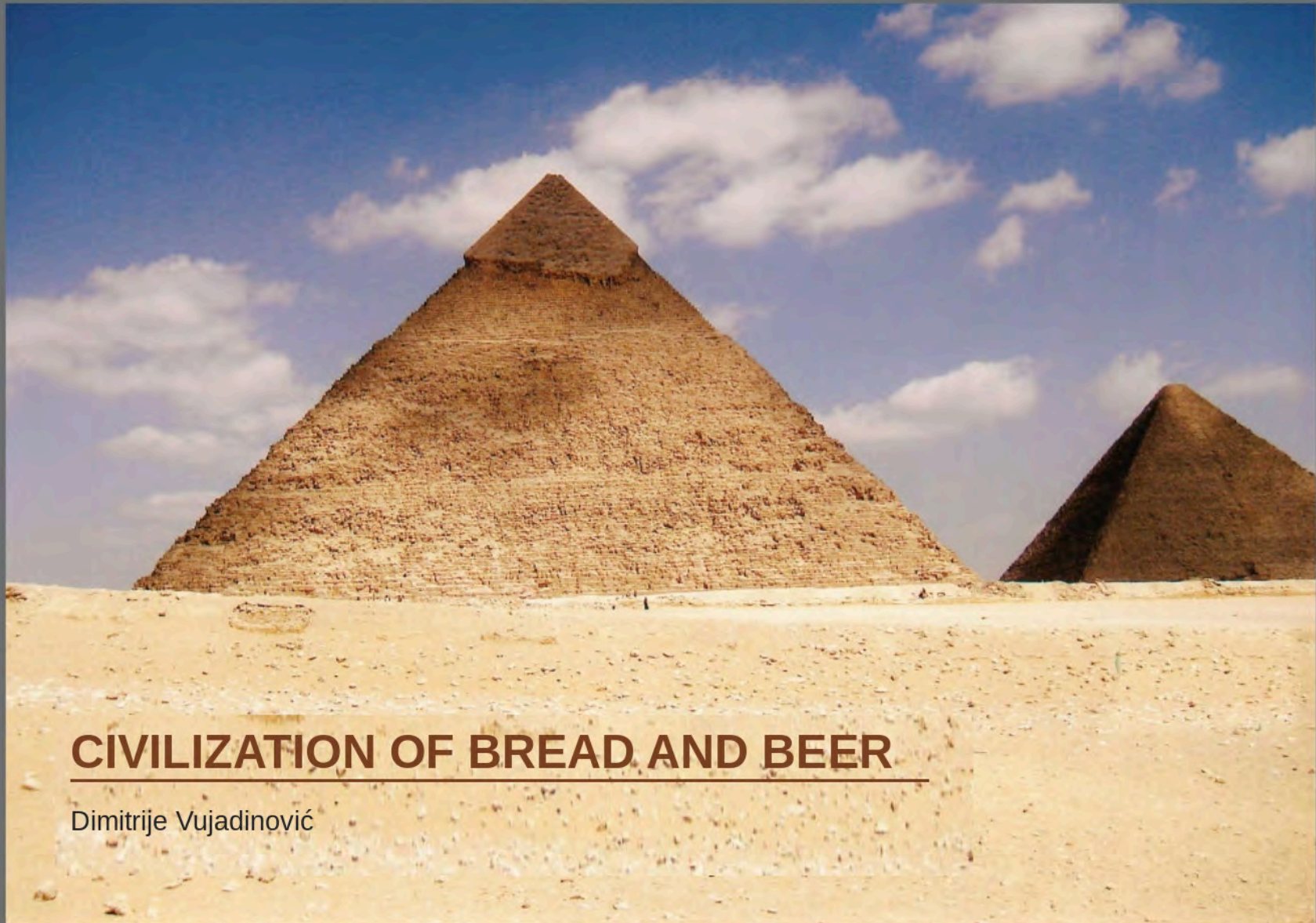




CIVILIZATION OF BREAD AND BEER

Dimitrije Vujadinović



Bread and Beer

The mouth of a perfectly satisfied man is full of beer.

