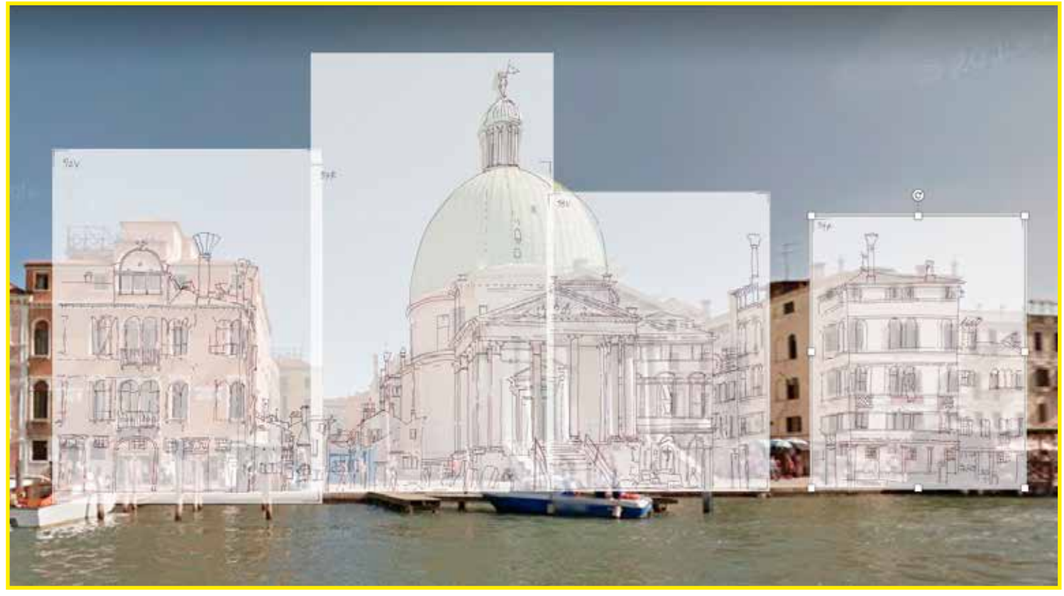


2 An enclosed booth type of camera obscura (left) and a tent type (right): from W J s'Gravesande, Essai de Perspective, 1711

All this is suggestive, but not definitive proof of a camera being used. Such characteristics could be the product of extreme skill in making freehand sketches by eye; there is no doubt that Canaletto was a highly accomplished draftsman. There are further features however that are much more difficult to explain, other than by reference to the camera. They have to do with the placing of images on the page, and the sizes of these images.

Look at the four sketches of Figure 1. In every case the page is completely filled to the bottom and sides. Buildings are cut off arbitrarily at the extreme left and right, where the optical image reaches the edges of the sheets in question. The church of San Simeone Piccolo itself is split between two sheets. The cupola on top of the dome is too high up to fit on its sheet, so is drawn separately in the sky - presumably by shifting the sketchbook under the optical image. The same happens with other domes and campaniles, elsewhere in the *quaderno*.

A draftsman working by eye would surely judge the overall size of a subject first, and would want to make sure that all of it fitted on his page. Here by contrast the standard size page is placed under the lens, and Canaletto draws just what the lens catches. Despite the overall view being broken up in this way, the drawings on the different pages all match up precisely at the joins, not just across double spreads, but even where they are on front and back of the same sheet.



One final test: do the sketches match the actual scene? Figure 3 shows them superimposed digitally over a photograph taken from Canaletto's viewpoint. The correspondence is close throughout. Many experienced draftsmen could reproduce local detail by eye with high accuracy. I do not believe that they would be capable of preserving relative sizes, proportions and alignments across the whole of an extended view in this way, especially if it was drawn on four separate sheets.

Both Canaletto and Bellotto made paintings of another scene, the Campo Santa Maria Formosa, for which there are again sketches in the *quaderno*. Figure 4 reproduces one of Canaletto's versions. Figure 5 shows the relevant sketches superimposed over a photograph of the Campo. Here there are several contrasts with San Simeone Piccolo. The camera drawings are made at different scales, depending on the depths of the various parts of the scene, perhaps using different lenses. They have to be altered in scale to fit over the photo. With the church itself, and the building to its left, both of which are seen frontally, Canaletto draws just one half of the facade, and presumably is planning to mirror the sketch to provide the missing half, back in the studio.

The perspective of the sketch at extreme right does not exactly match the buildings, suggesting perhaps that the camera has been turned slightly. Similar discrepancies are found at the edges of other scenes. The outstanding way in which both sketches and painting differ from the photograph in this case, is that Canaletto has greatly enlarged and raised the dome of Santa Maria, to give it the visual prominence it deserves. He does this with churches and campaniles in many pictures.

