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THE IMPLICATIONS OF APPLYING THE VIENNA SYSTEM TO PUBLISHED DATA ON PREHISTORIC POTTERY IN LOWER EGYPT

Abstract: *Pottery discovered at Lower Egyptian sites has several features that are distinctly different to those of pottery from Upper Egyptian sites. In this paper, the manner in which data on pottery fabric from Lower Egyptian sites has been classified and presented in published reports will be reviewed and certain problems stemming from this manner of publication will be examined. On the basis of this examination, the type of classification that would be most suited to the integration of all published data on pottery fabric at Lower Egyptian sites (as well as their features) and to the storage of this data as an objective record for future analysis by other researchers will be discussed. It would seem that, although the issue of problematic and biased published pottery data still remains, notating data using a code is one of the most promising methods. This classification method is useful as both a mnemonic device and as an effective means to record and classify the pottery fabric data gathered from Lower Egyptian sites.*

Keywords: *Pottery; classification; Lower Egypt; integration; the Vienna System*

Introduction

The Vienna System is commonly used in many publications to describe pottery fabric found at Lower Egyptian sites, even though the system was developed on the bases of specific material among which the period

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best represented runs from the 11th to the end of the 18th Dynasty. Is it really the most suitable method to classify prehistoric pottery from this region?

Issues that relate to the application of the Vienna System to published data on pottery fabric from sites dating to the late Chalcolithic and early Early Bronze I periods in Lower Egypt are discussed below. Based on the discussions, it is considered what sort of classification would be most suitable for integrating the various published data on pottery fabrics at Lower Egyptian sites with taking a promising new classification system as an example.

The prehistoric sites of Lower Egypt perspective

The division of fabric within the Vienna System is relatively loose in terms of the classification of fabric from the prehistoric sites of Lower Egypt

Fabric at prehistoric sites in Lower Egypt has tended to be classified mainly by its straw temper, since this is its major feature. Indeed, straw temper is the most common and basic inclusion (or temper) in the fabric found at all prehistoric sites in Lower Egypt. As a result, the size and the amount of straw temper are key in the classification process at each site, especially when it comes to classifying Nile clay. This means that division by size and amount of straw temper has been made in detail at many Lower Egyptian sites in order to classify the range of straw-tempered Nile silt fabric more accurately. It also means that the division of fabric within the Vienna System is ambiguous in terms of its application to fabric possessing this feature.

Classification in which the fabric and its surface treatment are combined

The definition and classification of fabric at prehistoric Lower Egyptian sites is often confused with its surface treatment, which is a further problematic issue in the application of the Vienna System to this fabric, as well as its comparison to pottery from other sites. One reason for this confusion is the fact that the fabric used at prehistoric Lower Egyptian sites does not vary a great deal. Therefore, if a characteristic surface treatment is found on a sherd, this treatment is built into the classification to indicate a characteristic of the fabric. Although this method of classification poses problems when applying the Vienna system, as long as we use the term ‘ware’ (which is defined as a combination of three hierarchical attributions:

fabric, manufacturing technique, and surface treatment), there is no reason why this classification system should not be used for the fabric of prehistoric Lower Egyptian sites. From this point of view, the classification system adopted at Buto and Helwan (Köhler 1998, 3; Köhler 2005, 47-48) may be regarded as effective, since a five-digit number can be used to simultaneously refer to several elements of a sherd (type of clay, surface finish, temper, etc.) without mixing up the individual elements (e.g. 21421, defined as the 'standard fabric' by E. Ch. Köhler [1998, 4], which contains a normal amount of straw temper with red slip and polish on the surface). Fibrous temper, a type of temper that has been observed in pottery at many prehistoric Lower Egyptian sites, cannot be dealt with appropriately by the Vienna System, but it can be correctly described by the 'ware' classification system at Buto and Helwan (see Fig. 1).[1]

Although the kind of temper should always be considered and noted, even if it differs only slightly from site to site in the Chalcolithic and early Early Bronze I periods in Lower Egypt, this does not always indicate that production technology at one site was superior to that of another. It is generally thought that production in the Chalcolithic and early Early Bronze I periods in Lower Egypt was too simple (e.g. the limited usage of the potter's wheel) for the amount of temper to be intentionally or subtly manipulated. For example, Köhler (1995, 87-89, fig. 4) describes the level of pottery manufacture in Naqada IIc/d in Lower Egypt to be simply 'household production'. With regard to fibrous temper, she states that 'this fabric might have originated accidentally due to a lack of the usual material for temper, which would not be surprising for a primary production' (Faltings and Köhler 1996, 110).

