The evolution of Picasso’s portrait of Gertrude Stein*

BEGUN in the autumn of 1905, Picasso’s portrait of Gertrude Stein (Fig.11) was the result of eighty or more separate sittings. In April 1906 Picasso painted out the whole head, and soon after both painter and sitter (Fig.12, seen here in a photograph taken five years earlier) left Paris.¹ When Picasso returned from Gósol in mid-August, he completed the painting in the absence of his model. Both Picasso and Stein were pleased with the results, as she records in The Autobiography of Alice B. Toklas: ‘And when she saw it he and she were content’.² Stein’s well-known account has given rise to much speculation

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about the creative process that led to the final painting. Questions have arisen about the appearance of the initial sketch, the changes or difficulties that might explain the many sittings needed to complete the work, and the stylistic influences that lay behind the creation of the face. The handling of Stein’s compelling image betrays an uneasy mixture of two different styles: within this discrepancy, and in particular, in the handling of her face, lies the future direction of Picasso’s art.

The difficulties Picasso experienced in painting this work were not typical: eighty or ninety sittings were hardly his modus operandi. Stein’s powerful personality may well have been a factor in protracting the process, but one cannot escape the sense of unusual struggle and laboured progress that characterised the execution of the portrait. The purpose of this article is not to explore these biographical or art-historical issues, but rather to investigate the development of the picture itself. Using the evidence of X-radiographs and autoradiographs, it is possible to look at the images Picasso discarded on his way to completing the portrait, and to recreate some of the steps in the evolution of the work.

After a quick sketch executed at the first sitting, the artist seems to have had difficulty continuing in a simple and direct way. Numerous changes were made to the head, and minor ones to the right hand, shoulders and background. Initially Stein’s head was almost in profile. Picasso gradually pivoted it until it came to rest in its present, more frontal and vertical position. In spite of (or perhaps because of) his frequent reliance on preliminary drawings, Picasso’s paintings often prove, on examination, to contain changes, which can be various in character and degree. The alterations we see in the portrait of Gertrude Stein are concentrated in the area of the head, and they have something of the quality of preliminary studies, much like those made for the 1906 Self-portrait with palette (Figs. 13 and 14), where various angles and expressions are tried out. There are no known preliminary drawings for the Gertrude Stein, and it seems that Picasso experimented with several possibilities on the canvas itself.

It has been possible to recapture the discarded images through the use of two complementary analytical techniques, X-radiography and neutron activation autoradiography. In 1970 an X-radiograph was taken of the area of Gertrude Stein’s head in the painting (Fig. 15). It indicates two finished heads, the first almost in profile. With characteristic economy of means, Picasso employed the same general position for what had been the right eye to create the ‘new’ left eye in the final head, the one we see in the completed painting. However, the X-radiograph also shows multiple foreheads and cheeks, pointing to the possibility that other positions for the head had been considered.

The information obtained from the X-radiograph, together with Stein’s description of the many sittings, provided the incentive to include the portrait in an autoradiography project largely concerned with Rembrandt, Van Dyck and Vermeer, carried out by Maryan Ainsworth and others in 1978. The autoradiographs made of the Gertrude Stein form a set of eight. Of these, nos. 5 and 8 together contain most of the information concerning the changes to the painting. The clarity of autoradiograph no. 8 (Fig. 20) is due in great measure to the radioactive element of phosphorus found in bone black, a pigment which Picasso used to make the initial sketch. This image gives us a sense of the rapidity and sureness with which Picasso sketched in the folds of Stein’s jacket — unlike the face, where the initial sketch has been obscured by subsequent changes.

For one interpretation as to the nature of Picasso’s difficulties, see R. Libar: ‘Unmasking Pablo’s Gertrude: Queer Desire and the Subject of Portraiture’, Art Bulletin, LXXIX [1997], p. 56.


The X-radiograph was taken by Hubert von Sonnenburg, Chairman of the Paintings Conservation Department at the Metropolitan Museum of Art, New York.

