

How it all began ...

Relating the invention and early development of pottery to the emergence of social and intellectual life

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In archaeology and history, only clay that has been hardened by fire is considered to be ceramic. It is not necessary to look into questions of intellectual life for functional pots. Even today, there is a German saying that „a pot is a pot is a pot - and that is all there is to it“. Even a mere generation ago, throwing pots from clay was the exclusive preserve of the potter - before they were re-branded ceramists in 1984 under German law. At the first pottery market after the war at the Grassi Museum in Leipzig, the potters announced on a banner: „Ich pfeife auf die Welt, aus Dreck mach ich mein Geld“ – „I do not care what people say, I make my money from dirt“. And generally, the potter is seen with some romanticism, even today.

In the distant past, human beings made artworks from clay that give some reflection of their intellectual life as early as the Stone Age. This leads to the question that concerns us, the question of the origins and the fateful pull that humanity is subjected to in the currents of change.

We are all products of the times we experience. What we create bears our features. We can admire Greek vases and Provençale faience, but we cannot lay claim to them for our own times because a piece of a certain quality reveals immediately what era and what region it comes from. But we have the greatest difficulty in explaining why this is so. Is it the state of mind, the organisation of society, artistic imagination or the functionality? If we are unable to say for our own times whether something takes economic conditions into account or that it was created from a sense of creative delight, how can we possibly relate ceramics to the intellectual circumstances or the condition of society for the distant past! But it is true to state that historical research is only able to comment from a distance. But with relation to the millennia before history began, this cannot be the case. Instead, it is the point achieved in the course of time by prehistorical research. As this branch of research has no „material“ to work on with regard to intellectual life, it has to rely on the consensus of the scientists involved.

- In this, everything accorded to human

nature as reason and instinct has to be considered. This includes the human need for a spiritual/religious core. The fear of impending danger and disaster as well as the need for protection from them is ahistorical, and is present today. In addition, we must take into account the need that every human being has to explain everything rationally in terms of causality, which can however only be satisfied within the scope of the possibilities of each particular era. All human aspects of cultural and social studies are subsumed in cultural anthropology, whose aim is a rejection of prejudices (Boas 1911).

- The second source from which we can create an image of prehistory is the study of so-called primitive peoples still alive today who have preserved their traditions. It permits significant conclusions to be drawn, which have to be supported by research into prehistory.

- The third source is archaeology, which is the only one to provide concrete data for interpretation and dating.

This article attempts to answer questions on the origins of ceramics in our Middle Eastern past from natural, social and material circumstances. We will be restricting ourselves to this region because in all probability, our ceramics was an early Neolithic invention from the Middle East. The time-frame covers everything up to the birth of Christ, or in terms of ceramics, up to Greek vases and terra sigillata, ending with the bronze age. Until this point it is possible to speak of a uniform development of ceramics in the Middle East, from which Mediterranean antiquity, and later that of all Europe, was derived, later evolving separately.

General Developments

We normally accept a rather vague notion of what is meant by the statement that ceramics is one of the oldest creative activities. It was long believed that ceramics appeared parallel to the first settlements. When Katherine Kenyon excavated Jericho, the oldest town-like fortified settlement in the world, she was surprised to find the nomads already had ceramics but the town dwellers did not.

By C14 dating, that was 9850 ± 240 BP (before present, i.e. before 1950). You do not need to be a ceramist to realise that nomadic shepherds would more readily have found clay deposits in their natural surroundings than settlers. Of course farmers had a greater need of flame proof pots to cook their vegetable food. But you cannot pretend that clay can be found anywhere on the surface and that it is the most natural thing in the world to produce ceramics from a certain time onwards. The settlers needed pots and had to make them, even if there were no local clay deposits. When James Mellaart excavated the southern Anatolian settlement mound at Çatal Hüyük, the second oldest urban settlement, he was of the opinion that in layers VII-X, corresponding to 5500-5700 B.C., he had discovered the end of the pre-pottery Neolithic Age, in other words, the period in which ceramics began. But deeper excavations prove that the pre-pottery Stone Age has to be dated earlier. And he found ceramic shards himself from 6000 B.C. Ceramics-free layers have been found in Jericho in the C-14 periods of 8700, 8100 and 7700 BP. But fired clay figures of humans and animals from the 7th millennium have been found in western Iran, and the figure of an ibex from as early as 8000 B.C. was found in Beidha, Jordan, which may however have been fired when a house burned down around it. And the Venus of Dolní Věstonice (C14 = 25600 ± 170) is dated at the end of the Paleolithic period, the Gravettian.

