

Research article - History of anatomy and embryology

## Human anatomy in the paintings of Dominikos Theotokopoulos - El Greco (1541-1614)

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### Abstract

The peculiar style of Dominikos Theotokopoulos' paintings of his last period, with the special characteristic of the elongated human figures, has raised a heated debate which has lasted more than a century. Many scholars tried to identify an ocular pathology and especially astigmatism in this painter in order to interpret his style, and also other pathologies have been proposed as the reason for this elongation, such as a mental disease expressing the symptoms of graphomania and ecography, hashish addiction and Marfan's syndrome. On the other hand art historians reject any 'medical' theories, believing that in his works there are many elements of mannerism and one of them is this elongation, but many physicians insist to find a pathology beneath this deformation, which is discussed in this paper.

### Key words

Dominikos Theotokopoulos, astigmatism, mental disease, mannerism, spiritualism.

### Introduction

Dominikos Theotokopoulos - El Greco (1541-1614) was born in Heraklion (Crete) and died in Toledo (Spain). He studied Byzantine art in Crete and at the age of 26 he moved to Italy, first Venice and then Rome, where he stayed at the workshops of great painters of the time, among them Tiziano Vecellio (1485/90-1576) and Jacopo Robusti - Tintoretto (1518/19 - 1594) (Marias, 2013). Theotokopoulos presented a peculiar style in the formation of the human body in his paintings during his Spanish Period which is characterized by a special elongation. Human figures are created having an elongated body, head and extremities. This elongation sometimes is very emphasized so as the figures lose their realistic representation in the artistic creation (Chatzinikolaou, 1990). Among the works of the painter (Gudiol, 1983) this characteristic is especially obvious in the paintings: 'Burial of the Count of Orgaz' (1586-1588) (available at: <http://www.elgreco.net/the-burial-of-the-count-of-orgaz.jsp>), 'Agony in the Garden of Gethsemane' (ca.1590), 'Saint John the Baptist' (ca. 1600), 'Cardinal Fernando Niño de Guevara (ca. 1600)', 'Saint Jerome as Scholar' (ca. 1610) 'Apostle St John the Evangelist' (1610-14) and 'The opening of the fifth seal' (1608-1614) (available at: <http://www.elgreco.net/opening-of-the-fifth-seal.jsp>). These paintings are only few examples, because elongated figures can be found in many other Theotokopoulos' paintings.

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This style puzzled a lot art historians and every one who tried to find an explanation for painter's motivation. Its interpretation followed two separate roots. The first one which was adopted by the majority of art historians considers the style of Theotokopoulos' as an instinctive inspiration, which is a mixture of his roots in Byzantine art and his artistic education in Italy, forming a unique painting style which separates him from other painters of his time, expressing an idealist world and focusing on the spiritual dimension of the human existence. On the other hand, many physicians proposed a medical explanation for Theotokopoulos' figures (Charamis, 1966). According to them, a physical pathology, mainly a distortion of his vision and probably astigmatism, or a mental pathology was the fundamental reason for the painter's style. This assumption raised a heated and long debate which started in the beginning of the 20<sup>th</sup> century.

## Material

Liebreich, an ophthalmic surgeon, in 1872 was the first one who introduced the 'medical theory', in order to interpret a painter's works (Liebreich, 1888). He had the idea that some late paintings by Joseph Mallord William Turner (1775-1851) with elongated figures and color distortions were outcome of a possible painter's astigmatism, because when this physician saw again these paintings using corrective lens, there were no distortions and it was already known that the painter suffered ophthalmic and mental problems to the end of his career. Nevertheless, the change in painter's style began earlier than his medical problems.

The starting point of a 'medical' explanation regarding the style of Theotokopoulos was an article by the ophthalmologist Goldsmith in 1911, where he expressed the idea that the elongation and elliptical formation of Theotokopoulos' figures complied with the symptoms of hyperopic astigmatism, because looking at the paintings using astigmatic glasses, he could see the figures as normal representations (Goldsmith, 1911).

In 1912 Jorge examined Theotokopoulos' paintings trying to 'diagnose' many corporal deformities suggesting that they are present in his works, from chlorotic or cyanotic figures to microcephalic and plagiocephalic ones. He also found figures with the other pathological characteristics, among them paralysis, prognathism and strabismus, leading to the conclusion that the painter suffered a mental disease expressing the symptoms of graphomania and ecography, *i.e.* the tendency to repeat stubbornly the same motive (Jorge, 1912).

Jorge's views was challenged the following year by the ophthalmologist Beritens. This physician rejected the mental disturbance as fundamental reason for Theotokopoulos' style, returning to the idea of a visual abnormality and especially astigmatism combined with a pronounced squint believing that this conclusion can be inferred by the painter's self-portrait placed among the figures in the painting 'Burial of the Count of Orgaz'. In order to explain the diversity of pathologies detected by Jorge, he proposed that after the age of thirty seven Theotokopoulos loosed in time his clear view being unable to have the real perception of colors and shapes, therefore he produced his blur view in his paintings. Beritens used also lens producing elongated figures similar to those painted by Theotokopoulos (Beritens, 1913).

