



MECHANICAL ENGINEERING IN ANCIENT EGYPT, PART 107: CIVILIZATION RIGHTS I

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ABSTRACT

The paper presents some of the aspects of a new expression called ‘*civilization rights*’. It is an introduction to the subject presenting a look into the view of archaeologists and scientists regarding the ancient Egyptian civilization. The documentation techniques practiced by the ancient Egyptians are outlined and the ingratitude of the ancient Egyptian civilization is discussed in details as a new concept in

Egyptology. Illustrations and comments added to clarify the new civilization concepts.

KEYWORDS: Mechanical engineering in ancient Egypt, ancient Egyptian civilization, civilization rights, civilization documentation, civilization ingratitude.

INTRODUCTION

The ancient Egyptians succeeded to build a great civilization sustained for thousands of years and had outstanding features in the fields of mathematics, chemistry, astronomy, architecture, mechanical engineering and technology. This great civilization lifts too many monuments and artifacts behind them showing the whole world how great it was. Let us see how the world scientists look to it through the following survey: Gosse (1915) in his book about the civilization of the ancient Egyptians investigated the education of the ancient Egyptians, their professions, their architecture, their science and engineering skills, their medicine and their astronomy. He outlined that at four years old, the child became a writer and their daily task was writing three pages, drawing animals, learning arithmetic's through games, object

lessons, domestic economy, swimming, and learning sacred songs. The children spent no day idleness.^[1] El-Shatla (1998) in his book about the roots of the Egyptian civilization stated that the Egyptian civilizations did not arise from vacuum but its roots extend for six thousand years BC. He said also that age of the pyramids builders continued in research civilization development since the state unification in 3200 BC by King Mena with efforts for success and mastery leading to innovation.^[2] Shaltout and Belmonte (2005) tried to answer the question: were the temples of the ancient Egyptian civilization astronomically oriented?. They concluded that their work will offer a clear picture of the way in which the ancient Egyptians located and oriented their sacred buildings.^[3] Hart (2007) in his book about the ancient Egyptian civilization declared that by 3500 BC some of the ancient Egyptians were living in towns and performed the first steps in inventing writing , left pieces of ivory and finely made pottery vessels buried with their owners. He added that the majority of the Egyptians inhabited the banks of the River Nile and its branches and without the Nile their civilization would not have existed.^[4]

Harwell and Storemyr (2009) outlined that over 200 quarries were discovered where they were used over 3500 3500 years from Late Predynastic to Late Roman. They outlined also that limestone was the material choice for pyramids, tombs and temples from Early Dynastic time onward (within the limestone region) and from Late Middle Kingdom sandstone was used for all the temples within the sandstone region.^[5] Saleem (2010) in his paper about the Egyptian medical civilization outlined some interesting features of the ancient Egyptian medicine such as: depending on most advantage knowledge, qualified physicians (Imhotep from the 3rd Dynasty, Peseshet from the 5th Dynasty). She outlined some of the medical specialization in ancient Egypt such as: eye diseases, head diseases and teeth diseases.^[6] Dunn (2010) in his book about the lost technologies of ancient Egypt handled very outstanding products from the Egyptian civilization including: statues of Pharaoh Ramses II, Karnak temple, Serapeum, sphinx, obelisks and Mega machines. He performed an engineering analysis for the handled monuments illustrating the extreme accuracy and profession of the ancient Egyptians in producing them.^[7]

Helps (2011) examined the development of tool technology in ancient Egypt from 4000 BC to 300 BC. He clarified the materials used for tools production, and the use of tools in brick making, woodworking, stone working, agriculture, hunting, mummification medicine, personal hygiene, leather and fabric working.^[8] Teeter (2011) investigated the origin of the

Egyptian civilization through studying the Predynastic and Early Dynastic Periods. She presented graphical scenes from Naqada I, II and III and decorated pottery objects.^[9] Nawar (2013) stated that Egypt was a leader in many fields including astronomy, chemistry, medicine and engineering. He added: they were among the first nations developing metallurgy where they were the first to extract copper and gold.^[10] Agai (2017) stated that there was a tradition according to which the ancient Egyptians were the most civilized people. He discussed the reasons that led to the development of the tradition of the ancient Egyptian civilization. He analysed the role of the River Nile in the ancient Egyptian civilization and discussed the theories of the perception of the ancient Egyptian civilization.^[11] Elhabashy and Abdelgawad (2019) provided an overview for the history of the profession of nursing in ancient Egypt and discussed nursing as a health care profession in the ancient Egyptian civilization. They covered a time span from 3100 BC to 395 CE.^[12]

