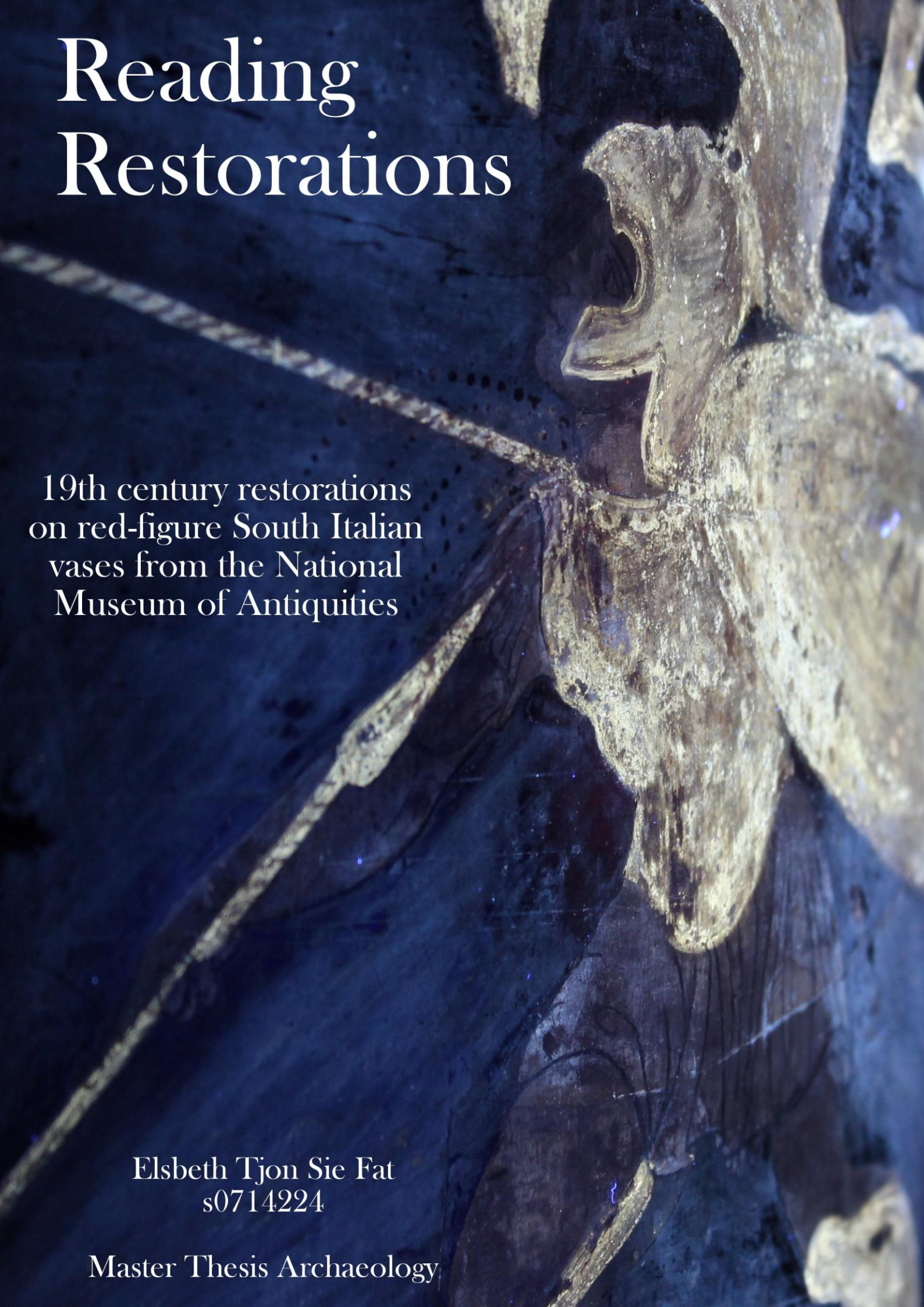
Reading Restorations



19th century restorations on red-figure South Italian vases from the National Museum of Antiquities

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Master Thesis Archaeology

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Preface

This thesis is the conclusion of my Master programme in Archaeology at the Faculty of Archaeology, Leiden University (The Netherlands). It mainly focuses on my first specialisation, Classical Archaeology, but also comprises my two other specialisations, Heritage Management in a World Context and Museum Studies.
Classical archaeology has the reputation of being a static and a monodisciplinary field of practice within the interdisciplinary approach of archaeology in general. This has changed, but classical archaeology still lags behind in embracing a multidisciplinary and interdisciplinary point of view. Especially modern techniques and inventions should be used more often. In this thesis, I have tried to also include other data than just written texts, and to make use of one of these techniques (UV fluorescence). The Dutch National Museum of Antiquities has been a perfect place to conduct my research about restorations on vase paintings and, with that, to improve the knowledge of the collection and of the subject in general.

This thesis would not have been possible without the support of several persons. Foremost among those is my thesis supervisor and advisor, Prof. Dr. Ruurd Halbertsma, who has inspired me to deepen my knowledge about this subject and who has once again proved to be an excellent mentor. He is one of the bridges both Leiden University and the National Museum of Antiquities need to maintain their close collaboration.
I also want express my gratitude to Peter Jan Bomhof, photographer of the National Museum of Antiquities, for providing the photos from the museum's photo archive, and to my uncle, Dr. Franklin Tjon Sie Fat, for checking my English.
Furthermore, I want to thank my close family and my boyfriend for their support and help during the many hours that I worked on this thesis.

Introduction

Problem orientation

The National Museum of Antiquities Leiden[1] and the Technical University Delft, both in the Netherlands, have developed a Science4Arts proposal for a multidisciplinary research project on the history and cultural meanings of repairs on archaeological ceramics, in which the biography of the object will play a central role (Final application Science4Arts (NWO) 2011, 1). The focus of the research would lie on the 'life cycle' of pottery: from their production in antiquity to their present existence in museums; and each phase in between. The research would give more insight into the function, context and significance of ceramic objects, conservation practices from the past, and present conservation and treatment strategies. Unfortunately, the proposal was not awarded with a grant by the Netherlands Organisation for Scientific Research (NWO) and the project could not go through.

This thesis was not part of the research project described above, but it is to some extent affiliated to it. Though, it is limited to only one phase of the cultural biography: the restoration of pottery in the decades after the archaeological discovery. More specifically, this research focuses on the restoration practices of vase restorers in the Neapolitan antiquities trade of the 19th century. Most restorations were executed on red-figure, South Italian[2] vases.

Although these restoration practices are still unexplored, recent investigations have led to promising results. Centre of the research is France, where the Institut National d'Histoire de l'Art (INHA) and the Centre de Recherche et de Restauration des Musées de France (C2RMF) have joined hands to investigate 19th century restorations and to develop the Lasimos Project, a 'scientific network on the history of knowledge of ancient vases'[3]. The main reason for the project was to fill up the gap that existed in the research to 18th and 19th century restorations (Bourgeois 2010, 5). The role that the restoration practices possibly had played in the 18th and 19th century vase trade was completely unknown. Since its birth, the Lasimos Project has created a network of museums and specialists from all over the world.

Preliminary, but important results of the investigations show that some of the studied vases have been restored considerably. Not only the broken parts seem to have been

[1] Dutch: Rijksmuseum van Oudheden (RMO).
[2] i.e. Magna Graecia; Greek colonies in southern Italy.
[3] Official subtitle of the project.

repaired and completed, also the paintings have been restored in some cases. These results are not only important for studies to museum history and restoration practices, but also for the perception of Greek pottery in general. The interpretation of the pictorial programme of ancient vases, for example, might need reconsideration if the figures have been adjusted in the 19th century.

The National Museum of Antiquities has a broad collection of Greek pottery. Some of the South Italian vases owned by the museum have their history in the Neapolitan art market of the 19th century. Yet, little is known about the restorations executed on these vases.

Aim and research question

The promising results of the Lasimos Project and the lack of information about the restoration practices on the Leiden vases have led to the desire to also investigate a part of the collection of the National Museum of Antiquities. Obviously, the aim of this thesis is strongly related to this desire. Most important is the question whether the vases indeed were restored in the 19th century. The principal research question of this investigation is therefore*: To what extent were the selected red-figure South Italian vases of the National Museum of Antiquities (Leiden, The Netherlands) restored in the 19th century?*

This research question mainly focuses on the decorative programme of the vases and –to a lesser degree– also on the ceramics.

Although this investigation will primarily give more insight into the (possible) restorations on these particular vases, the information can also be of importance for other research areas, as studies to restoration practices in Naples and to the history of the National Museum of Antiquities.

