Turning the Other Cheek:
Profile Direction in Self-Portraiture

Richard Latto
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PROFILE DIRECTION IN SELF-PORTRAITURE

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ABSTRACT
The spatial organization of the forty-seven self-portraits in the exhibition “Face to Face: Three Centuries of Artists’ Self-Portraiture” held at the Walker Art Gallery, Liverpool, was analyzed and compared with previously published studies, all of which have obtained their data predominantly from non-self-portraits. In the seventeenth century there was a significant asymmetry in self-portraits for both the direction of profile, with most paintings showing the right profile, and the direction of lighting, with most paintings showing the light coming from the left of the painting. Both these asymmetries declined over time and were not present in eighteenth- and nineteenth-century paintings. The lighting asymmetry and the temporal change confirmed findings with non-self-portraits, but the profile asymmetry was in the opposite direction probably because of the use of mirrors to generate the image being painted. Taken together, the findings support an explanation for asymmetries in portraits of all kinds in terms of the conventions of studio organization.

INTRODUCTION
Portrait painters are more likely to paint their subject’s left profile than their right.1 This was first reported by McManus and Humphrey [1] who surveyed 1474 portraits painted in western Europe from the sixteenth to the twentieth century and found that 60 percent of them showed the left profile. It was confirmed by Hufschmidt [2] who looked at 50,000 artefacts from the stone-age to the present

1 To try and avoid confusion, left profile, left side of the face, etc. will always refer to the left from the sitter or subject’s point of view. Where I need to refer to the left from the painter or viewer’s point of view, I shall refer to the left of the picture or the left visual field. Figure 1 illustrates this terminology.
day and Grüsser, Selke, and Zynda [3] who analyzed 933 paintings from the fifteenth to the twentieth centuries. (None of these studies discriminates between self-portraits and portraits of others, but since the vast majority of portraits are not self-portraits it is safe to assume that their data is drawn predominantly from non-self-portraits and that their conclusions therefore apply only to non-self-portraits.)

The basic finding of a preference for the left profile is very robust and most of the details are consistent too. McManus and Humphrey [1] found that the effect was significant with both male and female subjects but was greater for female subjects, and this was confirmed by Grüsser et al. [3]. McManus and Humphrey also found that the effect was stronger for “head and body” than for “head only” portraits, a distinction not looked at by anyone else. Huschmidt found a right profile bias until about 600 BC with a consistent left profile bias from the early Greeks to the present day [2]. Grüsser et al. found the strongest left profile bias in the fifteenth century with a gradual reduction to symmetry by the twentieth century [3]. They perform no statistics on their data but the effect appears to
interact with gender: asymmetry for male subjects is only present in the fifteenth century whereas for women it persists at least until the seventeenth century. They also found that there was an even stronger asymmetry in direction of illumination which was more likely to come from the left side of the picture (the subject’s right) until the twentieth century when left, right, and diffuse illumination become equiprobable. This is independent of the gender of the sitter but they suggest, without statistical analysis, that there may be an interaction with head position. A preference for light coming from the left of the picture is also found in still life paintings implying a general relationship between lighting and subject asymmetry which is not limited to the representation of the human face. (If there is a causal link between lighting and head position it is not at all clear in which direction the causality runs. The artist might arrange the studio with the light coming from the left and then arrange the sitter facing toward the light or begin by placing the subject facing left and then arrange the studio to provide the most effective illumination of the features.)

Explanations of profile asymmetry are many and varied, and there are almost certainly several factors operating. The simplest, and perhaps least interesting because most mechanical, is that right-handed artists find it easier to draw left profiles. Given a free choice, the right hand draws left profiles about 75 percent of the time [2, 4-6]. This finding is independent of culture, writing direction and, according to Hufschmidt, preferred hand. However, the profiles drawn with the left hand show equal numbers of left and right profiles. So while ease of drawing left profiles with the right hand and vice versa is a factor, there must be other effects leading to preferences for the left profile which partially override the tendency for the left hand to draw right profiles.

Another potentially important set of factors are the asymmetries found in the processes of face perception. Clinical studies of patients with neurological damage [7] and tachistoscopic studies with normal subjects [8] show that face recognition is a predominantly right hemisphere function. So faces presented in the left visual field of normals are processed more effectively. This might suggest that left facing profiles would be more effectively recognized than right, but this does not necessarily follow since in a free viewing situation eye fixations are on the facial features wherever they are [9-11]. Certainly, there is no direct experimental evidence supporting this explanation, but it is one possibility, though as yet a weak one, that a left profile is preferred because it puts more of the information about the face in the right, face processing, hemisphere.