The sections below briefly discuss the application of the Vienna System to fabric at individual sites in prehistoric Lower Egypt.

[1] This classification is explained as follows: 'This code is based on five basic features. The first digit refers to the general character of the ceramics and ranges from fine to coarse. The second digit stands for the sort of clay used, i.e. alluvial or Nile silt, Marl clay, or other clays, such as non-Egyptian clays. The third digit denotes a range of techniques of surface finishing from deliberately scraped, roughly smoothed with wet hands, well-smoothed, (e.g. with a tool), to polished or burnished. The fourth digit records the presence and colour of surface coating or slip and includes the options of no slip, white slip, red slip or another kind of slip. Finally, the fifth digit refers to different kinds of temper. The option 'normal' stands for a typical mixture, which can be of different fabric depending on the clay.' (Köhler 2005, 47).

	Category	Clay	Surface finish	Surface coating	Temper
Coarse	1				
Medium	2				
Fine	3				
Alluvial		1			
Marl		2			
Other clay		3			
Scraped			1		
Rough			2		
Smoothed			3		
Polished			4		
No slip				0	
White slip				1	
Red slip				2	
Other				3	
Normal					1
Mostly straw					2
Mostly sand					3
Mostly limestone/calcite					4
None or little					5
Fibres					6

Fig. 1. The classification system adopted at Buto and Helwan.
Reproduced from Köhler 2005, tab. 1

Maadi

This section will discuss the classification system for the most common wares of the Maadi site, Wares I and II (Rizkana and Seeher 1987). If the Vienna System were to be adapted to these, Ware I would correspond to Nile B2-C and Ware II to Nile B2-fine C. This classification is in accordance with the fabric description presented in a report, although no previous description or analysis has made use of the Vienna System (Rizkana and Seeher 1987, 24-26, 28-29). In other words, according to the division within the Vienna System, Wares I and II appear to be almost the same kind of fabric.

The Maadi classification is different in that both Wares I and II are made of Nile silt, but they are distinguished by the size and the amount of straw included, as well as their surface colour (Rizkana and Seeher 1987, 23-32). It has been reported that Ware I temper includes grit in moderate amounts

(the size of which reaches a maximum of 1mm) and also medium to coarse straw (over 2mm and very often longer than 10mm) in every specimen. Ware II includes tempered grit (at a size of less than 1mm) and organic temper, which is far less abundant than in Ware I (Rizkana and Seeher 1987, 28).

If we refer to the definition of Nile B2 and C in the Vienna System (Nordström and Bourriau 1993, 171-174, fig. 3), Nile B2 is defined as 'containing abundant fine to medium sand (0.06-0.5mm) and conspicuous amounts of fine to medium straw (up to 5mm) with a few scattered coarse straws'. Nile C is defined as 'including sand from fine to coarse (from 0.06 to over 0.5mm) in size and from scarce to common in frequency, with straw ranging from fine to coarse (from less than 2 to over 5mm) with an abundance of coarse particles'.

The reason Wares I and II seem to be of the same fabric under the Vienna System classification is that the definition for each kind of fabric within it encompasses a wide range not taking into account the size or the amount of sand and straw (Nordström and Bourriau 1993, 171-174; see also Fig. 2).

This inconvenient issue not only occurs when the Vienna System is applied to fabric from Maadi, but also to that of other prehistoric Lower Egyptian sites. Moreover, if a fabric is defined and presented as a certain kind in a site's report and given some leeway in terms of size and the amounts of its inclusions, problems tend to increase. For instance, a single kind of fabric presented in a site report classification may correspond to multiple groups in the Vienna System. Equally, two fabric types distinguished in a site report classification could be precisely the same kind of fabric under the Vienna System.

A few further issues need to be taken into account when applying the fabric types of the Maadi classification to the Vienna System. For example, the surface treatment of Ware II is a significant feature, given it is described as 'red burnished ware' in Maadi reports (Rizkana and Seeher 1987, 28). This means that according to Maadi classification (Rizkana and Seeher 1987), the fabric is thought of and classified in combination with its surface treatment. In addition, the fabric is actually described as 'ware'.[2] As fabric and surface treatments are dealt with completely separately

[2] Nordström (1972, 60) defined the term 'ware' as 'a specific combination of technological features, characterized by one fabric, or a set of closely related fabrics (clay, temper materials, porosity, firing, etc.) and a specific set of surface properties (basic colour, coating, surface texture)'. Renée F. Friedman (1994, 109) also suggests that ware, as a modern concept, represents a combination of three hierarchical attributions: fabric, manufacturing technique and surface treatment.

