## THE IMPORTANCE OF POTTERY IN ARCHAEOLOGY - WHAT WE KNOW ABOUT POTTERY AND WHAT WE WOULD LIKE TO KNOW.

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Many millions of years ago, earth was a quiet place, ruled by cute dinosaurs, which had some rat-like associates, the first mammals.



Our beloved and gentle dinosaurs had the bad fate of a gigantic meteorite, choosing planet earth to stop his course through space.



The story is known; the impact provoked a worldwide catastrophe; our pet dinosaurs faded away, and this damned little species of mammals took profit of the situation, being more adapted and so on.

Wonderful Darwinism at its best, the future of the fittest for live - an anticipation of the modern neo-economs who, as matter of fact, follow the same rules. Be it as it may, this Darwinist view of the development of mammals ended in the most superficial and aggressive species, the human being. From the beginning, an egomaniac stupid species only interested to maximize his living conditions at any cost possible. The end is predictable; the world will be exploited to a maximum; the environment will be ruined and the next masters of what will be left are beyond any doubt the well-organized insects – good so!

On the other hand, the Darwinist theory of evolution was questioned by a highly-developed special form of human beings, the purist American Protestant, who – shocked by the idea to have evolved from some suspect kind of primitive ape- invented the theory of creationism. God

blesses these fools, but they cannot blame any Christian form of god for that, since the old Mesopotamian tradition had already established how humans had been created: god Enki took some clay (in fact, it was nothing else but dirty mud) and created the humans of both gender.



They increased in number and made so much noise, that the gods decided to kill these damned punks by a disastrous flood known also in later biblical tradition as the deluge. The story could have ended here, and mother earth would have been happy, but poor Gaya; you had not chance, since a crazy guy named Utanapištim, the later biblical Noah, saved mankind and most of the animal species – wonderful and tragic at the same time. Once the humans back to action they started to develop further.

In what in recent times has been constructed as the Prepottery Neolithic, humans experimented with anything and playing god's role, they invented the first anthropomorphic representations also of burnt clay.



Of course, these small figures represented in most cases females, the only part of the human race ready to give birth to the next generation.

So far, so good. At the next stage of evolution in what has been called the Pottery Neolithic, humans learned to produce all kinds of containers of clay, which after burning, became quite non-perishable. At the beginning, pottery was only one type of container besides others of wood, leather and stone. Unfortunately, the human spirit didn't stop at that point and with increasing sedentarism and the establishment of permanent settlements a larger need of stock piling and a differentiated spectrum of types of vessels was needed.



In order to increase the production of such objects, the potter's wheel was invented, accelerating the process of pottery production dramatically. The consequences are known; mass produced vessels, and a kind of standard repertoire of pottery emerged. This process became more and more complicated and billions of tons of pottery were produced in the Ancient Near East through the ages. The pottery, once out of use and/or broken, was chucked away and survived the millennia, since alas! No garbage removal took place at these early days.



All this didn't bother anybody until, yes until new forms of human subspecies showed up: the antiquarian followed by the archaeologist. The first, more or less guided by aesthetics values or preferences, was, in fact, the good guy who collected and sold complete beautiful pieces and became rich and made his clients satisfied.



The archaeologist, on the other hand, a sometimes neurotic, profile addicted, narcistic, dogmatic and quarrelsome subject, didn't focus only on complete vessels, no, he became interested in anything, which was made of clay, also in fragments of undecorated, ugly simple sherds.



Hereby the starting point of the tragedy of recent pottery analysis was reached ending in the famous German saying: "Mit den Scherben ins Verderben" roughly translated as "pottery causes misery."



Pottery became one of the major playgrounds for archaeologists with no obvious limitations. In the early years, pots were grouped according to painting styles and/or specific forms, without any relation to their context, if indeed, there was any, since the early excavations of the second half of the 19. Century, that time A.D., could not recognize any archaeological contexts as we are familiar with today. These excavators were focused on collecting more or less complete objects of value in a classical antiquarian way.