Awad (2020) investigated the physical factors affecting the Pharaonic architecture: geographics, geological, social and religious factors. He outlined that the Egyptian civilization was one of the most appreciative of science and gathered its parts in one building. They added: The ancient Egyptians invented the annual calendar on the basis of the full cycle of the sun and calculated the year time to be 365 days.^[13] Metwalli et al. (2021) outlined how the ancient Egyptians practiced medicine with highly professional methods and how they had advanced knowledge in anatomy and surgery and how they treated diseases including dental, gynaecological, gastrointestinal and urinary disorders. They outlined the medical contents of the Ebers, Hearst and Berlin papyri where hundreds of medical cases were mentioned in them.^[14] Rashed (2022) presented a new science called ‘*civilization rights*’. He investigated too many important entries including: original heritage in world museums, scientific conference of civilization rights competition, website and electronic platform for civilization rights, ancient Egyptian heritage manufacturing, manual of alabaster products in Luxor, proposal for books and articles for the civilization rights, River Nile and civilization rights and civilization rights is a rooted science.^[15]

Civilization documentation

The ancient Egyptians established a great civilization and left evidences documenting the existence of this civilization such that no one can say they had no civilization. To do this they invented too many means of ‘civilization documentation’ using all means available in their

times with high relative technology that made them sustained for thousands of years. Here are some of their documentation means.

- The first documentation mean is using ‘tags’ starting from the time of Naqada II (3500-3200 BC) and ‘labels’ starting from the time of Naqada III (3200-3100 BC).^[16] Here are some of the evidences:
 - Fig.1 shows two tags from the time of Naqada II- Naqada III (3320-3150 BC) inscribing the quantities of goods and their origin.^[16]
 - Fig.2 shows a label from the tomb of Queen Neith-Hotep from the 1st Dynasty (3050 BC) inscribing the quantities and origin of some goods. It is in display in the British Museum, London.^[16]

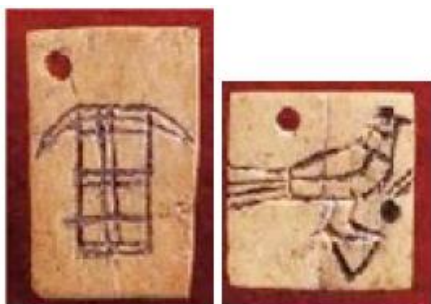


Figure 1: Tag from Naqada II-Naqada III.^[16]



Figure 2: Label from the 1st Dynasty.^[16]

- The second documentation mean is using ‘ostraca’ starting from the time of Naqada III.^[17] Here are some of the evidences.

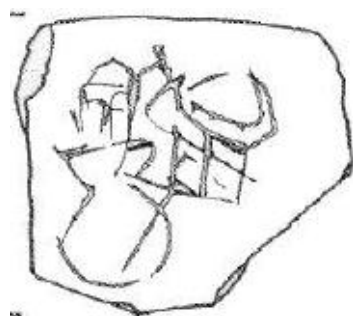


Figure 3: Ostracon from Naqada III-1st.

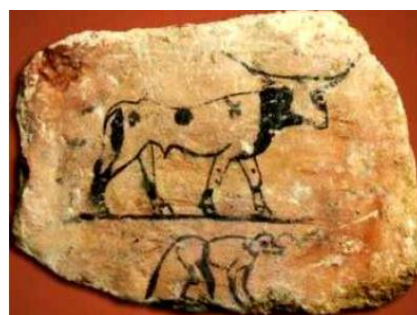


Figure 4: Ostracon from the 1st Dynasty.^[17]

Dynasty.^[17]

- Fig.3 shows a bowl shred produced from the Nile silt and used as an ostracon and inscribed with religious activity during the time of Naqada III-1st Dynasty (3200-3000 BC).^[17]