Hardness			Hard and firm
			Medium strength
			Crumbly and soft
Porosity			Incipient vitrification
			Dense
			Decomposed limestone
			Elongated porous
			Moderately porous
			Open porous texture
Non-plastic inclusions	Other inclusions		Carbonized grains
			Red-brown grains
			Dark rock material
			Crushed sherds
			Rounded sand grain
			Silica formations
			Plant material
			Shells/fossils
			Miscellaneous inclusions
			Grey white grain
	Limestone		Coarse >500μ
			Medium 250-500
			Fine 60-250μ
	Straw		Coarse >5mm
			Medium 2-5mm
			Fine <2mm
	Sand		Coarse >2mm
			Medium 250-500μ
			Fine 60-250μ
Clay			Foreign
			Marl
			Nile

Fig. 2. Recording the properties of the fabric, excluding the colour, porosity and hardness of fracture.
Reproduced from Nordström and Bourriau 1993, 164

in the Vienna System, the 'wares' at Maadi, as classified by I. Rizkana and J. Seeher (1987), cannot be easily transposed to the Vienna System.

Buto

This section will discuss Wares I and II in the Buto classification, which are the first and second most common at the site. In a report (von der Way 1997, 85), it is stated that 'the fabric of all subgroups of Ware I at Buto (from Ware Ia to Ware Ig) are homogeneous, and the subgroups are classified depending on the surface treatment'. In addition, T. von der Way (1997, 84) asserts that 'Ware I at Buto corresponds to Ware I at Maadi'. From this description and from a description of the tempered minerals and their size in Ware I (von der Way 1997, 84), it would appear that Ware I of the Buto classification corresponds to Nile B2 to C in the Vienna System. In addition, it is stated that Ware II is equivalent to Nile C (von der Way 1997, 87). This means that if we simply try to apply the Vienna System to the fabric at Buto, Ware II seems to be a sub-set of Ware I (see Fig. 2).

So how are Nile B2 and Nile C described and distinguished from each other in the Vienna System and the Buto classification?

According to the Vienna System, the predominant temper in Nile C is straw temper (1-5mm in length) and it also has sand inclusions, which range from medium to coarse in size (0.25-0.5 to over 0.5mm) (see Arnold 1988, 124; Nordström and Bourriau 1993, 173). Contrastingly, in the Buto report, von der Way (1997, 84-87) says that the difference between Nile B1, B2, and Nile C centres on the length of the tempered straw and that Ware II (Nile C) sometimes includes much coarser sand (limestone and/or pounded ceramics) and thicker sherds (mostly 2-3.5cm) than Ware I (Nile B2-C) (including gravel sized 0.5-2mm). It has also been reported in other studies that Ware II was mostly used for a particular shape of vessel (Jar type 6b: von der Way 1997, 87, 91).

However, it has been argued that the distinction between Nile B2 and C is not always clear. For instance, D. Arnold (1988, 126) discusses this issue in light of the analysis of pottery from the early 12th Dynasty at the pyramid complex of Sesostris I at Lisht, where she finds that the coarse Nile clay used at the site is coarser than ordinary Nile B2, but also that it contains markedly less sand than ordinary Nile C. Most of the tempered straw in the coarse Nile clay of Lisht is 2mm in length, which means that the clay is denser than the ordinary Nile C of the Vienna System. Based on this analysis, Arnold (1988, 126) argues that there are four variants of Nile B2 amongst the vessels found at the pyramid complex

of Sesostris I at Lisht, ranging from one group that is closest to B1 to one that is nearest to C. She also points out that 'the main difference between Nile B2 and Nile C in early pottery[3] lies less in the size of the organic particles than in the presence in Nile C of other materials, such as yellowish white, decomposed limestone, and other dark-coloured rock particles' (Arnold 1988, 126). Lastly, she says that 'it is therefore often difficult to differentiate between Nile B2 and Nile C. The two fabrics appear to be extremes of a range of variations rather than two truly distinct fabrics' (Arnold 1988, 126).

