

New transcription reveals Newton's rare 'theory of everything'

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A new transcription of Isaac Newton's "theory of everything," providing rare insight into the scientist's views on nearly all known natural phenomena, is now available online to scholars around the world, thanks to an Indiana University research team.

Isaac Newton, the seventeenth-century physicist and astronomer whom many consider the leading figure in the history of science, is widely known for his theory of gravitational attraction, which according to legend, he contemplated after observing a falling apple.

Now, his largely unexplored views on topics ranging from the beginning of organic life to the origin of heat and flame, are available electronically for access by scholars, scientists and the general public.

In an ongoing project to produce an online scholarly edition of Newton's work, William Newman, professor of the history and philosophy of science at Indiana University, oversaw the editing of Newton's "Of Natures [sic] obvious laws & processes in vegetation."

"This is a highly significant testament of Newton's philosophy that has remained up to now unedited, untranslated and virtually unnoticed by Newton scholars," Newman says, referring to a section of the document that is written in Latin.

"The manuscript is important in part, because it shows how Newton linked alchemy to his early theory of gravitation," Newman says. "Many

alchemists had argued that an ethereal substance circulated between the center of the earth and the sun, and that this invisible material was responsible for combustion, for the subterranean generation of metals, and for the preservation of life in general. In 'Of Natures obvious laws' the young Newton adopted this alchemical theory and modified it by saying that the ether pushed all matter towards the center of the earth, hence accounting for why things fall."

The centuries-old document is held by the Dibner Library for Science and Technology at the Smithsonian Institution in Washington, D.C. Approximately 11 pages of English text are followed by a page and a half of Latin, written upside down. The pages are riddled with worm holes and the document itself was apparently saved from the blitz on London in World War II.

Isaac Newton wrote and transcribed about a million words on the subject of alchemy, or pre-modern chemical science, in formats ranging from laboratory notebooks to indices of alchemical substances.

The Chymistry of Isaac Newton, the project name given to the scholarly online edition of Newton's work, also includes new research on Newton's "chymistry," a seventeenth-century term used to describe alchemical pursuits as they existed in Newton's day.

Supported by the National Science Foundation, the project continues to build a repository of searchable transcriptions with page images.

"Our ultimate goal is to provide complete annotations for each manuscript and comprehensive interactive tools for working with the texts," says Newman. To date, about seven hundred pages have been published and can be keyword searched.

Indiana University's Digital Library Program collaborates closely with

Newman, providing project planning and technical services. The project is affiliated with The Newton Project originating at Imperial College London.

The Indiana University Digital Library Program is dedicated to the production, maintenance, delivery, and preservation of a wide range of high-quality networked resources. Its services and projects support the teaching and research of Indiana University faculty, support the learning and research of Indiana University students, and foster research about the digital library.

The Chymistry of Isaac Newton can be viewed at www.dlib.indiana.edu/collections/newton

Credit: Indiana University

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