

Strabismus in Bronzino's paintings: a hallmark of a realistic painter?

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Summary. The present article analyses eleven paintings of Bronzino, one of the major painters of the late Italian Mannerism, in which the sitters are portrayed with deviating eyes. The reasons why Bronzino may have included a truant eye in his subjects are herein discussed. We consider the 'wandering' eye as a hallmark of Bronzino's style. The inclusion of strabismus may be part of the Mannerism tendency of using exaggerated hallmarks but pursuing at the same time an increasing realism that was typical of the 15th and 16th century movements. (www.actabiomedica.it)

Key words: squint, Renaissance paintings, medical diagnosis, Bronzino

Introduction

Misalignment of the eyeballs is usually a result of the lack of coordination between the extra ocular muscles and is commonly known as strabismus (from the Greek word στραβισμός *strabismòs*), or more popularly, squint (1, 2). This pathological condition hampers optimal binocular vision and alters proper depth perception, and it sometimes results in amblyopia (incomplete development of visual function).

Recently, we came across a portrait with an elegantly depicted squint by Bronzino (Figure 1a), an image that raised our interest for further research. A systematic review of the works of this artist has revealed that there were more subjects depicted with strabismus, which is rather uncommon for an artist who was not affected by the disease.

The painter

Agnolo di Cosimo di Mariano (November 17, 1503 - November 23, 1572), popularly known as Bronzino because of the color of his skin and hair, was

one of the major painters of the late Italian Mannerism, who was active in Florence in the middle of the 16th century. Bronzino's artistic growth started at a very young age, when he was working as an apprentice at the workshop of Jacopo Carrucci da Pontorno, one of the early Mannerism masters (3). Bronzino absorbed the teachings of the master, and with this early influence, the style of the pupil became similar to the master's. Indeed, art historians still debate about the attribution of some paintings, that is, the tondi and frescoes (3), between the master and the student.

Bronzino gained popularity very quickly and became the court painter of the powerful Medici family in Florence. His faithful attention to detail can be seen in his depiction of the eleven subjects with squinting eyes. To find a painter who systematically portrayed his subjects with deviating eyes is a rare and unique.

Material and methods

Eleven paintings constitute the material of this review, which particularly focused on the eyes of the

models. For the purpose of illustration, the faces of the sitters are collated (Figures 1 and 2) with a brief analysis of each portrait and the model.

Results

In the Figures 1a-to-1c, Cosimo I de' Medici is painted with a divergent gaze (exotropia): the axes of both eyes are not parallel and make an obtuse angle. The breadth of the angle seems to be the same in all the pictures, even when the gaze is in different directions (rightward in Figures 1a and 1c and leftward in Figure 1b). This is in the agreement with the diagnosis of alternating fixed exotropia.

Figures 1d-to-1f represent three cases of exotropia (which is more evident in Figure 1d than in Figure 1e or 1f), with the left eye turned outward.

In Figure 2a, the left side of the face is hidden in shadow; however a divergent gaze of the left eye (exotropia) is possible. In Figure 2b the deviation of the ocular axes is slight, but perceptible, with the left eye turned to the left. Interestingly, the sitter represented in Figure 2c is painted with the same deviation of the gaze as in Figure 1a.

Finally, Eleonora di Toledo was portrayed in two different manners: in Figure 2d a slight outward deviation of the left eye is perceptible, while in Figure 2e, there is also a downward deviation.

Discussion

The finding of our analysis indicate a stylistic depiction by the artist, that might lead a physician to suspect an underlying pathological condition. With the exception of the sitters in Figures 1d, 1f, 2a, 2b and 2c, for whom we could find no historical documents indicative of any ocular pathology, the identities of the models are known. The sitters portrayed in the Figures 1a, 1b and 1c (Cosimo I de' Medici); 1e (Ludovico Capponi jr); and 2d and 2e (Eleonora di Toledo) are known and none of them were affected by ocular deviation. Moreover, in some cases, Bronzino himself depicted the same sitter (Cosimo I de' Medici and Eleonora di Toledo) in different portraits with or without squinting eyes.

Binocular vision, with proper alignment of both normally developed eyes, allows for stereopsis, that is the perception of depth and three-dimensional structure from visual information (1). Strabismus is classified as congenital, acquired or secondary to other pathological conditions (4). It is present in 4% of children, and is the most common cause of monocular visual loss (1).