It is assumed there is a link between the Venus figures and intellectual life, magic and religion. With functional pots, there was initially probably only a connection to the general living conditions. A magical significance, which is obvious in the painted murals of cult rooms in Çatal Hüyük, has also been posited for the zig-zag bands of decoration, as they are seen to be symbols related to the sun. The Naquada period boats in Egypt (3700-2900), which had hitherto been interpreted as a representation breaking out of geographical limitations characteristic of the times, seem to be related to religious waterborne processions as they are decorated with palm leaves, flags and standards. Sim-

ple, slender model ships made of clay (more numerous than in other materials) are considered to be mythical sacred barks in which the sun god Re (or Ra) travelled across the sky and into the underworld. Vessels or clay models of valuable wheeled vehicles found in temples such as Meggido or Lagaš may also be votive gifts as thanks or even payment for benefits granted.

With the emergence of the kingdom in the Middle East and in Egypt, the social order changed fundamentally. These changes stemmed from the the formation of an increasingly demanding ruling class, an increasing division of labour, the management of human labour and the production of surpluses, which made writing systems necessary for their administration from the turn of the 4th to the 3rd millennium. Extensive parts of the population could be liberated from the production of food. This led to a rich unfolding of culture and an increase in the availability of luxury goods, which found expression in Mesopotamia and Iran in ornate ceramics, and in Egypt in Egyptian paste used for religious or ceremonial purposes, all of which had nothing to do with pottery. This may well have been attractive for immigrants and invaders. The social order was reflected in deities responsible for the kingdom, the city and specific areas as well as in generally revered sacred objects.

Intellectual and social life

Prehistoric hunters, fishers and gatherers procured edible plants and animals for subsistence from the wild without recourse to their domestication. This economic system was superseded by a productive one in the Neolithic Age. Hunter gatherer societies are today simply described as those where the man hunted whilst the woman collected plants, honey and small animals, erected shelters and kept the fire burning.

In 1861, the Swiss anthropologist and sociologist Johann Jakob Bachofen put forward the view in his study, "Mother Right: An Investigation of the Religious and Juridical Character of Matriarchy in the Ancient World" that the patriarchal family was preceded by the matriarchal one. Recent ethnographic research rejects the assumption of purely matriarchal cultures, which is not at all the same as to interpret Venus figures and other representations of the female as mother goddesses. Bachofen's hypothesis of the matriarchy was adopted by evolutionary ethnology and became popular. It was agreed that a matriarchy had existed, and this enhanced the respect accorded to women in general. The influence of the theory of the matriarchy was regarded as a shift in general consciousness and the development of modern society as a whole. Only as a result of this have we become as open for gender psychology as we are today (Illies 1975). Bachofen is accused

of not discovering the matriarchy but matriarchal myths (Wesel 1988).

As to intellectual life in the distant past, the historian Graves believed that the fundamental mystery was that of motherhood as there was no knowledge of the link between coitus and pregnancy. The image of the "Great Goddess" could thus emerge, who was both feared and worshipped (Graves 1985). However, sexual ignorance has since been questioned in other research, and in contrast, it was the male who was represented as the symbol of fertility. He was sacrificed as the lover of the great goddess to inseminate trees, crops and animals.

In hunter-gatherer societies, the spirits of the dead are present. They are to be feared and must be appeased. Fortune in the hunt is granted by the lord of the animals, who gives the hunter his prey and replenishes the hunting grounds. The focus of thought and feeling becomes the "permanent and ideological concern with the animal as the chief partner in life" (Sigmund 1962). Among most present day hunter-gatherers, there is a belief in the lord of the animals as a being superior to all other powers, as well as in forest and bush spirits. Wilhelm Schmidt claims that hunter-gatherers and nomadic hunters made sacrifices to this highest being, but the settlers sacrificed to the earth mother (Schmidt 1948). Hunter-gatherers made sacrificial offerings of brain and marrow in skulls and hollowed bones as vessels.