Canaletto's painting of the church of SS Giovanni e Paolo illustrates similar graphical habits (Figure 6). There is again a slight divergence in the buildings at the extreme right - seen in very steep perspective - between sketches and painting. The west front of the church is captured in three sections, with some

3 The camera sketches of Figure 1 superimposed over a photograph of San Simeone Piccolo and adjoining buildings, taken by Philip Tabor from Canaletto's viewpoint

4 Canaletto, 'The Campo Santa Maria Formosa', oil on canvas, 47 x 80 cm, Woburn Abbey

5 Camera sketches on six pages of the *quaderno* (36V to 39R), superimposed over a photograph of the Campo Santa Maria Formosa, taken by Philip Tabor from Canaletto's viewpoint

6 Camera sketches on four pages of the *quaderno* (50V to 52R) superimposed over Canaletto's 'Church of SS. Giovanni e Paolo', oil on canvas, 46 x 78 cm, Royal Collection, Windsor

overlap, and the pinnacles on the roof are drawn separately in the sky. Canaletto has greatly enlarged the dome. The building at the left, the Scuola di San Marco, is not traced at all in the camera - although the silhouette of its far corner is outlined at the left of the church. The same happens with many palazzi and architectural monuments in other groups of sketches. Is it possible that Canaletto had access to architectural drawings or engravings of such buildings, from which he worked? There were architectural folios in the library of his patron and agent Joseph Smith. If so, Canaletto would have needed some method of turning elevation drawings into oblique views.

Gregorio Astengo and I have made superimpositions of all the camera sketches in the *quaderno* over the corresponding paintings, finished drawings and engravings. Our conclusions so far are that Canaletto is in general extremely faithful to the everyday fabric of Venice, especially in the less well known and less frequented parts of the city. Departures from reality - enlargements of important buildings, shifting of campaniles from their true positions - tend to increase in frequency towards the Grand Canal and the Piazza San Marco. The Piazza in particular is a difficult space in which to obtain satisfactory views - as photographers find today - and Canaletto is quite happy to alter the angles between the corners of the square, distort its shape, move or remove buildings altogether, and even take viewpoints from positions that are in reality inaccessible.

I plan to build a camera or cameras, working from s'Gravesande's designs and other types described in the 18th century, to test whether it is possible to recreate these procedures of Canaletto's, and to understand what problems he faced.

Going back to San Simeone Piccolo: Figure 7 shows a finished drawing, a *capriccio*, in which

7 Canaletto, 'Capriccio with San Simeone Piccolo', drawing, 31 x 46 cm, Detroit Institute of Arts

Canaletto has picked up the church and dropped it onto some unknown garden site. The building is exactly as it appears in the *quaderno* sketches, and has even carried along with it two small houses at the left. The building over the garden wall to the right is Jacopo Sansovino's Libreria Marciana, which in reality is opposite the Doge's Palace, and for which Canaletto perhaps had the architect's drawings.

Matters become yet more curious in a second picture, 'Capriccio with an oval church' (Figure 8), set in the Venetian Lagoon. Here the houses on either side of San Simeone are inherited wholesale from the original *quaderno* sketches (compare Figure 1). The ghost of the facade of the church itself is still vaguely recognisable, and its hemispherical dome has been squashed into the shallow saucer of the oval church's roof. The Gothic tower might come from another source. André Corboz has studied Canaletto's *capricci* intensively: he calls this kind of series a 'linear chain' of progressive transformations.[6] It becomes clear from this and many other *capricci,* that Canaletto has a characteristic method in which he starts from camera sketches, cuts them up, permutes them and reassembles them, like some kind of 18th century Photoshop. After studying the *oeuvre* for a time, one begins to look for departures from reality in the *vedute*, and vestiges of reality in the *capricci*.

Mysteries remain, in particular the issue of how Canaletto might have transferred the camera tracings to paper for the finished drawings, and to canvas for the paintings. No underdrawing has been found beneath the paint layers. One standard method of transferring drawings was to square them up and transfer them using grids: but there are no grids on the *quaderno* tracings. Another method was to prick small holes along the outlines, and sift powdered charcoal through ('pouncing'); but there are no pinholes in the *quaderno* sheets. There *are* pinpricks in the finished drawings, but their function has not been explained.[7]

Examination of these drawings under infrared reflectography has also revealed receding orthogonals and horizon lines in pencil, made with a ruler. Rosie Razzall has claimed this as evidence of geometrical perspective construction, and that Canaletto was therefore

8 Canaletto, 'Capriccio: an oval church by the Lagoon', oil on canvas, 61 x 95 cm, private collection, New York

not a camera user.[8] This is a misunderstanding. It is the sketches in the *quaderno* that are made with the camera, of course. What is happening in the underdrawing for the presentation drawings is that Canaletto is tidying up and straightening the images transferred from the *quaderno*, so that the perspective of the view as a whole is coherent and consistent.

