LEONARDO AND LEDA

by John H. Lienhard

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Today, we watch as myth drives science. The University of Houston's College of Engineering presents this series about the machines that make our civilization run, and the people whose ingenuity created them.

When I was in the army, I met an engineer who did sculpture. One day, he did the most lovely little rendering of Zeus coming to Leda in the form of a swan. When I admired it, he gave it to me. It was made of unfired clay, and it did not last.

But the powerful imagery of the myth did last. It stayed with me. That's why I'm so struck by another rendering of Leda, which has also been lost. It's the one Leonardo da Vinci painted in 1504. While the painting's lost, all kinds of preliminary sketches remain. Other artists did versions of Leonardo's Leda. We have a good idea what it looked like.

Two major forces at work in Leonardo's life merge in the painting. One is anatomy, particularly the anatomy of reproduction. The other's the world of living plants and water. Leda came before most of Leonardo's dissections of animal and human reproductive systems. It followed much of his work on water and plant life.

Art historians Kenneth Clark and Carlo Pedretti both seem haunted by the lost Leda painting. Maybe it's that blank region in a mosaic. A space richly hinted at by the lush tiles around it -- an absence teasing our minds all the more because of those hints.

When Pedretti looks at Leonardo's earlier sketches of plants and water he sees both realism and surrealism. On the one hand, Leonardo was the beginning of modern science. Vesalius, Galileo, and Bacon soon developed his idea that we must look directly at nature. Leonardo held all the seeds of modern science.

But the magic of Leonardo is that he recreated everything as soon as he saw it. Coleridge once criticized Newton for being a passive scientific onlooker. Well, there was nothing passive about Leonardo's observations or his Leda.

Scattered about her were eggs bursting with the fruit of her union with swan Zeus. Fecundity was underscored by rich foliage all around her. In preliminary sketch after sketch, Leonardo had studied those plants. He'd shown leaves and flowers as you see them, but dramatized. He gives them a vital swirling impulse.

A stream of water flowed through the Leda scene. And in the years just before he painted her, Leonardo began his studies of moving water. Fluid flow scholars call Leonardo the first student of turbulent eddies. His drawings capture that motion so well his vision

must've been stroboscopic. The water is more than just realistic. It seems alive. And Leonardo later went from the study of moving water to the study of blood flow in living beings.

Element by element, the theme of life spirals outward in a great vortex from Leda. Life springs from the universal idea of union between god and human. Myth mutates into truth and touches our minds on a level too deep to be conscious. It breathes both life and scientific truth -- into us all.

I'm John Lienhard, at the University of Houston, where we're interested in the way inventive minds work.

(Theme music)

Clark, K., *Leonardo Da Vinci* (ed. by Martin Kemp). New York: Penguin Books, 1988. See especially Chapter 6.

Pedretti, C., *Leonardo da Vinci Nature Studies from the Royal Library at Windsor Castle*. Houston: The Museum of Fine Arts, Houston, 1982.

For more on Leonardo and Leda, see Episode 703.