The oldest stage in the development of religion is unanimously held not to be a belief in gods. Instead, it is a belief in the "power" effective in creatures and the forces of nature. In the Neolithic Age, this power was personified in the development of intellect and consciousness. It was now possible to address the deity direct in prayer and during sacrifice. And the people who had gathered in the centres of civilisation needed urban temples such as those in Meggido or Lagaš, where representations of deities, sculptures of offering sacrifices and votive gifts from early urban(2700-2500) and New Sumerian (2150-1950) times were found. The attributes of divine beings were cult garments (pleated skirt, headband), but especially a feathered head-dress in Babylon as well as Egypt.

From the endeavour to influence the secrets of the world at one's own discretion, magic was born (Narr 1952). Frazer calls the ability of magicians to produce any desired effect by imitation sympathetic magic. What the magician does to any particular object has an effect on the person who was once on contact with this object. A fisherman for instance believed that a branch from a tree that attracted many birds would also attract many fish (Frazer 1968). Besides the magic that produces desired results, sympathetic magic also includes incantations and taboos to avoid things that are not desired. In mag-

ic, the co-operation of the gods is assumed, whose favour can be obtained by means of prayer, ceremony and sacrifice.

Long before myths and the concept of deities that presupposed them appeared, there was a cult, i.e. ritual acts (Blumenberg 1971). In social units, fixed forms of practice sanctioned by tradition had developed (Lehmann 1913). The cult survived, as the painted ritual murals in Çatal Hüyük in Anatolia (layer VI and VII = c. 5500 B.C.) unmistakably prove. The cult appears to have been an integral part of life in living quarters and cultic sites. First temples only appeared in Mesopotamia in Tepe Gaura (layer XIII, 3500 B.C.). The cult became autonomous in temple complexes, i.e. buildings that no longer served as living quarters. Sumerian texts of the next most recent period state that it was the purpose of life and the duty of humans to recognise the deities, to pay respects to their power and existence as beings who had created and preserved everything, including nature, human society and the individual. An expression of these beliefs can be seen in Sumerian temples in general and processions and sacrifices in particular. Preferred sacrifices were of food (animals, cereals, fruits), which were burnt, buried or otherwise offered to the gods. In this act, the sacrifice was seen as representative of the food which was thus recognised as having originated from the deity and belonging to it. In the family, it was the head of the household who carried out these sacrifices, in society it was the shaman (Vorbichler 1956).

Myths developed in the environment of polytheism. They are stories of deities, in which the deities are accorded human attributes and abilities, desires and feelings, actions and fates. The example of Egypt shows how myths made a transition to enter the kingdom. Osiris, killed and dismembered by his brother Seth, is avenged and buried by Osiris's son, and the son ascends to the father's throne. Osiris survives as the true king. The kingdom made reference to these myths. The god Osiris was the symbol for the actual king, who in death became Osiris (Schott 1964).

In the history of religion, the concept of an original monotheism cannot be proved. The theory was based on the revelation and the story of the creation in the Bible, and it is based on the belief in a superior being among so-called primitive peoples, although this has always been accompanied by animistic and demonistic notions. Animism is the belief in anthropomorphic spirit beings who are believed to be. In primitive religions, whole armies of demons populate the world.

It was only with the organisation of belief that the ritually organised sacrificial cult developed, which was supposed to establish contact to supernatural forces. Forms of sacrifice (1) have survived from ancient history

into the present: sacrifices to accompany the dead as the burning of widows, the sacrifice of chastity as celibacy, self-sacrifice in Roman religion as suicide attacks.

From earliest times, the ritual killing of vanquished foes occurred. It continued from the beginnings of the dynastic age in Egypt (2850 B.C.). The pharaoh killed bound captives more as a demonstration of power than as a sacrifice, but it was a ritual act.

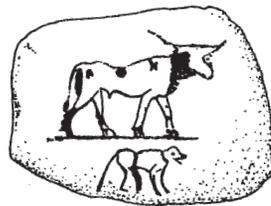
A favoured sacrificial animal especially for the weather god in Mesopotamia, Syria and Asia Minor was the bull. In the cult rooms at Çatal Hüyük, the second oldest urban settlement, its dangerousness is demonstrated in huge dimensions. In Egypt in the 1st dynasty, an Apis bull was shown on an ostrakon from Saqqara, and in more recent dynastic times, it was worshipped in its true form as a deity.