Egyptian inscription from 2200 BCE

It is no exaggeration to say that beer was of central importance to ancient Egyptian society. Both adults and children found pleasure in beer, and it was the principal drink of both poor and wealthy Egyptians. Bread and beer were staple foods. Although most people struggled to make ends meet, there was also a danger of excess, at least among the wealthy. Both adults and children drank it. It was the basic drink of the poor (day labourers were sometimes paid in beer), but it was also consumed by the wealthy and offered to the gods and left in tombs. Isis, goddess of nature, was the protector of beer in Egypt. An important state official was appointed to control its quality, as beer was an integral part of everyday life and religion.

Bread was the principal food of all Egyptians. The poorer classes in fact lived almost entirely on it. In ancient Egypt, bread was produced in essentially the same form for 2,500 years. There is evidence that the first public urban bakeries appeared at the same time as the pyramids. One of the great discoveries in the history of breadmaking was the use of yeast, or the fermentation of dough. This discovery was probably connected with brewing beer. We may imagine that some enthusiastic beer drinker accidentally mixed bread dough with barley left over after brewing—and a miracle happened! During baking, the dough rose, producing bread of greater volume and a pleasant aroma and taste.

But bread was not merely the principal food of all; it was also a unit of culture and a unit of measure by which things were counted. The “number of loaves” signified wealth, and bread ovens throughout the country were almost like mints. Baking bread was primarily a state responsibility, and bakers practised their craft at the Pharaoh's command. On the wall of the royal tomb of Pharaoh Ramesses III, a whole multitude of people employed in the palace bakery is depicted. They performed various tasks: beating dough, carrying water, kneading, mixing yeast, firing the ovens, filling the ovens, carrying loaves, and more.

The Sons of the Nile understood the importance of thorough kneading and did it with their feet. The Greek historian Herodotus considered the Egyptians the only people who kneaded “bread dough with their feet and clay with their hands”. The greatest fear of the ancient Egyptians was not military defeat or changes of dynasty, but hunger. This is also at the heart of the biblical story of Joseph and his brothers, and of the Israelites' exodus from Egypt. Numerous wall inscriptions and reliefs in tombs and pyramids are devoted to the table and food: so that the deceased, when reborn, would not remain hungry and would remember what food and drink to eat and how it should be prepared.



