

Introduction

The sons of famous fathers are at a disadvantage in achieving distinction for themselves. Of none is this more true than of John Herschel, only son of William Herschel. To his contemporaries the father was notable as the discoverer of Uranus, first addition to the classical list of naked-eye planets. Mature consideration esteems him more as the founder of stellar astronomy, the first to extend systematic observations beyond the bounds of the solar system into galactic and extragalactic space, using the large telescopes of which he was equally a pioneer.

Full-scale biographies of him are numerous; so also, though more abbreviated, are the notices of his sister, Caroline Lucretia Herschel. Her personal and scientific devotion to her brother during his long bachelorhood has become legendary. She fed him with her own hands as he worked at grinding his mirrors; she became an observer and discoverer of comets in her own right. After his death she returned to her native Hanover, where she lived to be almost a hundred, celebrated as much for the lively charm of her personality as for her scientific achievements.

William married only late in life when his fame was fully matured. His position in the contemporary scene

must have resembled that of Einstein, for his name was known to every educated person even though the details of his achievements might be hazy. Then son John made his appearance, an only child in an astronomical household, which kept the strange hours which so often make astronomical observers comparative strangers to their families. Aunt Caroline, forty-two years older than the solitary little boy, took him to her heart, and there began a warm relationship which lasted for more than half a century. After Caroline went to Hanover there was a voluminous correspondence between the two which reads less like that of an aunt and nephew bridging a generation gap than that of a brother and sister.

That John benefited by his inheritance there is no doubt. The father had made his way from poverty and obscurity to a state of affluence and distinction. The son was born into a world where his merits might immediately be recognized by the galaxy of savants and aristocratic patrons with whom he was brought into contact, at first through the family connections. His was a name to conjure with. On one occasion, arriving in France, he showed his documents to a douanier who exclaimed: "Herschel! That is not a name: it is a star!"

The advantages had to be paid for: comparisons with his father must have been inevitable. However, he was gifted with a powerful and versatile intellect which enabled him to excel as a student of mathematics at Cambridge. Ranked Senior Wrangler, that is, best of his year, in the verbal debate which then constituted the examination, he was dismissed, as he recorded, "with a flaming compliment." The study of astronomy was a family heritage which he worthily carried on, in this field inviting direct comparison with his father. In other fields, such as mathematics and chemistry, his achievements were comparable and more diverse. The father was a self-educated genius unequaled in his specialty: the son,

through his formal education, knew how to spread his talents over many fields.

The implied verdict of history has been to rank the father before the son, for Günther Buttman's is the first full-length biography of the latter. The record of John's scientific work contained in this book shows that there has been an injustice to repair and a merit inadequately recognized. However, it would be better to recognize that the merits of these two men are of different kinds, rather than to set their reputations in competition. Certainly, the latter would have been abhorrent to John, who always spoke of his father with a respect and admiration bordering on reverence.

Günther Buttman's biography goes beyond the simple record of the amazing diversity of John's scientific contributions. To do no more than that would have been to miss the essence of the man. In spite of the hazards of his upbringing, John attained a full development of his personality, which comes to us through the historical records and documents with as strong and attractive a voice as that of dear old Caroline. The happiness of his mature years was largely due to his supremely fortunate marriage.

Engineered by a friend, occurring at an age then regarded as within sight of middle age, with a beautiful bride still in her girlhood, the union was idyllic. Physical passion and a compatibility of intellect there certainly were, and beyond these were the wife's qualities of carefree gaiety and readiness to share the hardships and dangers of the African visit. To the end of Herschel's days, his diaries continue to show his devotion to his wife and their twelve children.

There may be yet more to be learned of John's life before his marriage at the age of thirty-seven, for unpublished documents exist that hint at some previous entanglement which was disapproved of by the family and

came to nothing. It would indeed be surprising if one of John's temperament and evident attraction had reached that age entirely heart-whole.

Günther Buttman describes his book as a sketch for a biography. This modesty is justified only in the sense that there may be yet more to be written about John. What he does achieve is to draw attention to one of the liveliest minds and most attractive personalities of the nineteenth century, until now undervalued by historians of science.

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