Lawrence Gowing wrote that Vermeer is alone among users of the camera in "putting it to the service of style rather than the accumulation of facts."[9] Did Canaletto use the instrument just to accumulate facts? Were there no effects on his style of painting, his use of colour, or his treatment of tone? These questions have not been much studied. Leading 20th century Canaletto scholars like J G Links and Michael Levey, who were sceptical about or hostile to the camera thesis, declared that the instrument, if used, served only to account for a mechanical quality in some of the paintings.[10] At the most basic level, one needs strong light to work with a camera: Canaletto's are paintings of a sunlit Venice. Both Canaletto and his nephew paint distant human figures as little twists and blobs of bright colour, resembling nothing so much as the luminous images of clothes and faces on the camera screen. In Bellotto's later paintings of northern Europe he shows a sensitivity to tonal values that make his paintings look, precisely, like photographs, especially in black and white reproduction (Figure 9).

Canaletto is barely mentioned in the main text of David Hockney's *Secret Knowledge*, and none of his paintings features in Hockney's 'Great Wall' of pictures, designed to illustrate an increasing naturalism in Western painting from 1300 to 1900; indeed, the density of images along the Wall thins out very noticeably in the 18th century, at the zenith of European view painting.[11]

9 Bernardo Bellotto, 'Castello Sforzesco, Milan', oil on canvas, 61 x 98 cm, c.1744, National Heritage Institute, Brno, Czech Republic

Half a dozen pages are devoted to Canaletto in Hockney's book with Martin Gayford, *A History of Pictures*.[12] However, the informative text here is largely by Gayford, and Hockney's few remarks are mildly negative. He talks about the fact that both the camera obscura and the photographic camera serve to distance an artist from the scene. Taking the example of one of Canaletto's many paintings of the Piazza San Marco, he says "we are fixed in position... in a sense we are outside this space, not in it."

Gayford mentions the 'collage' technique adopted by Vanvitelli, the Dutch/ Italian view painter and precursor of Canaletto, through which both artists combined the use of the camera with drawing by eye. Gayford also makes the comparison with Photoshop. It would be interesting to have Hockney's comments on the *capricci* and their relationship to his own 'joiner' photographs and paintings. Vanvitelli and Canaletto aimed to create 'collaged' pictures that still had overall perspective coherence, while Hockney's purpose has precisely been to pull the viewer closer into each separate part of the picture.

Philip Steadman is Professor of Urban and Built Form Studies at University College London, and author of *Vermeer's Camera* (Oxford University Press 2001). He has an Emeritus Fellowship from the Leverhulme Trust to study Canaletto's camera. =WE DON'T DO THIS FOR OTHER AUTHORS

Notes

1 For example Antonio Zanetti, *Della Pittura Veneziana e delle Opere Pubbliche de' Veneziani Maestri*, Giambatista Albrizzi, Venice 1771 p. 463. **2** https://correr.visitmuve.it/en/home/ **3** The sketchbook was donated to the Gallerie in 1949. Facsimiles have been edited by Terisio Pignatti, *Il Quaderno di Disegni del Canaletto alle Gallerie di Venezia*, 2 vols, Daria Guarnati, Milan 1958; and Annalisa Perissa Torrini, *Canaletto: Il Quaderno Veneziano*, Venice 2012. **4** G.J. Gravesande, *Essai de Perspective*, The Hague 1771, chapter on 'Usage de la chambre obscure pour le dessein'. A copy of the first edition is in the library of the Correr Museum in Venice. **5** Decio Gioseffi, *Canaletto; il Quaderno della Galleria Veneziane e l'Impiego della Camera Ottica*, Istituto di Storia dell'Arte Antica e Moderna, no. 9, University of Trieste 1959. **6** André Corboz, *Canaletto: Una Venezia Immaginaria*, 2 vols, Milan 1985, p. 350. **7** K.T. Parker, *The Drawings of Antonio Canaletto in the Collection of His Majesty the King at Windsor Castle*, Oxford and London 1948, pp. 22, 24. 8 In publicity associated with an exhibition in London in 2017, *Canaletto and the Art of Venice*, 18th century art in the Royal Collection. Catalogue edited by Rosie Razzall and Lucy Whittaker, Royal Collection Trust 2017 **9** Lawrence Gowing, *Vermeer*, Faber, London 1952 p.23 **10** See for example J.G. Links, *Canaletto and His Patrons*, Paul Elek, London 1977 p.61; and Michael Levey, 'Canaletto as Artist of the Urban Scene', in Katharine Baetjer and J.G. Links (eds), *Canaletto*, exh. cat., Metropolitan Museum of Art, New York, 1989, pp. 17–29: p.24 **11** David Hockney, *Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters*, London and New York, 2nd edn 2006. There are some mentions of Canaletto in the collected texts at the back of the book. **12** David Hockney and Martin Gayford, *A History of Pictures, From the Cave to the Computer Screen*, London and New York, 2016, pp. 219–21.