Methodology

To achieve the aim of the research, a selection of six vases[4] of the total collection of 45 red-figure South Italian vases (acquired in the 19th century) owned by the National Museum of Antiquities, will be investigated on the appearance of 19th century restorations. This will be done with the use of ultraviolet fluorescence. This practical analysis is rooted in a theoretical background: the cultural biography of pottery and the position of restoration within this life cycle (chapter 1). The restoration phase of this cultural biography is an important factor to consider, as it will give a clearer insight into the reuse of ancient pottery and the 19th century conception of the artists who have restored the vases.

[4] For the motives behind this selection, see chapter 5.

The theoretical framework is followed by two sections. First, an explaining section which is about the vases of Magna Graecia in general (chapter 2) and the collection of the National Museum of Antiquities (chapter 3). This part primarily acts as a contextual background section, as it explains the research objects of the investigation more thoroughly. Second, a section which specifically focuses on the restorations on South Italian vases. In this section, the methodology used in previous studies will be described (chapter 4), followed by an extensive description of the methodology and results of this investigation to the collection of the National Museum of Antiquities (chapter 5). This chapter is obviously the most important part of this thesis, as it tries to give an answer to the research question.

1. The cultural biography of Greek vases

The social life of things

Ever since its publication in 1986, 'The Social Life of Things'[5], a multidisciplinary volume about a better understanding of commodities, has been a highly influential work in the anthropological, historical and archaeological world. Archaeologists are principally interested in the pioneering theories developed by Igor Kopytoff about the cultural biography of objects.

Kopytoff, an anthropologist, argues in his work that the same range and kinds of cultural questions that are asked to biographies of persons can be asked to biographies of things (Kopytoff 1986, 66). Objects should therefore not only be seen as practical goods, but instead as things with cultural and symbolic meanings. As is the case with its function, the meaning of an object can change over time. Kopytoff illustrates his point with the use of huts by the Suku, a tribe in Zaire (present Democratic Republic of the Congo). The physical state of a hut at each given age corresponds to a particular use. It could be used as a house, a guest house, a kitchen, a chicken house – until the structure collapses. For a hut to be out of phase in its use makes a Suku uncomfortable, and it conveys a message (Kopytoff 1986, 67).

The idea that with every change in an object's social environment new features and meanings are added to its life story, fitted well with the ideas of postprocessual archaeology. A central proposition of the postprocessualists is that society is inconceivable without artefacts which actively communicate and help build society into what it is (Shanks 1998). Objects not only contain a meaning, but are also active players in a (material) culture.

The implementation of the cultural biography of things in archaeology was further developed by Michael B. Schiffer in his work about site formation processes[6]. Schiffer distinguished two classes of formation processes: those which were culturally created (C-transforms) and those which were non-culturally, or naturally, created (N-transforms). In the view of an artefact's biography, cultural formation processes in particular are of

[5] See Appadurai, A. (ed.), 1986. *The Social Life of Things. Commodities in Cultural Perspective*. Cambridge: Cambridge University Press.

[6] See Schiffer, M.B., 1987. *Formation Processes in the Archaeological Record*. Albuquerque: University of New Mexico Press.

importance, since these processes are responsible for retaining items in systemic context[7], for forming the historic and archaeological record, for cultural modifications of material and also for the activities of the archaeologists after the discovery (Schiffer 1987, 7). One may therefore separate the cultural formation processes into two kinds: those that reflect the original human behaviour and activity before a find or site became buried, and those that came after burial (Renfrew and Bahn 2004, 58).
This last point is important to consider, as from an archaeological point of view, an object's biography does not end with its final deposition. The remains of the collapsed huts of the Suku, for example, can form a great source in the study of house structures when once excavated.

When summarizing the cultural formation processes, the following stages can be identified:

FIRST STAGE: SYSTEMIC CONTEXT	**SECOND STAGE: ARCHAEOLOGICAL CONTEXT**
(after Renfrew and Bahn 2004, 58)	
1. Acquisition of the raw material (Procurement)	1. Reclamation
2. Manufacture	2. Artifact Processing
3. Use (and distribution)	
a. Reuse (repeating phase 3)	3. Preservation
b. Recycling (repeating phase 2)	
4. Discard	

So, in the first stage, raw material is gathered and from this an artefact is manufactured. Subsequently, the object is used until it becomes useless and is discarded. There can be various reasons for a deposition, such as loss, deliberate burial or, more simply, removal after use. But not in all cases an object is discarded right after its first use; it can also be reused, thus repeating the use phase, or recycled, repeating both the manufacture and use phases. When one of these processes is followed, it is reasonable that also the function and meaning of the object change. A storage jar, for example, may be used as an aesthetic object after losing its original, practical function.

[7] Schiffer distinguishes two contexts: the *systemic context*, the condition of an element which is participating in a behavioural system; and the *archaeological context*, materials which have passed through a cultural system, and which are now the objects of investigation of archaeologists (Schiffer 1972, 157).

Later, when an object is rediscovered, the phase of reclamation (and with that, the second stage) commences. When executing the archaeological practices within these phases, it is important to notice that an artefact may have entered the archaeological record at any one the four stages in its life cycle of the systemic context (Renfrew and Bahn 2004, 58).

Schiffer has systematically summarized the stages of both contexts in clarifying models [figure 1 and 2]. Figure 1 shows a general model of the stages of cultural transformation; figure 2 is through the addition of 'reclamation' somewhat of an extension. The reclamation processes that appear in the second stage can be best defined as transformations of an object from the archaeological context back into the systemic context (Schiffer 1987, 99). One can think of phenomena as scavenging, looting, but also excavating.

Restoration as part of the cultural biography

Unfortunately, according to this thesis' author, the systematic models of Schiffer are not directly applicable to all archaeological processes. In the archaeological context in particular, various paths can be followed to reclaim an object. These paths are connected with the reasons behind the reclamation; a scavenged item is obviously gathered for a different reason than a professionally excavated object. Schiffer discusses these processes shortly (1987), but suitable models as shown in figure 1 and 2 are lacking. Therefore, figure 3 has been developed here for a better understanding of the archaeological context. Figure 3 shows a brief list of possible processes in the reclamation phase. In this stage, a set path is followed (artefact retrieval – artefact processing – application), but, because of the various motives, the manner differs. From a museological point of view, the process of acquisition, analysis and preservation preferably follows the third path, although many objects are acquired via intermediary channels, such as bequests and donations.

It is chosen to place the process of restoration under 'preservation' in this figure; primarily because the term is – in this thesis – seen as an effective means to reach preservation. In the terms developed by the International Council of Museums – Committee of Conservation (ICOM-CC) restoration is defined as 'action taken to make a deteriorated or damaged artefact understandable, with minimal sacrifice of aesthetic and historic integrity' (ICOM-CC, Definition of Profession). This official explanation has been adopted here. Still, restoration can also be placed under 'analysis' as well, especially if the restorations are executed right after the excavation of an object.

When viewed in the sense of Schiffer's second model [figure 2], restoration can naturally be put best under reclamation [figure 4]. One should yet be aware of the fact that all

processes described in figure 3 can be placed under 'reclamation' and that this denomination primarily functions as a collective term.

In the existing models, the role of restoration as reclamation process is thus undervalued. It is important to notice that restoration must be seen as a reclamation process and hence as an essential part of the cultural biography of an object. To underline this, figure 3 and 4 have been created by the author. In fact, a renewed 'life' begins when an object has been restored. In this new life stage, not only the object itself has been repaired, also its function and meaning have been rehabilitated. In most cases, it is perhaps better to speak about a *change* in the function and meaning of an object. When applied to Kopytoff's theories, it can be said that with the restoration of an object, also the social environment in which the object has been placed alters. As seen before, this shift can take place already in the systemic context (reuse and recycling), but also in the archaeological context. When archaeological objects are displayed in a museum, for example, they are praised because of their aesthetic value and not –or less– because of their former functional value.

