These chambers, King Cheops made as burial chambers for himself in a kind of island, bringing in a channel from the Nile. The pyramid itself took twenty years in the building. It is a square, each side of it eight hundred feet long, and the same in height, made of polished and most excellent fitted stones. No stone is less than thirty feet long."

2-125. "This is how the pyramid was made: like a set of stairs, which some call battlements and some altar steps. When they had first made this base, they then lifted the remaining stones with levers made of short timbers, lifting them from the ground to the first tier of steps, and, as soon as the stone was raised upon this, it was placed on another lever, which stood on the first tier, and from there it was dragged up to the second tier, and on to another lever. As many as were the tiers, as many were the levers; or it may have been that they transferred the same lever, if it were easily handleable, to each tier in turn, once they had got the stone out of it. I have offered these two different stories of how they did it, for both ways were told me.}"

Think of the Ma'at principle again, in light of what Herodotus just wrote. What does it say? {The heart of a just and truthful man can be weighed in a balance against the feather of Ma'at.}. How can a Pharaoh like Khufu be so cruel to his fellow man and, at the same time, erect a pyramid reflecting such great genius? If you think about this paradox for a moment, you will discover that the idea behind this paradox is the beautiful metaphor of the Feather of Truth, which implies that something light can be balanced with something heavy, or that a great weight can be leveraged by a lightweight. This is the principle of the weak force in the universe. If you were an ancient Egyptian engineer, how would you go about applying this general principle to the building of an Egyptian pyramid? How could you apply this principle to a lifting machine? What would be the significance of such a newly invented technology with respect to your labor force? What is the economic significance of replacing brute force by some other kind of power?

There seems to be several questions and paradoxes here, which would need to be addressed, but Herodotus did not raise these questions. He simply put the paradox, or the anomaly, before the reader who cannot but be distraught and perplexed by his contradictory historical statement.

It is clear that the first interpretation that Herodotus gave of the construction of the pyramid in History 2-124. identified that slave labor was enforced by an evil Pharaoh who treated his people like animals, like cattle or beasts of burden. However, quite to the contrary, his second interpretation in History 2-125. indicated a form of construction which is based on what we would call today a republican outlook, implying that man is not an animal but a creative individual seeking to discover physical principles leading to the mastery of some sort of labor saving technology. This opposite view implies that the Pharaoh treated his people as human beings, and with dignity. Why would Herodotus give his reader precisely those two diametrically opposite options, one bestial and the other human? Is there a way to discover which of those two stories is true, or is it just a matter of guessing and believing? Also, can both of these stories be true, at the same time?
Figure 6. The pyramid Building Machine following the description of Herodotus. Drawings by J.P. Lepre.
His greatest works were the Step Pyramid and the complex of Sakkara (C. 2,630 BCE). As an architect and a chief astronomer, Imhotep became the spiritual guiding light behind the construction of all of the pyramids, especially the Bent Pyramid of Sneferu (C. 2,600 BCE) and the Great Pyramid of Khufu (Circa 2550 BCE), both of which were built by his son and grandsons. Records from the Pharaoh's architect Khnum-Ab-R'A (C. 490 BCE) show that all of the royal architects of the Pharaohs of Egypt, including himself were grandsons of Imhotep.

Between the years 495-491 BCE, the architect KHNUM-AB-R'A, who was Chief minister of works for Upper and Lower Egypt, was given the responsibility for public works being done in the valley of Wadi Hammamat. On one of the public monuments, located there, he has left an inscription showing the records of all of his family ancestors, a total of 24 predecessors leading back to Imhotep, and to his father Kanofer. This Amazing pedigree covers about 2,000 years of Egyptian architecture, thus, covering the entire duration of Egyptian civilization.

The period of KHNUM-AB-R'A corresponds to the reign of Darius, the Persian King who had his architects and engineers build a canal from the Nile to the Red Sea, which the Cyrenaica people of the sea, led by the astronomer-navigator Maui, used to navigate to the Indian Ocean, and from there to the Pacific Ocean, in the period of 232 BCE. All of the names on the list of that architect are said to be consecutive fathers and sons.


Imhotep was also famous for his astonishing medical and scientific accomplishments, as well as for his outstanding skills as an advisor, and scribe of the King. At his death, Imhotep received the greatest of honors, and became immortalized as the Egyptian god of medicine, whom the Greeks later came to identify, and worship as Asclepius. Temples were erected to his