The painterly brilliance and evocation of the artificial world of the famous theatre displayed in Edouard Manet's *A Bar at the Folies-Bergère* (Fig.1; RW.I-388; referred to here as the 'Bar')² reveal little of the painting's complex and singular artifice. Since its first showing at the Paris Salon of 1882,³ the painting has been recognised as Manet's last and greatest masterpiece, iconic of both his art and the Paris of his time. Even though its reception at the Salon, from the public and critics alike, was more positive than for most of his works exhibited in earlier years, criticism was given for its baffling narrative and unfinished appearance. But the main concern revolved around the mirror's reflection. The essential problem was succinctly illustrated at the time in a caricature by Stop (Fig.4)⁴ which added the gentleman's figure in front of the barmaid with this explanatory caption:

A SELLER OF CONSOLATION AT THE FOLIES-BERGÈRE – (Her back is reflected in a mirror; but presumably due to the painter being distracted, a man with whom she is chatting and who can be seen in the mirror does not exist in the painting. We feel we have to correct this omission.)

That witty proposal in fact sets out the spatial arrangement considered by most scholars to the present day to be the only, yet impossible, assessment of the reflection's "optically illogical relationship"⁵ – with the barmaid facing directly across the bar but seen in the mirror's reflection to be facing and interacting in some way with the gentleman. As T.J. Clark has claimed, "we must be where he is. But we cannot be".⁶

Prior to 1882 spatial uncertainty was not a major issue in the wide-ranging criticism of Manet's works. That changed with the *Bar*. Contexts and emphases of subsequent commentaries fluctuated with the times but assumptions about the mirror reflection persisted, enabling countless speculations on the painting's narrative and meaning. As Richard Brettell has observed, "the reflection... has caused more speculation than any depicted mirror in the history of Western art".⁷ And in many ways those assumptions have become symbolic of the way in which Manet's art in general has been assessed. Notional examinations of the 'problem' have conveniently concluded that no alternatives to
the accepted dogma could possibly exist and only two perspectival analyses – one stating that the "pictorial puzzle resists rational solution" and the other shown to be incorrect – have been published. Nevertheless, it can be shown here that the painting's spatial concept was created with two strategies for spatial ambiguity and the mirror reflection can indeed be explained. As with any masterwork, its ambiguity was in fact crafted and not accidental or created in error.

When Manet painted the Bar, the Théâtre des Folies-Bergère was a popular variety theatre and night-life venue in Paris. It comprised a large, covered entry jardin through which one accessed, at both ground-floor and first-floor levels, the theatre auditorium beyond in which acrobats, singers and musicians performed. Seating in the theatre at the ground-floor level was arranged with rows facing the stage and surrounding loges in a horseshoe shape and, at the first-floor level on a similarly horseshoe-shaped balcony, with stepped rows at the sides and loges in the centre. Behind the seating at both levels were the famous promenoirs, where, from a series of small bars, barmaids served customers. Information about the theatre's interior of the time is limited to seating plans, posters, illustrations of varying accuracy, and several works by other artists. A pictorial seating plan of 1875 (Fig.5) best illustrates the seating arrangement and the elements in the space including, at the first-floor level, the engaged columns at the side walls supporting the roof beams and with large mirrors set between them, a decorative frieze at the top of the walls, and the chandeliers. Manet's step-son, Léon Leenhoff, had noted the bar of interest was located on the theatre's first floor, on the right-hand side and near the stage and proscenium but, although a bar is evident in that location in contemporary posters, analysis shows that a mirror there would not provide the required reflections and the bar of the painting was on the right-hand side just within the main area of the promenoir.

A dominant characteristic of Manet's organisation of pictorial space, and one evident throughout his career, was its alignment with the picture plane in order to limit seamless spatial recession. Such an alignment implies a frontal one-point perspective, but in a number of works there also exist, often hidden, strategies for spatial ambiguity. Notwithstanding the limited number of cues available in many of his works to assess the existence of perspective, it is clear Manet understood its geometry and, paradoxically, those strategies were anchored in its conventions. Developed separately in the early 1860s, they were conjoined in a number of works in the 1870s, and brought to their most creative integration in the Bar. The main strategy involved the offset section of a one-point perspective view in
which the pictorial space has the potential to be perceived as both frontal and angled, and the other created apparently cohesive images from composites of views with different perspectives and scales. Importantly, both strategies seem to have been influenced by processes of photography.

The offset geometry is demonstrated in Fig.6 with the space in the offset frame still part of a frontal one-point perspective view but, because of its spatial shaping – indicated with lines in perspective on the horizontal plane – also appearing to be that of an angled view. Its application is best demonstrated with Manet’s *La prune* (Fig.7; RW.I-282) in which the image appears to be a frontal view of the woman seated at a table and turned to her left. With the table, bench seat and background screen frame all horizontal, the view is confirmed as a one-point perspective and its apparent spatial shaping is demonstrated with lines on the table set in perspective to a central vanishing point (Fig.7-a). However, when the viewing position is offset to the left whilst remaining a one-point perspective the spatial shaping shows the woman is not turned to her left but, rather, is looking straight across the table and the bowl is set directly and naturally in front of her, not displaced awkwardly to the side as in the frontal view (Fig.7-b). The painted image hasn't changed and yet two concurrent spatial perceptions are ambiguously possible.

Some problems exist with the strategy's application. Importantly, if the frontal view is not dominant or if the offset view is obvious, then the ambiguity is not brought into play. It is also not possible for the artist to look directly ahead and to also see the view offset to the side, other than peripherally. If one looks to the side, the view becomes a two-point perspective. Clearly Manet understood the geometry and could apply it when developing an image, but it is likely that photographs were also used as visual sources for the offset views – made possible with chambre photographique cameras equipped with sliding frames to correct perspective. These were cameras used by professional photographers of the time and by the 1860s many artists would have been aware of, and understood, their function. Another problem involves the distortion of objects, particularly if rectilinear in shape, the more distant they are from the perspective's centre of vision, and the fact that any obvious distortion signals the offset position. As is seen in *La prune* and in the later *Bar*, Manet understood that the effect could be minimised by using only round objects on the table or bar.