The Polish philosopher Krzysztof Pomian has contemplated about changes in meanings that are attached to objects. According to Pomian, the combined action of six variables determines the definite meaning of an object[8]:

- change of social place
- change of space (as defined by other objects)
- change of the verbal context
- change in the mode of exhibiting the objects
- change of public
- change in behaviour in relation to the objects

These changes together lead to a change in the meaning of an object. Pomian brings it to another level, by stating that the history of an object is the history of the successive meanings that have been attached to the objects (Pomian 1990, 71). The meaning itself can have a major influence on the appearance of the objects, but it has rather to do with the exchange processes which the objects form part of. Usually, an object is being traded because of its practical value. Objects have prices, and therefore represent a commercial

[8] Translated by the author. Pomian's essay 'Pour une histoire des sémiophores. À propos des vases des Médicis' was originally published in Le Genre Humain 14 (1989), but has never been translated to English.

value. When an object loses its functional value however, it also loses its place in the exchange process. In practice, this basically means that the object has become waste and will be thrown away.
However, objects which form part of collections, are exceptions to this theory: although they are not part of an exchange process anymore, they are not thrown away, but collected and even aestheticized. When placed in a museum, the aesthetic or informative value takes over the original practical value of an object.
Pomian calls these objects 'semiophores'; objects that were earlier just seen as 'things', had shifted to 'things with a meaning'. Semiophores represent the 'invisible', because the meanings the objects are carrying are understandable for the ones who observe them. A Greek helmet which is exhibited in an archaeological museum, for example, serves as an example for something that is not actually present in the museum, e.g. Greek military equipment, Greek warfare, and Greek culture in general. The visitors conceive these invisibilities because they are able to link the semiophore with these subjects. The semiophore therefore acts as a connector between present and past, here and there, and visible and invisible. The six variables that are mentioned before help the observers to make this connection between the visible and the invisible. When these variables change, also the meaning that is attached to the object changes.

Pomian illustrates his points with the case study of the 'de'Medici vases'. The highly influential House of Medici which ruled over large parts of Italy and Europe from the late 14th century onwards, gathered an extensive collection of antiquities and art works. Important and highly valuable objects are reckoned among their collection, of which the famous Tazza Farnese is one of the most striking examples [figure 5]. The vase collection mainly consisted of contemporary hard stone vessels. The House of Medici possessed the collection for several decades. In 1530, a part of the vase collection was placed in a shrine in the Basilica di San Lorenzo by Pope Leo X (Giovanni de'Medici). The vases contained relics of several saints and were shown to the people only once a year, at Easter. Two ages later, in 1737, the vase collection left the House of Medici and became part of the collection of the Grand Duke of Tuscany. With the transfer of ownership, also the juridical status of the vases changed: they did not belong to a dynasty anymore, but to the state (Pomian 1990, 69). A part of the collection was brought to the Galleria degli Uffizi, another part to the new Museo di Storia Naturale, both in Florence.
According to Pomian, the vases of the House of Medici have always been part of commercial exchange processes: they were traded against money (Pomian 1990, 72).

Because the vases moved from a private collection[9] to a church and after that to a museum, also the social places of the vases changed. In the private collection of Lorenzo de'Medici, for example, the vases were a reflection of their owner's status. In fact, the vases even helped in strengthening the admiration for the owner. This admiration can also be seen in the subsequent social place (the church), albeit now not for il Magnifico, but for l'Onnipotente. The vases formed a connection between God and the people and were, because of that, also an element in the interchange between the world of the living and the divine world. In the museums in Florence, however, the vases gained a whole new meaning: as intermediaries between the past and the present. The vases are loaded with history, and thus have become primarily study objects (Pomian 1990, 74).

The vases of the House of Medici act as examples of Pomian's theory of semiophores. Although the vases have more or less remained the same materially, in their function as semiophore their meaning has changed with every exchange.
When studying an object which is exhibited in a museum, it is therefore important to notice the meaning that the object may have had in the past, what it has nowadays, and what it will have in the future.

[9] Pomian calls this social place a 'studio' or a 'scrittoio', a study in which a collector was surrounded with his books and objects.

2. South Italian vases

2.1 Magna Graecia

The theories about the cultural biography of objects are not only applicable to the 'de'Medici vases', but also to other museological objects, as South Italian pottery. As the denomination perhaps suggests otherwise, the term 'South Italian vases' has nothing to do with the pottery of 'Italian' nations, as the Etruscans, Romans or other tribes. Instead, South Italian vases are vases which were made in the Greek colonies of South Italy and Sicily (collectively: *Magna Graecia;* [figure 6]) between the later years of the fifth century B.C. and the early years of the third (Trendall 1982, 15).
'Magna Graecia' is the Latin translation of the original Greek name 'Megale Hellas' (Μεγάλη Ἑλλάς), which initially referred to South Italy specifically and over time possibly came to include Sicily (Bennett and Paul 2002, 13).

Ancient Greek colonization had started in the Geometric Period (900-700 BC), in which the Greek city-states began to develop. The maritime trade, that had always been important for the cities, expanded tremendously in the following centuries. To monitor the economic interests, trading posts were founded oversees. Although the expansion of the trade can be seen as the most important factor for the foundation of settlements in other areas, also population growth, (political) troubles and the need of more agricultural land might have been important for the establishment of the colonies. In fact, in most cases it may have been a combination of factors that could lead to the decision of founding a colony.
Two types of Greek colonial settlements are being distinguished: emporia and apoikia (in modern languages unfortunately both denominated as 'colony'). Emporia can be seen as purely trade-based settlements, while apoikia were more complex, independent communities. All around the Mediterranean sea, from Asia Minor and North Africa to South Italy and France, both colony types –which formed a link between the cities on the mainland and other trading nations– began to emerge.
Logically, the Greek colonies became a melting pot of various cultures and customs. Because of the variety of people that formed the new colonies and their different places of origin, the culture of Magna Graecia can be seen as a mix of several civilizations.

Due to this mixture, the colonies developed in a different manner than their mother cities had done in former times. The colonies in Magna Graecia were politically independent, but maintained religious ties and trade links with their mother cities. At the same time, the colonies were highly influenced by tribes of the Italian mainland, to which the Greek ideas were also passed on. The colonies in Magna Graecia should therefore not only be seen as an extension of the Greek city-states, but rather as a free-standing culture. According to many, the importance of Magna Graecia lies in the fact that the Greeks of South Italy and Sicily were the essential link in the passing of Hellenism from Greece to Rome, and so to the west (Mayo 1982, 8).

2.2 Vasi etruschi versus vasi italo-greci

After the discovery of Greek and Roman antiquities in Rome and its surroundings in the 16th century, collecting antiquities became a new trend in elite Europe. The area around Naples and South Italy became subject of interest in the 18th century. Although most Greek antiquities were desirable objects for these collectors, pottery was undervalued for a long time. The Grand Tourists had neglected most of the pottery, partially because the vases were still buried in the unopened grave tombs. The excavations in the 18th century meant a change in this situation (Halbertsma 1995, 114).

One of the first important collections of Greek vases was the collection of the British ambassador of the Two Sicilies, Sir William Hamilton (1731-1803). Apart from gifts, Sir William acquired his vases from three principal sources: purchases from other collections, the art market, and excavations (Jenkins and Sloan 1996, 139). In a way, Hamilton was ahead of his time: he examined and published his collections. The publication of Pierre-François d'Hancarville (1766)[10] about the respectable vase collection of Sir William Hamilton meant the beginning of a renewed interest in Greek pottery.

In 1767, Hamilton's first vase collection was sold to the British Museum in London, where it became the basis for the extensive pottery collection of the museum. From 1790, Hamilton was building up a second vase collection in Italy, which was also designated for the British Museum. This collection was also published; this time by the German painter –and Director of the Neapolitan Academy of Fine Arts– Wilhelm Tischbein[11].

[10] Title publication: Collection of Etruscan, Greek, and Roman Antiquities from the Cabinet of the Hon. Wm. Hamilton (Naples 1766-1776).

[11] Title publication: Collection of Engravings from Ancient Vases Mostly of Pure Greek Workmanship Discovered in the Sepulchres in the Kingdom of the Two Sicilies but chiefly in the Neighbourhood of Naples during the course of the years MDCCLXXXIX and MDCCLXXXX. Now in the Possession of Sir Wm. Hamilton, His Britannic Majestaty's [sic] Envoy Extr.y and Plenipotentiary at the Court of Naples (Naples 1791-1795).

Unfortunately, the boat on which the collection was brought to England, got shipwrecked. Only recently, in 1974, the ship was rediscovered. Excavations of the underwater site have led to the discovery of many of the antiquities of Sir William Hamilton. Research to these objects is still going on.

Along with the early excavations in the 18th century and Hamilton's publications, a discussion about the provenance of the vases came up. Because many vases had been found in Etruscan graves, the vases were seen as Etruscan (*It*. vasi etruschi) for a long time. The notion that Greek vases found in Italy were Etruscan can be attributed to the nationalism of a group of scholars from northern Italy. Two Tuscan etruscologists, Filippo Buonarroti and Francesco Gori, had adopted the idea as part of a nationalist movement (Jenkins and Sloan 1996, 51). They had fallen back on one of the first publications about the Etruscans: *De Etruria Regali* (1616-1619) from the Scottish historian Thomas Dempster.