Bakery, Tomb of Ramesses III

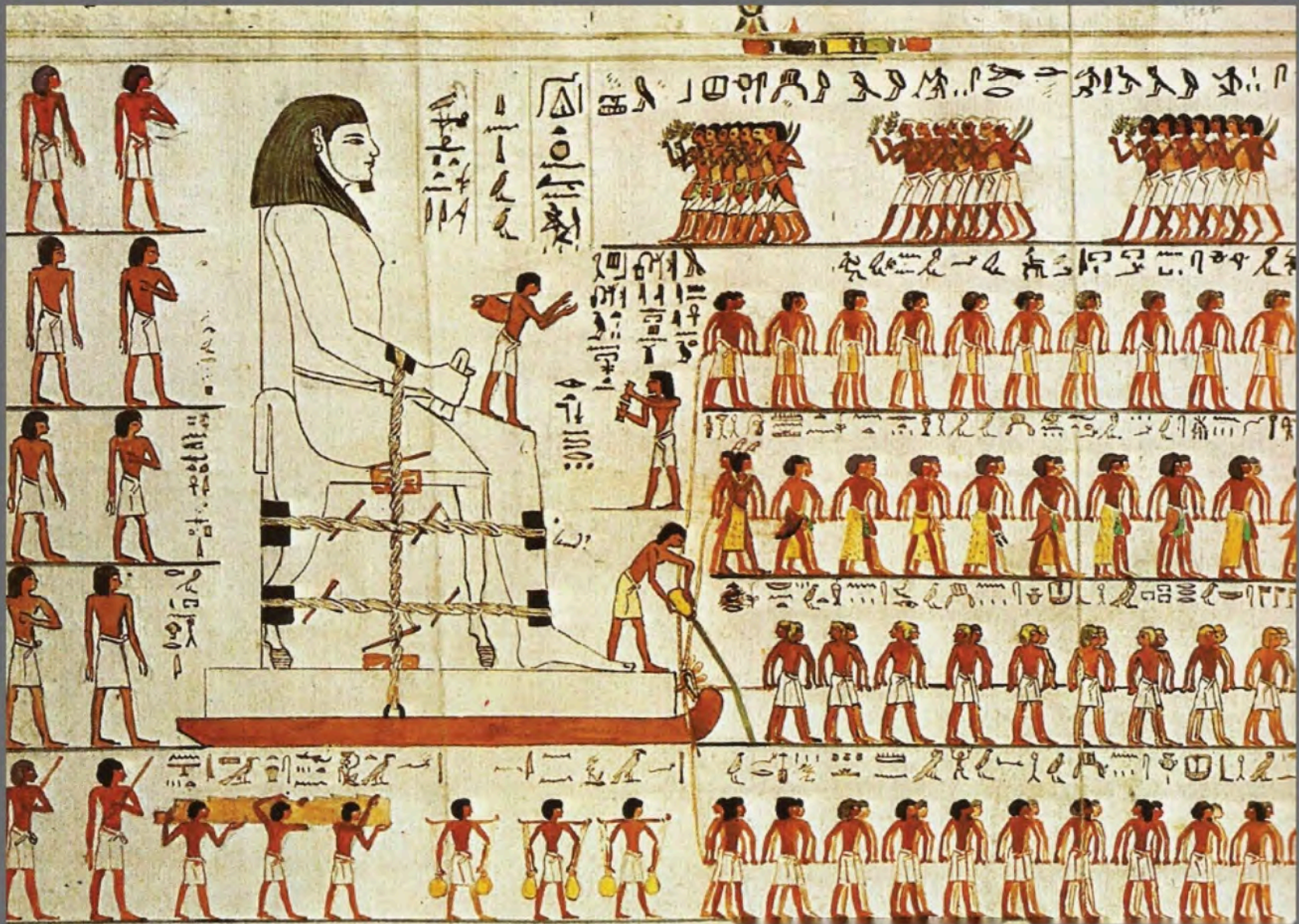


Source of Power and Cause of the Downfall of Ancient Egypt

Ancient Egypt was the first—and so far the only—great civilization in human history to endure continuously for almost 4,000 years. It was the source of many later Mediterranean and European civilizations and cultures that appeared, flourished, disappeared, or still survive. Even today, despite the technological development achieved since then, we remain astonished by the architectural and building skills, the richness of the cultural and artistic heritage left by the followers of the Pharaohs: more than a hundred pyramids, numerous painted tombs and temples, sphinxes and statues, hieroglyphs and mummies.

Ancient Egypt is still a great mystery. What was such a powerful and long-lasting civilization based on? Gold and precious stones, the number of soldiers, outstanding mathematicians and chemists? None of these. Without the abundant two harvests a year made possible by the Nile, and without the production of bread and beer (liquid bread), there would have been no Egyptian civilization. Bread and beer were the basic sources of energy for peasants, workers and soldiers. The owner and ruler of this power was the God on Earth himself—the Pharaoh.

Here lay the source of the power of ancient Egypt, but also the cause of its downfall. Fearing that another great civilization, Rome, might be left without bread, Emperor Augustus Octavian defeated Egypt's last ruler, Cleopatra, in 30 BCE and took control of the grain fields along the Nile. Thus the once powerful state of the Pharaohs disappeared.



Scene from the tomb of Djehutihotep

Sons of the Nile

*I adore You, O Nile! You, O Hidden One, for You bring darkness into the light!
You who cover the fields, created by the Sun god, with water! Nourisher of all animals
and people,
Your course is the one that waters the earth everywhere: Heavenly Messenger, at Your
coming I adore You!*

The ancient Egyptians called themselves “Chemet”, sons of “Chemi”, the black land (hence the word “chemistry”). They traced the origin of their people and their name to the divine Nile, which brought them rich, fertile soil. Thus the Nile ruled over the people. Pharaonic Egypt was the “gift of the Nile”.

Everything was based on the agricultural year. The farmers’ work shaped the annual calendar. The twelve Egyptian months were divided into three seasons of 120 days each. There was no spring, summer, autumn and winter, but “inundation”, “growing of the crops” and “harvest of the grain”. Ancient Egypt was essentially an agrarian state, one vast agricultural estate, because all the land, as well as the irrigation canals, belonged to the God on Earth—the Pharaoh.

One might think that such an agrarian state would have honoured its peasants with all the distinctions it bestowed. Instead, officials received the decorations and marks of honour. When the “Great Overseer of the Fields”, at a ceremonial audience, presented Pharaoh Amenhotep with the “Harvest Report of the South and the North” and humbly reported: “The Nile has not been higher than it has been in the last thirty years”, the Pharaoh ordered that the official messenger be anointed with oil and adorned with necklaces before his eyes.



