## Kepler on Aristotle

*Johannes Kepler refuted Aristotle's geocentric cosmology, and charged that Aristotle held science back for nearly two millennia, until the advent of Copernicus, by rejecting the Pythagorean idea that the Earth moves in an orbit around the Sun. Here is an excerpt. Kepler's full document was published in* 21st Century Science & Technology*, Winter 2001-02.*

I am as little satisfied with Aristotle, when he thinks it is sufficient to have asked why the Earth remains at the center of the world, and to answer, that nature assigned this position to it. For it is entirely uncertain, and not conceded by me, that the Earth is in the middle of the world; and were it so, it would be so indeed on account of nature, but in the same way that all things are on account of nature. But one is not satisfied to know that things are according to nature, but one asks why they are that way and not some other way, and what means nature used to bring this about. . . .

*Johannes Kepler (1571-1630)*

shadow sometimes cast by an unseen universal reality.

Therefore, to sum up the issue of Hilbert's case, as if in a single sentence we may say, that: *In the departments of science itself, as in the wrong-headed assertion by Göttingen's late David Hilbert on the subject of physical science, Hilbert, while obsessive in his own fashion, has been among the relatively cleanest, since he abhorred that bad lot typified by the pair of Bertrand Russell-trained fanatics, Norbert Wiener and John von Neumann whom Hilbert kicked out of Göttingen, reportedly on grounds of insufferable scientific incompetence.*

Generally, the mathematics departments' positivists working, still today, can all be fairly identified as in the Delphic tradition of that infamous Macedonian maker of poisons of sundry kinds, the he (*I shall refrain from insisting on "it"*) known as the ancient Aristotle, whose influence probably begat the Euclid who based a system on asserting, *a priori*, what he could not prove, and was never true.

Back then, during the lifetimes of the ancient Socrates, Archytas, and Plato, and before the rise of the Delphic Aristotle, or the evil high priest Plutarch, the notion of a competent body of scientific practice, had been based on the foundation of a notion of universal physical principles, a set of principles which had been derived from the work of ancient trans-oceanic navigators who thought very much as Johannes Kepler was to have done later.[8] This was to be recognized by modern science, first, in Kepler's discovery of the planetary orbits of Earth and Mars, and, then, later in his life, Kepler's uniquely original discovery of the general principle of gravitation on which all competent teaching of modern physical science is premised today.

### *In Real Science Today*

Several centuries later than Johannes Kepler, Albert Einstein had summarized the outcome of Kepler's discovery of the general principle of Solar gravitation: Kepler had defined a universe which is finite, but not bounded, an anti-reductionist universe based on a uni-

8. For example, the Platonic equinoctial cycle of 25,000 years.