SECTION 4
THE EUROPEAN CONNECTION
ANATOMICAL ILLUSTRATION IN ARABIC MANUSCRIPTS

Emilie Savage-Smith

Early anatomical illustration in Arabic manuscripts is almost entirely defined by triangles, circles, and other geometric forms executed by the use of compasses and straight edges.¹ Virtually all Arabic medical encyclopaedias and compendia had sections on anatomy—describing the bones, nerves, muscles, arteries, and veins, as well as the compound organs, which included the eye, liver, heart and brain. These volumes were often illustrated with diagrams. For example, many manuscript copies of the influential medical encyclopaedia al-Kāhī al-Mansūrī fī al-ṭibb ("The Book on Medicine for Mansūr") by al-Rāzī (d. 925) have a diagram of the brain, drawn as a triangle.² It constitutes the earliest diagram preserved today illustrating the ventricles or cells of the brain, where the various cognitive faculties were thought to be located. The triangle has two internal lines parallel to the base line of the triangle; the cell at the apex is the posterior ventricle, the locus of memory; the cell in the middle the seat of thought, and the largest cell at the base of the triangle (usually divided into two sections) is where imagination is located. This diagram occurs in many subsequent Arabic treatises, including the popular epitome of the Canon of Medicine by Ibn Sīnā written in Syria by Ibn al-Nafsīs (d. 1288).³ Triangles were used in Arabic treatises not just for representing the brain and its cognitive functions, but for other anatomical structures as well.

In medieval Islam, knowledge of anatomy was for the most part based on the anatomical writings of the Greek physician Galen (d. c. 210), who worked mostly in Rome though he was for a while in Alexandria. His knowledge of anatomy was derived from the dissection of animals, from which he then argued by analogy to human structures. Galen’s writings were available in the Islamic world through Arabic translations made in Baghdad in the ninth century. Of those translations, only one copy, so far as I am aware, has an anatomical illustration: it is a modest triangular diagram of shoulder muscles (deltoid, as we know them) occurring in a late copy made in 1555 of the Arabic translation of Galen’s Anatomical Procedures.⁴ Since it is such a late copy, it probably should not be taken as evidence that the Greek original was illustrated, or even that early copies of the Arabic translation were illustrated in this way. It may simply

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² For example, a copy of al-Kāhī al-Mansūrī by al-Rāzī in Bethesda MD, National Library of Medicine (NLM), MS A 28, fol. 13v; dated 1078 (1667).
³ For an example of Ibn al-Nafsīs’s brain diagram in his Māṣūr al-Qīsān, see Birmingham AL, University of Alabama at Birmingham, Reynolds Historical Library, MS Medical 5066, fol. 3r.
⁴ Los Angeles, UCLA Biomedical Library, coll. 1062, MS 90, fol. 119r; dated Ṣafar 962 (Jan. 1555).