The brilliant Italian Renaissance artist Michelangelo Buonarroti painted magnificent frescoes on the ceiling of the Vatican's Sistine Chapel, laboring from 1508 to 1512. Commissioned by Pope Julius II, Michelangelo performed this work himself without assistance. Scholars debate whether he had any guidance from the Church in the selection of the scenes, and what meaning the scenes were to convey. In the fresco traditionally called the Creation of Adam, but which might be more aptly titled the Endowment of Adam, I believe that Michelangelo encoded a special message. It is a message consistent with thoughts he expressed in his sonnets. Supreme in sculpture and painting, he understood that his skill was in his brain and not in his hands. He believed that the "divine part" we receive from God is the "intellect." In the following essay, Michelangelo explains how he creates sculpture and painting and how, I believe, God himself gave man the gift of intellect:

After the divine part has well considered:
Mark first and gesture, none both mind and hand.
With a steady model, first, at their command.
Give life to none, but this is not achieved
By spirit; in painting, too, this is perceived.
Only after the accident has planned
The best and highest, can the ready form.
Take up the brush and try all things received.

The sculpture and painting of Michelangelo reflect the great knowledge of anatomy that he acquired by performing dissections of the human body. His experience in dissection is documented in Lives of the Artists, written by his contemporary, Giorgio Vasari. Vasari says, "For the church of Santo Spirito, in Florence Michelangelo made a crucifix of wood which was placed above the lunette of the high altar, where it still is. He made this to please the priest, who placed rooms at his disposal where Michelangelo very often used to lay dead bodies in order to discover the secrets of anatomy.

The Creation of Adam fresco shows Adam and God reaching toward one another, arms outstretched, fingers almost touching. One can imagine the spark of life jumping from God to Adam across that gap between their fingers. However, Adam is already alive; his eyes are open, and he is completely formed; but it is the intent of the picture that Adam is to "receive" something from God. I believe there is a third "main character" in the fresco that has not previously been recognized. I would like to show this by looking at four tracings, Figs 1 through 4, and by reviewing some neuroanatomy, using works by Frank Netter, MD, illustrator of The CIBA Collection of Medical Illustrations, Vol. 1—The Nervous System. Examine Figs 1 and 2 to see if there is any similarity between them. Examine Figs 3 and 4 and decide if these figures are similar or dissimilar. Take enough time inspecting the figures so that you
mind may form its own image of them.

Proceeding to the neuroanatomy, Fig. 5 shows a sagittal section of the skull; the brain, which lies in the cranum, takes its shape from it. Study the picture to gain an overall impression of the shape of the cranum. Figure 6 shows the left lateral aspect of the brain and illustrates the sulci and gyri that are present in the hemispheres. The fissure of Silvius, or lateral cerebral fissure, separates the frontal lope from the temporal lobe. Figure 1 is a tracing of this illustration. Figure 7 depicts the medial aspect of the right hemisphere; Fig. 8 is a tracing of the brain and spinal cord portion of this illustration. The sulcus cornuatus separates the gyrus ependi from the Superior frontal gyrus and paracentral gyrus. The parietal lobe is divided into the cuneus and lingual gyrus. The parietal gyrus is seen lying in the piriform fissure; the fact that the piriform is bifurcated can be seen clearly. The putamen, the bulbous upward extension of the putamen, is shown. Immediately in front of the putamen is the cuneus section of the optic chiasms. Figure 3 is derived from Fig. 4 by removing both the cerebellum and the midbrain structures inferior to the gyri ependi and rotating the spinal cord posteriorly from the standard anatomical position. Figure 9 is in the inferior surface of the brain. From the optic chiasm, the optic nerves extend outward, and the optic tracts pass backward across the cerebral pedicles. The basilary arcy, formed by the junction of the two vertebral arteries, extends from the inferior to the superior border of the horns. Figure 10 shows the vertebral artery running cranialward through the foramen in the transverse processes of the cervical vertebrae to the inferior surface of the skull. The vertebral artery bends abruptly around the articular process of the atlas and makes another abrupt bend to enter the cranial cavity through the foramen magnum, where it joins the other vertebral artery to form the basilar artery.

Having studied these images of neuroanatomy, proceed to Michelangelo's Creation of Adam (Fig. 11) and look at the image that surrounds God and the angel.

This image has the shape of a brain.

Figure 12 shows that Fig. 8 is obtained by tracing the outer shell and the sulci. Figure 13 shows that Fig. 4 is a tracing of the outer shell and of major lines in the fresco of God and the angel. Therefore, Figs. 1 and 3 are tracings of neuroanatomy drawn by Frank Netter, and Figs. 2 and 4 are tracings from the Creation of Adam by Michelangelo.

The sulcus ependi extends along the hip of the angel in front of God, across God's shoulders, and down God's left arm, extending over Tree's forehead. The flowing green robe at the base represents the vertebral artery in its upward course as it twists and turns around the articular process and then makes contact with and proceeds along the inferior surface of the horns. The back of the angel extending laterally below God represents the pens, and the angel's hip and leg represent the spinal cord. The pituitary stalk and gland are depicted by the leg and foot of the angel that extends below the base of the picture. Note that the feet of both God and Adam have five toes; however, the angel's leg that represents the pituitary stalk and gland has a bifid foot. This same angel's right leg is flared at the hip and knee; the thigh represents the optic nerve, the knee the transected optic chiasm, and the leg the optic tract. The important point, however, is not to identify minute neuroanatomical structures in the fresco, but to see that the larger image encompassing God is compatible with a brain. Michelangelo portrays that what God is giving to Adam is the intellect, and thus man is able to "plan the best and highest" and to "try all things received."

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References