Strabismus is also classified as convergent or divergent, and vertical, horizontal or torsional based on the axis of deviation (1, 2, 4, 5). Convergent squint, known also as esotropia, is a condition wherein one or both eyes turn inward, whereas divergent squint, exotropia, is a misalignment in which the eyes turn outward (1, 2). The visual capacity of an eye (or both eyes) depends on the type of strabismus. In the case of Bronzino's portraits, careful observation of the eyes may raise the question of whether we are observing a pathological condition or just a stylistic attitude. This question may not have a precise answer, but speculation about the truant eyes might be feasible.

It would be easier to assume that the ocular misalignment depicted in several of Bronzino's portraits is an artifact or a mistake. However this is unlikely, because the artist was popular for to his depiction of realism. He was depicted the cold and, often, arrogant expressions of his noble sitters, with portraits that were immaculately realistic. The subjects exuded blank, yet stoic expressions, and yet had with a sense of nobility and haughtiness. It is doubtful that an artist with such a strong reputation depicting detail, would inadvertently include deviating eyes.

Another explanation is that the deviation was intentionally added by Bronzino as a mark of beauty. In modern times, a squinting eye is commonly thought to be unappealing. However, in earlier societies, a slight tendency of the eye to deflect outwards, has often indicated godliness and somehow even beauty. Although it will never be confirmed if indeed the goddess of beauty had that little defect, the commonly known 'strabismus of Venus' is an irregular positioning of the eyes that is thought to give her an imperfect beauty.

A similar subject of debate is the hand gesture of Bronzino's sitters. In portraits of Cosimo and his family by Bronzino, each are shown making a distinct hand gesture in which the thumb, the second, and the

