

this subject; and his discoveries and descriptions, even of very minute parts of the muscular system, are spoken of with praise by modern anatomists.<sup>9</sup>

We may consider, therefore, that the doctrine of the muscular system, as a collection of cords and sheets, by the contraction of which the parts of the body are moved and supported, was firmly established, and completely followed into detail, by Galen and his predecessors. But there is another class of organs connected with voluntary motion, the nerves, and we must for a moment trace the opinions which prevailed respecting these. Aristotle, as we have said, noticed some of the nerves of sensation. But Herophilus, who lived in Egypt in the time of the first Ptolemy, distinguished nerves as the organs of the will,<sup>10</sup> and Rufus, who lived in the time of Trajan,<sup>11</sup> divides the nerves into sensitive and motive, and derives them all from the brain. But this did not imply that men had yet distinguished the nerves from the muscles. Even Galen maintained that every muscle consists of a bundle of nerves and sinews.<sup>12</sup> But the important points, the necessity of the nerve, and the origination of all this apparatus of motion from the brain, he insists upon with great clearness and force. Thus he proved the necessity experimentally, by cutting through some of the bundles of nerves,<sup>13</sup> and thus preventing the corresponding motions. And it is, he says,<sup>14</sup> allowed by all, both physicians and philosophers, that where the origin of the nerve is, there the seat of the soul (*ἡ γημυνικὸν τῆς ψυχῆς*) must be: now this, he adds, is in the brain, and not in the heart.

Thus the general construction and arrangement of the organization by which voluntary motion is effected, was well made out at the time of Galen, and is found distinctly delivered in his works. We cannot, perhaps, justly ascribe any large portion of the general discovery to him: indeed, the conception of the mechanism of the skeleton and muscles was probably so gradually unfolded in the minds of anatomical students, that it would be difficult, even if we knew the labors of each person, to select one, as peculiarly the author of the discovery. But it is clear that all those who did materially contribute to the establishment of this doctrine, must have possessed the qualifications which we find in Galen for such a task; namely, clear mechanical views of what the

<sup>9</sup> Sprengel, ii. 150.

<sup>10</sup> Ib. i. 534.

<sup>11</sup> Ib. ii. 67.

<sup>12</sup> Ibid. ii. 152. Galen, *De Motu Musc.* p. 553.

<sup>13</sup> Ib. 157.

<sup>14</sup> *De Hippocr et Plat. Dog.* viii. 1.