

ANCIENT EGYPT – Innovations

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Overview In dealing with Egyptian science, as distinct from Egyptian technological innovation, we looked briefly into broad developments in engineering, medicine, mining, agriculture and astronomy. (In these spheres of development the evolution of Egyptian culture, in its broadest and most definitive forms, was being promoted). Around this axis, of substantive scientific developments, blossomed a garden of technical innovations--in a broad sense the gadgets that accompany science achievement, and that 'make life better for people.' The Egyptians, a practical people, were eminently creative in the generation of such gadgets.

Massive structures and living interiors Apart from the massive engineering challenges, presented by pyramid construction, there were many practical challenges that had to be overcome in the course of building a huge limestone tomb. Basic tools like ramp and lever were employed in construction, to move enormous weights. (As well as to help transport the huge component blocks for distances of a hundred miles or more.) But it was not only the pyramids. The Lighthouse in the harbor of Alexandria, the Pharos, was often cited as a miracle of tall and effective monumental height, over one hundred meters. When it came to the *interior* appointments of such structures as pyramids, or of well-to-do domestic houses, the Egyptians acquired high skills of furniture making: beds and tables and stools. They proved equally proficient with those niceties of dwelling appointments--columns, lintels, sills, jambs, and veneers--which provided a high domestic comfort level, to those who could afford it. House construction itself, furthermore, was strengthened by the inclusion of clay-smeared reeds in walls and foundations. The security provided by this kind of innovation meant a great deal to the man in the street.

Miscellaneous, and an observation It is in the nature of technological innovations, like the above, that in the aggregate they do not display a single outstanding product, but rather a diversity of life-enhancing facilitators--like our own electric razors, I pods, or support hose, which tighten up sagging varicose veins. With energy and inventive ardor, the Egyptians found many new ways to medicate themselves, beautify their eyebrows, help themselves sleep well., orient themselves in time with a functional 365 day calendar and calculate by a decimal system.

Readings

Scheel, Bernd, *Egyptian Metalmaking and Tools*, Haverfordwest, 1989.

Nicholson, Paul T.; Shaw, Ian, eds., *Ancient Egyptian Materials and Technology*, Cambridge, 200;

Discussion questions

During which eras of their long imperial history were the Egyptians most prolific with inventions and discoveries? Please get into detail.

Was there any traditional training for scientists and inventors in ancient Egypt, or did they tend to learn by apprentice work and on the job experience? You might start by looking into the life of the legendary architect Imhotep, who was ultimately deified for his great skill.

The Egyptians were active exporters of paper to the Greeks and Romans, as early as 3000 B.C.E. Who were the main consumers of paper, in those cultures? What use did they make of paper? How was it distributed?