

Ancient repairs: techniques and social meaning

Renske Dooijes and Olivier P. Nieuwenhuys

Introduction

At most archaeological excavations the biggest part of the find assemblage consists of pottery sherds, preserved owing to their extraordinary durability. The ceramics, either fragments or complete objects, were lost or discarded by their original owners and were buried to eventually become part of the archaeological soil matrix. Since the birth of scientific archaeology, archaeologists have emphasized the investigation of pottery fabrics, techniques and styles. More recently, the study of pottery function and use, and the reconstruction of the social and symbolic context of pottery, have come to the fore. As the symposium 'Konservieren oder Restaurieren' testifies, restorers and archaeologists have become increasingly interested in ancient repairs. We study the technical aspects of ancient repairs – what techniques and materials were used? – but we have also become more and more aware of the cultural and historical context in which repairs were made.

When trying to reconstruct the complex biography of ceramic objects, ancient repairs may play an important role. Through time people have always repaired ceramic objects. In this paper we argue that ancient repairs can tell us something about the cultural values attached to an object and the social role it played in the past. Ancient repairs can tell us something not just about how the object functioned, but also about its owner's social identity and status. Importantly, repairs make it possible to investigate *changes* in the social meaning of an object. Below, we discuss the notion of the cultural biography of objects. One can argue that this concept may provide a useful tool to explore changes in function and social use of ceramic objects such as pottery. We shall present a typology of archaeological pottery repairs, an essential building block for any further investigation. There will then be an examination of ancient pottery repairs from excavated archaeological contexts, and an exploration as to how they may help us gaining insight in the social role and value of these objects.

Objects have a life – the cultural biography of objects

The concept of a cultural biography of objects refers to the insight among archaeologists and cultural anthropologists that they, in a way, have 'social lives'. That is, pottery vessels are not just 'tools' with a particular function, they are also invested with social and symbolic meaning¹. Moreover, their social, symbolic and economic meaning is not static. It changes as the object moves from one context of use to another in the course of its life. In each new context, different groups of people move into new relationships with each other and with the object, thereby giving it a new meaning².

The notion of a cultural biography of objects was introduced into archaeology by Igor Kopytoff to refer to the often complex life histories of objects. Where, when and how had an object been made? How was it used? Which role did it play in society? What was the value and meaning of the object during the various stages of its life? Reconstructing the cultural biography of an object may provide important insights into past societies and about technical know-how in antiquity.

We may distinguish different stages within the object's cultural biography. This starts with the stage of production, in this case in the pottery workshop. Then life begins, during which various things happen to the object. Archaeologists can often reconstruct the distribution, consumption, circulation, exchange, and eventual discarding of the object. However, as we all know, an object's useful life does not always end with discarding. The object may be curated and brought into circulation again, or it may be excavated by the archaeologist, after which a whole new life cycle begins. To begin with, we may draw an analytical distinction between the cultural transformations and the physical transformations of an object³.

Cultural transformations refer to what we may call changes in context. During its life span, archaeologists distinguish four main stages for an object: production, distribution, consumption and discarding. Greek (Attic) vases found in Etruscan burials are a good example of ceramic vessels changing context and hence socio-sym-

bolic meaning. We know that the objects were made in Greece; their find context tells us about changes in their distribution and value. Likewise, the histories of contemporary collections in archaeological museums give contextual information about changes in distribution and value of ancient objects taking place at the modern end of those objects' cultural biographies.

On the other hand, there are all sorts of *physical transformations*, actual physical mutations of the object. For example, traces left by the production process, erosion, use traces, graffiti, breakage and, of course, repairs both modern and ancient. These physical transformations can all give crucial information about the cultural transformations that happened to the object, about the way the object was used, and about the change of its value through time. Whereas conclusions concerning cultural transformations with respect to context, distribution and use often remain hypothetical, ancient repairs and other physical transformations give a physical proof of certain actions carried out on the object during its lifetime. An ancient repair 'marks' it. These 'marks' can tell us about the society in which the object played a part, about technical knowledge at the time, but also about systems of value and ethical and aesthetical perspectives in the past. Physical transformations during its life therefore merit careful consideration.