Tell el-Iswid (South)

This section will discuss fabrics SO1 and SOM1, which are considered the two most common in Phases 1 and 2 at Tell el-Iswid (South). They are defined as 'Nile silt tempered with medium to coarse straw' (fabric SO1) and 'Nile silt tempered with medium to coarse straw and grit' (fabric SOM1) (Guyot 2011). Although it should be noted that only limited data is available on both fabrics from the latest excavations, it is difficult to apply the Vienna System to them on the basis of the definitions presented, because no kind of Nile clay fabric without mineral particles (i.e. fabric SO1) exists within it. If the Vienna System were to be applied to the two fabric kinds with no thought as to whether grit is included or not, both kinds would be defined as Nile C and it would thus seem that they are both the same kind of fabric. Incidentally, although the fabric data reported by E. C. M. van den Brink (1989, 67-68) is not classified clearly, three different fabrics are defined: one imported fabric and two kinds of Nile clay fabric tempered by straw and distinguished by their surface treatment. Since descriptions of fabric are rarely included in reports (van den Brink 1989), it is difficult to tell which kinds of Nile clay in the Vienna system correspond to the two kinds of Nile clay fabrics reported by van den Brink.

Tell el-Farkha

This section will discuss R2 and P-Ware at Tell el-Farkha. In a report from the site (Mączyńska 2004, 426), it is stated that R2-Ware corresponds to Nile B2 – Coarse Nile C (Nile C2) in the Vienna System and that P-Ware is equivalent to Nile A to Fine Nile C (Nile C1). As we can see in Fig. 2, it therefore seems that each of the two fabrics covers a wide range within the divisions of the Vienna System and that both share a large range with each other.

[3] Here, 'early pottery' refers to pottery from the early 12th Dynasty (Arnold 1988, 126).

P-Ware is defined by A. Mączyńska (2004, 426) as follows: 'P: Red slip ware; Petrie's Polished-red class; Fabrics Nile A, Nile B, Nile C1. The surface is covered with light red, red, or reddish-brown slip, polished or burnished. The "Lower Egyptian" fibrous termer fabric was also recorded among vessels belonging to this ware.' This description indicates that the classification of fabric at Tell el-Farkha was achieved by examining the surface treatment rather than the fabric itself. In fact, out of the five fabric groups identified in the pottery of Tell el-Farkha, two additional ones were made in the same way as P-ware was, namely S-Ware (hard smoothed ware) and Y-Ware (yellow slipped ware) (Mączyńska 2004, 426). These fabric classes cannot be simply transposed into the Vienna System, because fabric and surface treatment are treated as completely separately entities within it. In other words, if the Vienna System is applied to these fabric types at Tell el-Farkha, they simply become indistinguishable from each other and from other kinds of fabric.

Minshat Abu Omar

The following fabric types are said to have been found at Minshat Abu Omar: Nile A, B1, B2, C, Marl A1 to A4 and others (Kroeper and Wildung 1994, XVI-XVII). However, if only the fabric types found in Minshat Abu Omar 1 and 2 are counted, then only Nile B1, B2, C, Marl A, and a few others have been discovered and reported (Kroeper and Wildung 1994; Kroeper and Wildung 2000). The fabrics observed in Minshat Abu Omar 1 and 2 are not classified in terms of ware and surface treatment in the excavators' reports (Kroeper and Wildung 1994; Kroeper and Wildung 2000).

According to reports from Minshat Abu Omar, Nile C is by far the most common fabric in the two phases (Kroeper and Wildung 1994; Kroeper and Wildung 2000). In addition, even though it is certain that Nile B is the second most common fabric type, it is unclear whether Nile B1 or Nile B2 is more prevalent from the reports alone[4] (Kroeper and Wildung 1994; Kroeper and Wildung 2000). The mixtures of Nile and marl clay, which are some of the most characteristic of Minshat Abu Omar 1 and 2 (they have not been reported at other Lower Egyptian sites) are not recognised by the Vienna System (Nordström and Bourriau 1993, 166-167).

[4] In these reports (Kroeper and Wildung 1994; Kroeper and Wildung 2000), pottery is often described as being made of Nile B (written as IB) without clearly expressing the sub-group of Nile B1 or Nile B2 (Nile B1 is referred to as IB1 and Nile B2 as IB2). Of the pottery made of Nile B, the number of examples said to be 'made of IB' is greater than those 'made of IB2', whilst the fewest examples are 'made of IB1'.

