

## Comment

### Casting *versus* Carving of the Pyramid Stones

The casting theory for the stones required for building the pyramids<sup>1</sup> cannot be accepted for the following reasons:

- Huge amounts of fuel should be needed for calcining limestone which is certainly were not available in Egypt.
- The ancient Egyptians built homes from adobe bricks [mud cast and dried in the sun] but they never burnt this adobe to make bricks. This means that the technology of calcining stones at high temperature without melting was not known although they melted gold, reduced oxide ores in furnaces to produce molten copper, and melted sand + limestone + natron to make glass.
- The fact that no copper tools for carving were found on the pyramid plateau does not mean that limestone was not carved. The many huge sarcophagus carved from granite is a testimony of the ability of the ancient Egyptians to carve very sharp edges easily and rapidly when one considers the softness of limestone as compared to granite. For example, that of Kaiemneferet, Old Kingdom, Fourth Dynasty 2700 - 2200 BC made of rose granite, found in Giza, is an extraordinary example of sculpture [Figure 1]. Together with its lid, the sarcophagus weighs over 3 tonnes. In Sakkara there are a number of such sarcophaguses weighing even 7 tonnes. The carving of obelisks and the hieroglyph writings on granite is another example of skilled carving.



Figure 1 - Sarcophagus carved from granite showing skill in carving hard rock

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<sup>1</sup> [http://www.livescience.com/history/070518\\_bts\\_barsoum](http://www.livescience.com/history/070518_bts_barsoum)

- The wall painting in the tomb of Rekhmite in Thebes, XVIII dynasty and dated 1450 BC, reproduced without color in *History of Technology* edited by Charles Singer in volume one, in the chapter dealing with building construction in the early empires, shows workers carving and finishing large blocks of stone [Figure 2].

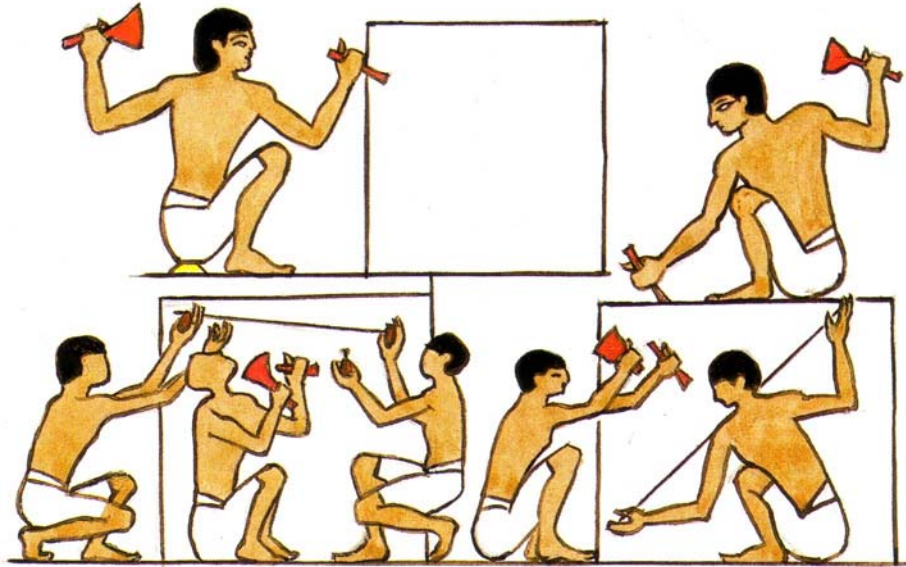


Figure 2 - Wall painting in the tomb of Rekhmite in Thebes, XVIII dynasty and dated 1450 BC, showing masons carving and finishing stones

- When one looks up any book on ancient Egypt one will find that the stone used in the construction of temples, columns for example in Karnak, etc., is very well carved and fitting exactly.
- The ancient Egyptians were skilled in transporting monuments hundreds of tonnes without problem. For example the obelisks. A drawing from Twelfth Dynasty illustrates this point [Figure 3].

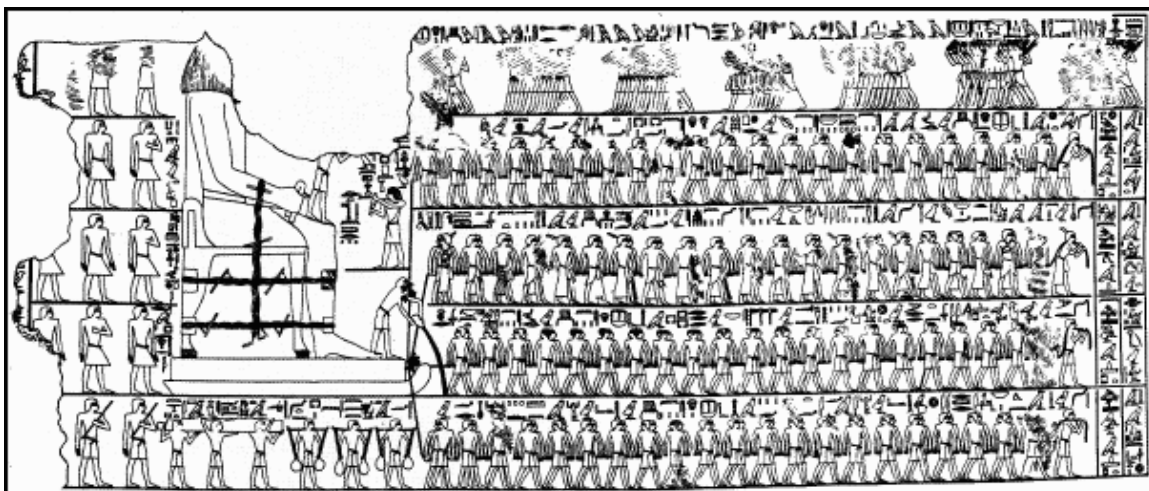


Figure 3 – Moving an Egyptian statue, bas relief from Twelfth Dynasty tomb [C.R. Lepsius, Denkmäler, 1842]

This leaves no doubt that casting is out of place.

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