Because of its strength, wildness and potency, the bull was considered a deity all over the ancient Middle East. In ancient Iran, the ritual killing of a bull was the focal point of nocturnal sacrificial ceremonies, which was later taken over by the Mithra cult. The cult of the bull is also linked with the golden calf in the Bible (Otto 1991).

In Egypt, the character of the gods changed as a result of continual intellectual development. The god king was seen as a falcon, and only when humans experienced their own superiority towards animals did supernatural beings take on human features. Myths developed in which forces acted like humans. From the 2nd dynasty, they received animal's heads like Khnum, the god with the ram's head, who made people on the potter's wheel.

Divine power is related to animal species and religious ideas are represented in animal images – a process born from the same mental state as the invention of hieroglyphs.

Between the Old and the Middle Kingdom, one "god" was spoken of in Egypt, of whom the individual gods were various manifestations. The Apis bull was related to the primeval creator god Ptah, who became Hephaistos under the Greeks because he was originally the god of craftsmen (Badawy 1978). Clay utensils were part of cultic practices for the burning of incense.



Earliest representation of the Apis bull with its spotted hide on an ostrakon 2850 B.C.



Representation of the god Khnum from the tomb of Sahure, 5th dynasty, 2450 B.C.

Footnotes

1) Virgil tells a story of the sacrifice of chiefs whose powers were on the wane in the Aeneid, which is retold by Sir James George Frazer (1854-1941), who studied the religions of primitive peoples. It is the famous story of the golden bough, of which Turner (1775-1851) painted an eponymous picture: In the Diana shrine at Nemi (a forest lake) in the Alban Hills south of Rome stood a famous tree on the northern shore, from which no branch was to be broken. Only an escaped slave had permission to do so. If he succeeded he obtained the right to a sword fight with the priest. If he won, he would rule in his place with the title of the king of the forests.

(The level of Nemi Lake was lowered by 21 metres in 1930, revealing two splendid ships from Caligula's times (37-41 A.D.), which were destroyed during the war and have since been rebuilt.)

Another sacrificial rite has also entered subsequent history: In some cultures, sacrificial animals were not to be slaughtered so that their blood would remain in

their bodies to please the gods. This is also in evidence among the Mongols in the 13th century, who conquered Baghdad in 1258 and rolled the caliph, al-Mustasim, in a carpet and shook him to death. It is said the world would have shaken if a single drop of his blood had touched the ground.

2) The ostrakon is a clay potshard used as a writing tablet. It was later used as in Athens (488-417) to „ostracise“ unpopular politicians (Weiß 2004).

3) The golden calf in the Bible was a young animal cast in gold, which Jeroboam had erected in Bethel, north of Jerusalem and Dan in northern Israel after the Canaanite symbolism for Baal, the fertility god. The prophets fought hard against it. According to Exodus 32, Aaron had a golden calf made in Sinai, which Moses „burnt ... in the fire and ground ... to powder and strewed it upon the water, and made the children of Israel drink of it“. Then he ordered the „naked“ to be put to the sword, „and there fell of the people that day about three thousand men“.

Birth of Christ

Beginning of the Chaldean Period (626, Neo-Babylonian Empire) with prophecies, astrology, interpreting omens, magic in Mesopotamia · Zoroaster, founder of Zoroastrianism and prophet in Chorassan (630-553) · Etruscan script with magical properties (late 1st century - 8th century.)

Terra sigillata in Arretium und Puteoli (30) Egyptian paste loses importance (c. 500) Ishtar Gate built in Babylon with glazed tiles (c. 520) Greek vase painting (1000-300)

& gdc6Zbegins in Greece (1000)
B.C. Trojan War (1184) · Moses leads the Jews out of Egypt (1225) · astronomic calculations in Babylon lead to astrology and alchemy · Marduk, patron deity of Babylon, worshipped throughout Asia Minor
7gdcoZ 6Z ends in Asia Minor and Egypt (1600-1000)
Abraham lives in Palestine (between 1900 - 1700)
Gilgamesh epic (late 2nd century.)