The origin of the Vienna System perspective

The Vienna System was created on the basis of sample sherds from Tell el-Dab'a, Saqqara, Dahshur, and Thebes (Asasif, el-Tarif, and Karnak North), as well as some unprovenanced Predynastic sherds from the Fitzwilliam Museum in Cambridge, Old Kingdom sherds from various sites (supplied by Barry Kemp) and Badarian sherds from Matmar from the collection of the Museum of Archaeology and Anthropology of Cambridge (Nordström and Bourriau 1993, 168). Nordström and Bourriau (1993, 168), two of the archaeologists responsible for creating the system, stated that 'the chronological and geological limits of the Vienna System were set by the range of samples available. The Delta is represented by material from only a small area in the East and there is nothing from Middle Egypt beyond the Fayum or Upper Egypt outside Thebes. The period best represented runs from the 11th to the end of the 18th Dynasty. Earlier and later periods are represented by only a thin scatter of samples.'

After analysing pottery from the early 12th Dynasty found in the pyramid complex of Sesostris I at Lisht, Arnold (1988, 126) concluded that there were four variants of Nile B2 and also stated that the pottery fabric from the early part of the dynasty was considerably different to that of the later part. Whereas later Nile fabric is characterised by its notably variable size and the nature of its organic inclusions, earlier fabric is far more uniform. These observations suggest that even in the pottery of the 12th Dynasty, which is considered by H. Nordström and J. Bourriau (1993, 168) to be the pottery most suited to the Vienna System, certain differences can still be observed. As a result, variants also need to be devised in this group for the Vienna System to be successfully applied.

As the quality of the product largely depended on the scale of production within each workshop, it seems unreasonable and illogical to apply the Vienna System, which was devised principally for pottery from the 11th to the end of the 18th Dynasty and the Chalcolithic and Early Bronze I periods (see Fig. 3[5]). Despite the disadvantages of applying the Vienna System to the fabric of Lower Egyptian sites, it is still commonly used to differentiate the different fabrics in publications.

[5] In this table, the most (left) and second most (right) principal fabric at each site are shown. The Vienna System is applied to the two kinds of fabrics which are reported as the most and the second most principal fabric in the report each site, with referring to the description especially relating to type of clay, inclusion (temper), colour, and hardness in reports from each site.