- Fig.4 shows a limestone ostrakon from the tomb of Queen Neith-Hotep from the 1st Dynasty (3050 BC) inscribing images for a cow and monkey.^[17]
- The third documentation mean is using ‘*stelae*’ starting from the time of the 1st Dynasty.^[18] Here are some of the evidences.
- Fig.5 shows a 1.43 m height sandstone stele of King Djet from the 1st Dynasty (3000-2990 BC) in display in the Louvre Museum, Paris inscribed by the ‘*serekh*’ of the King.^[18]
- Fig.6 shows an 0.455 m height limestone stele of Wepemnefret from the reign of King Khufu of the 4th Dynasty (2589-2566 BC) in display in the Brooklyn Museum, New York inscribed by a scene for the owner behind an offering table and a colored hieroglyphic text written in nine bounded columns and one bounded row.^[18]



**Figure 5: Djet stele from the.
1st Dynasty.^[18]**



**Figure 6: Wepemnefret stele from the 4th.
Dynasty.^[18]**

- The fourth documentation mean is using ‘*seals*’ starting from the time of the 1st Dynasty.^[19] Here are some of the evidences.
- Fig.7 shows a 20.4 mm height limestone cylinder seal of King Peribsen from the 2nd Dynasty (2795 BC). It provided an impression for the King’s Cartouche and other hieroglyphic scripts.^[19]
- Fig.8 shows an 64 mm height golden office seal from the reign of King Isesi from the 5th Dynasty (2414-2375 BC) in display in the Museum of Fine Arts, Boston. It provided the Serekh of the King and hieroglyphic text around it.^[19]



Figure 7: King Peribsen seal from the 1st Dynasty.^[19]



Figure 8: Office cylinder seal of King Isesi From the 5th Dynasty.^[19]

- The fifth documentation mean is using ‘*papyri*’ starting from the time of the 4th Dynasty (2500 BC).^[20] Here are some of the evidences:
 - Fig.9 shows a piece of papyrus from the 4th Dynasty (2500 BC) describing the daily life of the pyramid builders during the time of King Khufu in display in the Egyptian Museum, Cairo.^[20]
 - Fig.10 shows a page from the Berlin mathematical papyrus from the 12th /13th Dynasties (1991-1725 BC) presenting the solution of a mathematical problem solving two simultaneous equations in two unknowns. It is in display in the Egyptian Museum, Berlin.^[20]



Figure 9: Papyrus piece from the 4th Dynasty.^[20]

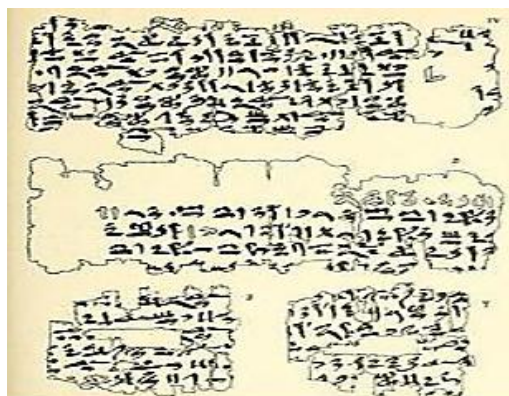


Figure 10: Berlin papyrus from the 12th/13th Dynasties.^[20]

- The sixth documentation mean is using ‘*tomb inscription*’ starting from the time of the 4th Dynasty (2500 BC).^[21] Here are some of the evidences:
 - Fig.11 shows a relief from the tomb of Aa-Akhti, Chief Architect of a King (probably King Nebka) of the 3rd Dynasty (between 2666 and 2647 BC) depicting the tomb owner

striding and holding a staff in one hand and a scepter in the other hand and hieroglyphic text engraved in bounded columns and a single row in display in the Louvre Museum, Paris.^[21]

- Fig.12 shows a relief from the tomb of Queen Neferu II, wife of King Mentuhotep II of the 11th Dynasty (2061-2010 BC) depicting the Queen having her hair dressed. It is in display in the Brooklyn Museum, New York.^[22]



Figure 11: Relief in the tomb of Aa-Akhti from the 3rd Dynasty.^[21]



Figure 12: Relief in the tomb of Neferu II from the 11th Dynasty.^[22]