There are also clear asymmetries in face perception in free gaze situations. With full-face drawings and photographs, the right half of the face seems to be more important for both recognition and for judging the emotional state of the sitter [3, 12, 13] and subjects spend more time looking at it [11]. There is no direct evidence on the relative recognizability of left and right profiles or three-quarter views, but assuming that the effect does generalize to profiles, it does not provide an obvious explanation for why artists prefer the left, less recognizable, profile.
Another clear finding is the observation that emotions are expressed more intensely on the left side of the face [14-16]. So another possible explanation of profile asymmetry in portraits is that painters choose the left profile because it is the most expressive and therefore most characteristic of the sitter.

The fact that the left side of the face is more expressive also suggests that the emphasis on the right side of the face in perception is not due to the fact that it is the most informative. It may, much more simply, be caused by a generalized tendency to attend more to the left side of a picture or view whatever it represents [17-19], though the evidence for this is not entirely clear cut [20]. By extension, then, it could be that painters paint the left profile because it puts the important features in the left half of the picture.

Another possibility, first suggested by McManus and Humphrey, is that the left profile is more pleasing than the right [1]. Again, there is no experimental evidence for this, but there is a possible mechanism for its origin. Since mothers tend to hold their babies with the head to the mother’s left [21-23], we begin life by getting repeated exposure to a left profile. The “mere exposure” effect [24] might be sufficient for this initial experience to lead to a permanent preference for left profiles.

McManus and Humphrey also suggested there might be a spontaneous tendency for the subject to turn to the right, thus exposing the left profile. Again there are no direct studies, but there is good evidence of spontaneous right head turning in babies [25].

The interaction of profile direction with gender has led some authors to speculate on the social or symbolic significance of the two profiles [1, 3], but these ideas are all rather post hoc and it seems more likely that the interaction is caused by gender differences in the processes underlying one or more of the other theories.

Applying the principle of parsimony, and Lloyd-Morgan’s Cannon should apply to humans as well as animals, what is the most likely explanation of the preference for the left profile? If right-handed artists arrange their studio so that the palette, held in the left hand, is lined up with the subject being painted to make the selection of colors easier and the light comes from the left so that the painting hand does not cast a shadow, then having the sitter’s head turned to the right would cause the face to be well lit and present the easier-to-draw left profile to the artist. The importance of lighting might also go some way to explaining the gender difference if we assume that at least until recently the painter of the female portrait was more concerned with physical beauty and therefore put greater emphasis on ensuring that the subject was seen, literally, in the best light than when painting men. An explanation in terms of studio organization would also account for the decline in the effect as artists became less studio bound in the nineteenth and twentieth centuries.

The other more cognitive explanations considered above may contribute but they are not necessary to give a full explanation of the findings so far. Until there is direct evidence that the left profile is aesthetically more pleasing or easier to
recognize or more significant of social status or that sitters spontaneously turn their heads to the right, the studio bound explanation will remain sufficient. And its sufficiency can be tested further by looking at data from the unique sub-class of self-portraits.

Until photography became available in the middle of the nineteenth century, realistic self-portraits necessitated the use of a mirror to generate an image of the painter. If the sitter in a studio organized in the manner outlined in the previous paragraph is simply replaced with a mirror angled to reflect the artist at work, then the image will be reversed and a right profile would be painted. This would also be true if the artist felt his or her own actual left profile was more pleasing, irrespective of how it was reflected. On the other hand, if ease of drawing is a dominant factor then the left profile should also be more common in self-portraits, as it would if any of the explanations in terms of leftward attention, or ease of recognition or aesthetic preference for left profiles in general are correct.

An exhibition of self-portraits at the Walker Art Gallery, Liverpool, provided an opportunity to test these hypotheses.

**METHOD**

**Materials**

The exhibition “Face to Face: Three Centuries of Artists’ Self-Portraiture,” was held at the Walker Art Gallery, Liverpool, United Kingdom, from October 28, 1994 to January 8, 1995. It was organized for National Museums and Galleries on Merseyside by Xanthe Brooke, curator of European Art at the Walker and consisted of forty-seven oil paintings by forty-four European artists. There were also a number of drawings which were not used in the present study. The earliest self-portrait was by Rembrandt in 1630, the most recent by George Frederick Watts in 1904. There were four Rembrandts. All other artists were represented by single paintings. The paintings were all from collections in the United Kingdom, so there was a relatively high representation of British artists. Only three of the painters were women, not enough to analyze as a separate sub-group. Using McManus and Humphrey’s division into “head only” and “head and body,” only five paintings could be classed as “head only” which was again not enough to analyze separately.

