



Electric universe: the true story of electricity

David Bodanis. Published by Little Brown (Distributed by Penguin Books NZ Ltd), 2004. ISBN 0316729728. Contains 245 pages. Price \$35.00

David Bodanis has a track record of painlessly and entertainingly guiding educated, intelligent and thoroughly attractive readers (us) through subjects we like to think we understood at some time in the past but may now be a bit hazy on the details. Bodanis has taught a survey of intellectual history at Oxford and has leap from his best selling $E = mc^2$ to draw intellectual and social historical circles around the Electric Universe.

The book begins with a question. What would happen to our world if electricity failed not just a little, but utterly? The answer, as we all know, is that the force that has been around for more than 13 billion years is the glue that holds us and our universe together... without it, nothing. But how did man penetrate and learn to use this hidden world? The book begins to trace the stories of the Victorian researchers and their telegraphs, telephones, lightbulbs, rollercoaster, and trams. This is not just the science Book of Genesis readers may recall from their school days. Rather, Bodanis artfully draws the inventors and inventions within the intellectual and social contexts of their time. This is a story-teller that you would want at your next dinner party. He adds perception, humour, and shrewd insight to historical fact.

The first eight chapters traverse the ground between Joseph Henry's use of the electric coil to invent the electromagnet and telegraph to the use of Watson Watt's radar and the use of aluminium "chaff" (to block the superior German radar) in the bombing of Hamburg. It is, however, the reader's journey from Bletchley Park decoders to the insight that electrons were as much like waves as like particles that led to semi-conductors, transistors, Silicone Valley, and finally to nerve conduction and neurotransmitters that best illustrates Bodanis' skill as a teacher and entertainer.

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