- The seventh documentation mean is using ‘*obelisks inscription*’ starting from the time of the 4th Dynasty (2500 BC).^[23] Here are some of the evidences:
 - Fig.13 shows a 20.7 m height granite obelisk of King Senusret I from the 12th Dynasty (1971-1926 BC) erected in Matariya, Cairo. It was inscribed by hieroglyphic text carved in a longitudinal single unbounded column.^[23]
 - Fig.14 shows a 28.58 m height granite obelisk of Pharaoh Hatshepsut from the 18th Dynasty (1479-1458 BC) erected in the Great Temple of Amen at Karnak, Luxor. It was inscribed by hieroglyphic text carved in three longitudinal unbounded columns.^[23]
- Even though the temples were constructed for worshipping purposes, the ancient Egyptians used their walls and columns to register their various activities to preserve their civilization documentation for the next generations. According to evidences, they started inscribing their temples during the 12th Dynasty of the Middle Kingdom (1991-1802 BC).^[24] Here are some of the evidences.
 - Fig.15 depicts the inscription of the columns of the ‘White Chapel’ constructed by King Senusret I from the 12th Dynasty (1971-1926 BC). The texts and scenes were carved in the rock-columns covering the whole surfaces.^[24]

- Fig.16 shows an inscription for Pharaoh Seti I from the 19th Dynasty (1290-1279 BC) on a wall of the Hypostyle Hall of the Amen Ra Temple. The inscriptions depicted the Pharaoh in an offering position and hieroglyphic text carved in vertical bounded columns covering the whole surface.^[24]



Figure 13: Granite obelisk of King Senusret I from the 12th Dynasty.^[23]



Figure 14: Granite obelisk of Pharaoh Hatshepsut from the 18th Dynasty.^[23]

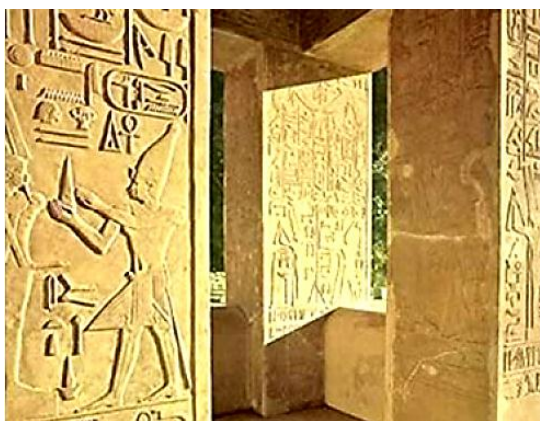


Figure 15: Columns inscription in the White Chapel from the 12th Dynasty.^[24]

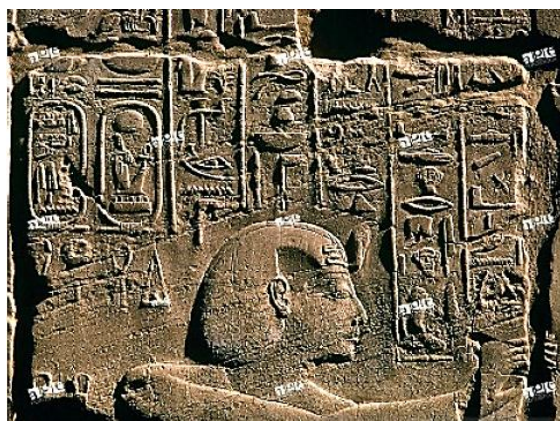


Figure 16: Wall inscription in the Amen Ra Temple from the 19th Dynasty.^[24]

Civilization Ingratitude

The purpose of this paper is to investigate some of the civilization rights with special application to the case of the ancient Egyptian civilization. But before analyzing the

civilization rights we have to analyze the ‘ingratitude’ to this civilization either locally or internationally. Let us investigate what I mean by ‘*civilization ingratitude*’ through the following bad negative activities.

(i) Monuments transfer

- The ancient Egyptians established great monuments such as colossal statues, obelisks and temples in specific places inside Egypt.
- Some of the enemies of this great civilization transferred some of those monuments to other places inside or outside Egypt. Here are some examples:
 - Fig.17 shows what is known as ‘Fayoum Obelisk’.^[25] It was carved during the reign of King Senusret I of the 12th Dynasty (1971-1926 BC) and later transferred in 1972 during the reign of President Anwar El-Sadat of Egypt (1970-1981) to Abgig of the Fayoum Governorate. Comments.



Figure 17: Fayoum obelisk from the 12th Dynasty.^[25]

- The obelisk is broken from its top side.
- It was moved to a residential area beside streets.
- The main label is for a painting shop not for the obelisk itself.
- It was inscribed in one column text.
- The top part was scrapped by Egyptian ingrates.
- Sure, its original position was much convenient for its purpose as assigned by the ancient Egyptians.