**Scoring**

Each painting was scored on two dimensions:

*Direction of profile of the subject:* Left, Straight ahead, or Right (where “Left” indicates that the subject is showing their left cheek).

*Direction of the source of lighting:* Left, Straight ahead, or Right (where “Left” indicates light coming from the left side of the picture).
The date of the painting and the handedness of the painter, where this was apparent from the self-portrait, were also noted.

RESULTS

The profile and lighting direction for the forty-seven self-portraits are shown in Table 1. This shows the distributions both overall and divided into three groups according to the century in which the portrait was painted (the Watts, painted in 1904, was included in the nineteenth-century group). Figure 2 shows the same data expressed as percentages and with the Straight Ahead condition omitted. In the seventeenth-century portraits there was a significant difference for both profiles ($\chi^2 = 8.33, df = 1, p < 0.01$) and lighting ($\chi^2 = 8.33, df = 1, p < 0.01$). In the eighteenth and nineteenth centuries, there were no significant differences between directions.

A more detailed analysis of this decline in asymmetry over time showed that there was a significant correlation between the date the portrait was painted and both the direction of the profile (Spearman’s $r_s = 0.40, t = 2.95, p < 0.01$) and the direction of the lighting (Spearman’s $r_s = -0.32, t = 2.23, p < 0.05$).

Within paintings, there was a significant negative correlation between the direction of the profile and the direction of the lighting, that is if the painting showed the right profile the light tended to come from the left and vice versa (Spearman’s $r_s = -0.42, t = 3.13, p < 0.01$). Handedness could be clearly determined in only eighteen of the portraits. Of these three were left-handed. There was no correlation between handedness and the direction of either the profile or the lighting.

DISCUSSION

The asymmetry in lighting found here for self-portraits, with a preponderance from the left of the picture, is in the same direction as that reported by Grüsser.

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et al. [3] for both objects and portraits in general. As with Grüsser both this asymmetry and the asymmetry in profile direction declines with time.

The asymmetry in profile direction in self-portraits, with the right profile the most common, is however in the opposite direction to that reported by all previous authors for portraits in general [1-3].

This pattern of reversed profile direction but normal lighting direction in self-portraits is exactly what would be predicted if the sitter for a portrait,

![Graph showing the relationship between century and percent left profile and lighting direction.](image)

Figure 2. The proportions of paintings in each of the last three centuries showing the left profile of the sitter and light coming from the left of the picture.
normally seated to the left of the canvas with the light coming from the left, is simply replaced with a mirror angled to reflect the artist as she or he faces the canvas.

The weakening of this pattern over time may be partly due to the arrival of the non-reversed photographic image in the nineteenth century, although Figure 2 suggests that it begins rather earlier than that so there may be some other factor operating as well, presumably the same one that causes a decline in asymmetry in portraits in general [3]. One suggestion for this second factor is that it is caused by a move out of the studio or at least a weakening of the conventional studio organization.

The influence of photography is also supported by the negative correlation between the direction of profile and the direction of lighting. For if the mirror is replaced by a camera, the photograph of the artist at work will show a left profile with the light coming from the right of the picture. So if self-portraits consist mainly of either mirror or photographic images, with the camera or the mirror simply replacing the sitter, this would generate a negative correlation of the kind found.

The findings in the present study have clear implications for the various explanations which have been offered for asymmetry in portraits. They reduce the importance of ease of drawing or any of the explanations in terms of leftward attention, ease of recognition or aesthetic preference for left profiles in general, since all of these would have predicted a preference for left profiles in self-portraits. It remains a possibility that the artist simply finds his or her own left profile (appearing as a right profile when reflected in a mirror but as a left profile when photographed) more pleasing or more expressive, although the fact that the lighting does not seem to be adjusted to shine on this left profile makes this explanation less likely.

The data from self-portraits thus most strongly support the explanation suggested in the introduction that asymmetry in portraits of all kind is not caused by cognitive or social factors, though these may have some influence, but is simply the result of the conventions of studio organization.

REFERENCES


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