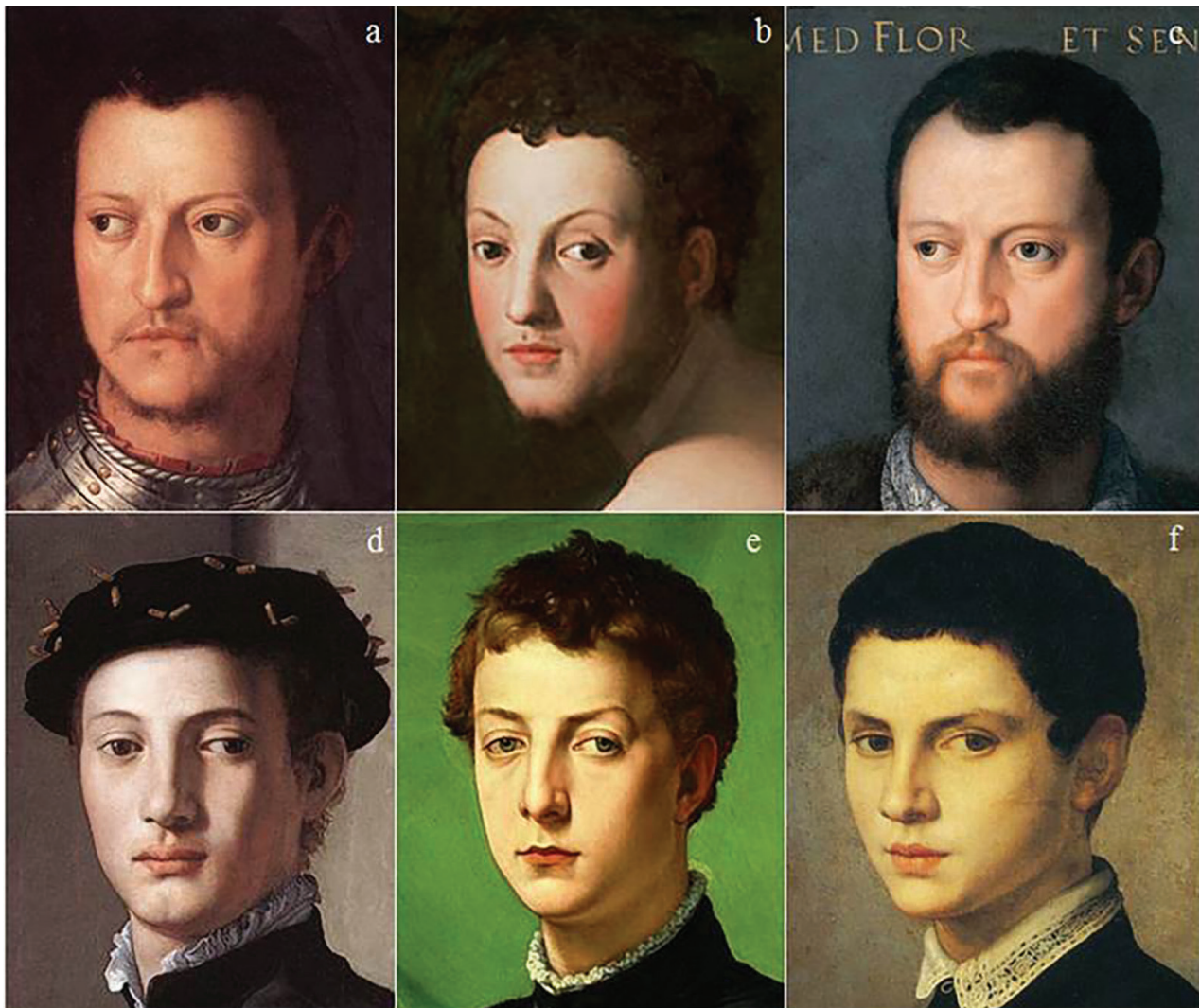


Figure 1. a. Detail of *Portrait of Cosimo I de' Medici in Armour* (1545), by Agnolo di Cosimo Tori better known as Bronzino, oil on wood, 74 x 58 cm [from the Galleria degli Uffizi, Florence, Italy]; b. Detail of *Portrait of Cosimo I de' Medici as Orpheus* (1537-1539), by Bronzino, oil on panel, 114.3 x 96.5 cm [from the Philadelphia Museum of Art, Philadelphia, PA, US]; c. Detail of *Portrait of Cosimo I de' Medici* (1555), by Bronzino, oil on wood, [from the Galleria Sabaudia, Turin, Italy]; d. Detail of *Portrait of a young man with a book* (1530), by Agnolo di Cosimo Tori better known as Bronzino, oil on wood, 95.6 x 74.9 cm [from the Metropolitan Museum of Art, New York, US]; e. Detail of *Portrait of Lodovico Capponi jr* (1533), by Bronzino, oil on panel, 116.5 x 85.7 cm [from the Frick Collection, New York, US]; f. Detail of *Portrait of Young Sculptor* (sometimes known as *The Amateur of Sculpture*) (c.1540-50), by Bronzino, oil on panel transferred on canvas, 90 x 79 cm [from the Louvre Museum, Paris, France]

fifth fingers are splayed while the third and fourth fingers are joined to resemble an 'M'. One could argue that this is the sign of the Medici family, which is not unique, and that the gesture in the painting was a sign of modesty. Indeed, the '*modest Venus*' (also known as *Venus Pudica* and later popularized as *Medici Venus*),

is a 1st-century BC marble copy of an original Greek bronze sculpture depicting the goddess of love Aphrodite, housed in the Uffizi Gallery, Florence, Italy. The Venus is sculptured while covering her modesty, so art historians used to refer to her as *Venus pudica*, namely 'modest Venus'. Although the deviating eye