A typology of ancient repairs

It would not be an exaggeration to say that ancient repairs as a topic for inquiry have been severely neglected by archaeologists. This is somewhat surprising considering the heavy emphasis on detailed material studies. Repairs are generally ignored in archaeological find reports, perhaps simply because they are deemed to be so self-evident that they hardly need further exploration. As a rule, archaeologists rarely make explicit mention of the presence of repairs, if at all⁴. That the objects were occasionally repaired only comes to light from the illustrated examples, and then only if the scholar made the decision to show the actual remaining sherds in the drawing, instead of reconstructed 'complete' shapes. If repairs are mentioned at all, this is not usually done systematically or in a statistically reliable manner⁵. Thus it is impossible to find out how representative the illustrated repairs are, whether or not they were the only types of repairs found, with what particular types of objects specific types of repairs are associated, and so on.

In order to move forward, it is essential to start building a clear typology of ancient repairs, as a crucial first step for discussing the cultural biographies of objects. This field of research has only just started. Restorers and archaeologists alike have begun to realize the need for a

systematic collection of information on this topic⁶. The typology to be presented here is offered as a starting point, to be elaborated upon in future research through interdisciplinary work by restorers and archaeologists. This typology primarily originates from a study of ancient repairs on Greek ceramics, mainly from the Classical Period⁷. We have added a few examples from Near Eastern prehistory. Some of the techniques discussed here seem to be universal and can be found in any archaeological collection of ceramics. Although a more extended discussion of ancient pottery repairs would be beyond the scope of this paper, we would like to point to a few interesting examples: the bitumen-repairs from the Jebel Aruda excavations on the Syrian Euphrates, dated to the so-called Uruk period ca. 3200 B.C.⁸, and the repairs to mass-produced bowls using lime/gypsum in the Late Bronze Age of the Near East⁹.

Let us now take a look at three main groups of Classical-Period pottery repairs¹⁰:

- drilling holes;
- the use of metal staples;
- the use of alien fragments;

The earliest repairs: drilling holes

The earliest repairs found on pottery vessels are based on a simple principle. Holes are drilled along the breakages, probably using a flint or obsidian tool. The sherds are then tied together by stringing leather, rope or another organic material through the holes (*fig. 1*). In later periods people also used metal wire. We can find examples of this technique as early as in the Neolithic period when ceramics were first introduced. In Greece this type of repair is found with sixth-millennium ceramics from the Franchthi-cave (Southern Argolis, Greece)¹¹. However, the technique is certainly not limited to Greece. Painted Late Neolithic vessels from Late Neolithic Syria, dated to about 6000 B.C., show the technique very clearly (*fig. 2*).

Metal staples

From the moment people started to use metals, in Greece from the Early Bronze Age onwards (c. 3000 B.C.), various types of staples were used to repair pottery. The 'Type A' metal-staple technique was very often used to repair ceramics. This technique resembles the one described above. Here as well, holes were drilled along the breakages of the fragments that had to be reassembled. Then, instead of a piece of string, a metal staple was put in place, usually made of bronze or lead (*fig. 3*). Figure 4 shows an example of Type A metal staples on fragments of a black glazed amphora from Geraki, Greece, dating from the 4th–3rd Century B.C.¹².

The 'Type B' metal-staple repair differs from Type A because of the groove that was carved into the sherd, between the opposite holes. A metal staple was set into this groove, which kept the staple neatly in place (fig. 5). As far as we can presently gauge, this type of staple was always made of lead. It seems very likely that liquid lead was poured into the groove, thus creating the staple in situ. The technique can be seen very clearly on a red

figured crater from the collection of The Louvre, dating to 510-500 B. C. (color pl. 1).