How Manet came to understand the offset strategy's potential for spatial ambiguity is not known, and precedents for his particular use of the strategy are limited (see Appendix below). It is
first evident in his *Chapeau et guitare* (1862; RW.I-60) and was applied with variable success in numerous works through the 1860s and 1870s, including those depicting café or café-concert interiors during the late 1870s. *La prune* is certainly an exemplar of the strategy, but another work, *Reichshoffen* (1877–78; noted in RW.I-278 and I-311, as *Brasserie de Reichshoffen*), is important by virtue of its failure. Its initial composition involved a central viewpoint and a view along a table. The perspective of the table was then adjusted in stages in an attempt to create spatial ambiguity with an offset viewpoint, but the process only created spatial confusion and, as a result, the canvas was cut to create two reworked paintings, *Au café* (1878; RW.I-278) and *Coin de café-concert* (1878; RW.I-311, as *La Serveuse de bocks*). With the strategy used to its fullest effect some three years later in the *Bar*, it is clear Manet had realised that the potential for ambiguity was diminished with an obvious offset viewpoint.

A major theme in his oeuvre from the mid-1870s involved the contemporary world of cafés, brasseries and cafés-concerts and many of the works, including *La prune* and *Reichshoffen*, were important precursors to the *Bar*. In those settings, mirror reflection also became a crucial component in Manet's spatial repertoire. As characteristic décor elements in the interiors of dining and entertainment establishments, mirrors provided Manet with pictorial effects and a supplementary spatial device. In his *Un café, place du Théâtre Français* (c.1876–78; RW.II-pastel.64), for example, the mirrors are not defined, but their reflections with suggestions of chandeliers add a false sense of shimmer to an otherwise cheerless interior; and, the mirror in *Café-concert* (1878–79; RW.I-280) provides a literal spatial interplay rather than ambiguity, with the top-hatted customer looking in the direction of where the singer seen reflected in the wall mirror behind him may actually be performing. The angled reflection in *Café-concert* is echoed in a work of a friend of Manet, Gustave Caillebotte's *Dans un café* of 1880 (Musée des Beaux-Arts, Rouen) – a painting shown in the fifth Impressionist exhibition of that year. Although possibly influenced by Manet, Caillebotte's use of double mirror reflections was probably an influence on Manet's deliberations with the *Folies-Bergère* imagery the following year, even if functioning somewhat differently. However, as explained in the Appendix, the mirror reflections in a much earlier work, Jean-Auguste-Dominique Ingres' *Madame Moitessier, seated* (1856, The National Gallery, London), function within an offset strategy to create spatial
ambiguity exactly as in the Bar. Even though the extent to which it may have influenced Manet, if at all, can only be speculated, Ingres' painting exists as the Bar's most important precedent.

The strategy of composite images was similarly utilised in many Manet works, but also with mixed results. In an early work, *La pêche* (1861–63; RW.I-36), the scene appears as a collage of interlocked fragments that has only partial cohesion and no sense of ambiguity. In contrast, the cohesive but spatially uncertain images of two unfinished works, *View of the 1867 Exposition Universelle* (1867; RW.I-123, as *L'Exposition Universelle de 1867*) and *The burial* (1867?; RW.I-162, as *L'enterrement*), are actually complex composites with diverse mixes of perspectives and scales. 21 Manet's use of the strategy during the 1870s was limited but its application in the Bar augmented the ambiguity created with the offset viewpoint. Photography may have been an influence, with photographers in England during the 1850s creating composite images collaged with fragments of photographic images, using both prints and negatives. 22

**Painting's evolution**

The project evolved from that background of strategies and imagery and its genesis is marked by the vivid *Oil sketch for A Bar at the Folies-Bergère* of 1881 (RW.I-387; referred to here as the 'Oil sketch'). Leenhoff noted it to have been "Painted from sketches made at the Folies-Bergère. Henri Dupray is talking to the barmaid in the studio on the rue d'Amsterdam." 23 It is thought the period during which Manet worked on the project was from the summer of 1881 until submission for the Paris Salon opening on 1 May 1882 – a period which included a stay at Versailles from late June to early October for treatment of his declining health. An overall chronology can be loosely ascertained from notes and comments made by the artist, family and friends or claims by scholars. Leenhoff also noted that the Oil sketch was the "First idea for the picture. It is the bar on the first floor, to the right of the stage and the proscenium. Portrait of Dupray. Was painted in the summer of 1881." 24 When at Versailles, Manet had written on 23 September to Eva Guérard-Gonzalès, stating that when he returned to Paris (planned for 1 October) "I hope the weather will be fine enough in October for me to start something for the next [Salon] exhibition" 25 – but that seems more a plan for an outdoors work rather than the Bar and sheds no light on a prior existence of the Oil sketch. Adolphe Tabarant has stated that a pastel portrait of the barmaid from the Folies-Bergère, *Le modèle du "Bar aux Folies-
Bergère" (1881; RW.II-pastel.65), was made "during the autumn of 1881", and that both the Oil sketch and the final painting were painted in the "last months of 1881". Gaston La Touche, a painter friend of Manet, recalled that during the winter [of 1881–82] "Manet was working on his Bar of the Folies-Bergère. I often went to see him; I even posed as the man who is reflected in the mirror", and the painter and illustrator Georges Jeanniot recounted that "When I returned to Paris in January 1882, the first visit I paid was to Manet. He was then painting the Bar at the Folies-Bergère, and the model, a pretty girl, was posing behind a table laden with bottles and food.

