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John Smeaton

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John Smeaton

The late-eighteenth-century Industrial Revolution gave us *remarkable* engineers – Watt, Telford, Wedgwood, Cort, Hargreaves. But most remarkable of all was John Smeaton. He touched every *emergent* technology in a remarkable era of human history.

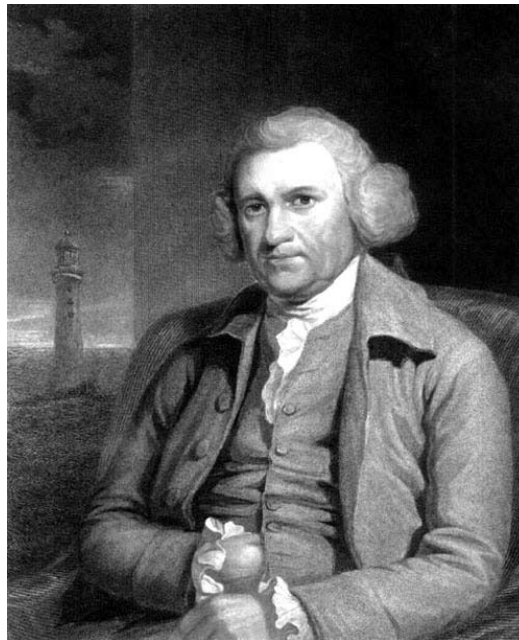
In 1741, the 17-year-old Smeaton met Henry Hindley, a *famed* clock and instrument maker. Smeaton had, by then, developed great mechanical ability in his own workshop. The older Hindley showed a *degree* of collegial confidence in the teenaged boy that changed his life. Smeaton had been *headed for* a career in law. In fact, the next year he even left his home in Leeds to study law in London.

But, when he returned two years later, he threw his full energies, into, not law, but the study of science and mechanics. When he was 24, Smeaton set himself up as a maker of what were then called philosophical instruments – clocks, astrolabes, transits, and the like.

But that was just a way station. Next he took an interest in water wheels, and was soon a consulting engineer on water power projects. Next it was bridges. At the age of only 32, he was put in charge of the third *attempt* to design and build an Eddystone Lighthouse. A light was desperately needed to keep ships off the rocks near the mouth of the English Channel. The first lighthouse had *perished* in a storm, 53 years earlier. A second one had burned just recently. This third try had to get it right. Smeaton cooked up an ingenious foundation of *interlocking* concrete *slabs* and built a light that was still in use over a century later.

He built the Calder River into a fine canal system. He *drained* the *fens* of East Anglia. He secured the foundations of London Bridge. He followed his work on wind and water mills, into broad studies of power production. While Watt was working *kinks* out of his new condensing steam engine design, Smeaton was analyzing and improving the old Newcomen engines. The year before Boulton and Watt went into production, Smeaton built the most powerful, and most efficient, engine in the world. As a result, another century passed before Watt's condensing engines could completely *displace* the older ones. Smeaton also won prizes for scientific work on energy conservation – in the collision of inelastic bodies as well as in water, wind, and steam driven power machinery.

He did so much, and we might well wonder what genie from what bottle had been at his side. Well, I think I know. Smeaton never managed *from afar*. He did his own *drafting* and his drawings were works of art. He based his fees on time spent, never on project costs. He achieved greatness, but never *embraced* greatness. He was an artist before he was an expert. He had the *humility* needed to stay *curious*. He was, quite simply, the soul of the English Revolution – that is, of the Industrial Revolution of the human lot. ■



<i>attempt</i>	Versuch, Anlauf
<i>curious</i>	neugierig
<i>degree</i>	Grad, Maß, Abschluss
<i>displace, to</i>	verdrängen
<i>draft, to</i>	skizzieren, entwerfen
<i>drain, to</i>	entwässern, ableiten
<i>embrace sth., to</i>	sich etw. zu Eigen machen
<i>emergent</i>	auftauchend
<i>famed</i>	berühmt
<i>fen</i>	Sumpfland
<i>from afar</i>	aus der Ferne
<i>head for, to</i>	gehen (in eine Richtung)
<i>humility</i>	Bescheidenheit, Demut
<i>interlock, to</i>	ineinander greifen
<i>kink</i>	Knick, Knitter
<i>perish, to</i>	zu Grunde gehen, untergehen
<i>remarkable</i>	außergewöhnlich
<i>slab</i>	(Stein-) Platte

John Smeaton war das Universalgenie der Industriellen Revolution in Großbritannien. Die Liste seiner Erfindungen reicht vom Leuchtturm bis zur optimierten Dampfmaschine.

Dieser Text von Prof. Dr. John Lienhard ist Teil der Radioserie „Engines of Our Ingenuity“ und wird hier mit freundlicher Genehmigung des Autors und der Radiostation KUHF wiedergegeben. Den Originaltext und weitere 2100 Kurzberichte über die Geschichte der Technik finden Sie unter www.uh.edu/engines