The 'Type C' staple repair, finally, consisted of a metal strip made of iron or bronze, with small nails attached to it at both sides. This type of staple did not go completely through the sherd. It seems likely that the small nails were 'hammered' in place (fig. 6). An interesting example of this technique can be seen on a red figured crater from the collection of The Louvre dating to 440-430 B. C. (color pl. 2).

The use of 'alien' fragments

Perhaps the most intriguing type of repair is where the ancient restorer made use of a fragment of pottery that



Fig. 1 Representation of the earliest type of repair: drilling holes and tying the sherds together using rope or leather.



Fig. 2 Fragment of a painted vessel from Late Neolithic Syria (6000 B. C.), showing drilled holes along the breakages, Leiden, National Museum of Antiquities, excavations at Tell Sabi Abyad, Syria.

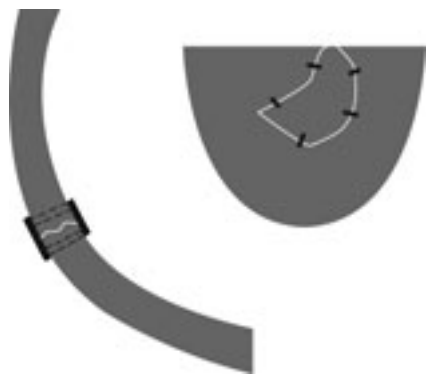


Fig. 3 Representation of 'Type A' metal-staple technique.



Fig. 4 Fragments of a black glazed amphora (4th-3rd century B. C.) showing 'Type A' staples still in place, University of Amsterdam excavations at Geraki, Greece.



Fig. 5 Representation of 'Type B' metal-staple technique.

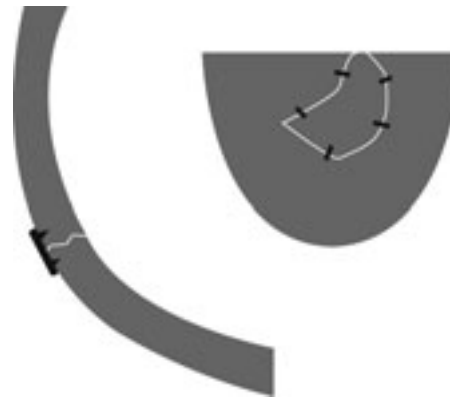


Fig. 6 Representation of 'Type C' metal-staple technique.

•••Abb. 3 und 5 sind identisch •••

did not belong to the object itself. The 'alien' part was cut to size, and fastened into, or onto, the gap. A famous example is the black-figured neck amphora from the Bareiss painter, dated to 530-520 B.C., from the collection of the J. P. Getty Museum. This amphora was repaired in antiquity with the upper neck and mouth of another amphora of about the same dimensions. Type B bronze staples made from lead were set in carved grooves and joined the two parts (*color pl. 3*).

Case studies

Having pointed out the main techniques for repairing pottery in Classical Greece, we will now briefly explore some case studies, showing how investigation of ancient repairs can teach us something about the value an object had in the past.

Case study A: a red figured crater from the collection of the Louvre

It seems that during the Greek Classical Period, restorers sometimes tried to make their repairs as aesthetically pleasing as possible. The red figured crater discussed above (*color pl. 1*), repaired with Type B metal staples, shows an example of this preference. It can be clearly seen that the staples were placed in the dark parts of the sherds as far as possible. By using Type B staples, made of lead, the repair was made as invisible as possible. Significantly, the lead staples would in time darken through a natural patina. Further, the grooves would in theory allow the repair to be filled-in, obscuring it even further, using some kind of filling material on top of the staple. Admittedly, no traces have been found of this possible filling, although it is likely that it existed.