On that evidence, Manet most probably painted the Oil sketch in the summer of 1881 prior to his stay in Versailles, commenced the Bar on his return to Paris in October of that year and, contrary to Tabarant's claim, was absorbed with its development well into the early months of 1882. Apart from the Oil sketch, a wash drawing, Study for A Bar at the Folies-Bergère (1882?; RW.II-527; referred to here as the 'Wash drawing'), is directly related to the final painting's motif and presents intriguing, though inconclusive, evidence to be by Manet. Noted by Charles Sterling to have appeared in a sale in 1914 and claimed by Tabarant to have been offered by Manet to his friend Antonin Proust, the drawing is thought by Bradford Collins to have been produced by Manet when working on the final painting to "test and develop his changing thoughts". Other works, such as a pastel of the model employed by Manet as the barmaid for the final painting and drawings noted by Leenhoff or thought by scholars to be connected to the Folies-Bergère have no particular relevance to the considerations here.

The strategies and subterfuges used by Manet exist within the compositional and spatial construction of a mirror which not only provides a background surface but, with its reflected spatial recession set across the full width and almost the full height of the canvases, also belies its very existence. Proposals made here for the way in which Manet used those strategies in the imagery development result from analysis of the visible images and X-radiographs of both paintings, as well as a consideration of viewpoints, views and physical arrangements within the theatre and Manet's studio by means of computer modelling. Modelling of the theatre interior was established from archival documents, photographs and site measurements, and one important discovery from that
information was that the theatre's side walls were, and remain, not parallel. A plan of the theatre space at the first-floor level (Fig.8) locates the bar of interest adjacent the right-hand side wall.\textsuperscript{37}

OIL SKETCH: Analysis of the Oil sketch (Fig.3) shows that a perspective geometry in fact underlies the work – with the relationship between the barmaid and her reflection and the single and double reflections of the chandeliers giving evidence of an offset viewpoint/vanishing point (VP) within a one-point perspective.\textsuperscript{38} The only contradiction exists with the right-hand end of the bar.

Obvious pictorial inconsistencies also exist. A reflection of the bar is not shown in the mirror behind the barmaid, posed by an unknown model, and, as the mirror's lower edge is not shown, it is also uncertain if the gentleman customer's figure, posed by the painter Henri Dupray, is in actual space or is a reflection. The X-radiograph shows the painting had been created with very few adjustments and give no evidence that the bar in actual space had been painted over the barmaid's figure or a reflection of the bar had existed at an earlier stage. And the apparent short stature of Dupray's figure contradicts a contemporary description of him as "a tall handsome young man", notwithstanding the fact that a riding accident had left Dupray with "a slight limp".\textsuperscript{39} Interestingly, the original image of the painting was more extensive than what is now seen. An earlier physical examination of the painting\textsuperscript{40} revealed that its canvas had been cut at the top, bottom and left edges and restretched, resulting in those sections of canvas with the original left-end of the bar\textsuperscript{41} and the trapeze artist's legs – seen in the upper left corner of the \textit{Bar} – turned over the side of the stretcher.\textsuperscript{42}

There can be no question that the background view of the theatre interior was recorded on site – presumably with sketches as noted by Leenhoff or possibly with photographs – and used as source imagery by Manet when painting the canvas in his studio. And Leenhoff's note that the barmaid and Dupray were painted in his studio was also confirmed with the computer modelling. The arrangement of the foreground figures and bar was not feasible from viewpoint P1 in the theatre, particularly with Dupray's figure. It was impossible for his depicted short figure to realistically exist in actual space at the distance required, seated or otherwise, or for a standing figure in actual space to produce the depicted figure as a reflection. Rather, the modelling showed that his figure was a reflection of him seated.\textsuperscript{43}

Analysis shows that the background view in the theatre was available from offset viewpoint P1, as seen on the plan in Fig.8, and that the arrangement in the studio for the foreground with the two
figures was seen from offset viewpoint P3, as seen on the plan in Fig.9. Although a bar is nominally shown to match its form in the painting, it is thought that no actual bar was used at this stage and the bar sketched at the theatre was simply set in the foreground as the item behind which the barmaid could be painted, without regard to the perspective of the theatre background or any corresponding reflection. And although no mention was made of a mirror and no mirror frame is clearly depicted, it is believed a mirror was used in the studio with its bottom edge set low enough to at least allow the uncertain extent of Dupray's figure to be as painted. The arrangement in Fig.9 shows the two figures in actual space (barmaid as B; gentleman as G) and their virtual images (barmaid as B'; gentleman as G') behind the reflecting plane of a mirror. The occurrence of any joint-sessions with the two models is not known but, although not essential, they may have been used to at least establish the spatial arrangement before individual modelling sessions were undertaken.

The painting's image is basically a composite of the two views from viewpoints P1 and P3 as illustrated in Fig.13-c with collaged computer-modelled views. The view from P1 (Fig.13-a) matches the background of the Oil sketch with reasonable accuracy and shows how the reflected balcony front is angled down to the right in its continuing curved form behind the barmaid; and the view from P3 (Fig.13-b), using three-dimensional mannequins in the modelling, matches the foreground of the Oil sketch with reasonable accuracy, except for the bar. Dupray's figure in actual space is outside the frame of view for the painting's image, with his head to the left of, and his right shoulder below, the frame, and the viewpoint is not seen reflected in the mirror. What the arrangement and view also show is that the apparent reflection disjunction of the final painting was conceived in the Oil sketch, with the reflections of the barmaid and Dupray seemingly facing each other but, in reality, neither facing nor looking at the other. Leenhoff's claim that they were depicted talking seems based entirely on the image.