This research was undertaken at the Brookhaven National Laboratory, with contributions from Maryan Ainsworth, Egbert Haverkamp-Begemann, John Brealey and Pieter Meyers. Neutron activation autoradiography is a non-destructive technique whereby a mild and transient radioactivity is induced by exposure to a beam of thermal neutrons for a short period of time. Beta particles (electrons) emitted in the decay of the radioactive elements of the painting are recorded on photographic film. A series of autoradiographs is made up of consecutive exposures, initially of short duration then increasing exponentially, with the final exposure lasting for one month. Because the radioactive elements within the painting have different decay times, different images are produced within the series, giving a description of the painting process. This technique does not indicate organic pigments, which are not radioactive, nor denser molecular weight pigments such as those that are lead based. For a full discussion, see M. Ainsworth et al.: Art and Autoradiography: Insights into the Genesis of Paintings by Rembrandt, Van Dyck and Vermeer, Metropolitan Museum of Art, New York [1982].
has to be reconstructed. We have assumed that the position furthest away from the final one was the first. In this initial placement, Stein’s head (Figs. 20 and 17) was almost in profile, with her left eye only partially visible. The top of her head was tilted slightly towards the viewer and was placed much further to the right, with the ear and hairline, as well as the outline of the coiffure, correspondingly shifted. A diagonal line that crosses the present chin delineated the neck, and the various lines around the chin indicate that Picasso had initially placed it lower and further to the right.

Other positions of the head are not so readily apparent, but a clue to sorting them out is provided by the repeated notation for the right nostril. In autoradiograph no.5 (Fig 16) there are four indications of it: one in the first position already described, one in the final position, and two others visible on the bridge of the final nose. These nostrils and multiple profiles of the forehead show that Picasso turned the head towards the viewer to a point midway between the first and final positions, raising the face. Indications of this ‘second’ position (Fig 18) are the top nostril, a new forehead profile, a different cheekbone, the top lip, an indication of a right eye and a notational line under the chin to indicate the neck. Other changes that must have occurred to the ear and hairline in shifting the head are not apparent, but have been marked here with dotted lines.

In what can be called a ‘third’ position, Picasso lowered and tilted the head, turning it slightly to the viewer’s right. This is indicated by both eyes and a strongly drawn right nostril (Fig 19). The lines of the left cheek and forehead are not too different from the ‘second’ position, except for the angle of the neck and its placement further to the left. Finally, Picasso lowered the head further and, while shifting it to the viewer’s left, made it more vertical. There is no indication that the face was ever directly frontal. The ear and hairline shifted to the left, along with the face. A fresh notation was inserted for the neck, lower than in the ‘third’ position but continuing at the same angle. A strong outline was drawn around the face, effectively isolating and abstracting it from the rest of the figure. The eyes, their asymmetry similar to that found in many heads of the post-Gósol period, are delineated, as are all the features, with a loaded brush. The black outlining of face and features makes this last face the one most easily read in autoradiographs nos.5 and 8 (Figs 16 and 23).

Other alterations to the painting occurred as a consequence of the changes to the head (Figs. 20 and 11). First, using an umber pigment, and working to the viewer’s right,
16. Autoradiograph no.5 of Fig.11, showing detail of the head.

17. Autoradiograph no.5 of Fig.11, showing detail, with the author’s indication of the first position of the head.

18. Autoradiograph no.5 of Fig.11, showing detail, with the author’s indication of the ‘second’ position of the head.

19. Autoradiograph no.8 of Fig.11, showing detail, with the author’s indication of the ‘third’ position of the head.
Picasso painted out the remnants of earlier faces, although with the increasing transparency of the oil paint, the first profile can now be discerned with the naked eye. Changing to a light grey-umber combination, he continued up to the top edge of the painting, making a near-vertical line. Moving from this axis, and using the same colour, he then surrounded the right of the figure (the viewer’s left) with a curve echoing the curve of the armchair on Stein’s left (the viewer’s right). He lowered her right shoulder by half an inch and, in the process, painted out the original edge of the armchair to the right of the sitter’s head. The final shaping of the ear, which is reduced in size and lowered, may have occurred soon after this adjustment. He then raised her left shoulder by as much as an inch. These changes to the shoulders have a great impact on the portrait: they increase the massiveness of the body and create an asymmetry which complements that of the powerful face.

In comparison with the many changes to the head, however,
Picasso made very little alteration to the rest of the painting. To simplify the image he eliminated the decorative pattern on the left lapel visible in autoradiograph no. 8 (Fig. 20). The fichu was also reduced, making a more direct line between the face and the right hand. This hand has become more exposed by the shortening of the cuff, and the eye now moves easily from it to the white of the fichu. Initially, the fingers of this hand were longer. By shortening them in a way that makes them look curled, Picasso added tension and gave the hand a more dynamic presence. Nevertheless, the figure remains very close to the initial sketch, whereas the final head is quite different in conception and handling. This discrepancy is no doubt one source of the shock the work produces in the viewer.

