Hypothesizing Heartbeats

The mysteries of childbirth and the development of a human fetus have long fascinated mothers, fathers, and the physicians and nurses who care for them. Early attempts to depict the environment inside the uterus featured drawings that resembled little men more than they did a human fetus, and lack of detail and knowledge was common. As the seventeenth century dawned, medical illustration achieved a new level of detail through the use of copperplate engraving. This was the technique employed to illustrate a new work on the uterus and the developing fetus written by Adrian Spieghel, chair of anatomy at the University of Padua. After his death in 1625, Spieghel’s son-in-law, Liberalis Crema, published De Formato Foetu with engravings by an unknown artist. The illustrations feature childbearing women posed to display the growing infants in their abdomens. Each one depicts the anatomical details of pregnancy with more clarity than had been seen in previous publications. The creation of the engravings was supervised by Giulio Casserio, who succeeded Spieghel as anatomy chair at Padua. It was at considerable personal expense that Crema purchased the copper plates from Casserio and then saw them through the press. The resulting work includes some of Spieghel’s posthumous contributions to our understanding of embryology such as his notion that the fetus’ heart beats in utero, and that the umbilical cord has no nerves. Spieghel’s views on the fetal heartbeat were against the mainstream of his contemporaries, and his book remains a lasting contribution of the development of embryology.

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