One aspect of the painted scene often raised by scholars – usually when discussing the Bar but equally applicable to the Oil sketch – involves the fact that there is no reflection of a standing crowd in the promenoir near the bar or an audience seated in the upper balcony on the same side of the theatre. Although the figures of Suzon and Dupray hide the closest reflected row dividers of the loges that are seen in Fig.13-a and Manet made judicious use of the aisle separating the side seating and the central loges, no explanation can be given for the omission of any audience or for the apparent deletion of the
row dividers which would have remained visible, as seen in Fig.13-c. As discussed below, the use of another viewpoint P2 in the theatre basically eliminated the row dividers in the Bar as well as the seated audience in the loges, but the omission of a standing crowd remained. The situation may have been influenced by Manet's artistic objectives and the nature of his theatre sketches which, as a record of the reflected interior, could only have been made when there was no standing crowd or audience. When those sketch images were transferred to canvas, Manet clearly chose to only show an audience in the balcony seating on the opposite side of the theatre.

BAR – STAGE 1: The Bar was also painted in Manet's studio, utilising a recreated bar with, as described by Jeanniot, "a table laden with bottles and food". Again, no reference has been made to a mirror. A perspectival geometry of the final painting is less clear than in the Oil sketch even though the horizontal elements such as the bar and mirror frame confirm a one-point perspective. One offset vanishing point exists for the barmaid and her reflection outside the picture field to the right, but the presumed vanishing point for the chandeliers is only understood from the Oil sketch. Such assessments are seemingly contradicted by the angled end of the reflected bar at the left which suggests a central vanishing point. A barmaid from the Folies-Bergère, Suzon, was engaged as the new model and there is sufficient evidence in the painting's X-radiograph seen in Fig.2, with overlay linework indicating some relevant figure forms, to confirm that the lateral relationship between Suzon's actual and reflected figures and Dupray's reflected figure was initially as in the Oil sketch. Whether Dupray was involved as a model beyond the Oil sketch is not known but his image from that work was most probably copied for the new canvas. The Bar's initial image also used the reflected view of the theatre interior from the Oil sketch and most probably included the trapeze artist's legs which existed on its original larger canvas. However, the frieze above the mirrors to the wall opposite the bar was deleted from the image – the implications of which are discussed below.

The X-radiograph also shows that the transferred reflected balcony front was more horizontal than in the Oil sketch, and the bar, reflected bar and mirror frame were all set across the full width of the image at an early stage. That extended width of the bar in the painting was probably a fiction – certainly unrelated to the bars in the theatre and unlikely related to the table used by Manet as a prop – and used as a compositional device to establish the frontality of the space. The mirror frame, as existed in the theatre, reinforced that intent. As the lateral placement of the barmaid and her reflected figure
was basically that of the *Oil sketch*, then the viewpoint for the painting's foreground would have been notionally the same at P3, as shown on the plan for the physical arrangement of the figures and bar in Fig.10. A proposal for the Bar's composition at its initial stage is shown as a line drawing in Fig.14-a. Its foreground is confirmed when underlaid with the view from P3 showing Suzon, her reflection and the reflected figure of the seated Dupray.

BAR – STAGE 2: Clearly problems existed with the crossed arms of Suzon's pose and Dupray's reflected figure. Her pose was changed to appear frontal (even though she was actually still angled) with her hands set on the bar's edge, and his seated figure was replaced with the standing La Touche. Manet was obviously also wishing to change the dynamics between their reflections and he achieved this with a number of adjustments. By moving himself a short step to the right to the offset viewpoint P4 and positioning La Touche forward and to the left from where Dupray had been seated, as shown in Fig.11, he created a view in which the lateral relationship between Suzon's actual figure and La Touche's reflection was maintained but her reflection moved to the right. With the repositioning of Suzon's reflection, the light on the column which had provided the halo effect to the barmaid's hair in the *Oil sketch* was then depicted. A proposal for the painting's composition at an intermediate second stage is shown as a line drawing in Fig.14-b. Its foreground is confirmed when underlaid with the view from P4.

BAR – STAGE 3: The final foreground adjustment, again made while maintaining the lateral distance between Suzon's actual figure and La Touche's reflection, was to move Suzon's reflection to the right to pictorially overlap La Touche's reflection and, in doing so, create their ambiguous interaction. Manet achieved that by moving himself a further step to the right to the offset viewpoint P5 and La Touche further forward and to the left as shown on the plan in Fig.12. As with the *Oil sketch* and although not essential, joint-sessions with Suzon and La Touche may have been used to establish the spatial arrangement prior to individual modelling sessions – as that described by Jeanniot. And most probably it was only after the figure positions were finalised that the wondrous still-life display of bottles, bowl of mandarins and vase with roses on the bar-top and the complex apparent disconnect with their reflections was either introduced or developed to its resolution. A wall mirror was certainly necessary to make all those reflection assessments and the minimum size of
approximately 1.5 (h) by 1.8 (w) metres required for the one fixed mirror to encompass the images of both the Oil sketch and the final painting would have presented few practical problems.53

The key to the painting's reflection is demonstrated in Fig.12 with the figures, bar and bar-top items shown in actual space and their virtual reflections in the reflected space. Suzon is in the centre of the view, and La Touche stands unseen outside the angle of view to the left with his reflected image partly seen within the angle of view to the right. Even though Suzon appears to look directly across the bar, she is in fact turned to her left – a converse application of the offset strategy to that used in La prune, in which the woman appeared to be turned to her left but was actually seated frontally – and La Touche looks past her to the mirror. The complex relationship between the items on the bar – all round shapes to reduce distortion with their distance from the centre of vision – and their reflections demonstrates Manet's crafting of the ambiguity, with some not seen in the field of view to the left but seen as reflections and, conversely, the reflections not visible of others seen in actual space, either hidden behind Suzon's figure and her reflection or out of view to the right. It also shows how the reflected image of the roses in the vase is cut at the painting's right edge. If its complete reflected image had been shown, the offset geometry would have been obvious and the ambiguity negated. Such spatial play is seen not as an enticement by Manet for viewers to 'solve' the painting but rather as an artistic necessity and an integral aspect of his speculative creative process – about which, however, he may have chuckled.

