DEE, JONES, AND MAGIC

by John H. Lienhard

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Today, a story about theatre, magic, and 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.

The Greeks used the phrase *Deus ex Machina* for a stage trick -- a mechanical god appearing on ropes and pulleys. Magical machinery captivated the ancient world. You saw far less magic in Medieval theatre -- the theatre of the Catholic Church.

That changed in the late 1500s. English alchemists rediscovered Vitruvius. Vitruvius was a Roman engineer who catalogued the ancient technologies. He filled one of his chapters with mechanical wonders: self-filling bowls, water organs, and more.

Medieval scribes copied Vitruvius over and over for centuries. But they paid little attention to what was in it. Now Renaissance thinkers read the old texts with a new eye. Vitruvius's magic machines struck a nerve among the new alchemists. They held a strange view of magic. They mixed magic tricks with a belief in real magic powers. It seems baffling to us.

Take the 16th-century alchemist, John Dee. Dee always kept one eye on his volume of Vitruvius. He set up a catalogue of human knowledge using Vitruvian principles. Dee also mixed trickery with what he claimed to be true magic.

In 1547, when he was 20, Dee created one of the first magic devices in English Theatre. He built a great flying bird with a man on his back for an Aristophanes play. The device was primitive, but he stunned his audience by the sheer novelty of it.

Sixty years later, the brilliant and arrogant architect, Inigo Jones, surfaced. Jones read Dee. He trafficked with the later alchemists. And he was intimate with Vitruvius. Late in life, Jones wrote a book on Stonehenge. He tried to prove it was a Roman temple built on Vitruvian principles.

Jones took up theatrical machinery in a very big way. His King, James I, put huge sums into his productions. When he did, people began taking Dee's magic for granted in the theatre. They began to expect magic.

Ben Jonson hated the alchemists, and he saw Jones as one of them. He also hated seeing theatre made into a bag of cheap tricks. Jonson wrote scathingly about Jones and his machines:

He designes, he drawes, he paints, he carues, he builds, he fortifies, Makes Citadels of curious foule and fish, . . . He has Nature in a pot!
Still, these new Deus ex machinas were here to stay. They took on a curious importance in Western thinking. When the alchemists put their magic in the theatre, they demystified magic itself. Magic out in the footlights was magic no longer. In the end, theatrical magic helped pave the way for a new and more rational science. It helped us expect magic of a better kind from technology and science.

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

(Theme music)

Yates, F.A., *Theatre of the World*. Chicago: The University of Chicago Press, 1969.

Jones, I., *The Most Notable Antiquity of Great Britain called Stone-heng*. Restored, (John Webb ed.) London: J. Flesher for D. Pakeman and L. Chapman, 1655.

Debus, A.G., *The English Paracelsians*. New York: Franklin Watts, Inc., 1966, Chapter I.

To satisfy the time demands of radio I've asserted some things that are only known circumstantially. For example, Jones was in several of the same places as the alchemist Robert Fludd (see Episode 614.) They were almost surely friends. Jones's education was such that he had to have read Dee (see Episode 474.) The author of Jones' book on Stonehenge is often given as John Webb. Webb was a friend of Jones who professed to have written the book from Jones's manuscript notes after his death.

See also Episode 896 for another view of Dee.