Earliest glazed tiles in Tchoga Zanbil, Chuzestan (14th/13th cent.) · Mycenaean bull's head rhyton from Karpathos s, Greece (1400- 1300) · Susa kiln from Iran further developed to the Corinthian kiln in Greece · Late Minoan vessel a in Knossos, Crete (1600-1500) · Snake goddess figure in Egyptian paste: in Knossos, Crete (Neo-Palatial Period 1650-1550) · wheel-thrown figures in prayer posture L in Tiryns, Argolis. Greece (1900-1700) · Cuneiform texts on kilns, smelts and glass recipes in Assyria (1700-700) · Fayence vessels K in Kerma, Sudan (1970-1930)

First historical records:
B.C. beginning of history

Early ushabtis with crossed arms (interpreted as a gesture of prayer) J in private and royal graves in Egypt (2040-1785) · Neo-Sumerian votive chariots H from a temple in Lagash, southern Mesopotamia (2150-1950) · Face urns G in Troy II (2300) symbolic vessels with faience inlay F in Abusir II, Egypt (2450) Early dynastic vessel with angular shoulder and broad handle in form of a face D in Kish near Babylon, Mesopotamia (2500- 2350) · Vitriified metallic ware in Tell Bia, North Mesopotamia (2700-2200) · Vessel thrown on a fast wheel S in Jemdet Nasr, South Mesopotamia (2900-2700) · Coloured "Hiibdhv" as a covering for the temple wall C in Uruk IVb, South Mesopotamia (2900)

3000 Cuneiform script appears in Uruk, Mesopotamia
B.C. Oldest European calendar on clay vessels in Vuedol, Croatia (3000-2600)

Vessels thrown on a slow wheel with painted decoration on white slip A in Teleilat Ghassul, Jordan (3400-2900) · Oldest clamp kiln with perforated kiln floor in Susa, Southwest Iran · Oldest kiln with domed chamber and flues in Sialk, Central Iran · Female clay figure] in Eridu XI, Mesopotamia (3600) · Dancer figure [from Mohammerije, Egypt (1370) · Naqada Period ships depicted on vessels p in Gerzeh, Egypt (3700-2900) vessels in Tell-I-Bakum I-IV o, Southern Iran (4000-3400) · Vessels and figures i in Ur, Southern Mesopotamia (4000-3800)

) 8VaXdaiXEZgdY
B.C. Beginnings of the cult of the dead in Egypt Badari Period in Egypt
Halaf culture spreads to influence Syria and Anatolia
Exports of copper from Arisma and Sialk, Iran, to Mesopotamia and Egypt

Vessels painted in stylised animals y in Sialk near Kashan, Iran (4000-3500) · 7aVXdexZceramics t and glazed steatite beads in El-Badari, Egypt (4100-3100) · Oldest pot with representation of a narrative r in Tell Hassuna IV, Mesopotamia (4800) vessels in Tell Halaf e, Syria (4600-3700) · first ceramics in Jericho, level 5, 4 Jordan (4900-4600) · In Ur, 1050°C only now achieved in firings.

R efugees from the Deluge form the Vina Culture
B.C. (5300- 3500) in the Balkans with the oldest ideographic script for the cultic ritual of funeral ceremonies
Beginnings of plough culture
First cultic buildings (Eridu)
First stamp seals (North Syria)

Vessels with red painted striped pattern q, in Samarra, Mesopotamia (5000-4500) · Fired and unfired female clay figure with children or young animals P in Hacilar, level VI, (5400) and vessels painted in red-brown on a pale background in level II (5100), Anatolia · A clay figure O beside numerous alabaster figures in Tell as-Sauwan, Mesopotamia (5400) · Small clay figures U and red slip-coated or painted, burnished vessels l in Jarmo, Mesopotamia (5900-5500). In the firing in 5900, a temperature of 1050°C was reached, in Samarra not until c. 5500.