Agricultural scene, painting in a Theban tomb



Hieroglyphs

In ancient times the Egyptians were called bread eaters, and they were also known as beer drinkers!

Beer was often known by the name “Hqt” (heqet or heket), while another name was “henqet”, and there was also a type of beer called “kha-ahmet”. The main sign in the word Hqt (beer) is the beer jug. The word “bnr” also causes difficulties: it is usually translated as “date”, but it may refer to another—or any—food with a sweet taste that Egyptians used in their beer. In hieroglyphs, the sign of the beer jug was used in words connected with beer—as an abbreviation for “beer”, “tax”, “to get drunk”, “food and drink”, and “waiter”.

For the Egyptians, the measure of most things was bread. The word for grain was “botet”. They saw the “death” of grain as the birth of bread. Herodotus wrote that the Egyptians were the people who kneaded “bread dough with their feet and clay with their hands”. In ancient Egypt, fifty recipes for making bread were used.



Servants bringing food and beer, wooden model, Middle Kingdom

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Beer Saved Humanity from Destruction

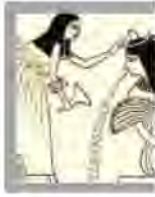
Legend says that the god Osiris taught the ancient Egyptians how to make beer. In ancient Egypt, the official goddess of beer was Tjenenet. Beer was often offered as a gift to the gods and is mentioned as part of the traditional sacrificial formula. It could be intoxicating like Egyptian wine, since the followers of the goddesses Bast, Sekhmet and Hathor had a custom of drinking heavily during religious festivals.

According to the famous myth, beer saved humanity when it was used to deceive the goddess Sekhmet, the “Eye of Ra”. Sekhmet, known as “Mighty One”, was depicted either as a lioness or as a woman with the head of a lion, often holding an ankh or a sistrum. She was the wife of Ptah and mother of Nefertum. On the battlefield, Sekhmet embodied strength and leonine courage and was delighted whenever prey fell into her hands.

As the god Ra grew old, he became increasingly afraid of his enemies and asked Hathor to help him. She became so absorbed in the task that she transformed into Sekhmet, the lion goddess, and began to take pleasure in killing. Ra then feared that she might destroy the human race completely, so red dye was mixed into beer throughout the land. Hathor, believing it was blood, drank until she became intoxicated and forgot her task. Humanity was saved. Once the beer had calmed her, she returned to her true form as the beautiful Hathor and went back to Ra.