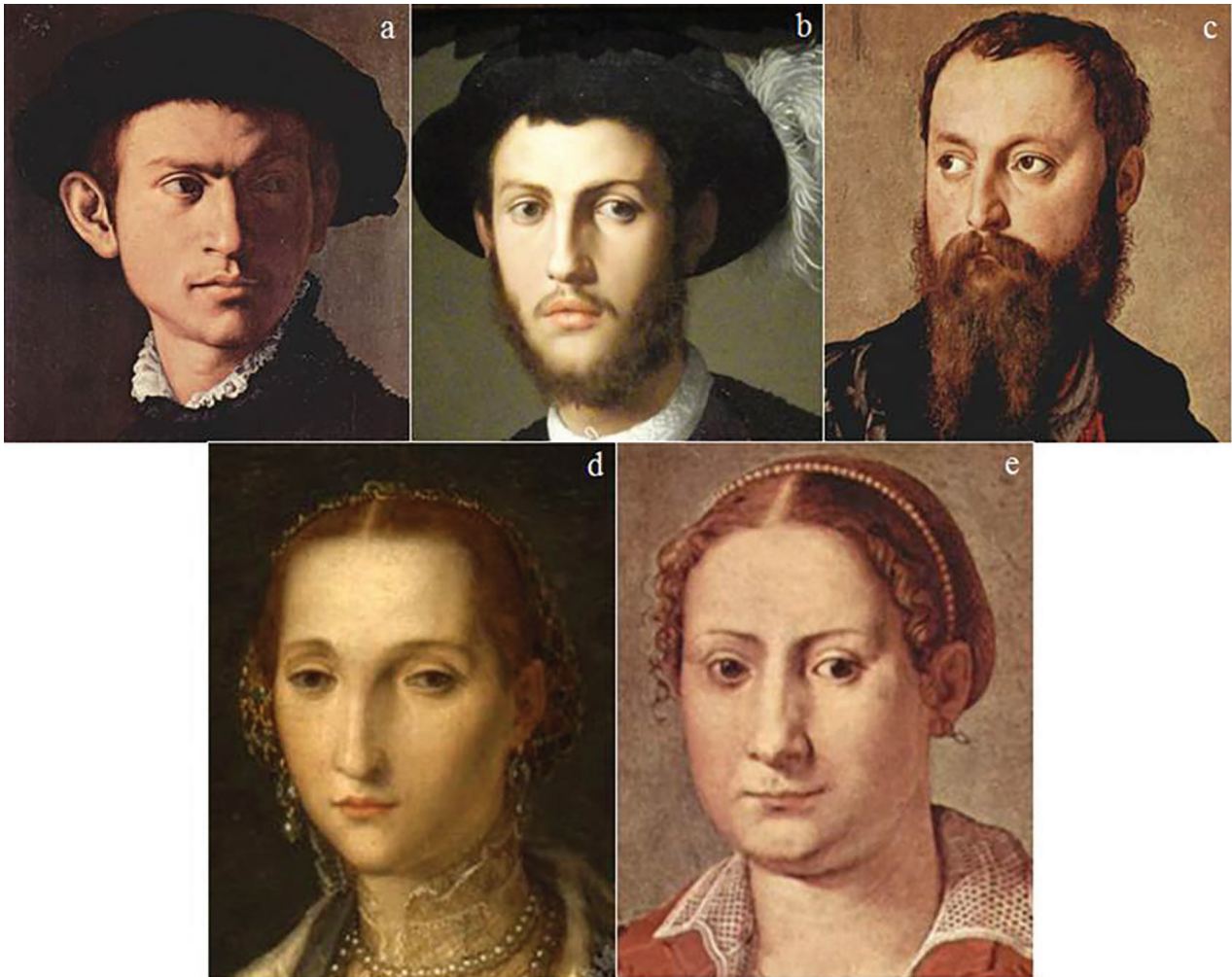


Figure 1. a. Detail of *Portrait of a young man with a lute* (1531), by Bronzino, oil and tempera on panel, 82.5 x 98 cm [from the Galleria degli Uffizi, Florence, Italy]; b. Detail of *Portrait of a Young Man* (1550-5), by Bronzino, Oil on panel. 86 x 67 cm [from the Nelson-Atkins Museum of Art, Kansas City, MO, US]; c. Detail of *Portrait of Pierantonio Bandini* (c.1552), by Bronzino, oil on wood, 107 x 83 cm [from the National Gallery of Canada, Ottawa, Canada]; d. Detail of *Portrait of Eleonora of Toledo* (1550-1), by Bronzino, oil on copper, 17x12,5 cm [from the Galleria degli Uffizi, Florence, Italy]; e. Detail of *Portrait of Eleonora of Toledo* (1555), by Bronzino, oil on panel, 109 x 85 cm [from the Galleria Sabaudia, Turin, Italy]

may be another element taken from the Venus' images, it hardly explains the widespread gesture in Bronzino's paintings of the Medici family, fascinating as this speculation may be.

A squint is a common disorder (1, 2, 4), and if the artist is also affected by deviating eyes, it may have a direct influence on his style. Indeed, Rembrandt van Rijn (5-7), Giovanni Francesco Barbieri (better known as *Guercino*) (8), Albrecht Dürer (9, 10) and Edgar Degas (11) were renowned squinting artists, as depicted in their self-portraits. In addition, a few more cases

of strabismus were portrayed by non-affected painters such as Raphael (12, 13) and Georges de la Tour (14). In their self-portraits, these painters made no attempt to conceal the deviating poor-sighted eye. Analysis of Bronzino's works, however, such as his portraits and self-portraits, poems and major biographies, failed to reveal any comments on his squinting eye. So in the case of Bronzino's paintings, it is unlikely that his style was affected by his own pathological condition.

The inclusion of a truant eye may have been part of the artists' tendency towards a more realistic repre-

sentation. The fact that in almost all sitters the squint was slight may suggest that perhaps Bronzino used the same model or the template derived from one model for subsequent painting. This would also support the hypothesis that strabismus was deliberately introduced by the artist to make the sitters' look more attractive, may also be reasonable.