All of these aspects of the final image's foreground are confirmed with the view from offset viewpoint P5. A wide-angle image of that view, which includes the full width of the wall mirror but in which the figure of La Touche is not included (if shown, his distorted form would be seen to the left of the painting's frame of view), is seen in Fig.15. It demonstrates the view's spatial shaping with parallel lines to the bar-top set in perspective from the vanishing point (VP) and shows how Suzon is turned to her left and not facing directly across the bar. Suzon's actual and reflected figures are shown transparent to demonstrate how the bottle positions on the bar were arranged so that the reflections of bottle group $g_2$ and part of bottle group $g_3$, that is $g_2'$ and $g_3'$, are hidden behind her figures and the reflection of bottle group $g_1$, that is $g_1'$, is outside the picture field to the right. A photograph taken of a bar reconstruction, with a large-format camera set in a location equivalent to viewpoint P5, confirms the view to be offset from the centre of vision within a one-point perspective geometry (Fig.16a).
When the figure of La Touche is included and the view is limited to the extent of the image of the Bar, the view matches the painting with reasonable accuracy (Fig.14c). Similarly, that section of the wide-view photograph which relates to the Bar's image, as seen in Fig.16b, matches the painting with reasonable accuracy.

At that final stage, the balcony front was extended to the right to appear between Suzon and her reflected figure in its final position and the reflected bar was cut back and angled at its left end – the position of the notional cut required to produce that visual aspect is shown in Fig.12. With the shortening of the bar, the visible area beneath the balcony with the supporting columns at the lower left was consequently expanded. A view from offset viewpoint P2 (Fig.17-b) in the theatre, as shown in Fig.8, provided both an expanded view of that area beneath the opposite balcony, and a more horizontal balcony front. Additionally it allowed the loges' row dividers to be fully hidden behind the barmaid, her reflection, and the reflected bar. The Bar's final composition can then be shown in Fig.17-c as a composite of three separate views from different viewpoints – the upper Part A as part of the background from viewpoint P1 (Fig.17-a), the central Part B as part of the background from viewpoint P2 (Fig.17-b), and Part C as the foreground from viewpoint P5 (Fig.14-c). The composite, collaged to appear as if a cohesive view seen from a single viewpoint, provides further evidence of Manet's second strategy for spatial ambiguity.

Manet also used a number of subterfuges to reinforce the spatial ambiguity. One involved the frieze across the top of the mirrors in the first-reflected space of the Oil sketch (Fig.3). In that work it allows one to understand in which mirror – that on the wall behind the bar or one of those on the theatre's opposite wall – each chandelier is reflected. If the frieze and that part of the chandelier in front of it are deleted, as in the Bar, then the positions in space of the chandeliers are not easily assessed and the means to make perspectival sense of the arrangement is removed. Other subterfuges include the veins in the marble bar-top set at an angled direction that is exactly opposite to the spatial shaping – confirming the very strategy it was introduced to counteract – and the reflected images of the depicted bottles of group g3 are somewhat larger than they would have appeared in the mirror – although that discrepancy may have been unintentional. What also may seem a device to further confuse the space, the apparent inside face of the background column at the right, is actually the face of a second-reflected column. In contrast, and rather than being a subterfuge, the angled left end of the
reflected bar must be seen as an intentional device used by Manet to counteract the offset spatial shaping. Whereas the direction of the veins in the bar-top marble manipulates the perception, the angled bar end seems an admission that without it the offset view was possibly still too obvious.

In the painting's final image, the reflected theatre space acts as a backdrop to the foreground mise-en-scène with its two isolated 'players' brought together in a pictorial choreography that is modulated by the barmaid's detached gaze to nowhere in particular and the gentleman looking past the barmaid to the theatre interior reflected in the mirror. The absence of any contact between them, when the close pictorial proximity of their reflections suggests otherwise, renders their relationship more complex and indeed more ambiguous in spatial and relational terms, than in the previously presumed narrative that involved a discourse and its implied sexual connotation.

Manet's program to produce spatially ambiguous images was most successfully realised with the *Bar*. That the resultant ambiguity was intentional and skilfully crafted within the geometry of linear perspective is confirmed when it becomes the very means by which the problematic pictorial space can be rationally explained – verifying both its use and concealment and challenging those speculative notions that see the apparent reflection disjunction as intuitively inspired, intentionally impossible, or created in error. However, those commentaries, interpretations and readings derived from that perceived disjunction are not negated. After all, the ambiguity that inspires them underpins the work. Nor is Manet's stated goal to be spontaneous contradicted, as he understood that "... to achieve spontaneity you must master your art". What the explanation presents are new insights into both Manet's mastery and the layered artifice of this remarkable image of uncertain appearances, paradoxically ensuring that *A Bar at the Folies-Bergère* remains open-ended, elusive and beyond our reach.
APPENDIX

Offset viewpoint precedents

Although offset-type views are seen in antique Greek and Roman wall paintings, and foreshortened planes with offset points of convergence were utilised by artists in Italy during the late-thirteenth and fourteenth centuries, it was within the coherent one-point perspective system established in the Renaissance by Leon Battista Alberti in 1435 that the offset viewpoint was developed and used with accuracy – initially in Italy and then throughout Europe.