6000 Rectangular buildings in Çatal Hüyük, containing
B.C. cult rooms with large, three-dimensional bull's heads and mural paintings of hunting scenes and magical symbols in red, green, black and yellow.
Beginnings of religion with sacrifices to a world-dominating higher being · Brick-built ovens

Clay figure of the mother goddess giving birth on a throne flanked by leopards Y in Çatal Hüyük, Anatolia (6000-4300) · Oldest vessel ceramics: coarse clay mixed with straw R in Tell Hassuna, Northern Mesopotamia (6000-5600) in level 1a 6gXVXeVciZWgZ, in level 1b HiVcVgVciZWgZ T · air-dried mud bricks (up to 72 x 28 x 8 cm in size) in pre-pottery Hacilar X, Anatolia (6000) · Brick-built mud ovens in Beidha VI-I, Jordan (6000-5500) · Simple forms made of clay and low-fired E in Karim Shahir near Jarmo, Northern Mesopotamia (7000-6000)

, Increase in settlement
B.C. Sympathetic magic
Round stone buildings with hard floors in Eynan in the Jordan Valley, Israel (7500-6900) and Jericho, Jordan (C14: 9850±240)

Pre-Pottery Neolithic Age
Basalt bowls with relief patterns and stones scored with anthropomorphic representations in Eynan, Israel (7500-6900) · unfired clay vessels W in El-Chiam in the Juda Desert, Jordan (7600-6300) Sculpture head made of calcite in Mugharet el-Wad, Israel (7900-7000)

- CZdaiX6Z: settlements predominate -
B.C. with a production economy domestication of wild plants, goats and sheep, later cattle; "self-domestication" of humans and domestication of clay

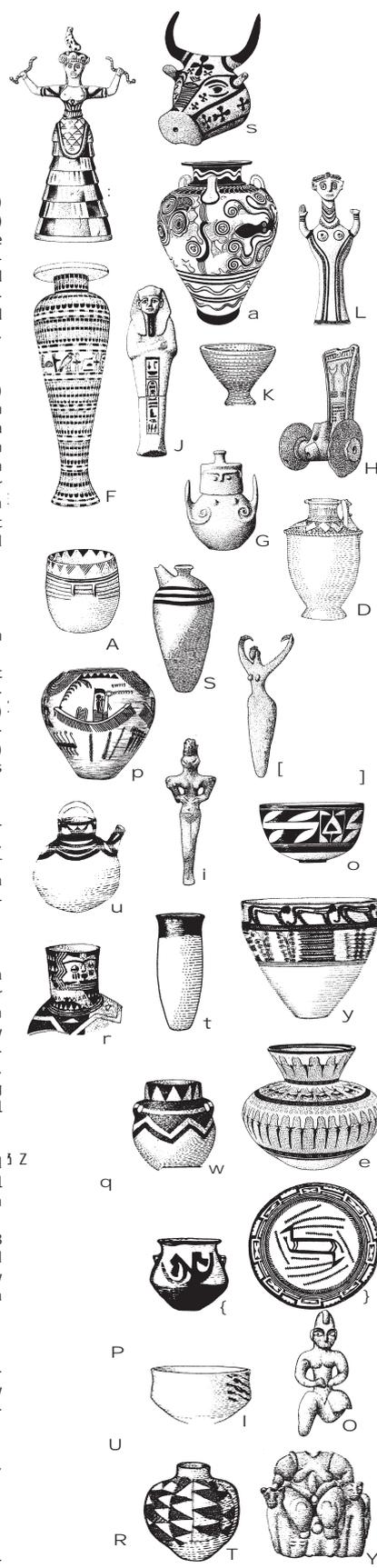
Discovery of mud as a building material (compressed mud) in Sialk, Iran

. First settlements in Beidha und Jericho.
B.C. Nomadic herders keeping gazelle and antelope in herds, which they followed.

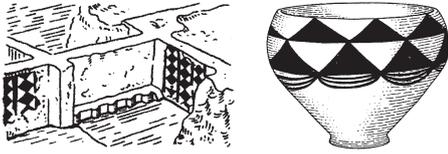
Stone vessels, beads and armbands made of alabaster, marble, limestone sculpture

(JeeZgEvaVZdaiXEZgdY
- Hunter-gatherers.
. Huts and tents, careful burials
B.C.

"Venus" carved in clay Q in Dolní Vstonice, M oravia.
Gravettian, C14= 25600±170
Stone Age culture in Göbekli Tepe, Anatolia (10.000)



techniques used should be described as art skills. Vessel painting achieved its zenith in Iran with the stylised animal portrayals in Tepe Sialk near Kashan (4,800-4,500) and Tepe Hissar south of the Caspian Sea



Mural and vessel painting in Yassy-Depe, Turkmenistan, 3000 B.C.E.