Scene on the wall of a tomb from the period of Pharaoh Seti



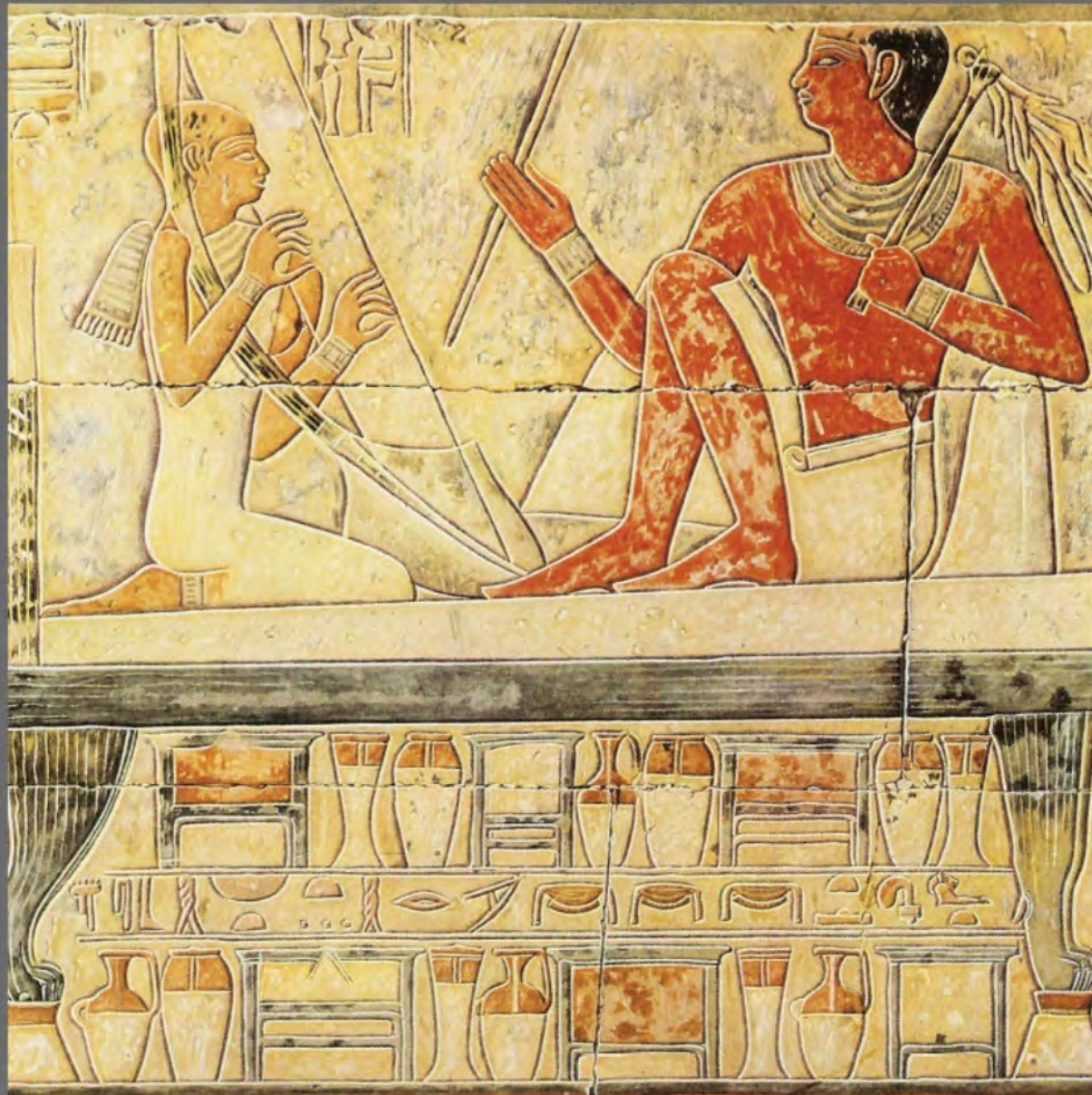
Beer Houses

If you have eaten three loaves of bread and drunk two jugs of beer, and your body wants more, resist it.

instructions of Kheti

The first public taverns appeared in ancient Egypt. Beer, *henqet* (Hnq.t), was a favourite drink of people and gods, rich and poor, adults and children. In the evening people would gather to drink in a "beer house". Beer was the natural drink of the ancient Egyptians and a staple for the wealthy and the fellah (peasant). In Egyptian taverns and beer houses, a favourite toast was "To the honour of your spirit". Works of art and written sources point to the popularity of beer in ancient Egypt. The elite and the masses (*hoi polloi*) enjoyed beers called Bringer of Happiness, Wonderful and Divine. They drank through tubes from ceramic vessels and sometimes did not know when to stop.

A papyrus from 1400 BCE warns of the dangers of babbling "in taverns where beer is drunk". Beer and scenes from ancient Egyptian taverns were depicted on the walls of tombs. Egyptians liked their beer cold, as can be seen from a complaint against thieves who stole food and drink: "They took a jar of beer that was cooling in the water, while I was sitting in my father's room." /New Kingdom/



2 Woman playing the harp, jars of beer below, tomb at Saqqara

Medicine and Status

Mother sent the children to school when they were ready to learn, and every day she welcomed them home with bread and beer.

Instructions of Ani, Papyrus

Besides being a drink, beer was also used in medicine. A medical document dating from about 1600 BCE lists around 700 prescriptions, 100 of which contain the word “beer”. Egyptians left food and beer for their dead. An inscription in an ancient Egyptian tomb reads: “...satisfy the spirit with beer and poultry meat, with bread and beer”.

Beer also had status value—it was considered an appropriate gift of a barrel of beer from a suitor asking for the hand of a royal princess. Pharaoh Ramesses II (1200 BCE) annually offered about 30,000 gallons of beer as a gift to the gods. Similar quantities were recorded as offerings intended to appease angry gods. Barley beer from ancient Egypt is also mentioned in the Egyptian “Book of the Dead”.