On the contrary, another group of Italian scholars –Felice Maria Mastrilli, A.S. Mazzocchi and Giacomo Martorelli– was of opinion that the discovered vases were not of Etruscan origin, but instead had Greek roots. They had based this idea on the appearance of Greek inscriptions, which were visible on several vases. This idea was supported by numerous scholars who lived in Rome; among which the German painter Anton Raphael Mengs and the German archaeologist Johann Joachim Winckelmann.

Scientific research in Greece, which commenced after the Greek War of Independence, eventually provided evidence for the Attic provenance of the sixth and fifth century black-figure and red-figure pottery (Halbertsma 1995, 115).

In 1764, Winckelmann published his most eminent work: *Geschichte der Kunst des Altertums*, in which he once and for all stopped naming the vases Etruscan. He suggested that the commonly used term '*vasi etruschi*' should be replaced by the denomination '*vasi italo-greci*' (Italian-Greek vases). With this name, the actual provenance of the vases –being Magna Graecia, the Greek colonies in Southern Italy– became justified.

2.3 Classification

After the identification of the South Italian vases as Greek, scholars began with arranging the pottery. Right from the start of the investigations most attention was paid to the red-figure pottery. The denomination 'South Italian pottery' is therefore mainly reserved for the red-figure vases from the fifth century B.C. onwards. However, research to the earlier years of the pottery production is indeed important to get the full picture of Magna Graecia's pottery assemblage.

An overview of the most important features of South Italian pottery is given below. Naturally, also here most attention is paid to the red-figure style (2.3.3).

2.3.1 Early styles

In the classification of the early South Italian pottery, the general arrangement of early Greek vase painting will be followed. Although South Italian vase painting differed from the mainland pottery production, the Greek mainland has had a remarkable influence on the South Italian styles. Along with their migration, the Greek colonists brought the technical knowledge of pottery production to their new residence. Most scholars assume that the colonists had produced their own pottery already from the beginning of their settling. There is for example strong archaeological evidence proving that ceramic production already had begun from the end of the eighth century B.C. in several colonial poleis in Magna Graecia (Iozzo 2002, 49). The colonists produced vases for daily, religious and funerary practices.

Geometric and Sub-Geometric style

The earliest findings of painted pottery which led to the idea that the local pottery production in Magna Graecia had already started in the eighth century B.C., were found on the island of Pithekoussai –modern Ischia– just off the Bay of Naples. This is not a coincidence, given that this island was the first Italian area which became colonized by the Greeks in the mid eighth century B.C. Pithekoussai may be called an emporion (trading settlement) or an apoika (colony). Most likely, the original trading settlement has evolved into a colony at some point (Ridgway 1992, 108).

Generally, the vessels were painted according to the style of the city-states from which the settlers came. Because the first settlers on Pithekoussai were people from Euboea (*Εύβοια*) –an island in the Aegean Sea–, Euboean pottery became the dominant style in the eighth century B.C. The local potters mainly produced typical Euboean Late Geometric patterns, as concentric circles and stripes. Unique for the period are some open, conical cups that carry simple Geometric patterns drawn in outline and filled with white paint, which can also appear on the rims [figure 7-8] (Boardman 1998, 28).

This South Italian Euboean style was not exactly the same as the original style from Euboea; also typical features of Corinthian wares were integrated in the vases. Regardless of the origin of the colonists, Corinthian pottery in particular was in general demand in South Italy and Sicily (Boardman 1998, 48). The South Italian style was also influenced by the mainland of Italy, where there were both imports and the production of local –and Phoenician– shapes carrying Greek Geometric decoration (Boardman 1998, 53).

From the end of the eighth century B.C., the ceramic production also started in other colonial poleis in Magna Graecia. The pottery production of this period is mainly characterized by the great variety of styles, which were influenced by the fabrics of the colonists' home countries. On the one hand, the local artisans imitated the simple Geometric patterns from examples that were imported from the Greek towns that at the time dominated the Mediterranean markets: Corinth, Chalcis and Eretria (Euboean), Rhodes, Chios and Phocaea (Iozzo 2002, 50). On the other hand, the painting of more elaborate scenes was still developing.
Although the settlers produced different types of pottery, the images were often influenced by the collective experience of migration (Iozzo 2002, 48). That this experience had impressed the colonists, can be derived from the scenes that were painted on the pottery: many of the early scenes presented sea and ship(wreck) scenes. An example of such a scene is the shipwreck scene on a krater from Pithekoussai from 725-700 B.C. [figure 9-10].

Orientalizing style
The diversity of styles decreased in the seventh century B.C., when the styles of the production places became more or less unified. This of course does not mean that the production was centralized, but the unification surely had a more profound cause. The era of big migrations was over and the cities that had been founded in the early years were now in a stage of stability.
It is important to notice that, apart from the relative unification of the styles, the most local styles were still influenced by their mother cities. At the same time, two additional strong influences extended evenly to all colonies: Corinth and the Ionian area (Iozzo 2002, 55). But, because of the growing contacts between Greece and Asia Minor, the Geometric style of the mainland steadily changed in a style with Eastern features. This Orientalizing style was first developed in Corinth. Although the city-states in Magna Graecia were highly influenced by Corinthian –and Euboean– pottery in the Geometric period, the Orientalizing styles in the west in the seventh century looked less to Orientalizing Corinthian ware (Proto-Corinthian) (Boardman 1998, 114). Instead, the local production of vases expanded and a local style was developed, which was directly based on Orientalizing decoration. An example of a vase in the Orientalizing style can be seen in figure 11.

In the case of pottery production in South Italy, the sixth century can be characterized by changes and extremes. In the beginning of the sixth century B.C., the trade between the

mainland and the colonies increased considerably. This obviously led to the rise in the amount of imported goods and the decrease of the local pottery production. The logical consequence of these changes was the generalization of the pottery record.
This all changed again around the mid sixth century B.C., when the contacts between the Greek mainland and the colonies deteriorated. From that time on, the production of local pottery flourished again; albeit with one major change: the influence of black-figure pottery.

2.3.2 Black-figure pottery

After the Geometric period first Corinth and then Athens dominated the market for Greek pottery (Cook 1972, 145). Once again, Corinth turned out to be the trend-setter: the first black-figure ware was developed here. This is not a coincidence, as the Proto-Corinthian wares of the Orientalizing period are considered to be in fact the first black-figure wares. In the Proto-Corinthian style, first a silhouette was drawn and then the details were engraved. These parts turned black in the subsequent firing process.
The actual black-figure Corinthian pottery that was developed from the seventh century B.C. became rather popular in South Italy a century later [figure 12]. A few decades after the Corinthians had commenced to produce their black-figure pottery, also the Athenians, highly influenced by the Corinthians, developed a black-figure style [figure 13].

Naturally, the imported Corinthian and Attic wares were imitated by the local artisans. From the mid sixth century, the local producers –which had always been a constant factor in Magna Graecia's pottery assembly– developed their own black-figure pottery style out of the imported styles: *Chalcidian* pottery. This denomination was first applied under the misconception that the pottery was made in Chalcis, a city in Euboea, because the inscriptions on some of the vases were in Chalcidian script (Boardman 1998, 217). Because all vases were found in the West, and not in the East, the common thought nowadays is that the pottery was produced in the Euboean colony of Rhegium (present-day Reggio Calabria).
The Chalcidian style was the first local, South Italian style that had evolved into a differentiated style which was exported on a large scale.
Most likely, there were several artists responsible for the painted scenes on the vases, of which the so-called Painter of the Inscriptions was the most important. He became the founder of a number of workshops that produced an important group of vases which were exported in huge numbers (Iozzo 2002, 60). As his name suggests, the Inscription Painter

included many inscriptions in his paintings. The example given in figure 14 shows not only one of these inscriptions, but above all the high quality of his work.
Although the Inscription Painter probably had many pupils, no Chalcidian artist could touch the abilities of his master. The painter who came closest to the Inscription Painter, is the so-called Phineus Painter, named after his most famous work: a cup with a narrative presentation of the myth of Phineus [figure 15].

Because of the invention of the red-figure technique in Athens in 520 B.C., the black-figure vases got out of use in the fifth century B.C. The only black-figure vases that continued to be produced were the Panathenaic amphorae, which were given to the victors of the sports games at the Panathenaic Games. However, the stylistic and symbolic features of the black-figure technique which had been developed in Magna Graecia, became the principles of the succeeding red-figure style.