(3,500-2,900) as well as in the ceramics excavated by Herzfeld in Faristan in 1928, the Tell-i-Bakum ceramics (level II, 4,500). In Mesopotamia, the economic and cultural centres moved from the north to the southern river oases. The somewhat less imaginatively painted ceramics in the Ubaid style (4,500-3700) covered a large area, which is evidence of growing cultural ties. In these civilisations, where the potter's wheel also made its appearance, art ceramics were under the influence of the ruling classes, but their religious convictions are not in evidence here. The products cannot be related to magic or symbolism but seem to be an expression of creative abilities, imagination and an aesthetic sensibility. There were various fashions, and the influence of foreign models was also felt. As artwork, ceramics is so expressive of its times that it is used for dating purposes.

In contrast, Egyptian paste in Egypt appeared in a religious context and served the cult of the kings and gods. Beads of Egyptian paste set in gold were used in the flail of the pharaoh's symbols of office, and the animal's tail probably consisted of cascades of Egyptian paste beads. The dark blue Egyptian paste head of the king cobra on the forehead of Tutankhamun's golden mask is said to have been to protect the king. Thoth, the god of wisdom, was portrayed as a brilliant blue figure in the form of a baboon. In contrast to pigments used for painting, the blue glaze of Egyptian paste, created from minerals, was a symbol of heaven and the eternal cycle of nature together with the belief in reincarnation (Schulz 1977).

In the religion of the Greeks, gods in human form with their human characteristics and emotions were portrayed on vases. The hierarchical organisation of the pantheon paralleled patriarchal human society. The Etruscans gave their own names to the Greek gods. The painting on their vases was based on Attic models and became increasingly autonomous in their cultural centres.

Whereas marble was the preferred material of the Greeks for their sculpture, the Etruscans used terracotta. Many clay sculptures have been found as votive offerings and as human figures on the lids of urns and sarcophaguses. In early times, the Romans largely covered their requirements in art by commissions handed to the Etruscans. It was only under Emperor Augustus in the first century that an individual style in Roman art developed. Portrait heads and busts were of significance here. The religion was at first a continuation of village rites from vegetation cults within the family. Finally a pontifical religion developed, with the pontifex maximus at its head and a deified the ruler, who was represented in idealized portraits. Terracotta played an important role here. With the use of bowl-shaped moulds and the production of tableware, terra sigillata represented the first step to industrial production of ceramics.

Conclusion

Through the social contacts they initiated, rites, cults and religions had a sociological role besides their intellectual and ethical ones. Along side politics and economics, they were part of the environment that influenced people in their behaviour. It is remarkable how the development of individuals in their own times is reflected over generations in ceramics. It is the general development from real experience to the unreal, and ultimately to integral conceptions. This is how intellectual life evolved from the ritual cults of hunter gatherers and nomadic herders⁴ to organised religions, and ceramics developed in the same way. It began with concrete observation, discovery, experience and determination of purpose and finished as a work of art, as we may particularly admire in Iran. Then the potter's wheel appeared, and the art of brushwork waned or disappeared completely. A new cycle was set in motion ("life cycle"), from the simple, undecorated forms in mass production to the high art of Greek vases. After this stage was over, the cycle began again on a realistic footing with terra sigillata, which represented the beginnings of industrial production. And this is how things continued up to the art of the manufacturing which ended with the second millennium. The machine started a new cycle

– the age of Karl Marx and Walter Gropius. The work of the hand has become design. Handwriting, which now is only necessary to sign a will, is being superseded by the e-mail, dominated by "asap" – there is not time to write "as soon as possible" in full. We are now right in the middle of the future. It always meant the wider opportunities to develop in a gradually expanding framework, and it still does.

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⁴) The period since the advent of writing is known as "history", the time before this as "prehistory". Research in this period is based primarily on burial objects. The period before this phase of prehistory is the time of nomadic herders, who only rarely buried their dead in a sacred place over several generations, as was the case in the Chalcolithic Period in Al Badari. This means that the cultural achievements of nomadic tribes based on their closeness to nature have not been sufficiently appreciated. Among these achievements may well be the beginnings of pottery and the invention of glazes.