Similarly, Simon (15) also stated that divergent strabismus appears in so many of Bronzino's sitters that it is likely to be a sign of distinction and, somehow, beauty of that period. However, while this explanation is acceptable for the portraits depicting the slight squint, it seems unlikely in the cases in which the sitter has severe squint.

There could be another reason for the inclusion of deviated eyes. Most likely, Bronzino like all right-handed artists, painted with the light coming in from the left side. In that era, painters tended to depict in daylight with a window on their left-hand side that illuminated the right side of the sitter's face. So, the right eye of the subject was depicted as looking directly at the artist, whereas the left eye was able to wander and slightly diverge (16). However, this sort of 'artistic license' may also not explain the severe squint in some of Bronzino's portraits (Figures 1a, 1c, 1d, 2c and 2e).

Conclusions

Bronzino's portraits are masterpieces in which the elegant, and in some cases, the aristocratic stoic or un-emotional, but calculated attitude of the sitters is somehow tainted by a divergent eye to become immaculately realistic. Although we cannot entirely reject the theory that Bronzino used affected models, it is most likely that the 'wandering' eye is a hallmark of Bronzino's style. Indeed, the inclusion of strabismus may be part of the Mannerism tendency of using exaggerated hallmarks but pursuing at the same time an increasing realism that was typical of the 15th and 16th century movements. It is likely that the Italian painter was fascinated by the visual effect of a divergent eye. Therefore, the hypothesis that the squint was deliberately introduced by the artist to make the gaze of the sitter somehow peculiar, while reflecting at the same

time the increased anatomic accuracy of that period, seems most likely.

References

1. Birch EE. Amblyopia and binocular vision. *Prog Retin Eye Res* 2013 Mar; 33: 67-84.
2. Levi DM, Knill DC, Bavelier D. Stereopsis and amblyopia: A mini-review. *Vision Res* 2015 Sep; 114: 17-30.
3. Pilliod E. Pontormo, Bronzino, and Allori: A Genealogy of Florentine Art (New Haven, CT: Yale University Press, 2001).
4. Engle EC. Genetic basis of congenital strabismus. *Arch Ophthalmol* 2007; 125: 189-95.
5. Livingstone MS, Conway BR. Was Rembrandt stereoblind? *N Engl J Med* 2004 Sep 16; 351(12): 1264-5.
6. Marmor MF, Shaikh S. Was Rembrandt stereoblind? *N Engl J Med* 2005 Feb 10; 352(6): 631-2; author reply 631-2.
7. Mondero NE, Crotty RJ, West RW. Was Rembrandt strabismic? *Optom Vis Sci* 2013 Sep; 90(9): 970-9.
8. Mateo J. [Giovanni Francesco Barbieri, il Guercino (Cento, 1591-Bologna, 1666)]. *Arch Soc Esp Oftalmol* 2012 Jul; 87(7): 226-7.
9. Aronson JK, Ramachandran M. The diagnosis of art: Durer's squint – and Shakespeare's? *J R Soc Med* 2009 Sep; 102(9): 391-3.
10. Polland W. Did squinting cause the 'Dürerblick'? *Acta Ophthalmol Scand* 2003 Dec; 81(6): 676-7.
11. Kendall R. Degas and the contingency of vision. *The Burlington Magazine* 1988; 130: 180-216.
12. Santos-Bueso E, Sáenz-Francés F, García-Sánchez J. Eye pathology in the paintings by Rafael Sanzio (III). The Transfiguration. *Arch Soc Esp Oftalmol* 2012 Dec; 87(12): 420-1.
13. Barbón García JJ. The strabismic cardinal and the gentleman]. *Arch Soc Esp Oftalmol* 2001 Oct; 76(10): 629-30.
14. Santos-Bueso E, Sáenz-Francés F, García-Sánchez J. Eye pathology in the paintings by Georges de la Tour (III). Strabismus: the cheat with ace of diamonds. *Arch Soc Esp Oftalmol* 2012 Feb; 87(2): 61-2.
15. Simon RB. Bronzino's portrait of Cosimo I in armour. *Burlington Magazine* 1983; 125(966): 527-539.
16. Marmor MF. Vision, eye disease, and art: 2015 Keeler Lecture. *Eye (Lond)* 2016 Feb; 30(2): 287-303.

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