



**ON THE MOTION OF THE
HEART AND BLOOD IN
ANIMALS**

WILLIAM HARVEY

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On the Motion of the Heart and Blood in Animals by William Harvey.

This edition was created and published by Global Grey

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It is in like manner evident that the auricles pulsate, contract, as I have said before, and throw the blood into the ventricles; so that wherever there is a ventricle, an auricle is necessary, not merely that it may serve, according to the general belief, as a source and magazine for the blood: for what were the use of its pulsations had it only to contain?

The auricles are prime movers of the blood, especially the right auricle, which, as already said, is “the first to live, the last to die”; whence they are subservient to sending the blood into the ventricles, which, contracting continuously, more readily and forcibly expel the blood already in motion; just as the ball-player can strike the ball more forcibly and further if he takes it on the rebound than if he simply threw it. Moreover, and contrary to the general opinion, neither the heart nor anything else can dilate or distend itself so as to draw anything into its cavity during the diastole, unless, like a sponge, it has been first compressed and is returning to its primary condition. But in animals all local motion proceeds from, and has its origin in, the contraction of some part; consequently it is by the contraction of the auricles that the blood is thrown into the ventricles, as I have already shown, and from there, by the contraction of the ventricles, it is propelled and distributed. Concerning local motions, it is true that the immediate moving organ in every motion of an animal primarily endowed with a motive spirit (as Aristotle has it¹⁴) is contractile; in which way the word *veopou* is derived from *veuw*, *nuto*, *contraho*; and if I am permitted to proceed in my purpose of making a particular demonstration of the organs of motion in animals from observations in my possession, I trust I shall be able to make sufficiently plain how Aristotle was acquainted with the muscles, and advisedly referred all motion in animals to the nerves, or to the contractile element, and, therefore, called those little bands in the heart nerves.

But that we may proceed with the subject which we have in hand, viz., the use of the auricles in filling the ventricles, we should expect that the more dense and compact the heart, the thicker its parietes, the stronger and more muscular must be the auricle to force and fill it, and vice versa. Now this is actually so: in some the auricle presents itself as a sanguinolent vesicle, as a thin membrane containing blood, as in fishes, in which the sac that stands in

¹⁴ In the book *de Spiritu*, and elsewhere.