2.3.3 Red-figure pottery

The main reason that the red-figure pottery had pushed aside the black-figure ware was that now more details could be painted on the vases. The red-figure technique was the opposite of the black-figure technique: instead of the silhouette, the background was painted and turned black in the baking process. Details on the figures could be drawn afterwards.
The red-figure technique was mainly manufactured in Attica, but was brought to South Italy and Sicily by Attic emigrants in the middle of the fifth century B.C. Throughout the years, the colonists of Magna Graecia had developed their own culture within the Greek system. Therefore, –as seen with the development of earlier styles– the South Italian potters and painters did not thoughtlessly copy the Attic features and characteristics of the technique, but developed their own version of the red-figure technique instead[12]. Unlike the Attic ware, the South Italian pottery was not widely exported.

'Pre-South Italian ware'
From the installation of the Greek colonies until the third quarter of the fifth century B.C., the colonists imported most pottery from their home country, Greece (and Athens in particular). From the fifth century onwards, the colonists began to produce their own red-

[12] In contrast with the earlier described styles, this South Italian style has been thoroughly examined. Arthur Dale Trendall (1909-1995) is considered to be the pioneer in the research on red-figure vases from Magna Graecia and was by far the most influential expert on the subject. See for his works (Trendall, A.D., 1989. *Red Figure Vases of South Italy and Sicily*. London: Thames and Hudson) and his numerous descriptions of all styles.

figure pottery. These local productions were mainly imitations of the imported Attic wares and were only meant as supplements to the imported vases.
The vases that were made in this early period can be seen as predecessors of the five types of the actual South Italian ware, and is generally denominated as 'Pre-South Italian ware'. Although the first local wares were not that different from the Attic pottery, the production of these wares undoubtedly meant the first step in the development of South Italian pottery.

There are several production places known of this period, from which the Metapontine and the Tarantine schools of vase-painting were the two major centres. Metapontum (Metaponto), a little village now situated in the Province of Matera, has been identified as production place for the forerunner of Lucanian pottery: *Early Lucanian*.
A typical feature of the pottery in this period is the modest shape of the vases: the simple bell-kraters were the most commonly used vases. For the most part, the pottery was decorated with subjects associated with Dionysos and his followers, with daily life, or with scenes of pursuit (Trendall 1989, 18). Studies to the painting style on the vases have resulted in the identification of three main vase painters; the so-called Pisticci Painter, the Cyclops Painter and the Amykos Painter. The former is named after the town of Pisticci, where several of his vases were found. His work presented many parallels with the Attic examples of the time, both in themes and techniques [figure 16]. A close collaborator of the Pisticci Painter was the Cyclops Painter, who was named after one particular calyx-krater, on which he had painted the famous story of Odysseus and the Cyclops. The style of the Cyclops Painter resembled much of the style of the Pisticci Painter, but differed in the way details and perspective were displayed. A distinctive feature of his style was the treatment of the drapery of female figures [figure 17].
Still, the most important of the early Lucanian artists was the Amykos Painter, who –in line with the Cyclops Painter– thanks his name to a vase painting on one of his hydriae: the Punishment of Amykos. In the famous myth of the Argonauts, king Amykos of the Bebryces (Bythinia) was beaten by the Dioskouros Polydeuces in a boxing fight. Characteristic for the Amykos Painter was his portraying of stock figures or stereotypes. He mainly depicted these figures on vases of large dimensions, as big kraters and amphorae. That the Amykos Painter must have been important in his time, can be deducted from the large amount of pottery he made: more than 200 vases and a large amount of fragments are ascribed to the Amykos Painter [figure 18].

Not far from the Metapontine school of vase painting, a similar style was developed in Tarentum, present Taranto. The pottery produced in this area has been identified as the

forerunner of the Apulian style and is hence denominated as *Early Apulian*. The painters of both Early Lucanian and Early Apulian seem to have worked in close cooperation and either style reflects the influence of the other (Trendall 1989, 18). Nevertheless, the Early Apulian painters presumably have developed the style slightly later than the Early Lucanian painters. Although there are many similarities between the two styles, there are also several important differences by which it was necessary to divide the Pre-South Italian ware into two separate styles.
Typical for the Early Apulian ware was the usage of large, monumental vases –as the volute-krater– which were richly decorated. Likewise, mythological scenes have played a bigger role in the paintings of the Early Apulian style than in the Early Lucanian ware. The Early Apulian ware also seems to be more influenced by the contemporary Attic ware (Trendall 1989, 23).
As with the Metapontine school of vase painting, the Tarantine school was also represented by some important painters, from which the Painter of the Berlin Dancing Girl and the Sisyphus Painter undoubtedly have been the most influential. The Painter of the Berlin Dancing Girl was specialized in depicting serious figures; mainly draped women and bearded men [figure 19]. The Sisyphus Painter was probably the most important painter of the Early Apulian style and was named after an inscription on one of his vases. His style is mainly characterized by the typical drapery of female figures [figure 20].

Apart from the Early Lucanian style and the Early Apulian style, generally a third style is distinguished: *Early Sicilian*. The Early Sicilian style starts a little later than the two other styles, but before the end of the fifth century, and on a smaller scale (Cook 1972, 192). Because of the isolated position of Sicily, the style from this island took its own course and thus was only slightly influenced by the two other early styles.
The style of the paintings did not have a very high quality, but the style could measure with the Early Lucanian and Early Apulian pottery. In subjects, there is a preference for draped women and satyrs (Cook 1972, 198).

Major styles
The Pre-South Italian styles steadily developed into several flourishing styles. The first classifications of this red-figure South Italian pottery were based on the finding places of the vases, since it was assumed that they had been made where they were discovered (Trendall 1982, 15). This led to a complicated system with many pottery types. Soon, not location, but style became the marker of the classification system. Three types were distinguished from each other: *Lucanian*, *Apulian* and *Campanian* pottery. At the end of

the 19th century, *Paestan* had also been recognized as a fabric in its own right. And thanks to the large quantity of red-figured vases brought to light by excavations since 1950 in Sicily, it became possible to add *Sicilian* as a fifth (Trendall 1989, 7). Based on their resemblances, described below, these five types fall into two main groups: one consisting of Lucanian and Apulian, and the other of Campanian, Paestan and Sicilian.

2.3.3.1 Lucanian ware

The Early Lucanian ware that was made in Metaponto in the later fifth century B.C., developed into the Lucanian style at the beginning of the fourth century B.C. Although its forerunner had been a respectable style, the quality deteriorated remarkably in Lucanian times. The reason for this abatement can most likely be subscribed to the decrease in contacts with the Greek mainland. Along with the growing isolation of the Lucanian workshops, the painters moved from a respectable mundane style to a more provincial style. Instead of incorporating typical Attic features, the workshops now mainly imitated Apulian scenes, that –unlike the Lucanian style– had remained its qualitative standard. It is therefore important to consider the close connection between the Lucanian and the Apulian style.

The famous Amykos Painter of the Early Lucanian ware had three principle successors: the Anabates Painter, the Creusa Painter and the Dolon Painter [figures 21-23]. The styles of the three artists show a marked degree of similarity, although they had also developed individual characteristics (Trendall 1989, 55). As in the Early Lucanian style, the Lucanian artists mainly used modest vase shapes as bell-kraters for their paintings. The main themes that had decorated the early vases, were also applied on their Lucanian successors. Still, the stock theme of the Lucanian vases was the simple depiction of a group; generally a three-figure group at the front and two or three youths at the back. Characteristic details of the Lucanian paintings were a doubled dark stripe (mostly on women's skirts), palmettes with serrated edges, a Z-pattern and thick rays (Cook 1972, 197).

The successors of the three principle painters never reached the quality that they had delivered. At the end of the fourth century B.C., a remarkable decline is visible in the refinements of the paintings. The dispersal of finds around the Lucanian workshops show that in this period, the production of pottery had moved to the inland of Italy (Cook 1972, 197). Although a variation on the Lucanian style continued to be produced in these areas, this shift meant the definitive end of the Lucanian ware.

2.3.3.2 Apulian ware

The Apulian style has descended from the style from the Sisyphos Painter of the Early Apulian ware. The style tends to fall into two main groups: the 'Plain' style and the 'Ornate' style.

The Plain and the Ornate style can be distinguished from each other in both the used pottery types and the stylistic appearance. In the Plain style, mainly bell-kraters, column-kraters, hydriai and pelikai were being used. In contrast with these small vases, the painters of the Ornate style applied their paintings on vases with larger dimensions, as volute kraters and amphorae.