- Fig.18 shows the ‘*Dendur Temple*’ in its original location in Nuba and after erection in the Metropolitan Museum of Art.^[26] Comments.^[26]
- The temple was constructed during the period: 23-10 BC.
- Construction material: sandstone.
- Dimensions: 13 x 6.4 x 4.9 m.
- It was dedicated by President Gamal Abdelnasser of Egypt (1956-1970) in 1963 to the United States Government.



Figure 18: Dendur temple in its original location.^[26]



Figure 19: Dendur temple in its new location in the Metropolitan Museum of Art.^[26]

(ii) Tomb Robbery

- ‘*Tomb robbery*’ is an old convention known since the time of the Early Dynastic Period (3150-2686 BC).^[27] It is a bad human activity aiming at stealing the ancient civilizations anywhere.
- In Egypt, ‘*tomb looters*’ are very active as an important ring in the chain of ‘*tomb robbery*’ working hardly to attain, sell and smuggle ancient Egyptian artifacts.
- A foreign report was reporting in 2013 that ‘Egypt's cultural heritage is in danger. Grave robbers, sometimes heavily armed, are taking advantage of political chaos to plunder its poorly guarded archaeological sites. Authorities feel powerless to stop them’.^[28] This means that:
 - The problem is really serious.
 - The ‘*tomb robbers*’ are heavily armed.
 - Political chaos enhanced tomb robbery.
 - The archaeological sites are poorly guarded.

- The looted artifacts fled to a near economical center in the Arabic Gulf, then to foreign countries such as U.S.A., or any European country. Fig.20 shows small tomb-artifacts looted from Egypt in 2009.^[29] Comments.
- The looted artifacts smuggled to Dubai.
- Then transferred to New York.
- In New York it was seized.
- The local Egyptian authorities could not stop the robbery operation nor the smuggling through the Egyptian ports.
- An archaeology site posted in 2013 a report including some facts about ‘*tomb robbery*’ in Egypt as follows.^[30]



Figure 20: Egyptian artifacts looted in 2009.^[29]

- At the pyramids of Saqqara, they advanced with weapons and cleared out a state-owned storehouse. There have even been illegal excavations in the tourist centers of Aswan and Luxor, which experts attribute to organized gangs. Instead of shovels, some even bring along small excavators.
- Deborah Lehr, who runs the Paulson Institute at Chicago, has suggested that the US government should support the investigation by providing satellite images of the sites. But such plans have gotten stuck in the pipelines of the Egyptian bureaucracy.
- Mr. Walt Curnow, the correspondent of ‘*Freelance*’ posted in 20 October 2018 an article including important evidences of artifacts looting in Egypt. Here are some of them.^[31]
- A pouch was discovered in March 2017 hiding Pharaonic mummy masks, 200 artifacts and more than 20,000 coins.

- The loot had been stolen from Egypt with powerful and connected individual's involvement!
- Modern Egypt is built upon ancient Egypt allowing people to dig in their houses and find antiquities.
- Hundreds of antiquities sites from the Pharaonic, Coptic and Islamic eras and museums were left largely unarmed giving raiders the chance to loot them (during the 2011 Arab Spring).
- The Egyptian treasures were passed to the international antiquities black market through the Egyptian international ports or porous borders.
- Many of the antiquities ended up in Europe and United States as private collections.
- A facebook page created in 2016 provided information on how to do your own illegal excavation. It attracted more than 50,000 members in one year!
- As an example of artifacts transfer, Fig.21 shows a segment scraped from the tomb of Tetiki, Mayor of Thebes during the reign of Pharaoh Ahmose I, founder of the 18th Dynasty (1549-1514 BC). It reached the Louvre Museum of Paris and was recovered in 2009 and settled in the Luxor Museum.



Figure 21: Segment from Tetiki's tomb from the 18th Dynasty.^[30]

(iii) Antiquities Smuggling

- '*Antiquities Smuggling*' means transferring the antiquities outside Egypt in an illegal way. This is another shape of the black destructive ingratitude in which the properties of the Egyptian peoples are drawn outside their country and their heritage is under continuous damage by both bad Egyptians and foreigners.
- The Egyptian Minister of Tourism and Antiquities announced that on 11th November 2021, the Archaeological Unit and the Police of Safaga International Maritime Port foiled

an attempt to smuggle 16 artifacts abroad including wooden and bronze statues, manuscripts, mummy masks and gilded amulets.^[32] Comments:

