

his first description testifies the freshness and depth of the impressions produced on his mind; but how great is the distance from this first sketch, made in the middle of the seventeenth century, and the somewhat less imperfect descriptions of Picard, Le Gentil, and Messier, to the admirable delineations of Sir John Herschel (1837), and of William C. Bond (1848), the Director of the Observatory at Cambridge, U. S. !\*

The former of these two astronomers had the great advantage† of observing the nebula in Orion since 1834, at the Cape of Good Hope, at an altitude of  $60^{\circ}$ , and with a twenty-foot reflector, by which means he was enabled to render his earlier delineations of 1824–1826 more perfect.‡ The positions of 150 stars, mostly of from the fifteenth to the eighteenth magnitudes, in the vicinity of  $\theta$  Orionis, were determined. The celebrated trapezium, which is not surrounded by a nebula, is formed of four stars of the fourth, sixth, seventh, and eighth magnitudes. The fourth star was discovered (in 1666?) by Dominique Cassini, at Bologna;§ the fifth ( $\gamma'$ ) in 1826, by Struve; and the sixth ( $\alpha'$ ), which is of the thirteenth magnitude, in the year 1832, by Sir John Herschel. De Vico, the Director of the Observatory at the Collegio Romano, announced in the beginning of the year 1839 that he had discovered three other stars in the trapezium with his great Cauchoix refractor. These have not been observed either by Sir John Herschel or Mr. Bond. That portion of the nebula nearest the almost unnebulous trapezium, and forming, as it were, the anterior part of the head above the throat, the *regio Huygeniana*, is speckled, and of a granular texture, and has been resolved into clusters of stars both by Lord Rosse's colossal telescope and by the large of three stars, near an indentation which one might certainly regard as the *Sinus Magnus*. Perhaps the drawing gives only the three stars in the trapezium, which range from the fourth to the seventh magnitude. Dominique Cassini, moreover, boasts that he was the first who observed the fourth star.

\* William Cranch Bond, in the *Transactions of the American Academy of Arts and Sciences*, New Series, vol. iii., p. 87–96.

† *Observations at the Cape*, § 54–69, pl. viii.; *Outlines*, § 837 and 885, pl. iv., fig. 1.

‡ Sir John Herschel, in the *Memoirs of the Astronomical Society*, vol. ii., 1824, p. 487–495, pl. vii., viii. The latter of these gives the nomenclature of the separate regions of the nebula in Orion, which have been explored by so many astronomers.

§ Delambre, *Hist. de l'Astron. Moderne*, tom. ii., p. 700. Cassini reckoned the appearance of this fourth star (“aggiunta della quarta stella alle tre contigue”) among the changes which had taken place in the nebula of Orion in his time.