Also the scenes that were depicted on the vases differentiated from each other. In the Plain style, mainly scenes that were associated with Dionysos, athletics, warriors and heads of women were depicted. Only few mythological scenes were found; whereas in the Ornate style, mythological and funerary scenes appeared on a large scale.

The painters of the Apulian workshops decorated their vases in either style, but for the most part, they seem to have a preference for one or the other (Trendall 1989, 74). The painters that have been identified can therefore also be put into one of the two categories.

The first practitioner of the Plain style is thought to be the Tarporley Painter, who still used many features of the Early Apulian style (as practiced by the Sisyphos Painter) [figure 24]. However, the Dionysiac scenes and draped youths that the Tarporley Painter designed, fitted also well in the early Plain style (Trendall 1989, 75). The Plain style was further developed by the Dijon Painter [figure 25]. His subjects cover a wider range and include a little mythology, although he also remained loyal to the Dionysiac themes (Trendall 1989, 77).

During the development of the Ornate style, the painters made increasingly use of added colours. In this case, the Illiupersis Painter was an artist of the highest importance, since it was he who established the canons for the decoration of the monumental vases, for example mythological and funerary scenes and the portraying of female heads (Trendall 1989, 79) [figure 26].

The division between the two styles became less visible from the middle of the fourth century onwards, when the Plain style increasingly made use of colours and ornaments; which previously had been typical features of the Ornate style. This merging of styles resulted in the bloom of the well-developed Ornate style in the fourth century B.C. It can be said that the style became more monumental, both in vase shapes and mythological scenes. Painters that practiced this style were for example the Varesse Painter, the Darius Painter and the Patera Painter [figures 27-29].

By the end of the fourth century, the quality and originality of the paintings decreased considerably, which led to the definitive end of the Apulian style around 300 B.C.

2.3.3.3 Campanian ware

Unlike the Lucanian, Apulian and Sicilian styles, the Campanian (and Paestan) style did not have a noteworthy predecessor in the same region. The only red-figure vases that had been made in Campania before the development of the actual Campanian ware, were the so-called Owl-Pillar vases. This Owl-Pillar Group –dated back to 450-425 B.C.– was an imitation of the Attic red-figure vases of the second and third quarters of the fifth century B.C., though with a strong Etruscan flavour [figure 30] (Cook 1972, 191).
Nevertheless, the Campanian style that was developed in the middle of the fourth century B.C., did not derive from early vases as the Owl-Pillar Group. Because of the similarities with the Sicilian style, the Campanian style most probably has had its origin in Sicily. A characteristic feature of the Campanian style is the frequent use of white on (female) figures and the strict representation of the added ornaments. The scenes on the Campanian vases did not have a distinctive character. Mythology played a minor role in the representations, and, overall, the range of scenes was not expansive. But, unlike the limitations in themes, a whole range of pottery types was used to apply the scenes on. The main part of the vessels were of a medium size, but also small and large vases were used.

The production in Campania was centred in three workshops: two in and around Capua and one in Cumae. The red-figure vase production seems to have begun at Capua shortly before the middle of the fourth century, and at Cumae slightly later (Trendall 1989, 157). In the pioneer years of the Campanian style, the workshops were respectively represented by the Cassandra Painter, the Capua Painter and the CA Painter [figures 31-33]. Although the styles of the three production centres were obviously quite similar, each artist had developed its own characteristics. The Cassandra Painter, for instance, worked precisely and was influenced by the styles used in Sicily. The Capua Painter and his surrounding AV Group frequently portrayed single figures or female heads. The CA Painter –whose name is an abbreviation of Cumae A– is considered to be the standout of the Campanian style. His works were bright and of a high quality. Apart from the artists' own creativity, stylistic features from other areas turned out to be the decisive factor in the further development of the styles. The Apulian influence was for example much stronger at Cumae than in Capua, where the Sicilian style became more popular.
The successors of the three pioneers continued to produce vases in virtually the same styles as their masters. By the end of the fourth century, all branches of Campanian were in decay and the school petered out probably just after 300 B.C. (Cook 1972, 198).

2.3.3.4 Paestan ware

Like the Campanian ware, the Paestan style most probably has had its predecessor in Sicily. Still, the Paestan ware has various characteristics that distinguishes the style from Campanian and the other wares. Perhaps the most distinctive feature of Paestan decoration is the 'framing palmette' [figure 34] . These palmettes were usually set on each side of a painted scene, whereby the intermediary scene became more or less delimited by the palmettes.

The scenes that dominated the Paestan vases were mainly Dionysiac scenes; mythology and funerary scenes played a minor role (Trendall 1989, 198). As in all five styles, the designs were applied on a whole range of vase shapes, although the range used in Paestum was much more limited than in the other styles. The Paestan potters mainly used ordinary shapes, from which the bell-krater was the most popular. The clay from which these vases were made was unique for Paestum and is hence a typical Paestan feature. Due to the high concentration of mica in the clay, the pottery developed an orange-brown tint in the baking process.

Probably the most remarkable characteristic of Paestan pottery was the appearance of signatures on some vases. Because of these signatures, it became possible to identify the most influential vase-painters from Paestum. The highest amount of pottery is assigned to a certain 'Asteas' [figure 35]. It is important to realize that the signed vases made by Asteas only formed a small part of his total production. Studies to other Paestan vases have shown that Asteas must have painted many more vases. Another painter who has left his signature on some of the vases was 'Python' [figure 36]. This Python mainly decorated his vases with two-figure compositions (Trendall 1989, 202-3). Almost on all vases, Dionysos was one of the displayed figures.

Just like the Campanian ware, the Apulian style influenced the Paestan style considerably in the fourth century B.C. In style these vases look almost pure Apulian and might well have been thought of as imports, were it not that they are made from the typically micaceous Paestan clay and have turned up in quantities which would be unexpectedly large for imported wares (Trendall 1989, 207-208). The latest vases (early third century B.C.) of this 'Apulianizing Group' show a marked stylistic deterioration. At the final stage of this style, the figures are depicted in a manner that has become so barbarized that it is not always easy to tell exactly what is represented (Trendall 1989, 209).

2.3.3.5 Sicilian ware

The Early Sicilian style of the fifth and fourth century B.C. steadily passed into the Sicilian style. Still, the improvement of the quality of the style did not lead to a

considerable increase in contacts with the Italian mainland. As a consequence, the isolation of Sicily was still decisive for the development and characteristics of the Sicilian style. But, as described before, the Sicilian style was highly influential in both Campania and Paestum from the second quarter of the fourth century B.C.
The red-figure pottery of Sicily from c. 340 B.C. onwards shows a remarkable degree of uniformity of shapes, subject-matter and decoration (Trendall 1989, 233). This raises the thought that only a few production places were active in Sicily. This idea is supported by archaeological findings, which were mainly found in and around Syracuse and in the region of Mount Etna. The two production centres in these areas were represented by several painters: the Lentini-Manfria Group –from which the Lentini Painter was the prominent artist– worked in the region of Syracuse from the third quarter of the fourth century B.C., while the Etna Group was situated in the region around Mount Etna [figures 37-38]. The latter group did not have one leading painter, but consisted of various artists. Generally, also a third production centre is identified on Lipari –a small island northeast of Sicily– which can also be seen as part of the Sicilian style.
All regions seemed to develop their own version of the Sicilian style, although there are many more features that are characteristic for the production places in general. For example, striking features of Sicilian vase-painting were the predominance of the feminine element in the subject-matter and an increasing use of added colours (Trendall 1989, 234) [figure 39-40].
By about 300 B.C. the production of red-figure vases in Sicily had come to an end.

This ending can be seen at all five centres (Lucanian, Apulian, Campanian, Paestan and Sicilian). The production of red-figure pottery ceased around the end of the fourth century. It was probably hastened by political events (e.g. growth of Rome) and because of the knowledge that the red-figure vases were no longer being produced in mainland Greece.

2.3.4 Vase shapes

As seen above, the painters from the production centres made use of a great variety of vase shapes. The principal shapes used by the first South Italian potters in Lucania and Apulia for their red-figured vases were taken over from those current in Athens in the later fifth century B.C. (Trendall 1989, 9). Although most Attic shapes were also used in the Greek colonies, some shapes became more popular than others. Two vase shapes, the volute krater and the (pseudo-panathenaic) amphora, were broadly used in Magna

Graecia, especially in Lucania and Apulia. Figure 41 gives an overview of the vase shapes used in the South Italian colonies.