Case study B: a neck amphora from the collection of the J. P. Getty Museum

Making a repair 'invisible' means that the ancient restorer strove to bring the object back to its original state as far as possible. This expresses a desire to regain the aesthetic qualities of the complete, undamaged object. The neck amphora from the Bareiss Painter (*color pl. 3*) shows this kind of aesthetic principle. As we modern restorers would say today, the vase was *restored* instead of *repaired*. Whereas repairs to an object are mostly functional, restoration is usually associated with notions of value, authenticity and exclusivity of an object. Investigating the techniques that were chosen to restore pottery in antiquity allows to tentatively reconstruct the value of the object in this stage of its history. These repairs tell us about ethical and aesthetic choices made by people in antiquity. In the two examples discussed above,

visual aesthetics and ideas of authenticity were apparently deemed important. Could this have been a conscious strategy to preserve, or enhance, the social-symbolic value of the original, intact object and possibly the status or social identity of the owner? In this case it may be suggested that a visible restoration would have conflicted with the aim of extending the social life of the object. Interestingly, the 'new' neck of the amphora was taken from a vase about 20 years younger in age¹³. The alien fragment would therefore give us the *terminus postquam* for the dating of the ancient repair.

Case study C: a storage jar from Geraki

When scholars describe ancient restorations, they usually take it for granted that the object had value. Just because it was restored, it must have symbolized status and prestige in the past; and *vice versa*, its symbolic value must have constituted the main reason for the repair. Indeed, one may argue for a special, elevated status for the two examples discussed above. However, we must keep in mind that there are different types of value; for instance economic, religious, personal (family-related) and aesthetic value. Can a repair give an insight into the kind of value involved? A nice example of what appears to be a purely *functional* repair may be seen on a pithos found recently at Geraki, Greece (*fig. 7*). In this case the damaged base was repaired by filling it with lead. In this particular example the restorer does not seem to have aimed at making the repair invisible. This was a large, plain storage vessel. It could be argued that the object had a mainly utilitarian value, and that the aesthetic principles alluded to above did not apply. Even with a visible repair the vessel could continue its service life, probably with the same function as before.

The identity of the ancient restorer

A final issue we briefly touch upon concerns the identity of the ancient restorer. Who restored and repaired



Fig. 7 Section of a pithos (4th–3rd century B. C.), showing a lead plug in the damaged base. University of Amsterdam excavations at Geraki, Greece.

ceramics, and where did this work take place? The earliest type of repair using string and simple perforations could easily have been carried out in or around the home and fits a domestic mode of production. As soon as metal staples come into the picture, we may assume that the repairs were made in a specialized metal workplace. Only in the specialist workshop sufficiently high temperatures could be created to work the metal staples. In the light of the vast scale of pottery production in Classical Greece, a central place where such repairs were carried out sounds logical.

Concluding remarks

To conclude, we once again emphasize the importance of studying ancient repairs in a systematic manner. Archaeologists and museums alike have neglected the different aspects of ancient repairs, their technology and their potential for reconstructing aspects of the cultural biography of objects. We are still poorly informed about the frequency of repairs in archaeological contexts, as well as in museum collections. Most examples we have now seen are from museum collections and therefore may reflect modern collection policies rather than past practices. We simply cannot know precisely how representative these collections really are. To be able to give answers to the many questions referred to in this paper, we must have more information from carefully excavated archaeological contexts. Furthermore, pottery restorations should no longer be treated as a haphazard by-product of archaeological find processing and publication. As this conference testifies, they merit careful consideration in their own right.

Past stages in the object's cultural biography are just as important as the biography we can reconstruct for its more recent history. In fact, it is difficult to define a clear dividing-line between the past and the present, as is shown by the growing interest in the cultural meanings, and changes therein, of the 19th century repairs to Greek ceramics found in most museum collections¹⁴. The very same considerations that apply to ancient repairs also apply to more recent ones: they provide insight into aesthetic choices, changing cultural values, and cultural choices. In the past, restorers tended to remove ancient repairs or fill them in, and retouch the grooves and holes in the sherds. By doing so, they removed part of the cultural biography of the object, and at the same time added a new stage. Today this is no longer common practice, and ancient repairs are increasingly left untouched, thereby giving new, contemporary meaning to these earlier stages in the object's biography.

