

and suggested at once the thought that it contained mechanism more various and more vast than had yet been conjectured. And when the system of the planet Jupiter thus offered to the bodily eye a model or image of the solar system according to the views of Copernicus, it supported the belief of such an arrangement of the planets, by an analogy all but irresistible. It thus, as a writer<sup>9</sup> of our own times has said, "gave the *holding turn* to the opinions of mankind respecting the Copernican system." We may trace this effect in Bacon, even though he does not assent to the motion of the earth. "We affirm," he says,<sup>10</sup> "the *sun-following arrangement* (solisequium) of Venus and Mercury; since it has been found by Galileo that Jupiter also has attendants."

The *Nuncius Sidereus* contained other discoveries which had the same tendency in other ways. The examination of the moon showed, or at least seemed to show, that she was a solid body, with a surface extremely rugged and irregular. This, though perhaps not bearing directly upon the question of the heliocentric theory, was yet a blow to the Aristotelians, who had, in their philosophy, made the moon a body of a kind altogether different from this, and had given an abundant quantity of reasons for the visible marks on her surface, all proceeding on these preconceived views. Others of his discoveries produced the same effect; for instance, the new stars invisible to the naked eye, and those extraordinary appearances called Nebulæ.

But before the end of the year, Galileo had new information to communicate, bearing more decidedly on the Copernican controversy. This intelligence was indeed decisive with regard to the motion of Venus about the sun; for he found that that planet, in the course of her revolution, assumes the same succession of phases which the moon exhibits in the course of a month. This he expressed by a Latin verse:

Cynthia figuræ simulatur mater amorum :  
The Queen of Love like Cynthia shapes her forms :

transposing the letters of this line in the published account, according to the practice of the age; which thus showed the ancient love for combining verbal puzzles with scientific discoveries, while it betrayed the newer feeling, of jealousy respecting the priority of discovery of physical facts.

It had always been a formidable objection to the Copernican theory that this appearance of the planets had not been observed. The author

<sup>9</sup> Sir J. Herschel.

<sup>10</sup> *Thema Cæli*, ix. p. 253.