As with the painting styles, the vase shapes developed rapidly to fit into the multicultural character of Magna Graecia. The volute krater and the amphora for example, became increasingly larger and more elaborate decorated (Trendall 1989, 9). In Campania, even a new version of the amphora was developed: the bail-amphora. This specific type of amphora has one handle across the mouth instead of the usual two on the neck, as seen in the Attic version of the vase. The loutrophoros, a large vessel, also underwent modifications: the handles were made twisted or were completely left out; thus developing into a barrel amphora.

Along with the alterations of the Attic vase shapes, the colonies also developed their own vase types. Examples are the nestoris, a two-handled jar that was mainly used in Lucania [figure 42] and the knob-handled patera, a large dish with two handles (flanked by knobs), made in Apulia. Also in Apulia a strong mingling of styles became visible in the so-called 'Trozella' (*lit.* 'little wheels'). This nestoris-like jar with four 'wheels' on the handles was originally a Messapian[13] invention, but became more Greek in outlook with the colonization of South Italy by the Greeks.

[13] The Messapii were the native inhabitants of Apulia.

3. The collection red-figure South Italian vases of the National Museum of Antiquities

3.1 History of the collection

The National Museum of Antiquities in Leiden owns an extensive collection of Greek pottery, of which numerous vases have been identified as South Italian. The wish to assemble a collection of Greek vases already existed from the beginning of the museum.

The development of the museum: Caspar Reuvens

The Dutch National Museum of Antiquities was officially founded in 1818, when Caspar Reuvens –former professor in Classics at the University of Harderwijk– became the first professor in archaeology at Leiden University. Also the directorship of the university's archaeological collection was part of this chair.

This collection mainly consisted of the antiquities of the so-called *Marmora Papenburgica* (Papenbroek marbles). These antiquities were disposed of by will of Gerard van Papenbroek (1673-1743), the owner of one of the largest Dutch art collections in the 18th century. He had enlarged his collections by buying antiquities from other collectors or by bidding at auction (Halbertsma 2003, 15). Because van Papenbroek had required that the collection would get a public access after his death, the antiquities were exhibited in the orangery of the university's botanical garden.

When Reuvens was appointed almost 75 years later, the antiquities were in a bad condition. Because of the damp environment, it was obvious that the Papenbroek marbles were in need of another accommodation. This accommodation became realized in 1821, when the university bought several houses in the Houtstraat in Leiden to house the archaeological collection.

Along with the new housing for the museum, the collection expanded rapidly. During his first years as an archaeology professor, Reuvens had already acquired several Egyptian, Greek and Roman objects from private collectors, but these did not form a coherent collection.

The opportunity to extend the collection came soon. In 1820, a year before the actual move into the new museum, a collection of Greek antiquities was offered to the Dutch government by the retired Flemish colonel Bernard Rottiers. After an inspection by

Reuvens, the government decided to buy the collection for the price of 12.000 Dutch guilders. The collection mainly contained marble objects, but pottery was also represented. The purchase register of the collection[14] listed 29 Greek vases; of which two can be seen in figures 43-44.

The collection that Reuvens had brought together was not a balanced one. It was clear that –in accordance with the taste of time– the main focus of the purchasing was on the sculptural program of the museum. Moreover, none of the obtained Dutch private collections has had a single piece of pottery in their assortment. Even the great interest in Greek vases that came up in the second half of the 18th century, and that went hand in hand with the popular neoclassicism, could not get foot on ground in the Netherlands (Bastet 1987, 125).
It was the son of Bernard Rottiers, Jean, who brought the first extensive collection of Greek pottery to the National Museum of Antiquities. In August 1821, the chancellor of the Dutch consul in Greece, Paul Giuracich, sold a collection of about 200 antiquities to Jean Rottiers (Halbertsma 2003, 54). This second Rottiers collection consisted of many objects, among which 159 Greek vases, mostly black-figure lekythoi (Inventory book 1 (1818-1824), 56-69). Three of the obtained vases can be seen in figures 45-47.

Rottiers was not the only negotiator of the museum. The Major Jean Emile Humbert (1771-1839) has also been a very important actor in the purchase of antiquities. After several successful acquisitions, one transaction of Humbert in particular made that the total appearance of the museum changed drastically. Subject of this transaction was the elaborate Egyptian collection of Jean d'Anastasy, a collector in Alexandria. After almost a year of negotiating, the Dutch government agreed with the purchase of the whole collection. The sum spent by the Dutch government on this purchase (113.000 guilders) was the largest ever for an archaeological collection (Halbertsma 2003, 99).
Because of the acquisition of the d'Anastasy collection, Egyptian antiquities formed the most important part of the Leiden collection. The museum suddenly became an important player in the field of Egyptian archaeology. In quality, Greek and Roman antiquities were underweighted in the museum; not to speak of the pottery.
In 1828, Reuvens had the chance to expand the Greek vase collection tremendously. Humbert had come into contact with the Neapolitan antiquarian Onofrio Pacileo. Together with his two companions Raffaele Gargiulo (see 4.2) and Giuseppe De Crescenzo, the antiquarian was a specialist in the trade in Greek and South Italian vases

[14] Appendix to the letter of Mr. A.R. Falck (Minister of Education, National Industriousness and Colonies) to Caspar Reuvens, 2 November 1820 (Archive of the National Museum of Antiquities).

(Halbertsma 1995, 116). Pacileo offered the total collection of antiquities to Humbert for the price of 86.450 francesconi[15]. The collection contained around 1500 vases. Reuvens acted reserved towards the Pacileo collection. He thought that, after the acquisition of the expensive d'Anastasy collection, the Leiden Museum had become a prey for the Italian art dealers. He let Humbert make a thorough examination to the objects, because he thought that the objects would be fake:

> ***Maar er is nog eene andere aanmerking, van nog meer regtstreeksch belang te maken op de verzameling van Gargiulo. De Heer Von Köhler namelyk een scherpziende en scherpschryvende oudheidkenner in Rusland, heeft onlangs gewaarschuwd: 'Dat men in Napels thans vazen samenstelt, somtyds uit honderde van fragmenten, waaruit noodzakelyk zwarigheden voor de uitlegging en zelfs bedrog ontstaan moet, en dat zich dergelyke willekeurige en slechte restauratien met ellendige verzonnen inscriptien in alle nieuw aangelegde verzamelingen, en bepaaldelyk in die van Gochon d'Annecy te Parys en van Von Lamberg te Weenen bevinden.'***
>
> ***De samenhang van 's mans woorden schynt tevens onzen Gargiulo bedektelyk met dat bedrog te beschuldigen. […] Ik moet hierby voegen dat de taal van Pacileo, in zynen brief aan den Heer Humbert, dat alle vazen Italisch-Grieksche zyn en dat men zulks zal staande houden in het aangezigt van alle Academiciens van Europa, kwakzalverig is en weinig vertrouwen inboezemt, ofschoon eenige geleerden vazen van de Heer Gargiulo hebben uitgegeven.***

(Letter of Caspar Reuvens to the official of the Ministry of Education van Ewijck, 4 March 1829. In: Halbertsma 1995, 117.)

> ***But there is another comment to give on Gargiulo's collection, one of more direct importance. Sir Von Köhler, that is to say, a sharp-sighted and sharp-writing connoisseur of antiquities from Russia, has recently warned: 'That they currently compose vases in Naples, sometimes of hundreds of fragments, from which necessarily objections for the interpretation and even fraud arise, and that there are arbitrary and inadequate restorations with miserable invented inscriptions in all newly assembled collections, and particularly in that of Gochon d'Annecy in Paris and of Von Lamberg in Vienna.'***

[15] Silver coin used in the Grand Duchy of Tuscany in the late 18th century.

> ***The cohesion of the words of the man also seems to accuse our Gargiulo with that fraud. […] I have to add to this that the language of Pacileo in his letter to Sir Humbert, that all vases are Italian-Greek and that they will persevere this in the sight of all Academies of Europe, is a quackery and does not inspire any confidence, although some scholars have published the vases of Sir Gargiulo[16].***

(Own translation)

That the objects were not forged, did not matter: the objects were eventually not bought by Humbert. The vases of the Pacileo collection became dispersed to museums and collections from all over the world. Besides Reuvens' doubts about the authenticity of the collection, there were two other important reasons for the rejection: first of all, the museum simply could not get enough money to buy the antiquities. The most important financier of the acquisitions, King Willem I, did not want to spend more money on the National Museum of Antiquities because he had sponsored the museum a lot in earlier years, especially with the d'Anastasy collection. The second reason was of political kind: in 1830, the Southern part of the Netherlands revolted against the United Kingdom of the Netherlands and declared their independency. Obviously, King Willem I turned his attention to this Belgian Revolution instead of to the acquisition of antiquities.