Wall inscriptions in tombs and pyramids clearly show the social status of the person to whom they were dedicated, based on the wealth of the table that person could afford during life.



Faraonova trpeza, grobnica Pharaoh's banquet, tomb at Saqqara

Beer Was Produced by Women

Scientists have not been certain how the Egyptians made beer. During the almost 4,000 years of ancient Egyptian civilization, beer production changed and advanced technologically. Most likely, at first the beer was not intoxicating: it was nutritious, sweet, thick and without bubbles. It was strained through wooden tube-shaped siphons because it contained many impurities. This early beer probably had a "strong aroma from the addition of fruit or spices". Although deposits in ancient beer jars reveal which ingredients were used, further research is needed to determine the exact taste of the different beers.

Traditionally, though not exclusively, beer making was initially an activity in which women engaged to earn additional income (or goods) for themselves and their families. Based on scenes from tombs, it has been established that beer in ancient Egypt was made as follows: beer loaves were made from dough rich in yeast. The dough was then lightly baked, and the resulting bread was crumbled and strained with water through a sieve. Ingredients such as dates or more yeast were added. The dissolved mixture was left to ferment in large vats, and the resulting liquid was poured into jars which were sealed for storage or transport.

This process is described from around 2500 BCE, when bread was baked as small flat loaves, since ovens only began to be used after 2000 BCE. Eight types of beer were known, while the use of barley became common only in the Hellenistic period.



Brewery, original wooden model

Bread That Does Not Crumble and Beer That Does Not Spoil

A researcher from the University of Cambridge in England, after examining beer residues and dried bread from Egyptian tombs, found evidence pointing to more complex brewing techniques in the second millennium BCE. This is confirmed by later Greek sources, which say that beer was as strong as the strongest wine.

The process appears to have consisted of two stages. Grain was deliberately allowed to sprout and was heated to produce sugar and aroma. Heating made the grain accessible to enzymes that convert starch into sugars. This mass was then mixed in water with uncooked sprouted grain. Yeast was added to the mixture of sugar and starch, causing fermentation and producing beer.

The brewing method of ancient Egypt was probably similar to one still used in Sudan today: grain, barley or millet is coarsely ground. One quarter of the grain is soaked in water and left briefly in the sun. The rest is made into bread loaves and lightly baked so that the enzymes are not destroyed. The loaves are crumbled and mixed with the soaked, fermented grain. Water and a little beer are added, and the mixture is left to ferment. When fermentation is complete, the liquid is strained. Instead of the medieval herbs or buckwheat used today, dates were added for flavour.

Experiments by Newcastle Brown Ale concluded that the word translated as “date” actually represented anything sweet, since their samples contained no remains of what we today call dates. They also concluded that bread did not necessarily have to be prepared before fermentation, because sprouted barley and other grains could serve the same purpose. Bitter Nubian beer, made in a similar way, could not be stored for long. Egyptian beer, in an age when pasteurization was unknown, often spoiled in the heat. That is why dead Pharaohs were promised bread that would not crumble and beer that would not spoil.



Bread making, relief on the wall of a tomb at Saqqara

Pyramids and Tombs

Beer in the morning, beer in the afternoon and beer in the evening. A little wine in proper measure. After a hard day spent breaking stone for the Pharaohs, at least some time and energy for enjoyment.

About 5,000 years ago, during the imperial age when the Pharaohs ruled Egypt, beer was already an important part of the daily diet. It was made from lightly baked barley bread and was also used in religious rituals. Along with bread, oil and vegetables, beer was an important part of the wages workers received from their employers. The usual daily amount was two jars, each containing a little more than two litres. It was healthier to drink beer than water from a river or canal, which were often polluted.

Wages were often paid primarily in beer and bread and less often in other foodstuffs. Workers at the pyramids of Giza received beer three times a day as part of their meals; archaeologists found five types of beer. On temple friezes, the beer given to Pharaohs and their workers, who were rewarded with large quantities of beer for their work on pyramids and tombs, is part of the story of the greatness of ancient Memphis and Thebes.

The famous Egyptologist Professor Zahi Hawass found, south of the Great Sphinx at Giza, a complete bakery dating from the period when the pyramids were being built. It is believed that such a bakery could produce 20,000 small loaves a day for the labourers working there.



