

The great English worthies of the 17th - 18th century (part 2)

The saying that '*knowledge embodies humility and be distributed and shared*' does not seem ordained for the amazingly extraordinary people. Historically, many geni are known to be strongly egoistic and zealous, who viciously shielded their knowledge and bantered fiercely with their adversaries.

Dr. Edmund Halley, however, was an exceptional figure, and his greatest contribution to human knowledge was to take part in scientific wagers with others, whereas Sir Isaac Newton embodied the other extreme end of the spectrum. Newton was an odd figure - solitary, joyless and was prickly to the point of paranoia. He kept his scientific findings secret and did not let others know about his invention; he kept the invention of calculus a secret for 27 years, which later lead to a long bitter fight on the issue with Gottfried Leibniz, the famous German mathematician.

Dr. Halley, Robert Hooke and Sir Christopher Wren, the three great worthies were once dining in London In 1683, when the conversation turned to the motions of celestial objects. That planets orbit in an elliptical path was known but was not understood why. Wren promptly offered a prize of 40 shillings (then a couple of week's pay) to whosoever could provide a solution. Hooke, known for taking credit for ideas that were not essentially his own, claimed to have already solved the problem but declined to share it on the grounds that it would rob others of the satisfaction of finding the answers for themselves.

Halley, known for becoming obsessive for finding answers, decided to travel to Cambridge in 1684 to call upon Newton, the university's professor of mathematics, and could manage to meet Newton with the help of Abraham DeMoivre, Newton's confidant. Asked what he would think of the curve for the planet's orbit, Newton's prompt reply was ellipse. Halley, struck with joy and surprise, asked him how he knew it, to which Newton answered that he had calculated it. But when asked to show the calculations Newton could not remember where he had put the formula. On Halley's persistent efforts Newton promised to redo the calculation and publish a paper. He did as promised and after two years he produced the "*Principia*" that had not only the answer to Halley's queries, but contained many more path-breaking inventions.

But Newton, being the maverick that he was, intentionally wrote the volumes of *Principia* in a way as to make it difficult for other mathematicians to understand. Halley, nevertheless, took it on himself to produce the book and when the work was nearing conclusion, Newton and Hooke fell into a dispute over the discovery of inverse square law, an issue on which Newton refused to release the third volume without which the first two made little sense. Halley eventually could extract the third volume after extreme flattery to the erratic professor, but then faced financial hurdles. The Royal Society which had promised to publish the book pulled out, citing financial problems and Halley strived hard to pay for the book's publication from his own pocket despite his poor means. To make matters worse Halley who had accepted a clerk's position with the society was informed that he could no longer be paid his salary of 50 pounds per annum in cash, but would be paid instead in terms of copies of published books. Despite all the troubles Halley could finally succeed in publishing the complete volume of Newton's work.

A moot point - who may be commended more, the *maker* or the *mover* who made it possible to bring on the fruits of the *makings* to serve the humankind at large? Judge for yourself!