This aesthetic and stylistic approach to pottery had its pitfalls, since styles – as we argue today, are no living beings, which evolve. Style is connected to a certain form of production and spirit of the age, the wonderful 'Zeitgeist'. What has once been considered as developing styles in pottery are, in fact, products, which coexist for some time and/or start earlier or later, once modern archaeological sequences and contexts were established.



After the aesthetic phase, archaeologists became really clever and attributed certain forms, wares and styles to ethnic units, the famous concept of "Pots Equal Peoples" was born. Quite soon this was changed in "Pots Equal Specific Linguistic Groups or Lineages," because the ethnic paradigm became suspicious and could even be falsified, as for instance Kramer's classical study on Khabur- and Mitanni-Pottery has shown.



Once these simple equations went out of fashion the New Archaeology, the phase of statistical terror was entered by our ambitious archaeologists. Anything was measured, counted and/or weighted. With the aid of computers, the different types of pottery could be brought in relation to each other, the wonders of increasing sophisticated modern seriations.

This positivistic oriented analysis of pottery was stimulating and appeared to be quite scientific. It fitted at best the demands of the New Archaeology, trying to transfer archaeology from the humanities to the supposed "exact" natural sciences, ending hopefully in general laws concerning human's development.

This approach, in fact, was not new, since Marxist Archaeology had already a very similar approach stating that environment and society were the roots of consciousness. The McCarthyera of course made any such approach in the US, the homeland of New Archaeology, impossible.

The New Archaeology, therefore, accepted the general materialistic approach of Marxist Archaeology but excluded the fixed stages of human social development, as predicted by the Marxists. Brave new world!



This dependency on natural sciences led to an almost complete submission to statistics. Any item of pottery was measured, like the angles and size of rims and the thickness of body sherds etc. in order to get a subtile insight into the development of pottery types, which then could be used for more and more refined chronological subdivisions.



The approach seems to be, at first hand, somewhat crazy.



Anybody who ever has observed a potter and his lump of clay rotating on a potter's wheel cannot but shake his head. Of course, the potter will have certain general types of forms in his mind, but the concrete production process gives place to a lot of variations within. Moreover, angels and thickness of rims, for instance, are also depending on the size and thickness of the fingers and the thumb of the potter. At best, such a kind of analysis can help to identify certain individual potters, who of course had only a limited time for pottery production in their lifetime. On the other hand, once such an individual identified, it could be possible to define also the realm of circulation of his products, at least in theory. If the time and cost consuming process of such a kind of analysis and the weakness of possible results are contrasted, the result seems to be clear.



Another weak point of any statistical approach to define the life span of vessel types and the combination of different types in stratigraphic sequences, is the shifting of functional areas and the combination of pottery types associated within in different levels. If different functional areas are superposed to each other, the combination of vessel types will change from level to level. The smaller the excavated area, the bigger the problem.

Another tricky problem can be exemplified by the pottery of the Hittite period. It is very homogenous within all sub phases of the Hittite period and develops only very slowly new and diagnostic vessel types. In a recent study, Schoop could demonstrate that such a material is best analysed by a rigid statistical approach in regard to type frequencies in different assemblages. Anyhow, even if the changing quantitative distribution of certain vessel types can be plotted through time, the definition of assemblages of different phases remains still problematic. Especially if material from small excavations - or even worse, surveys are analyzed, since no comparable assemblages to the key sequence are given here.

For example: if bowl type A is not frequent in the sequence of Hattusa in the 17. Cent . B.C. - contrary to bowl type B -, what do we know about frequency concerning survey material? We would not be able to date our material to any subphase within the Hittite period. A similar result was shown by a study of Müller-Karpe at Kuşaklı. A useful marker for Hittite pottery can be the surface treatment, the brighter and the more dark-red the slip; the older is the vessel. However, this gives only a hint at best, since these characteristic slips are restricted to special vessel forms, which must not occur either in a sondage or on the surface of a site.