The technique was used by artists (in preparatory and final works) and illustrators alike for many reasons, including: the comparative ease to construct a one-point perspective rather than a two-point perspective view; the ability to show a receding wall/plane more extensively in a given picture field than with a central vanishing point; and, the potential to create a more spatially dynamic composition than is possible with centrally located vanishing points. Even though constituting only a small percentage of all one-point perspective images, countless examples of the offset viewpoint exist, including in works by acknowledged masters such as Fra Angelico, Sassetta, Uccello,\(^{56}\) Van der Weyden, Memling, Mantegna, Dürer, Titian, Pontormo, Holbein (Hans, the Younger), Bronzino, Tintoretto, Veronese, El Greco, Zurbarán, Velázquez, Rubens, Van Dyck, Rembrandt, Tiepolo (Giambattista), Canaletto, and Ingres. From the fifteenth to eighteenth centuries the technique became something of a characteristic of Venetian art, especially in the work of Tintoretto and Canaletto, but was not extensively used in France during any period\(^{57}\) and less frequently by artists throughout Europe by the mid-nineteenth century.

A work such as Jacopo Tintoretto's *Venus and Mars surprised by Vulcan* (c.1555, Alte Pinakothek, Munich), with its extreme offset view and reflection in a small mirror set parallel to the picture plane, presents possible evidence of a precedent to Manet's strategies used in the Bar. However, no spatial contradiction is apparent and its mirror reflection is literal. Nevertheless, it is of interest to note that a preparatory drawing (*Venus and Vulcan*, c.1545, Kupferstichkabinett, Staatliche Museen zu Berlin, Berlin, inv. no. KdZ 4193) was constructed as a two-point perspective – highlighting the fact that artists moved comfortably between the spatial modes and understood their differing implications and potential.
An important precedent closer to Manet's time and place is Jean-Auguste-Dominique Ingres' *Madame Moitessier, seated* (1856, The National Gallery, London). One of three portraits of women by Ingres that involved mirror reflections and ostensibly constructed as a one-point perspective – established by the mirror frame – it presents an apparent reflection disjunction similar to that in the *Bar* and is similarly considered by scholars to be spatially impossible.⁵⁸ Although the sitter's gaze to the painter/viewer is seemingly directed frontally, it is actually angled as the viewpoint is offset outside the picture field to the right and not centrally located. With its offset viewpoint, background mirror of almost full canvas width, and multiple reflections in the upper-right created with mirrors on opposing walls, *Madame Moitessier, seated* provides a direct connection with the spatial ambiguity of the *Bar*, irrespective of their differences in subject and composition. The painting was shown in the 1867 posthumous retrospective Ingres exhibition held in the École des Beaux-Arts in Paris at the time of the Exposition Universelle and Manet's own one-man show at the Place de l'Alma.⁵⁹ It is not known if Manet saw the painting but, if so, it would have brought to his attention the increased potential for spatial ambiguity when an offset viewpoint was combined with a mirror reflection.

Offset view examples, set within one-point perspective geometry, also existed prior to the *Bar* in isolated works of Manet's contemporaries, such as: James Tissot's *The Marquise de Miramén, née Thérèse Feuillart* (1866, Private collection); Carolus-Duran's *Les Rieuses* (1870, Detroit Institute of Arts, Detroit); Edgar Degas' two versions of *La classe de danse* (1873/1875–76, Musée d'Orsay, Paris; and, 1874, The Metropolitan Museum of Art, New York); Eva Gonzalès' *Le petit lever* (1875, Private collection); and, Pierre-Auguste Renoir's *Portrait de Madame G. C.... et de ses enfants* (1878, The Metropolitan Museum of Art, New York). However, no spatial ambiguity is apparent in those works and, although it is of interest that Gonzalès was Manet's only pupil, the mirror reflection in her *Le petit lever* is literal.

The question here is the extent to which Manet was influenced by other artists or works in his particular use of the offset viewpoint for spatial ambiguity. Ongoing research by this writer has, to date, found only Ingres' *Madame Moitessier, seated* to have similarly utilised the strategy for that purpose and to be the only direct precedent for the barmaid's reflection in the *Bar*. The full story, however, will certainly be found more complicated than that.
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NOTES

1. This essay presents a development of the proposal for the spatial explanation of Manet's painting made by this writer in a doctoral dissertation; see: M. Park, 'Ambiguity, and the engagement of spatial illusion within the surface of Manet's paintings', Ph.D diss., (University of New South Wales, Sydney, 2001), '5. Crafted ambiguity – case studies: F. A Bar at the Folies-Bergère', (text) I, pp.208–42; (notes) v.1, pp.29–32; (illustrations) v.2, pp.226–54. That case study is included in the excerpts from the dissertation on this website.


3. Listed in the Salon catalogue as: "1753. Un bar aux Folies-Bergère".


8. Anne Coffin Hanson, for example, has asserted that "Historians have attacked the problem like sleuths expecting to find some key to a logical and naturalistic explanation. There is none."; see A.C. Hanson, exh. cat. Edouard Manet: 1832–1883, Philadelphia (Philadelphia Museum of Art) and Chicago (The Art Institute of Chicago), 1966, p.185.

conclusion was influenced by an analysis by William Conger incorporated within the chapter (ibid, pp.38, 39). Conger concluded, however, that "The composition subverts perspectival logic so consistently as to suggest that Manet deliberately followed a pictorial strategy that exploited perspective for the sake of maintaining ambiguity." (ibid, p.38).


