

## Physics Integration Lesson 25 – Diligence and Testimony

S. Gollmer (2020)

Integration of faith and science takes on many forms; however, one aspect that should never be overlooked is the impact of testimony. Does what we believe impact how we live our lives? Do our beliefs change with popularity or do they remain anchored on something that is unchangeable? In light of these questions, I would like to present a scientist that I have admired for years, Michael Faraday.

Faraday was born to a poor family. Having only a basic education, the remainder of his education was of his own initiative. At age fourteen, he began a seven-year apprenticeship as a bookbinder. This afforded him a wealth of reading material, which advanced his education. One book, which had a significant impact, was *The Improvement of the Mind* by Isaac Watts. (Do you recognize this name? Watts is the author the songs *Joy to the World* and *When I Survey the Wondrous Cross*.)

Faraday took an interest in science, and chemistry in particular. Attending Humphrey Davy's lectures at the Royal Institute, he took meticulous notes. He presented a 300 page book based on these notes to Davy, who was so impressed that he hired Faraday as an assistant. Although Faraday contributed to the field of chemistry, his work with electricity and magnetism gained him the most notoriety. By 1831 he discovered that electricity could be generated by rotating a conductor in the presence of a magnetic field. The formulation of electromagnetic induction is named Faraday's law and is the fourth equation used by James Maxwell to provide a mathematical basis for light as an electromagnetic wave.

In addition to being a renowned scientist, Michael Faraday was a devote Sandemanian. This sect of Christianity began due to the First Great Awakening in England. Major leaders of this revival movement were George Whitfield, John Wesley and Jonathan Edwards. Faraday recognized there was a unity between God and His Creation, which strongly influenced his life. When asked by the British government to develop chemical weapons for the Crimean War, he refused on ethical grounds. When offered knighthood by Queen Victoria, he declined saying "I must remain plain Michael Faraday to the last." When offered a burial site in Westminster Abbey, he refused; although a plaque commemorating him is located there near Isaac Newton's tomb.

1. When I think of Michael Faraday, I am reminded of Proverbs 22:29. Does this verse imply that a diligent person will never have to deal with 'mean' men? If not, what is this verse saying? Explain.
2. Would accepting honors by the government been wrong? Why do you think Faraday responded as he did?