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Letters

Leonardo da Vinci, Man of Science

The objection of I. Webb Surratt to the inclusion of Leonardo da Vinci among the "Immortals of Science" [*Science* 130, 1435 (1959)] deserves little support. The choice for the University of Bridgeport was made by nearly 1200 college and university presidents, editors of science periodicals, science editors of the world's great newspapers, and professors of science at scores of universities. In number of votes, Leonardo ranked 13th among the 25 immortals chosen.

In every category of science, from aeronautics and anatomy down to zoology, the first modern presentation is often ascribed to Leonardo. The universality of his genius is construed by Surratt as a weakness in his not having thoroughly worked any single field. His failure to publish kept him from winning earlier recognition, but is this a reason for detracting from his scientific contributions? Sarton, to whom Surratt points as one holding Leonardo in lesser esteem, saw fit to treat Leonardo as one of the great in his *Six Wings of Science in the Renaissance*. In this critical study he states (p. 174), "I shall speak only of two of them, the greatest of all, the Italian Leonardo da Vinci and the Fleming Andreas Vesalius. Leonardo was the real pioneer, for his anatomical investigations were already begun before the end of the fifteenth century, while those of Vesalius culminated in 1543." Sarton, most penetrating of all historians of science, says further (p. 229), "Leonardo was one of the greatest men of science in history, but the world which admired him as an artist did not discover the man of science until many centuries after his death."

Surratt suggests that the selection of Leonardo is "an example of the blind following of tradition." But it is not a matter of tradition; Sarton states (p. 219), "It is pleasant to end with one of the immortals. Leonardo is alive today as he ever was." It shows that modern science is catching up with Leonardo's thoughts, and thus it in part compensates for 400 years of neglect. Leonardo's first published work appeared 132 years after his death. A commentary on Leonardo's work in science was first published by Venturi in 1797, and translations of his more detailed scientific studies were first made by Richter in 1882.

The six magnificent folio volumes published in Oslo in 1911-16 first revealed the full scope of Leonardo's work in anatomy. These volumes were followed by a book by McMurrich, sponsored by the Carnegie Institute of

Washington, which shed further light on Leonardo's work in anatomy.

More recently, O'Malley and Saunders published *Leonardo the Anatomist*, a quarto of 506 pages. Is it any wonder that Castiglioni in his *A History of Medicine* was impelled to repeat that Leonardo's was "the grandest effort ever made by any man to explore and interpret the universe"? Duhem, physicist and mathematician, saw fit to devote a three-volume study to Leonardo. Pledge, in his *Science since 1500*, a standard reference book in the history of science, chose Leonardo's self-portrait as the frontispiece. Finally, Massachusetts Institute of Technology engraved the name of Leonardo da Vinci, along with those of Newton, Darwin, Pasteur, and Copernicus, on its entrance towers, as men fit to be honored among the immortals of science.

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Names for the Sun and Moon

We, the members of the Future Scientists of America Science Club, have discussed naming the earth's sun and moon. We decided to work on this problem for the following reasons. (i) There is no universally established name for our sun. Literature of various kinds informs us that the Greeks, Romans, Egyptians, and others assigned names to the sun. The moon is also unnamed, but it has generally been referred to as our lunar body. This must be clarified. (ii) Heavenly bodies billions of miles away are specifically named, but these two masses in our own system are not. In this space age these bodies should be referred to by name, not as "our sun" or "our moon." Astronomers have named the 12 moons of Jupiter but not the Earth's moon.

We have reached the following conclusions. (i) *Sol* should be used as the name of our sun. This word is from the Latin and will apply very well, for our system is called the solar system. In the future, other systems should be called sun or star systems, not solar systems. (ii) The name of the earth's moon should be *Luna*. To assign any other name would be contrary to the weight of the available reference material.

The members of our science club would like to emphasize the importance of adhering to these established names. People throughout the world would no longer have only a vague notion of the names of the bodies investigated. We would like to see *Sol* and *Luna* used universally.

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