



From Ancient Inventions

"A vain book collector wearing spectacles who dusts but does not read his books"

Technical wonders of the past

Robert Temple

Ancient Inventions. By Peter James and Nick Thorpe. *Michael O'Mara/Ballantine*: 1995. Pp. 672. £25, \$29.95.

THIS book should be read by everyone interested in science or technology. It is accessible to lay readers but has sufficient references at the back to satisfy scholars. Well illustrated and lively, it could be read by an intelligent teenager.

The authors have obviously spent many years compiling information about ancient technology, Eastern as well as Western, and even including the Americas. I know of no other book that has the breadth and range of this one or which could be recommended so highly for adding a new dimension to the nonexpert's awareness of the past. Even expert readers will be astonished to read about the areas of the

world with which they are unfamiliar.

Collected together like this in a single survey, the material is so overwhelming in its impact that it numbs the mind and poses awkward and embarrassing questions about the nature of civilization. Anyone reading this book can be in no doubt that the history of humanity has been one long succession of brilliant inventions ever since the Stone Age, most of the beneficial effects of which have been lost through recurring social upheaval. The instability of human societies is such that it seems not to matter how many clever dicks appear to make our lives more bearable: their work is bound to be undone. Perhaps we should not complacently assume that this cannot happen to us because we are modern.

In a survey as vast as this, the authors could not possibly have all the information about all of their subjects. Experts in various fields will have no difficulty in adding details. The authors discuss ancient Roman apartment buildings but are unfamiliar with the Sabaean ones of the Hadramaut. They summarize Carlson's analysis of the Olmec lodestone compass but have not seen further writings on the subject and do not know of the Olmec magnetic statue of a turtle in which the lines of force converge in its snout. They have done an excellent job of initial research into ancient magnifying aids and the invention of spectacles, all of which is sound, but are unaware of most of the evidence. They do not know that the Layard lens which they discuss was toroidally ground to correct for astigmatism. James and Thorpe have made an important contribution in calling attention to the purposeful distortion of information in Renaissance times of the true origin of spectacles and telescopes by friends of Galileo who wanted to suppress the fact that Galileo did not actually invent the telescope but got it from someone else.

The authors have found many recent articles by specialists and incorporated the findings into the book. They inform us, for example, that the Mayan "glyph for cacao was identified by David Stuart in 1986". Not all such details are as fully referenced as one might desire. For instance, who exactly has proved the authors' assertion that Archimedes did not actually use burning-mirrors against ships? It is nevertheless nice to know that "The first of the famous Viennese coffeehouses was opened in 1683, using sacks of coffee left behind by the Ottoman Turks after their unsuccessful siege of

Vienna in that year" and other countless amusing tidbits that the authors take delight in recounting.

In a section on sex, the authors reproduce an ancient Greek illustration of a woman using two dildos, tools that they classify as an invention. Their account of ancient contraceptive techniques is important, although they are unaware of the widespread use of the giant fennel plant as an oral contraceptive by the Greeks and the Egyptians — as a result of over-harvesting, the plant became extinct. Roman condoms and pregnancy tests as well as sex manuals merit entries. A gruesome Roman castration clamp of the second or third century is shown in a photograph.

There is no European ethnocentrism in this book. Extremely extensive surveys of the history of Chinese inventions are included, and considerable attention is paid to obscure cultures. We learn, for instance, that the Eskimos invented snow goggles; the Nazca Indians may very well have floated above their desert designs in hot-air balloons made from woven cloth (a photograph of a modern trial replica is shown); the earliest known boat paddle from 8500 BC was excavated in Yorkshire in England; Danish rock drawings show large dugouts; and some palaeolithic bone carvings may be lunar calendars, as suggested by the work of Alexander Marshack. The Stone Age mammoth-bone houses of the Ukraine plain are mentioned, and illustrated, but the authors are unaware that these survived until classical times: similar structures made of elephant bones are described by Diodorus Siculus. James and Thorpe maintain that the supposedly earliest piece of paper found in excavations near Xian in China is "now known to be a fake", but they give no reference to this important assertion.

Some subjects are covered with more loving care than others. The authors devote particular attention to ancient locks and keys, with many fascinating illustrations of how the Egyptians, Homeric Greeks, classical Greeks, and Romans secured their doors. Ancient lighthouses get a lot of attention — I did not know that half a Roman lighthouse survives somewhere near Dover in England. An excellent artist has done the many first-rate illustrations, which are very strong on mechanical details.

The cut-off date of the book is 1492, so it spans about 16,500 years of human invention. I do not know whether we should be more proud that we are clever enough to have invented so many amazing things over this time, or depressed that we have made so little of most of them and thrown away much of the effort involved through our mass stupidity. It certainly makes one wonder what the future holds, and whether mankind's inventive ingenuity will have any greater staying-power in the centuries yet to come than it has had in the past. □



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The skating accident of Saint Liedwi. The earliest skates date from 1000 BC, and were made of bone.

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