- This is one of the ways used in artifacts smuggling through maritime ports.
- The report didn't say what is happened to the smuggling gang and what punishment they have got.
- The coffin of a woman called 'Shesepamuntayeshes' from the 26th Dynasty of the ancient Egyptian Late Period (664-552 BC) was looted, cut into pieces, sent to Dubai (of UAE) and then sent to a dealer in the USA by 'Express Mail'^[33] and.^[34] Fig.22 shows the wonderful coffin of the diseased after assembly by the USA dealer.^[33]

Comments



Figure 22: Coffin of Shesepamuntayeshes from the 26th Dynasty.^[33]

- The transition station for this smuggling was Dubai. What is about the cooperation between Egypt and UAE in fighting antiquities smuggling?.
- Where are the Egyptian authorities in Egyptian airports to stop this crime?
- Where are the other two coffins of the same Lady and where is her mummy?.
- The 'Arab News' site posted.^[35]
- In Late 2018, police in the Italian city of Naples said that he had seized 23,700 artifacts including 118 artifacts smuggled in a container from Alexandria Port to the Italian Port of Salerno.
- The Kuwaiti General Administration of Custom said: They have seized a Pharaonic sarcophagus lid smuggled inside a sofa from Cairo Airport.
- In August 2018, Egyptian Antiquities Ministry said: 32,638 artifacts had been lost in the last 50 years.

Comments

- This time a smuggling process took place from the North, from Alexandria Port.

- Another smuggling process took place from Cairo Airport (the main airport in Egypt).
 - This means that all types of ports are participating in smuggling Egypt's antiquities.
 - 118 artifacts were smuggled from Egypt in a container! How a container could pass from ports. Where are the security people and where are the customs staff?.
 - 23,700 artifacts were seized in Late 2018 only in one Italian city! How did they bleed outside Egypt?. Where are the responsible authorities?. Where are the Egyptians who love Egypt?.
 - The Egyptian Antiquities Ministry new that 32,638 artifacts had been lost (from Egypt) in 50 years. This is good that a survey exists. But what is happened to stop this artifacts bleeding from Egypt?.
 - The custom authority in Cairo Airport didn't suspect the smuggling process inside a sofa. Where are the modern instrumentation helping them to stop these crimes?. Thanks to the Kuwaiti Custom Authority.
 - In 18 April 2012, Hrag Vartanian reported.^[34]
 - A Brooklyn (of USA) antiquities dealer Mousa Khuli was pleaded guilty for smuggling cultural properties into the United States from Egypt (three-parts coffin set, funerary masks and limestone figures).
 - The objects were smuggled to US from Dubai using false declarations to US Customs.
- Comments:
- The smuggling route was: Egypt – Dubai – USA.
 - USA stopped the artifacts dealer, sent him to the court and given him a 20 years in prison.
 - Thanks to the Brooklyn Custom staff and the Brooklyn court authorities of the USA.

(iv) Monuments Negligence

- The ancient Egyptians established a great civilization that every Egyptian is proud to belong to this civilization. They left monuments and erected them to be a witness for their excellence and sustainability over thousands of year.
- Because of the weakness and non-unity of the Egyptians over specific periods through their long history, some of those monuments were either totally or partially destroyed or left with silly negligence.
- Some of the ancient Egyptian tombs were cut inside rock and decorated by scenes and texts in a fascinating and professional way indicating the high technology used in establishing this art to sustain for thousands of years in a complete dark environment. Those tombs housed records for the daily life of the ancient Egyptians and their sciences

and technologies as important aspects and features of their civilization. The criminal looters not only took the antiquities they found during tomb robbery but also attacked this amazing art through scrapping the walls, roofs and pillars of the tombs.

- Here are some examples:

- Fig.23 shows a fallen colossal statue for Pharaoh Ramses II of the 19th Dynasty (1279-1213 BC) fallen at Memphis (20 km south of Giza).^[37]

Comments.