In the nonsite.org online journal issue of 1 July, 2012, De Duve also published an article 'Intentionality and Art Historical Methodology: A Case Study' in which his explanation of the mirror image disjunction and mine were discussed. Although claiming to have read my doctoral dissertation, he either hadn't or was prepared to misconstrue what was written, and along the way to use and cut copyright images reproduced in the brochure for the *Manet: A Bar at the Folies-Bergère* exhibition at the J. Paul Getty Museum, Los Angeles, 2007 (Figs.6, 7). Little can be said other than to quote from text and illustrations of my dissertation on the very point that he labours, that is the angled shape of the left end of the bar top:

Although Manet hinted at the underlying spatial structure with the reflected half-flower, he also did his best to cover his tracks and to confuse. Both the angle of the reflected bar end at the left and the visibility of the inside faces to the two engaged wall columns indicate a space of a centre-point perspective, but they are simply used to enhance a perception of a frontal view. The required shape of the bar to provide such an illusion is shown in the plan and the isometric view, and although it cannot be seriously suggested that the prop that Manet used for the bar top actually had an angled end that prompted the use of such a false indicator of the perspective, far too many tongue-in-cheek manipulations have become evident in the research for such a suggestion to be completely ruled out. (Park, *op. cit.* (note 1), v.1, p.239)

The plan diagram in the dissertation which showed the angled shape of the bar end within a rectangular bar (Fig.F38) also had the specific note: "Angled shape of bar end as required to match form in Final Painting". In addition, De Duve used a photograph from the dissertation (Fig.F48), which was reproduced in the Getty Museum brochure, to support his argument (his Fig.12) but failed to understand that a line had been drawn across the bar at the left to indicate the extent to which Manet had falsified the perspective. Another dissertation photograph (Fig.F49) reinforced the point with offset viewpoint spatial shaping indicators. And, of course, Manet's spatial subterfuges with the direction of the marble veins and the removal from the *Bar* of the upper frieze used in the *Oil sketch*, as well as the detailed analysis of the barmaid's posture as confirmation of an offset viewpoint, were all ignored.

11. A Register of Manet works, with descriptive notes, was created posthumously by Leenhoff in 1883 and later, together with a related series of cards, each with mounted photographs of the works taken by Fernand Lochard and annotated notes by Leenhoff. For a description of the collections of the Leenhoff documents, see J. Wilson-Bareau: 'The Hidden Face of Manet: An


15. The functions of the *chambre photographique* were little different to those of the present-day camera known variously as the 'view', 'four by five', or 'large-format'.

16. Although scholars have often connected Diego Velázquez's *Las meninas* (1656–57; Museo del Prado, Madrid) with the *Bar*, its spatial interplay does not involve the offset strategy. Rather it is based on contradictory locations of the artist and/or viewer and an uncertain source for the reflected image in the small background mirror. George Mauner seems to have been the first to suggest the possible influence of *Las meninas* on the *Bar*, stating that "in its concept and structure [Las meninas] may have been the initial stimulus"; G. Mauner, *Manet, Peintre-Philosophe: A Study of the Painter's Themes*, The Pennsylvania State University Press, University Park (PA) and London, 1975, p.151.

17. Including: *Olympia* (1863; RW.I-69); *L'Exécution de l'Empereur Maximilien* (1868–69; RW.I-127); *Le départ du bateau de Folkestone* (1868–69; RW.I-147); and, *Portrait de Stéphane Mallarmé* (1876; RW.I-249).


19. The view is certainly offset to the right of the centre of vision but it is set in a slightly angled two-point perspective rather than a one-point perspective. Its spatial ambiguity is more to do with the double reflection in that geometry. For the explanation by this writer of the spatial organisation of Caillebotte's painting that is different to Kirk Varnedoe's proposal of 1976, see 'Caillebotte's choreography for *Dans un café*', in: Park, *op. cit.* (note 1), v.1, pp.258–60; v.2, pp.32, 33, 259–61; and, in a separate essay, 'The choreography of Caillebotte's *Dans un café*', included in the *Unpublished writings* section of this website.

20. To this writer's knowledge, the possible influence of *Dans un café* on Manet's painting was first raised by Kirk Varnedoe in J.K.T. Varnedoe and T.P. Lee, *Gustave Caillebotte. A Retrospective Exhibition*, exh. cat. (Houston and New York), The Museum of Fine Arts, Houston, 1976, pp.145, 146. Another work, the gouache of 1878 by Jean-Louis Forain, *The Bar at the Folies-Bergère*
(Brooklyn Museum, New York; also known as Scène de café), presents a problematic image when considering Manet's Bar as it depicts a similar scene with a barmaid standing behind a bar and in front of one of the mirrors. Constructed as a two-point perspective, not an offset one-point perspective, analysis shows that the reflected background is not seen from in front of the bar of Manet's painting or, indeed, any other viewpoint within the theatre. Its inscribed date of 1878 places it prior to the Bar and as a possible influence if Manet had seen it, but, as Lillian Browse has noted, "the year seems to have been added as an afterthought"; see L. Browse, Forain: The Painter 1852–1931, Paul Elek, London, 1978, p.96.


24. See note 12, above.


27. "...dans les derniers mois de 1881,..."; ibid, p.411 (Bar), p.414 (Oil sketch).


29. "Lorsque je revins à Paris en janvier 1882, ma première visite fut pour Manet. Il peignait alors le Bar aux Folies-Bergère, et le modèle, une jolie fille, posait derrière une table chargée de bouteilles et de victuailles."; G. Jeanniot, 'En souvenir de Manet', La Grande Revue, 46/15, 10
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30. "Il se prépare un four pénible à l'Exposition. Il refait toujours le même tableau: une femme dans un café…"; D. Rouart, ed.: Correspondence de Berthe Morisot avec sa famille et ses amis, Quatre Chemins-Editart, Paris, 1950, p.107. The letter was written shortly after the opening on 1 March of the seventh Impressionist exhibition in which Morisot's works were shown (she was in Nice at the time) but during the period in which Eugène was busily organising the hanging of additional works for her.


32. A. Tabarant, Manet et ses œuvres, Gallimard, Paris 1947, p.423. The dimensions of "23 x 20" [cm.] given by Tabarant are at odds with the work's 'landscape' proportions and the dimensions of "8¾" x 9¾" given in a note on the work when exhibited at the O'Hana Galleries in London in 1962; see 'In the galleries: Sketch for Le Bar', The Connoisseur, April, 1962, pp.270, 271. Rather than being apparent references to two different works, it would appear that the Tabarant height and width dimensions were transposed and did not include the full extent of the drawing's image.