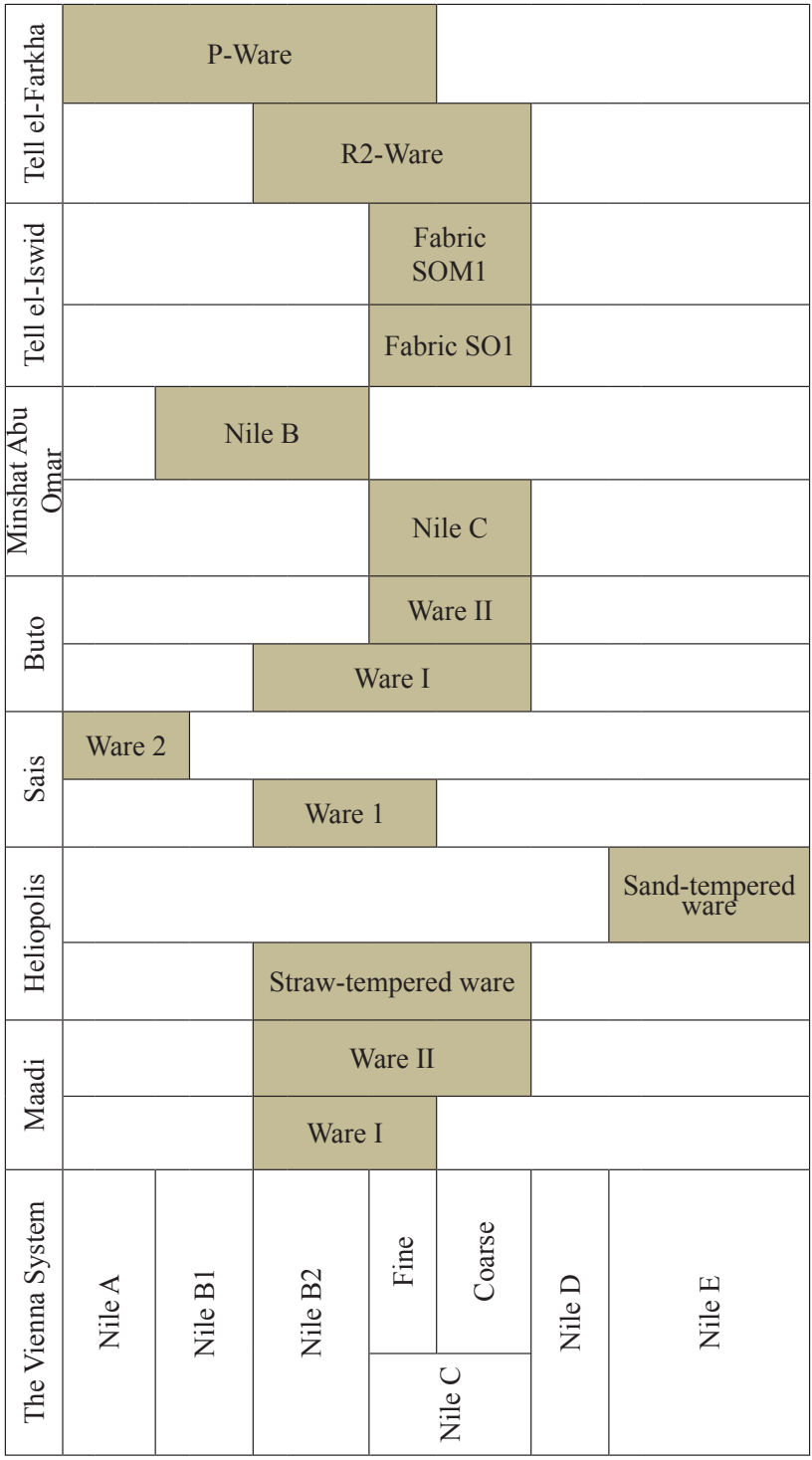

Fig. 3. Correlation in fabric and temper

Discussion

The considerations presented in the preceding sections would seem to suggest that the classification system adopted at Buto and Helwan (Köhler 1998, 3; Köhler 2005, 47-48) has considerable potential. However, the following characteristics of data already published on pottery fabric in prehistoric Lower Egypt must be taken into consideration:

1. Most prehistoric pottery in Lower Egypt is made of Nile silt clay.

2. The most common and basic inclusion (or temper) to the fabric found at all prehistoric sites in Lower Egypt is straw temper. This means that division by the size and amount of straw temper is sometimes made in great detail when classifying the various ranges of straw-tempered Nile clay fabric.

3. In data published thus far on prehistoric pottery in Lower Egypt, the fabric description is often combined with its surface treatment.

Even the classification system adopted at Buto and Helwan needs to be revised before it can be applied to already published data on the pottery fabric of prehistoric Lower Egypt. For instance, it may be wise to subdivide the fifth digit (signifying temper) in order for the size of the straw temper to be described in more detail. The six divisions for temper in the system at Buto and Helwan (normal, mostly straw, mostly sand, mostly limestone /calcite, none or less, fibres) could also be replaced by other divisions (fine straw,[6] medium straw,[7] coarse straw,[8] sand,[9] very coarse sand,[10] limestone /calcite, fibres [Fig. 4]). If necessary, multiple numbers could even be used to describe the temper. We could also re-divide the third (surface finish) and fourth (surface coating) digit of the Buto and Helwan system (Fig. 1) to better reflect already published data on pottery fabric in prehistoric Lower Egypt (see Fig. 5: 'Surface treatment').

For example, if this classification system (Fig. 5) were to be applied to R2-Ware at Tell el-Farkha, in which 'the rough, wet smoothed surface has

[6] < 2 mm in length (this numerical value corresponds to one in the Vienna System; see Fig. 2).

[7] 2-5mm in length (this numerical value corresponds to one in the Vienna System; see Fig. 2).

[8] > 5mm in length (this numerical value corresponds to one in the Vienna System; see Fig. 2).

[9] ≤ 1mm in diameter (this numerical value adheres to BSI 2009, tab. 1a; Wentworth 1922; Williams *et al.* 2006).

[10] > 1mm in diameter.