Bakery oven, capacity 20,000 loaves a day, for workers at Giza



Workers' dwellings, houses for workers who built the pyramids at Giza



The Pharaoh's Liquid Gold

Beer, together with bread, oil and vegetables, was an important part of the wages workers received from their employers. The usual daily amount was two jars, each containing a little more than two litres. It was healthier to drink beer than water from a river or canal, which were often polluted.

Ramesses III, who ruled as Pharaoh for thirty years, supplied about six million sacks of grain and seven million loaves as compensation to the temples, or for the construction of his tomb. For many centuries wages were paid exclusively in loaves: a peasant most often received three loaves and two jugs of beer a day. The hero of the tale of Dedi alone received 500 loaves and 100 jugs of beer a day.

We know the wages of priests very precisely. One temple official received 360 jugs of beer, 900 fine wheat loaves and, finally, 36,000 ash-baked flatbreads per year. As for the loaves, he complained about the quantity being too small.

Bread had the role of money. Even then, more than four thousand years ago, there were frauds as well as workers' strikes. A considerable number of surviving letters accuse the great lords or even the priesthood of giving bread late—or not giving it at all—despite having promised that the workers would receive it.

One papyrus from the period of Ramesses IX records the following incident. A group of workers was sent to the countryside. They received butter and beer, but no bread. The workers then began a "lying down in the settlement" strike: they stopped working. When a month later there was still no bread, "they lay down again" and sent a delegation with complaints to Thebes. The strikers succeeded in the provincial capital: the governor gave them the bread that a private contractor had withheld from them on both occasions.

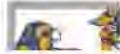
How much was one jug of beer worth? It is impossible to compare it directly with our modern understanding of money; but prices of some New Kingdom foodstuffs, expressed in the copper currency called the deben, give us an idea:

One sack of wheat (about 58 kg) — 1 to 2 deben
1 litre of oil — 1 deben
1 jug of olive oil — 1.5 deben
1 loaf of bread — 0.1 deben
1 litre of beer — 0.5 deben
1 litre of wine — 1 deben
50 fish — 2 deben