In 1914 Katz in an extended study declined the theory of astigmatism in Theotokopoulos' works pointing that in multi personal compositions there are mixed figures with elongated characteristics of their body and normal ones. According to him this is a very important element to reject astigmatism, because there should not be any exceptions with normal produced figures in the same painting. In addition, he underlines, that if we want to discover the influence of astigmatism in the works of the painter, then he should have suffered astigmatism in both his eyes, which is very difficult. Nevertheless, Katz admits that aging should have an impact in the vision of the painter, but not in a definitive way to determine his entire work. Katz chose to interpret Theotokopoulos' style as a model of an artistic expression (Katz, 1914).

In 1917 Levi-Sander, commenting on a work by Party who concluded that myopia is the main optical defect which can distort a painter's sketches, referred to Theotokopoulos pointing that if he had suffered from astigmatism, he should have created normal figurines in order to see them elongated, therefore he did not have an ocular problem and his paintings are free artistic creations (Levi-Sander, 1917).

Next year Isakowitz, in order to contradict Levi-Sander, expressed the idea that Theotokopoulos presented acquired astigmatism, where the use of imagination to create a sketch leads to the deformation of the representations, while the use of a real model helps the painter to follow the realistic pattern, despite his ocular pathology. He used as example the paint 'Burial of the Count of Orgaz', where in the lower level figures are not deformed, because real models were used but in the upper one, the deformation is clear due to the fact that the painter used his imagination (Isakowitz, 1918).

In 1922 Prinzhorn rejected the theory of astigmatism, believing that even if the painter was astigmatic, he would have created normal figures reproducing his natural models. He turned in the psychic sphere of the represented figurines, therefore he spoke about the inner and psychological world, which is represented in the deformed figures (Prinzhorn, 1922).

The following year Barrès reconsidered his views on Theotokopoulos' work and although in 1911 he had read the deformed figures of the paintings as idealistic representations, now under the influence of Beritens he was not reluctant to accept that some figures in the late works of the painter are deformed due to the astigmatism of the painter (Barrès, 1988).

In 1932 Huber highlighted the fact that in various paintings of Theotokopoulos' the elongation is not only vertically in the body but also horizontally in the hands, pointing as well that the painter, as a master painter, could not allow an unintentional deformation to ruin his masterpieces. Therefore, according to him this elongation is a sign of figure's mysticism (Huber, 1932).

The theory of astigmatism was reintroduced in 1933 by Strebel who denied the mysticism and the philosophical grounds of the painter's work, believing to the pathology of astigmatism. The horizontal elongation of the hands in some paintings was considered as a sign of distinction. The mismatch of the lower and upper level in the paint 'Burial of the Count of Orgaz' is explained by the fact that looking closely to the models astigmatism is diminished, while figures produced by memory are deformed (Strebel, 1933).

These ideas formed at the first third of 20<sup>th</sup> century (Crisp, 1929) constitute the framework of the debate lasting to our days (Pollard, 1994, Santos-Bueso et al, 2015),

if Theotokopoulos' paintings are an outcome of a pathology, more probably a visual distortion - especially astigmatism - than a mental disturbance, or they are artistic creation expressing the mysticism and the idealistic world of the painter.

The term 'El Greco fallacy' was introduced in the third quarter of 20<sup>th</sup> century in order to describe the peculiar style of Theotokopoulos' paintings (Firestone, 2013). Among the theories which were presented in order to explain Theotokopoulos' style in the past century we should mention Perrera's theory, in which is expressed the idea that Theotokopoulos was a hashish addict (Tazartes, 2005), while Marañon believed that Theotokopoulos used as models mentally ill persons from Toledo's psychiatric facility (Marañon, 1956).

The debate did not cease in the early 21<sup>st</sup> century. In 2002 Anstis published his experiment, in order to prove that even if Theotokopoulos was astigmatic, he would create physiocratic, *i.e.* realistic figures, therefore his style is his choice. He used subjects who, after looking through lens which produce astigmatism (one subject for two days consecutively), initially made deformed sketches but after some time started to make sketches similar to the real models. So, the first sketches were deformed, but after two days they were analogous to their prototypes. By this experiment Anstis believed that he had testified that no matter Theotokopoulos suffered a congenital or acquired astigmatism, he was able to produce normal human figures (Anstis, 2002).

The phenomenon of palinopsia, *i.e.* the persistent recurrence of a visual image after the stimulus has been removed, has also been introduced in the debate by Ollner, who believed that in the elongated figures the shape of the neck, the limbs and the usage of colors point that the painter suffered from palinopsia (Ollner, 2002). On the other hand, Kwoczyński proposed that figures of Theotokopoulos' paintings present the characteristics of Marfan's syndrome. Apart from the elongated bodies and extremities the author discovered also arched palate, pigeon breast and arched backward spinal curvature which according to him are undoubted proofs of the disease. He also posed the question whether Theotokopoulos suffered from the disease or he used models suffering from it (Kwoczyński, 2006).