Another critical point is the fact that almost the same pottery types can also occur in more than one period. One example, for instance, are bowls with loop handle-bases, which are attested at the upper Euphrates sites in the Middle Bronze- and in the Middle Iron Age.

In this context fits also a study by Genz, dealing with the Early Iron Age pottery of Central Anatolia. He could show that also in regard to pottery forms and patterns of decoration close ties between the Early/Middle-Bronze and Early Iron age material are visible. How this phenomenon is to be explained is hard to say. Genz speculates if some Early Bronze traditions could not have survived in small hamlets of the Hittite period. This might be true, since up to now no such small site of this period has ever been excavated in Central Anatolia.

The same argument has once also been put forward for the Harappan-Culture far away to the east. However, the point is different here. In the proper Indus valley as well as in Gujarat-Saurashtra, small settlements of the Mature Harappan period have been tested and there is no continuation of Early Harappan traditions. However, moving in the hilly regions, surrounding the Indus valley, the case is different. Here some late Early Harappan aspects are known from sites like Gumla in Waziristan and possibly Ghalighai in the Swat valley which last into the Mature Harappan period in the Indus Valley. However, all these phenomena need further study.





Related to this phenomenon is another crucial problem: The different speed and way regions might evolve. For example: after the Uruk-horizon in SW-Iran, a complete shift in the settlement pattern occurs from Late Uruk to Protoelamite in the Susiana plain, together with an almost complete break in the material culture. On the other hand, if we look at the development in the highlands, in Fars, the Uruk culture continues without a break into the Protoelamite period and also on a settlement pattern level, there is no break. Based only on survey material, it would be hard to recognize the Protoelamite horizon in Fars, if the few diagnostic types for this period are not present on the surface of settlements.



It should also be tested if vessel type variations could not also be in direct relation to the hierarchical rank of the settlement excavated or surveyed, within a given settlement system. Villages, not to speak of small hamlets, could probably be more conservative and slow in

developing or adopting new pottery types. Larger centres, on the other hand, may be more innovative and show a broader spectrum of pottery, due to the differing needs of the diverse social groups involved. This might also be reflected by domestic forms of production at a village and hamlet level, at least concerning special needed vessels as handmade pithoi for example, versus highly professional pottery production in the centres. This phenomenon might hamper the analysis of survey material.

Moreover, many too often regional studies like surveys where no or only a limited amount of excavations have been done, are based on diagnostic types from better known neighbor regions. Such studies level any insight into the regional development.



For instance, if the Fasa-Darab region in South-Iran would have been exclusively defined by the material culture from the neighbouring areas Fars and Kerman, a secluded society (Nischengesellschaft) like the Vakilabad-Culture, which was contemporaneous with the Urukand Protoelamite-Culture in South-Iran, would have been missed and the Fasa-Darab region would have been considered being unsettled in these two periods.

Examples of strong local variability are the differences in the pottery types in the 3. Millennium B.C. between northern and southern Babylonia or between the Harappan pottery from Sind, compared to the one from Punjab, for instance.

In southern Babylonia, the Early Dynastic I material-culture continued along with the Early Dynastic II-culture, as defined by the excavations in the Diyala region. Coming to the Harappan example, Dales, who had worked at Mohenjo Daro in Sind and later in Harappa in Punjab, was convinced that his type-catalogue from Mohenjo Daro in Sind would be useful in the north. Alas! It proved to be completely useless, The vessel forms in Punjab differ to a very large amount from those of the south. The same is true for the contemporaneous vessel-types in NW-India and Saurashtra-Gujarat.

These impressive local and regional variations, as they are recognized today, had been levelled before in the normative phase of archaeology due to the influence of older publications by socalled authorities. For decades, excavation reports figured almost exclusively the diagnostics which were already known from early excavations at Mohenjo Daro, published by Sir John Marshall and gave therefore, the false impression of an interregional homogenous Harappan culture.

Another similar well known case is Amiran's nevertheless, useful publication of "Ancient Pottery of the Holy Land," a book that had somewhat blocked the understanding of local and regional developments in Palestine for decades, since some Biblical Archaeologists arranged their assemblages in their excavations according to Amiran's scheme.