Servants offering beer and bread, relief on the wall, Teti's pyramid, Saqqara

Tutankhamun's Secret

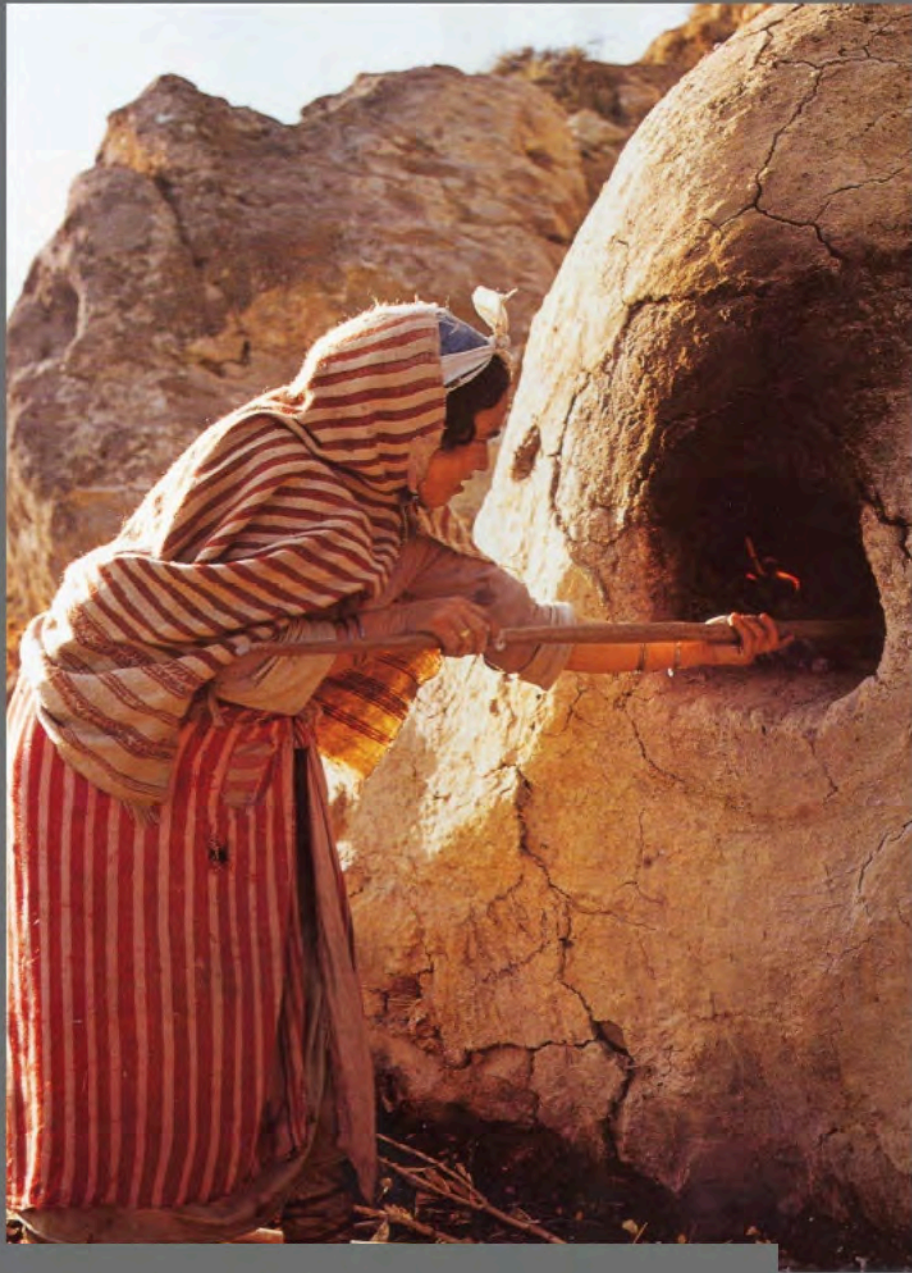


Much remains unknown, but one question is nevertheless important: what did that beer taste like?

In 1990, the Egyptian Exploration Society approached a brewery for help. This marked the beginning of a partnership that, over five years, greatly increased knowledge of beer-making processes in the age of Tutankhamun. The Herald Sun reported on 9 February 1996 that a recipe for "Tutankhamun Ale" would be made on the basis of deposits found in jars at the Temple of the Sun of Nefertiti.

They had left us an extraordinary legacy—a recipe for beer. A special team was tasked with obtaining the genuine raw materials in order to produce "only 1,000 bottles of this beer". The aim was to uncover Tutankhamun's great secret, the "liquid gold of the Pharaoh".

"This is unlike any beer I have tasted before," said Dr Samuel. "It has a rich, full malt flavour and an aroma somewhat reminiscent of Chardonnay." Perhaps the ancient Egyptians had found a way to satisfy both beer lovers and admirers of white wine...



Ancient Egyptian bread oven, modern Morocco



Father of History, Mother of Civilization

Energy stands at the very foundation of all our achievements! For thousands of years, until the invention of steam engines at the beginning of the 18th century, human strength—complemented by the power of domesticated animals—was the primary source of energy. Those who control the sources of energy rule society.

For millennia, the survival and strength of both individuals and communities depended exclusively on bread. Bread was the staple, and often the only, food available, and as such, it was the fundamental source of energy for the hands that built pyramids and temples, and wielded tools and weapons.

In many social processes and events, the Egypt of the pharaohs (Kemet) does not differ significantly from later societies and cultures. For 6,000 years, it has been evident that the foundation of the timeless social matrix was established precisely during the pharaonic era. This matrix has not changed drastically; while technological development, knowledge, and religious norms have evolved, we, the human beings, constitute the core of this matrix—and we change with great difficulty and slowness.

These are eternal anthropological questions and universal principles that concern all of us, regardless of the era in which we lived, live today, or will live in the future. Throughout those turbulent millennia, there was only one constant that signified life—bread.

It may be an exaggeration to say that ancient Egypt is the father of history and the mother of civilization, but then again, it might not be. Bread and "liquid bread"—beer—were the staple food for all inhabitants of ancient Egypt, from pharaohs to peasants. As the essential core of sacred ritual offerings, bread symbolized life and the continuation of life. The quantity of bread signified wealth or poverty and directly influenced social, economic, and political relations.

The eternal question remains: what enabled the rise and development of a great state, and what ultimately led to its disappearance? The answer is never simple, but we will not be mistaken if we call ancient Egypt the beginning of the "civilization of bread"!