## Discussion

The X-ray's examination of the paint 'Burial of the Count of Orgaz' revealed that the elongated figures were initially designed in normal proportions and elongation was an element which came afterwards (Trevor - Roper, 1997). This is a reasonable argument in order to accept the idea that the elongation was an intentional drawing characteristic of the painter, which was not imposed by an ocular pathology but by his own volition. The hashish theory could not be accepted due to the numerous works of the painter, while the Marfan's Syndrome theory could not be applicable to all the figures of Theotokopoulos' paintings, but only to some of his models. The theories concerning the mental unequilibrium of the painter (Pestel, 1953) can not explain the other normal figures in the painter's works.

Many ocular pathologies have been invoked in order to interpret the style of numerous painters (Arnold - Loftus, 1991, Elliott - Skaff, 1993, Ravin, 2008, Weale, 2008). For example, it is underlined how presbyopia affected the work of Rembrandt

Harmenszoon van Rijn - Rembrandt (1606-1669) (Trevor - Roper, 1997) and how cataract affected the work of Claude Monet (1840-1926) (Lanthon, 2009). These interpretations underestimate the artistic sensitivity of the painters and in fact are very weak, as almost every artistic style is considered as an outcome of an ocular deficiency.

We should have in mind that Theotokopoulos' workshop comprised a great number of assistants and pupils, therefore it is very logical to infer that the creation of a disproportioned figure was a matter of discussion and if this attribute was considered as an element which destructed the composition, then it would arise a number of objections during the construction of the paintings, but it seems that this was not the case.

On the other hand, the majority of figures with elongated characteristics in Theotokopoulos' work are saints, angels and martyrs. That is, the elongation is linked to religious themes, a fact which points that the elongation complies with the spiritual hypostasis of the figures and its main purpose is to denude the figures of their corporal context, in order to highlight their uranian place and their pneumatic substance. The elongated figures seem to reach the sky and the heaven, being ethereal creations.

This spiritual background in Theotokopoulos' work can be traced in his roots in Byzantine art (Drandaki, 2009). Byzantine art has as main characteristic to put in second place the corporal entity of humans, in order to exploit the religious and spiritual dimension and to achieve a place near God. This is expressed in Byzantine art by the iconographical distortion of human body, so that in the Byzantine icons and frescos human anatomy is stylized and no one expects to find realistic analogies to the human body (Delvoye, 1967).

Elongated figures had been presented many times before Theotokopoulos. In Byzantine Art of 12<sup>th</sup> and 14<sup>th</sup> century elongated figures appear, losing their exactly realistic formation as they try to touch the spectator. This style is linked to the so-called Macedonia School of Byzantine Art (Mango, 1972). Elongated figures are also found in the European art of the 16<sup>th</sup> century. The so-called Mannerist group of painter which developed in Italy, with main representatives Girolamo Francesco Maria Mazzola - Parmigianino (1503 - 1540), Jacopo Carucci - Pontormo (1494 - 1557) and Giulio Romano (1499 - 1546), has as a special attribute the elongation of human figures (Hauser, 1992). In addition, the earliest group of "mannerist" is found in ancient Greek art. In Attic Red-figured pottery of 5<sup>th</sup> century BC a group of painters, among them the so-called Pan Painter, Pig Painter, Agrigento Painter and Academy Painter, had as special feature the elongation of figures (Robertson, 1992). These examples from antiquity to 16<sup>th</sup> century point that the elongation of human figure is linked mainly to an artistic choice rather than to a pathological phenomenon, due to its diachronically presentation in art of many civilizations.

## Conclusion

Theotokopoulos' paintings of his last period have puzzled a lot not only art historians but also physicians who tried to find a motive for his peculiar style in an ocular, but not only, ocular pathology. The roots of his style can be found in Byzantine Art and in Italian painting of 15<sup>th</sup> - 16<sup>th</sup> century. A 'medical' explanation of his late work not only faces many problems in its argumentation but also treats the artist inspira-

tion deprived of its ideological concept, implying that the painter was manipulated by a disease. Although the elongation of figures is an element found in many artistic movements, Theotokopoulos presented a unique style in his paintings which did not find imitators. The uniqueness of his work complies with the uniqueness of an artists in general, who wants to express the spirituality and the mysticism in his artistic world and also to differentiate and distinguish from other painters. His singular style intended also to set the spectators thinking about the pneumatic world. On the other hand, all this debate which lasts over a century is very important not because it tried to give a 'medical' answer to Theotokopoulos' work but because it revealed many different methodological approaches to its interpretation.

### Conflict of Interest

All the authors declare that they have no conflict of interest.

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