In this field, interdisciplinary cooperation is crucial. This paper therefore urges museums, restorers and those who participate in archaeological excavation projects to join hands and focus more closely on ancient repairs. Restorers can do much more than mere conservation work in a museum. By carefully studying the ancient repairs they find, they can actively contribute to archaeological and culture-historical debates. Repairs, either ancient or modern, are not the end but the beginning of a new stage in the biography of the object, in the present museum context as well as in the past.

PHOTO CREDITS

Fig. 1. 3. 5. 6. Drawing by E. M. Dooijes-Hoogwijk.
 Fig. 2 Courtesy of Dr P. M. M. G. Akkermans, photo by O. P. Nieuwenhuysse.
 Fig. 4. 7 Courtesy of Dr J. H. Crouwel, photo by R. Dooijes.
 Color pl. 1 Courtesy of Réunion des Musées Nationaux.
 Color pl. 2 Courtesy of Réunion des Musées Nationaux, Pierrick Jan.
 Color pl. 3 The J. Paul Getty Museum, Villa Collection, Malibu, California.

NOTE

- 1 D. P. Braun, *Pots as tools*, in: J. A. Moore – A. S. Keene (eds.), *Archaeological Hammers and Theories* (New York 1983) 108–134.
- 2 I. Kopytoff, *The cultural biography of things: commodification as process*, in: A. Appadurai (ed.), *The Social Life of Things. Commodities in Cultural Perspective* (Cambridge 1986) 64–94.
- 3 With this terminology we follow very loosely the American archaeologist Michael Schiffer (M. B. Schiffer, *Formation Processes of the Archaeological Record* (Albuquerque 1987), without subscribing to the processual mode of archaeological reasoning.
- 4 For instance, the key words 'repair' and 'restoration' are not included in the index of some major text books on pottery for archaeologists, e.g. W. K. Barnett – J. W. Hoopes (eds.), *The Emergence of Pottery* (Washington 1995); C. Orton – P. Tyers – A. Vince, *Pottery in Archaeology* (Cambridge 1993); F. R. Matson, *Ceramics and Man* (Chicago 1965).
- 5 But see J. Chapman – B. Gaydarska, *Parts and Wholes. Fragmentation in Prehistoric Context* (Oxford 2007).
- 6 See the various contributions to this conference. For archaeology, Chapman – Gaydarska, cited at note 5, provides a detailed review and stimulating discussion. Two studies that include a systematic discussion of archaeological repairs from the Near East are O. P. Nieuwenhuysse, *Plain and painted Pottery, PALMA III* (Turnhout 2007), and K. Duistermaat, *The Pots and Potters of Assyria – Technology and Organization of Production, Ceramic Sequence, and Vessel Function at Late Bronze Age Tell Sabi Abyad, Syria, PALMA IV* (Turnhout, in press).
- 7 R. Dooijes, *Antieke reparaties, technieken toegepast op marmer, brons en aardewerk* (Ancient repairs, techniques applied to marble, bronze and ceramics), MA thesis in Classical Archaeology, University of Amsterdam (Amsterdam 2000).
- 8 R. Dooijes – O. P. Nieuwenhuysse (in prep.), *Ancient pottery repairs from the Jebel Aruda*.
- 9 Duistermaat, cited at note 6.

- 10 The typological designations are after Dooijes, cited at note 7.
- 11 K. Vitelli, Franchthi Neolithic Pottery, Vol. 1, Classification and Ceramic Phases 1 and 2, in: T. W. Jacobsen (ed.), Excavations at Franchthi Cave, Greece, 8 (Bloomington 1993).
- 12 Courtesy of Dr J. H. Crouwel, director of the University of Amsterdam excavations at Geraki, Greece.
- 13 M. B. Moore – D. Von Bothmer, A neck-Amphora in the Collection of Walter Bareiss, *AJA* 76, 1976, 1–11.
- 14 See the various other contributions to this volume.