

The great English worthies of the 17th - 18th century (Part 1)

While going through an exciting book titled “*A Short History of Nearly Everything*” by Bill Bryson, I came across some interesting information that I thought would fascinate others as well.

During the seventeenth and eighteenth centuries England was fortunate to have several extraordinary intellectuals of whom Edmund Halley, Robert Hooke, Sir Christopher Wren and Sir Issac Newton are worth mentioning. Each of them was a genius and amazingly gifted in a multitude of disciplines. A brief reiteration of achievements attributed to each will be followed by some very interesting episodes involving them.

Halley (1656-1742) was a sea captain, a cartographer, a professor of geometry at University of Oxford and the Astronomer Royal. He charted variations in earth’s magnetic field and wrote authoritatively on tides and motions of planets, proposed methods for working out the age of the earth, its distance from the sun and showed that atmospheric pressure decreases with altitude. His inventions include deep-sea diving bell, the weather map and actuarial tables among other things. He even devised a practical method for keeping fish fresh out of season and studied effects of opium. Ironically, the one thing he did not do was discover the comet that bears his name. He merely recognized that the comet which he saw in 1682 was the same one that had been seen by others earlier in 1456, 1531 and 1607. Studying the sighting pattern he predicted reappearance of the comet after 76 years and in 1978 when it was seen, the comet was named after Halley, some 16 years after his death.

Hooke (1635-1703) was a philosopher, physicist and an inventor. He was interested in astronomy and claimed to have stated the laws of planetary motion before Newton. He studied elasticity which led to Hooke’s law. He is perhaps best known as the first person to study ‘*cells*’, a name he coined and later known as *cell biology*. He invented practical telegraph system and though did not make his own microscopes, he was heavily involved with the overall design and optical characteristics of microscopes which he used to study cells.

Sir Christopher Wren (1632-1723) was an astronomer first, an architect second and also a mathematician. As an architect he played an important role in the reconstruction of London city and in designing more than fifty new churches after the great fire of London (1666) destroyed the city, his greatest masterpiece being the St Paul’s Cathedral.

Sir Isaac Newton (1642-1727) was a rare genius, a mathematician, physicist and astronomer who produced his legendary work in the *Principia* (1687) that states the three renowned laws of motion and the universal law of gravitation. As a student he was frustrated by the limitations of conventional mathematics and invented a new form, the Calculus (1660). He also authored the book *Optics* (1704) and his principles of ‘*Celestial Mechanics*’ remained unchallenged till the advent of Einstein’s theory of relativity and quantum mechanics.

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