	Definition	
Fine straw	< 2mm in length	1
Medium straw	2-5mm in length	2
Coarse straw	> 5mm in length	3
Sand	≤ 1mm in diameter	4
Very coarse sand	> 1mm in diameter	5
Limestone/calcite		6
Fibres		7

Fig. 4. Revised divisions for the temper of prehistoric pottery in Lower Egypt

	Clay	Temper	Surface treatment
Nile alluvial clay	1		
Marl	2		
Other	3		
Fine straw < 2mm in length		1	
Medium straw 2-5mm in length		2	
Coarse straw > 5mm in length		3	
Sand ≤ 1mm in diameter		4	
Very coarse sand > 1mm in diameter		5	
Limestone/calcite		6	
Fibres		7	
Other		8	
Rough			1
Smoothed			2
Polished (burnished)			3
White slip			4
Red slip			5
Other colour slip			6
Other			7

Fig. 5. A classification system modified for the pottery fabric of prehistoric Lower Egypt

voids from burned-out organic temper' and 'the organic temper (2-5mm) is less coarse than that of R1-Ware' (Mączyńska 2004, 426), the number to describe this fabric would be 1-2-2. However, it would be difficult to determine the number of P-Ware, because the potsherds were identified as belonging to this group purely by their surface treatment of reddish slip (Mączyńska 2004, 426; Mączyńska 2011, 889-890); the fabric itself varies greatly, as can be seen in Fig. 2. Although Mączyńska (2011, 889-890) states that the fabric of P-Ware changed from Phases 1-2 to Phases 3-7, she also claims that the fabric of P-Ware in Phases 1-2 is the same as that of R2-Ware. As a result, the number of P-Ware could be thought of as 1-2-5 (Mączyńska 2011, 889). To use another example, if this classification system were to be applied to Ware Ia from Maadi (whose temper is described as 'Ware I; it is made up of Nile-silt clay that contains (a) grit in moderate amounts in every specimen, the size reaching a maximum of 1mm, and (b) medium to coarse straw, very often longer than 10mm' [Rizkana and Seeher 1987]), the numbers describing the temper would be 2-3-4. Ware Ia,[11] which is made of Nile clay and has a burnished surface treatment, would thus be described as 1-234-3.

These examples demonstrate that even if data is described using a classification system developed at an individual site that is distinct, explicit and detailed, it can still be classified by a new or different system. In most cases, however, the classification of pottery data presented in published reports from prehistoric Lower Egyptian sites is not distinct enough, mainly because the classification system adopted at the site is typically an individual one and only a limited or selected amount of pottery and potsherd data is provided. As a result, if fabric data has been classified in an individual manner or using a classification system developed at an individual site without the original detailed record of each item of pottery or potsherd (e.g. fabric /temper and shape), it is very difficult for researchers to analyse the pottery at the site objectively by simply referring to the publication it appears in. It is also difficult to reclassify pottery data from such sites without the opportunity to analyse the primary sources (pottery and potsherds) found at the site (if possible, the primary sources of all pottery and potsherds excavated there, or at the very least, the primary sources of the pottery

[11] Surface treatment of Ware Ia is described as a 'slightly burnished surface with moderate lustre. A slip can occasionally be identified. Mostly the surface is black, although irregular patches of brown and red colour occur as a result of imperfect firing conditions' (Rizkana and Seeher 1987).

and potsherds presented in published reports) or the chance to re-examine high-quality data (e.g. field notes) recorded for all or most of the primary sources.

There are several other problematic issues concerning already published data on pottery from Lower Egyptian sites besides the one just mentioned. However, if it is kept in mind that the data from Lower Egyptian sites (especially data provided in older publications[12]) often includes bias and a lack of objectivity, the system above (Fig. 5) could be applied to it. This classification, which places greater importance on temper (especially straw temper), could be tenable and even practical for usage in future excavations and publications.

[12] For example, if the classification system in Fig. 5 is applied to Ware 2 in the Buto classification, which is described as being 'made of Nile C. However, sometimes it possesses coarser lime-washing pure bits and/or pounded ceramics in grain sizes of 1-2mm additionally. Only four examples have slip treatments on the surface' (Rizkana and Seeher 1987, 87), it will become 1-123468-1. Unlike the discussed examples (Ware Ia at Maadi and R1-Ware and P-Ware at Tell el-Farkha), the number to express Ware 2 at Buto could become quite long, because the description of Ware 2 in the report includes the Vienna System, which is not clear enough to categorise the fabric utilised in prehistoric Lower Egypt (see above: The prehistoric sites of Lower Egypt perspective) and because the additional data and explanation of Ware 2 given is not sufficient for application to the classification in Fig. 5.

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