

Michelangelo: Artist or Anatomist?

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Abstract

In relation to the published work "Michelangelo and Noah's Liver: A Hidden Anatomy Lesson?", I have been asked to make a review of the aspects that relate Michelangelo to anatomy. Let me start by asking some questions: Who was Michelangelo?

Keywords: Anatomy • Corpse dissection • Spinal cord • Michelangelo

About the Study

His work is world famous for its anatomical fidelity but where did the artist get his vast anatomy domain? Would it have been possible for him to learn it without close contact with human bodies? The truth is that Michelangelo practiced numerous corpses dissections, that quite possibly inspired him to hide an entire treatise on anatomy in his works, especially in the Vatican frescoes.

Michelangelo's facet as an anatomy devotee begins in his early youth in Florence. He was undoubtedly a precocious genius. We should remember that the David was sculpted when he was around 26 years old.

After the death in 1492 of his protector, his patron Lorenzo de Medici, the artist carved a crucified Christ out of wood for the prior of the convent of Santo Spirito, who allowed him to use a room to dissect corpses from the hospital associated with the church.

Although, it is also described that in the in Michelangelo's own house there was a room specially prepared for corpse dissection, that he looked after with suspicion, thinking that at that time this practice was not something totally accepted by religious authorities. As his disciple and biographer Ascanio Condivi wrote: this anatomy studies gave the teacher great pleasure.

Condivi described how Michelangelo was able to teach a whole anatomy master class with a corpse in his hands, revealing details that even the doctors of the time did not know. This is a point that stunned me while preparing the work on the fresco "The Drunkenness of Noah". Me, as a surgeon, who is dedicated to open up people and repair their organs, I think I haven't met a colleague who had a pinch of the anatomy knowledge close to that of Renaissance artists.

Anatomy is a difficult area to learn, because it is not enough to know it by heart, but you have to be able to capture your knowledge

in a three-dimensional way. It is not enough for a surgeon to read the anatomical references of a certain organ in anatomy books, the surgeon must know how to apply this knowledge when operating in a practical way, where to put the hands and where to put the stitches.

As Frank Netter, a well-known medical illustrator of dozens of anatomy books for the study of medicine, would say: anyone who says he knows about anatomy has to be able to draw it rather than describe it. Michelangelo was someone who professed this idea. He even planned to publish an anatomy treatise in collaboration with the eminent anatomist Realdo Colombo, his friend, a doctor, and, on at least one occasion, a supplier of corpses.

I will briefly describe few more of the interpretations of the Sistine Chapel that might uncover relationships between Michelangelo's frescoes and anatomical references, although, no doubt, one begins to wonder whether these interpretations are well-founded or leave too much to the imagination.

I think that in the description of the references to liver anatomy of the fresco "The Drunkenness of Noah" I have been objective enough and have given ordered and coherent arguments to be able to affirm that indeed there was an intention on the part of the artist to capture his knowledge in anatomy and physiology liver. But this, of course, can be debated.

For the Swedish doctors Lennart and Anne-Greth Bondeson, they maintain that the God captured in the fresco "The Separation of Light and Darkness" shows clear signs of goiter on his neck, a thyroid disease that the artist himself could have suffered [1]. They suggest that by such representation Michelangelo wanted to confer a divine status on himself (Figure 1).

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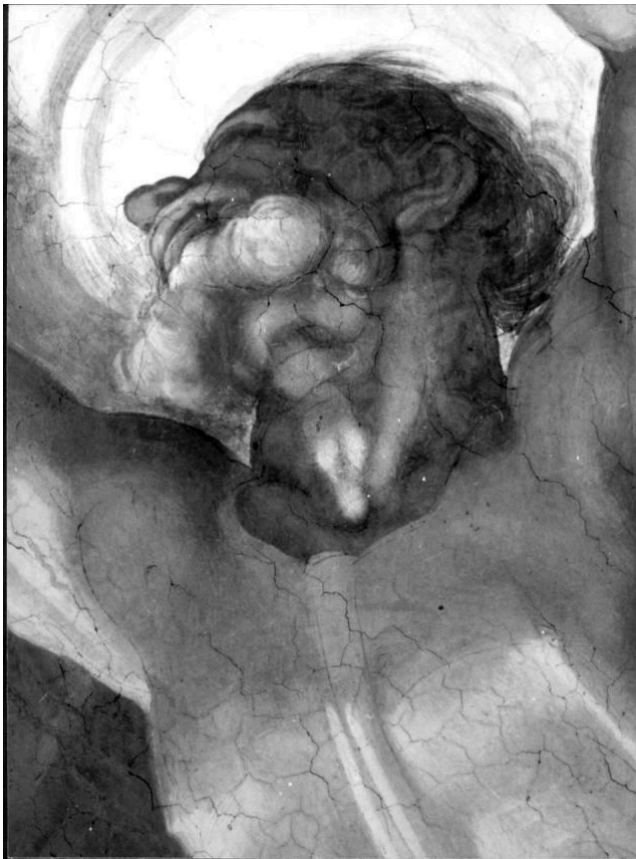


Figure 3. Illustrated the mean level of integral optical density of the CK 18 immunostaining.

But curiously, for this neurosurgeon Rafael Tamargo and the medical illustrator Ian Suk, this same neck of strange volumes and incoherent lighting has an outline of the human brain stem, accompanied by a spinal cord and an optic nerve in the folds of the robes [2]. For more references you can check my original publication [3].

Entire volumes have been written regarding these possible associations: a shoulder joint drawn on the body of a sibyl, a vertebra on that of Holofernes, the hyoid bone in the position of God separating light from darkness, a lung in the form of God's mantle creating Eve. How much of this was intended and how much is the product of the author's imagination? What is certain is that, without a doubt, Michelangelo was both an artist and an anatomist. Do artists like this still exist? Do doctors like this still exist, with such respect for anatomy [4-6]?

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