Whether the final position of the head was established before Picasso went to Spain in May 1906 cannot be determined from the autoradiographs. It is possible that before leaving, the artist turned the head to its final position but then, still not happy with the face, painted it out, and that finally, upon his return to Paris, he reworked it in the same position, altering the features and modelling. However, it is more likely that he spent many of the sittings working on the first position and, dissatisfied, began shifting the head to the ‘second’ and ‘third’ positions. Then he painted out the face. Returning from Gósol, he placed the head in its present position and completed it, the clarity of the features of the final face as seen in autoradiograph no. 8 pointing to a single execution. Furthermore the quality of this face, with its impersonal, mask-like character, is more suited to the near frontal head position Picasso finally chose.

It is important when looking at the autoradiographs to remember that this process registers only some pigments and therefore does not provide a complete image of a painting stage. Most importantly, it does not register lead white, a key pigment in this work. The face in autoradiograph no. 8 (Fig. 23) has a softer, more natural look than the face in the painting which is strongly modelled in lead white. In the autoradiograph, the asymmetry of the eyes falls within what are the accepted conventions of portraiture and, with the absence of strong lines to either side of the mouth, the face is less harsh, as well as being more particular and naturalistic. In the face as actually painted, Picasso built up with lead

21. Detail of Fig. 11, showing the head.


In the literature, it is often stated that Picasso painted out the ‘whole head’ (see Pablo Picasso: A Retrospective, exh. cat., Museum of Modern Art, New York [1980], p. 59; also P. Dax and G. Bousaille: Picasso, the Blue and Rose Periods, Greenwich, CT [1967] p. 284), but there is no indication that this occurred. Underneath the final layer of the face, one can see light red ochre applied in vertical strokes, which is probably the ‘painting out’ layer, then used effectively as an underlayer for the present face.

See note 6 above. In reconstructing the various phases of the face, information has been used from both autoradiographs and the X-radiograph. The autoradiographs have provided the drawing, and the X-radiograph has shown that modelling was carried out. The clarity and completeness of the first head is readily apparent. The other two, because they are superimposed, are much less readable in the X-radiograph, but enough evidence exists in the multiple forehead lines and cheeks, to confirm that the other two faces were modelled with a similar paint mixture containing white lead.
white the massive forehead with its flat, sharply contoured sections, the hard-edged cheeks and flattened chin. Just as important to the final effect of the face is Picasso’s use of half-tones: the grey shadow on the left side of the face with its sharp edge, the strong shadows to the sides of the mouth, under the eyes, and in the make-up of the eyebrows. Because this grey contains white, it registers minimally in the autoradiographs. It is possible to say that the autoradiograph relates to the painting much as a Picasso contour drawing does to the final, built-up work. One can also perhaps read the face of the autoradiograph no.8 (Fig.23) as what Margaret Werth has called the ‘true self’ of Stein lying beneath the mask. In her discussion of the portrait, she refers to the ‘oscillating oppositions’ between the ‘real’ self and the mask which ‘animate the portrait and create a vivid and disturbing psychological presence’. In the autoradiograph we have what amounts to a naturalistic portrait of Stein.

According to Fernande Olivier, it was Picasso who approached Stein with the idea of painting her portrait. Whether or not this was the case, in beginning the work he may have believed that it would prove to be carried out as spontaneously as the portrait of Leo Stein painted that same year (Fig.24), and may not, therefore, have felt the need for preliminary drawings. Indeed, it is likely that in the earlier stages of the painting, the handling of the faces was consistent with the way the body was painted, and that, had the portrait been finished at any of these stages, the head would have resembled that in the portrait of Leo Stein. But, after returning from Gósol, Picasso painted the final head with a rapidity that was more characteristic of his usual habits of working, requiring no further sittings from Gertrude.

The strong relationship to the mask-like drawings Picasso made in Gósol of the head of Josep Fontdevila has been commented on by numerous scholars. Indeed, the ‘death mask’ drawing of Fontdevila (Fig.22), made near the time the portrait was completed, is almost a mirror-image of Stein’s face, and echoes it in spirit as much as in detail. With the superimposition of this mask-face, the character of the painting was transformed. Picasso resolved the work in a way that distanced him from the sitter but also paid her homage, albeit in severe and monumental form. Stein herself remained undaunted by the image: ‘for me, it is I, and it is the only reproduction of me which is always I, for me’.

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23. Autoradiograph no.8 of Fig.11, showing a detail of the head.


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9F. Olivier: Picasso and his Friends, London [1964], p.83.

11See, for example, J. Palau i Fabre: Picasso: Life and Work of the Early Years 1881–1907, tr. R. Lyons, Oxford [1983], p.469; also Richardson, loc. cit. at note 1 above.
12Stein, loc. cit. at note 2 above.