As a consequence, in order to understand the different local and regional developments all hierarchical levels of a given settlement system should be tested by excavation in order to get an insight into the variability of site size specific type occurrences. Without such a research program, the analysis, especially of survey material remains somewhat risky.

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A further key word in pottery analysis is "ware" – a combination of certain attributes; most modern archaeologists would agree too. Unfortunately, this aspect of pottery is also not easy to deal with. Apart from the two broad classes of mineral and vegetal temper and all the possible mixtures of both, ware is in most cases not specific to certain periods but is highly depending on local resources, the function of the concrete vessels and so on.

For example, the Early Bronze- and Early Iron Age pottery of Central Anatolia cannot be distinguished if only bodysherds are considered, because the ware is to 99% the same. A similar situation occurs if certain vessels of Old Assyrian- and the Parthian-Period is analysed, at least in Assur. If only sherds are taken into consideration, there is obviously no difference: wavy-line comb-incisions, pale slip and sometimes a bitumen coat in the inner side of the vessel are of the same kind. The only difference between both wares is an almost unrecognizable amount of slightly bigger particles of grit in the clay of the Parthian compared to the Old Assyrian sherds.



There is also a strong relation between ware and type in direct relation to the function of the latter, as is well known. One example is the famous cooking pot ware.

In regard to ware petrographic analyses of sherds become more and more common. These studies not only refine the archaeologists' ware-definitions but are also able to locate possible clay resources and the regional distribution of certain ware-types. As examples one can quote, recent studies by Falb on the so-called metallic-ware and by Kibaroğlu on the Kura-Araxes-Pottery.



Of course, any kind of analysis is welcomed and keeps us occupied. We produce masses of papers and thanks' to our computers, there will be no end to this. But coming back to the beginning, what was the main purpose for the ancient to produce pottery? It was the need of cheap and differentiated objects for stockpiling. In other words, contrary to us archaeologists, who study pottery almost exclusively in a chronological frame, pottery as such was important to the ancient in the context of space and function.

The analysis of functional classes of pottery was pushed forward by Rice, who classified vessels according to functions like processing, storage and transport. In Germany, Pfälzner used this approach in his dissertation on Mitanni- and Middle-Assyrian pottery, but his type definitions are somewhat simple and one will always find types, which do not fit his scheme. Hempelmann made also a nice contribution in this direction, taking the evidence from Early Bronze IVA-B and Middle Bronze I at Tell Halawa on the Middle Euphrates.



Everybody, who has excavated a late Early Bronze- and early Middle Bronze-site at the Middle Euphrates, is aware of the fact, that the pottery assemblages of both periods differ to a very high degree from each other. Only few and unspectacular forms continue from EB to MB. That means a shift in storage, food processing and consumption from EB to MB is probable.



In the EB - period Halawa was a fortified settlement with two sanctuaries and, according to Mayer, a centre of second order in the settlement hierarchy of the sites of the Middle Euphrates. Cattle and donkeys were quite prominent, an indicator of the relative high status of the inhabitants. Obviously, Halawa collected corn from smaller villages and transferred them to a larger centre, like Emar for example. Big storage jars were most often found next to the sanctuaries and – to a lesser degree - in households in courtyards next to fireplaces. These pithoi were buried half into the ground and could not be moved. Grain was stored at limited amount on private sector, but any surplus went to the temple area, where it was storaged on a larger scale. Small pots which have been found at all sites of the EB IV-period on the Middle Euphrates, have a volume of 475 cubic centimetres, that is roughly half a SILA. These vessels were found in the bigger pithoi and obviously served at measure units.

In order to transport the surplus not only at a village level but also on longer distances, smaller pithoi with standardized volume were needed and were, in fact, in use. These vessels are found also on all neighbouring sites, and their capacity is equal to 20 times 800 cubic centimetres equal to 16 litres. This capacity is in nice concordance with the unit of measurement  $gu_2.bar$  at Ebla also equal to 20 times one SILA.