Figure 23: Fallen colossal statue of Ramses II from the 19th Dynasty.^[37]

- The statue feet/leg and base are missing.
- The crown of the Pharaoh is fallen behind the Pharaoh Head.
- The donkey is standing beside the leg of the Pharaoh. No respect at all.
- Even though Egypt now has about 17 college of archaeology, this statue and other colossal statues are left fallen on the ground in different locations. Where are the Egyptian restoration experts?. Where are the professors of artifacts restoration in the Archaeology Departments in the 17 colleges?. Where are the undergraduate and postgraduate students to erect those statues again of a great Pharaoh such as Ramses II who established the greatest Egyptian Empire during the New Kingdom of Egypt.
- Hatshepsut was a great Pharaoh during the 18th Dynasty (1479-1458 BC) erected four obelisks at Karnak (only one of them remains standing and one is broken and falling down in the Karnak Temple as shown in Fig.24.^[38] Comments:
 - It was reported that an obelisk of Pharaoh Hatshepsut was re-erected in the Karnak Temple by an Egyptian restoration and archaeological team on Saturday 9 April 2022.^[39]
 - This is good news and needs one more step towards returning all the Egyptian obelisks abroad to Egypt. They are as follows.^[40]
 - Italy: 12 obelisks.

- United Kingdom: 4 obelisks.
- United States: 1 obelisk.
- Turkey: 1 obelisk.
- France: 1 obelisk.



Figure 24: Fallen obelisk of Pharaoh Hatshepsut from the 18th Dynasty.^[38]

- Poland: 1 obelisk.
- Those are 20 obelisks located outside of their original location in Egypt and carry a lot of information about the historical era they were produced in and the ancient Egyptian civilization.
- Our Pharaohs will be happy to see their obelisks returned back to Egypt with reasonable compensation to Egypt's people for being outside their country for a long time.
- A sad example of monuments negligence is what happened to the tombs of the rulers and nobles of ancient Egypt. The author wrote a separate paper in his series about the '*mechanical engineering in ancient Egypt*' with a lot of examples on monuments negligence regarding tombs and fallen statues.^[41] Here I present one example from the tomb of Nebamun, scribe and grain accountant during the New Kingdom (1350 BC). His tomb was discovered in 1820, looters damaged most of its paintings and a number of them were transferred to the British Museum to be one of its best treasures.^[42] Back to Egypt's sad tomb of Nebamun, I present a scene for Nebamun and his wife setting in a party with their guests as shown in Fig.25.^[43] Comments:
 - Most of the scraped scenes in the tomb of Nebamun are known and can be restored.
 - Those in the British Museum can be easily returned to their original places in Nebamun's tomb.

- Antiquities authorities have to make a deep surge for the scraped scenes in all over the world to return them back to their original locations.
- A lot of tombs suffer from what Nebamun's tomb suffers from.
- It is a great shame to leave them in this measurable state.



Figure 25: Scene from Nebamun's tomb from the 18th Dynasty.^[43]

CONCLUSION

- The paper presented an introduction for the new subject about '*civilization rights*'.
- The paper discussed the '*civilization documentation*' techniques practiced by the ancient Egyptians starting from the time of Naqada II. Eight documentation media were investigated with the presentation of 16 typical illustrations covering the time period (3320 – 1279 BC).
- The '*civilization ingratitude*' as a new concept and terminology in '*Egyptology sciences*' was investigated in details through the study of:
 - Monument transfer inside and outside Egypt with two illustrations.
 - Tomb robbery with two illustrations.
 - Antiquities smuggling with one illustration.
 - Monuments negligence with three illustrations.
- Comments on the illustrations were executed in depth to clarify the bad and criminal effects of the studied activities harming the glory of the ancient Egyptian civilization.

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DEDICATION

I dedicate this work to Professor Ahmed Yahia Rashed Professor of Architecture Engineering, founder of Farouk Elbaz Center for Sustainability and Future Studies in the British University in Egypt, president of the Institute of the Civilization Rights in Virginia, USA and the PI of the National Initiative Civilization Rights to build Civilization (the initiative of '*Civilizology Science*'). This dedication is for his sincere and hard work to remind the national and international community with the great Egyptian civilization he loved and facing troubles to preserve it.



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BIOGRAPHY

- Emeritus Professor of System Dynamics and Automatic Control.
- Has got his B.Sc. and M.Sc. from Cairo University in 1970 and 1974 respectively.
- Has got his Ph.D. in 1979 from Bradford University, UK under the supervision of Late Prof. John Parnaby.
- Now with the Faculty of Engineering, Cairo University, EGYPT.
- Research on Automatic Control, Mechanical Vibrations, Mechanism Synthesis and History of Mechanical Engineering.
- Published about 300 research papers in international journals and conferences.
- Author of books on Experimental Systems Control, Experimental Vibrations and Evolution of Mechanical Engineering.
- Member of the Editorial Board of a number of International Journals including the WJERT journal.

- Reviewer in some international journals.



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