33. B.R. Collins, The Dialectics of Desire, the Narcissism of Authorship: A Male Interpretation of the Psychological Origins of Manet's Bar, in Collins, op. cit. (note 5), p.119, Fig.14 (n.p.). As seen in reproductions, the drawing displays characteristic Manet touches and includes some elements, such as an indication of the frieze above the mirror, which suggest it was made before the final painting. But the exactness with which the barmaid and her reflection match those of the final painting confirms that it was made after the final painting, as was Manet's practice with many other works, and probably from a photographic print. At the time of writing the doctoral dissertation (Park, op. cit. (note 1) ), this writer had not identified that correlation and was in general agreement with Collins that the drawing was used as an intermediate image. Notwithstanding the matching figures, its authenticity as a Manet work must remain an open question until the original has been examined.

34. Although the basic analysis and proposals were initially part of a doctoral dissertation completed in 2001 (Park, op. cit. (note 1) ), many aspects have been either amended or introduced with subsequent considerations.

35. The lengthy research and detailed explanation of the proposals made here provide an understanding of what for Manet may very well have been but a few moments of motif perception and imagery conceptualisation. Similarly, the detailed geometry of the explanation is only indicative of the analytical procedure used in arriving at the explanation and does not imply such exactness in Manet's methodology or that he used any measuring device other than his eye. Any sketches he made in the theatre, for example, would have been just that, simply sketches. Their perspective geometries would have been assessed by eye, not constructed, and the transfer of their imagery to the two canvases would have been with an informal, but technically informed,
creativity. The same would have applied even if photographs of the interior had been used as visual sources. And the proposals involving figure mannequins for the imagery stages note only the basic compositional elements and are not attempts to document Manet's constant reworking – as noted, for example, by his concerned brother Eugène – or the degree of completion at any point within the flux of the painting's evolution.

36. Two photographs of the theatre's interior (c.1925?) and a previously unpublished set of architectural drawings for major renovations made in 1926 were reproduced in Park, *op. cit.* (note 1), v.2, pp.231–233, Figs.F14–F20, inclusive.

37. As assessed from the 1926 architectural drawings (see note 36) and confirmed by measurements taken on site.

38. The slight alignment difference of the theatre side walls means that the vanishing point for the chandeliers existing in the first-reflected and second-reflected spaces would not be coincident with the vanishing point assessed for the barmaid and her reflection. Manet would not have noted or been interested in such a variation.


40. For information from the examination and X-radiographs made of the *Oil sketch*, see: Wilson-Bareau, *op. cit.* (note 11), pp.78, 79, 80 (Fig.101), 85–86 (Technical summary), 89-n.113, 96 (Catalogue checklist no. 59, 60).

41. Although Lochard's photograph does not show the base of the bar as seen in the painting's image, the left and right edges are included and it can be reasonably assumed the canvas cuts and restretching, as well as the reworking of the bar, were carried out by Manet and not by someone unknown during the period between his death on 30 April 1883 and the posthumous photograph.


43. Certainly it could be claimed that Manet simply painted Dupray as a shortened figure for unknown artistic reasons, but within the context of his strategy to create ambiguity out of observed reality that would be unlikely.

44. Viewpoint P1 was 145 cm. above floor level. All other viewpoints used in the analysis, i.e. P2–P5, inclusive, were set at the same level.

45. The overall height of the barmaid mannequin, including a 10 cm. platform behind the bar on which she stands, was 162 cm.; the height of the seated Dupray mannequin was 136 cm.


47. For information from the X-radiographs of the *Bar*, see Wilson-Bareau, *op. cit.* (note 11), 'Un bar aux Folies-Bergère'. pp.79, 80 (Fig.103), 82, 86 (Technical summary), 89-n.115, 96 (Catalogue checklist no. 61).
Wilson-Bareau thought that because "the face is freshly painted, with the canvas priming showing through" then the head and face of Suzon most probably had not been initially closer to their appearance in the *Oil sketch; ibid*, pp.79, 82. Nevertheless, an area evident in the X-radiograph to the right of the barmaid's head may account for an early state with the head angled.

The overall height of the Suzon mannequin, including a 10 cm. platform behind the bar on which she stands, was 162.5 cm.; the height of the bar was 760 cm.

The height of the La Touche mannequin was 172.5 cm.

The X-radiograph suggests there may have been more than one such intermediate move.

The minor variations in the figure sizes as seen from each of the viewpoints and which result from the distance variations between the viewpoints and the figures (both in actual space and as reflected images) are apparent in the computer-modelled views but would not have been taken into account by Manet. His main concern was the lateral positioning of Suzon's reflection between her actual figure and La Touche's reflected figure.

The width of the mirror shown in Figs.9, 10, 11 and 12 is 1.9 metres.

The view from P2 also includes the double-reflection of the proscenium arch in the theatre, which is suggested with one curved line in the *Wash drawing*. Interestingly, if Manet observed a barmaid standing behind the bar from such a position, he would have seen a wide separation between her actual and reflected figures, as was depicted in the *Bar's final image* – suggesting that, although its foreground imagery was created in his studio, it was conceived within the theatre.


### Appendix

The offset viewpoint is perfectly illustrated in Paolo Uccello's *Miracle of the Host* predella panel fragment of c.1468 (Galleria Nazionale delle Marche, Palazzo Ducale, Urbino), with the spatial shaping difference seen between the central viewpoint of the *Selling of the Host* scene on the left and the offset viewpoint of the *The Jew's attempt to destroy the Host* on the right. However, as the offset spatial shaping in the latter is obvious, no ambiguity is involved.