Besides function there are of course vessel types with a more ideological value, like pottery with ornamentation like stands and so-called ritual-vessels with hatching and/or application. All these items, as well as luxury products, like light- and dark-coloured Euphrates-ware were all associated with the sanctuaries at Tell Halawa.

In the MB-period things changed drastically: Halawa was no longer fortified and had no sanctuaries any more. The house types seem, nevertheless, somewhat planned. Goat and sheep dominate the animal bones, and storaging is found only within the context of private households. Also vessels, used as measurements do not occur anymore. Long-term storage cannot be traced, and Meyer and Hempelmann speculate if Halawa was not depending on Emar as the regional centre. All this indicates radical changes on a socio-economic level. If this is to be connected with the increasing hegemony of the Ammorites, as Hempelmann argues, is far from being clear, since such a pottery is also found far to the north at Kurban- and Lidar Höyük in SE-Turkey.



Such studies are extremely important but only few excavations have complete room inventories with complete vessels. Small expeditions might also not have enough resources to restore such complete vessels from the masses of sherds, coming from the excavation.

At the end of this introduction to the workshop -I won't shut up unless - being a German archaeologist -I include in my survey the real objects of ancient Near Eastern archaeology, that is to say, objects of art. There are in all Near Eastern cultures vessels with decorations of complex patterns, like vessels with fancy applications of all kind or complex scenes like they are found on Old Hittite cult-vessels, with representations of festivals and rites. Especially the bull-leaping motive is of interest, because it is a kind of link between the Aegean, Egypt, Syria and even the Harappan-Culture far to the east.













However, all this is well-known and does not really bother anybody. Therefore, stressing once more my German legacy, I will give you an example of what could happen if a good old-fashioned German art historian, Moortgat-style meets dust archaeology in a post-processual way of looking at objects of art, and thus I will let out the cat – or in this case, the dog - of the bag.



Of course, the masterpieces I present here, are well known. However, let us try to learn how to "see," how to look at these objects from a new viewpoint.

Once we leave the traditional way of identifying the so-called antiquaria and style of these masterpieces and enter straight in an innovative and modern perspective, as a dust-archaeologist, it is clear what is the only feature of these masterpieces which is of interest: It is not the body, not the weapons, not the clothes, not the style, not the material. The only features of interest are the objects the persons wear on the head, traditionally called hat, polos, crown or what so ever.



According to our innovative and modern perspective, all these interpretations have to be altered. Of course, any art historian considers everything people wear on their heads as hair dress, because this seems to be evident. As a dust-archaeologist, this is not evident at all, since we are trained to deal with pottery, not exclusively with art. Therefore, in our innovative and modern perspective there can be no doubt, that what is depicted on the heads in question are in fact pots, which were commonly in use.



The art historian confronted with this ultimate shocking innovative and modern way of looking at his beloved masterpieces has only the choice to agree and to argue, that the hats were inspired by the concrete pots. However, if we agree to that, then this post-processual dust-archaeological

innovative and modern approach can solve a long disputed problem of Near Eastern art history: The question of the origin of the horned helmet of Near Eastern goods and deified kings.



This type of helmet is said by art historians to have shown up for the first time in what they call Mesilim-Phase, which means in modern terminology the older part of Early Dynastic II or even Early Dynastic IB. Our innovative and modern approach gives now a completely new date for the first occurrence of this type. The predecessor of all horned helmets is to be found in the earlier part of the Uruk-Period, that is about 1000 years earlier as assumed and its geographical origin is Susa in SW.-Iran. Therefore, this important attribute of goods, like the cylinder seals and their imagery of the Uruk-culture all have their roots in Iran and not in Babylonia.

In order giving you enough time to digest this astonishing and outstanding result of research done at Münster, I finish my lecture and wish you an interesting workshop with hopefully important results, in the aim to build up a regional sequence of the northern plateau of Jordan.

Thank you for your patience.