ISAAC NEWTON
A Dramatic Lecture

Seventh Annual NES/MAA Dinner Meeting in Memory of Kenneth J. Preskenis
Framingham State College
Monday, April 6, 2009

Schedule:
6:00 PM: Reception, Faculty-Staff Dining Room, Third Floor of D. Justin McCarthy College Center
6:30 PM Dinner, Faculty-Staff Dining Room, Third Floor of D. Justin McCarthy College Center
8:00 PM Isaac Newton Lecture, Hemenway Hall 212

Isaac Newton

A Dramatic Lecture

Written by H. W. Straley, Charlene B. Straley and F. A. "Chip" Straley
Performed by H. W. Straley as Isaac Newton
Technical Direction Norman Johnson

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Background

Isaac Newton is, perhaps, the greatest intellect and the most important person of the millennium. He was born while England convulsed in revolution, as Cromwell defeated the armies of King Charles I and The Treaty of Westphalia ended Europe's Thirty Years War. He lived immediately after Fermat, Galileo, Kepler and others who had made significant discoveries in mathematics and science. Hence, mathematics and science assumed great importance.

Academic reputation was earned by convincing Royalty you were worth their patronage. In order to protect intellectual discoveries, it was common to write to a third party concealing the discovery in an anagram (secret code). These letters were written in Latin, the language of science and philosophy. Newton often corresponded via intermediaries, especially John Collins, Secretary of the Royal Society, and Henry Oldenburg. The intermediaries would edit the letters, have them copied and then forwarded to the addressee. It often took months for a letter to be delivered.

Calculus is the study of change and area. Newton referred to finding change as a fluxion and area as a fluent. Leibniz used terms similar to those we use today, derivative when finding change and integral when finding area. Prior to Leibniz and Newton, Fermat developed methods for finding derivatives and integrals. However, no one realized these two operations are inversely related. This inverse relationship was first discovered by Isaac Newton opening the door to the scientific and the technical advancements we enjoy today. Unfortunately, Newton did not publish his discovery, choosing to share it with only a few colleagues. Almost twenty years after Newton discovered the calculus; Wilhelm Leibniz published the first article on the calculus. This led to the great conflict. Many accused Leibniz of stealing Newton's ideas while others gave Leibniz credit for discovering the calculus.

Newton's book *The Principia* is considered by many to be the greatest scientific book every written. *The Principia* certainly thrust Isaac Newton to the forefront of scientific thought. He was a man of internal and sometimes violent external conflicts. By today's standards he might have been considered an emotionally abused child. He trusted no one and kept his ideas to himself. His virulent hatred of Robert Hooke and Wilhelm Leibniz impacted the scientific world for generations and caused England to fall behind Europe in scientific and mathematical progress for nearly 100 years.

Historical dramatizations traverse a narrow path between two ravines. On one side is historical accuracy; while on the other is dramatic interest. We have tried to blend accuracy and drama in our interpretation of the life and character of Isaac Newton.

 Persons desiring information should contact Dr. H. W. Straley, Mathematics Department, Wheaton College, Norton, MA. 02766, 508-286-5691, straley_harrison@wheatonma.edu; or Dr. Charlene B. Straley , 500 Elm St., Mansfield, MA 02048; charstraley@concast.net; or Prof. F. A. Straley, Drama Department, Arizona Western College, P. O. Box 929, Yuma, AZ, 85366, 928-344-7592, chip.straley@azwestern.edu .