Conrad Leemans and the Canino collection

Although he had made a good start with the acquisition of Rottiers' second collection, the archaeological museum of Reuvens did not own a very representative collection of Greek ceramics (Bastet 1987, 127). The development of this section was for account of Reuvens' successor, Conrad Leemans, who had become curator/director of the museum after the sudden death of Reuvens in 1835.

Leemans managed to gather many Greek vases in the museum. 250 vases 'of all sorts'[17] were donated by several Dutch diplomats who were stationed in the Mediterranean, as van Lennep (Smyrna) and Cocq van Breugel (Tripoli). Still, the basis for the extensive vase collection was formed by the so-called Canino collection. These objects were once collected by Lucien Bonaparte, Prince of Canino and brother of Napoleon. In 1828, more than 2000 objects were found on his estate in Tuscany, Italy. To Bonaparte's opinion, an Etruscan necropolis with loads of *vasi etruschi* was uncovered. Yet, also this time the

[16] For the restoration practices of Raffaele Gargiulo, see chapter 4.
[17] Conrad Leemans used this phrase (Dutch: 'van allerlei aard') in his description of the Canino collection in 1840.

vases turned out to have Greek origins. In the years after the discovery, most of the vases were sold to European collectors and museums.

The dealing in the Canino vases was going on for years; five years after Bonaparte's death in 1840, some of the objects were still put up for sale in Paris (Bastet 1987, 129). In 1839, a remaining part of the collection (105 pieces) was exhibited in Rotterdam. Conrad Leemans studied the collection and decided that it would be a good addition to the existing collection of the museum. In consultation with the Minister of the Interior and Kingdom Relations, H.M. de Kock, he got permission to buy the remaining collection of 96 Greek vases for the price of 6910 Dutch guilders (Letter of Minister of Internal Affairs H.M. De Kock to Conrad Leemans, 5 September 1839). The nine other vases were already sold to the Kingdom of Bavaria (four) and to Baron Van Westreenen from The Hague (five).

With the acquisition of the Canino vases, the National Museum of Antiquities finally had an extensive collection of Greek vases. That Leemans was proud of the vase collection he had assembled, becomes clear of the following quotation:

> ***'Zijn nu deze voorwerpen reeds belangrijk door de verscheidenheid van vorm, door hunne grootte, door het verschil van stijl, bewerking en door den volmaakten staat, waarin zij bewaard zijn gebleven, zij worden dit nog veel meer door de voorstellingen, waarmede zij prijken, en door de opschriften en merken, diehunne waarde zoo zeer verhoogen.'***

(Leemans, C., 1840. Grieksche en Etrurische beschilderde vazen uit de verzameling van den Prins van Canino)

> ***Are these objects already important by the variety of shape, by their size, by the difference of style, by their working and by the excellent condition in which they have been preserved; they will become even more important by the images they present, and by the inscriptions and marks, which increase their value highly.***

(Own translation)

The vase collection of the National Museum of Antiquities was extended considerably in the following centuries. The museum now owns also a respectable collection of red-figure South Italian vases, of which 45 vases were bought in the 19th century. A catalogue of these vases can be seen in the next paragraph.

3.2 Catalogue of red-figure South Italian vases acquired in the 19th century

Because this research primarily focuses on red-figure South Italian vases, only these vases will be described here. Although the acquisition of the other Greek vases of the National Museum of Antiquities has been described before, they do not form part of the catalogue.
In the catalogue, the classification into the five groups as developed by Trendall and used in chapter 2, will be followed. The vases are sorted by acquisition date and inventory number.

Lucanian ware

1. Lucanian oxybaphon (krater/wine vase)
R.Sx.4

Find spot unknown

Three dancing figures, one holding up his hands (A).
Three clothed men; the middle man leaning on his stick (B).

Acquired in October 1888
Collection Jan Six

2. Lucanian nestoris (type 3)
Inv. K1894/9.1

Exact find spot unknown, Italy
Acrobat Painter (375-350 BC)

Woman with box facing naked man (soldier) with helmet and shield.

Acquired in September 1894
Collection L. Verschoor-Bonfanti

Apulian ware

3. Apulian column krater
Inv. GNV1

Find spot unknown

Clothed woman, quickly moving to the left, holding a dish in her right hand and a thyrs[18] in her left hand.
A winged youth is moving towards her from the right, with a wreath in his right hand and a drum in his left hand (A).
Two men, standing in front of each other, with a stick in their right hands (B).

Acquired in May 1886
Collection Martinus Nijhoff

4. Apulian oinochoe
Inv. GNV10

Cumae

Woman sitting on tree trunk with box in left hand and bucket handle in right hand. Tambourine in front.

Acquired in November 1886
Collection Martinus Nijhoff

No picture available

5. Apulian kelebe
Inv. GNV58

Nola, Italy
Laurel branch

Acquired in January 1887
Collection Martinus Nijhoff

[18] Stick of Dionysos

6. Apulian hydria

Inv. GNV107

Find spot unknown

Temple with woman's figure, little basket in left hand and bowl in right hand. Large baskets on both sides of the temple (A).
Palmettes and plant decoration (B)

Acquired in July 1887
Collection Martinus Nijhoff

7. Apulian jug

Inv. GNV109

Nola, Italy

Woman's head
Mouth damaged, but repaired

Acquired in July 1887
Collection Martinus Nijhoff

8. Apulian jug

Inv. GNV137

No picture available

Find spot unknown

Woman holding a wreath in her left hand and three lutes in her right hand.

Acquired in November 1888
Collection Martinus Nijhoff

9. Apulian jug

Inv. GNV139

Find spot unknown

Scene from Leda and the swan: Woman on tree trunk, right breast revealed. On her lap a swan, which brings its beak to the woman's lips. In front of the woman a youth with wings, in his right hand a wreath, which he offers to the woman.

Acquired in November 1888
Collection Martinus Nijhoff

No picture available

10. Apulian stamnos

Inv. GNV140

Nola, Italy

Seating woman with a dish in her right hand (A). Winged naked woman with a mirror in her right hand and a wreath in her left hand.

Acquired in November 1888
Collection Martinus Nijhoff

11. Apulian dish with lid

Inv. GNV144

Lekani, Greece

Laurel branch (dish). Two white flying swans (lid).

Acquired in November 1888
Collection Martinus Nijhoff

No picture available

12. Apulian neck-amphora

Inv. GNV154

Italy
325 BC

Woman with wreath standing in aedicula. The grave surrounded by two men and women bringing offerings (A). Three women with phiale, wreath (B).

Acquired March 1889
Collection Martinus Nijhoff

13. Apulian amphora

Inv. K1894/1.13

Nola, Italy

No picture available

Two women's heads on the neck.
Two men in toga (A). Girl fleeing for a satyr (B).

Acquired in January 1894
Collection L. Verschoor-Bonfanti

14. Apulian oinochoe

Inv. K1894/1.14

Find spot unknown

No picture available

Woman's head

Acquired in January 1894
Collection L. Verschoor-Bonfanti

15. Apulian kotylos

Inv. K1894/1.15

Find spot unknown

Woman's head (A). Seated woman with a dove in her right hand (B).

Acquired in January 1894
Collection L. Verschoor-Bonfanti

No picture available

16. Apulian aryballos

Inv. K1894/9.25

Capua, Italy

Man's head between arabesques

Acquired in September 1894
Collection L. Verschoor-Bonfanti

17. Apulian (feeding) bottle

Inv. K 1894/9.26

Italy
Truro Painter (400-300 BC)

Head of Juno

Acquired in September 1894
Collection L. Verschoor-Bonfanti

18. Apulian aryballos

Inv. K1894/9.31

Capua, Italy

Paintings in netting-patterns

Acquired in September 1894

Collection L. Verschoor-Bonfanti

19. Apulian oinochoe/epichysis

Inv. K 1895/1.3

Italy

Ca. 400-300 BC

Androgyne Eros in the middle of floral motives

Acquired in 1895

Collection L.Verschoor-Bonfanti

20. Apulian askos

Inv. K1896/9.2

Italy

Ca. 400-300 BC

Decoration of Eros carrying a wreath.

Acquired in 1896

Collection L.Verschoor-Bonfanti

Campanian ware

21. Campanian neck-amphora
Inv. AMM1

Italy
Ixion Painter (330-320 BC)

Scene from the Trojan War: battle between Achilles and Memnon, supported by their mothers Thetis and Eos. Above Hermes, weighting the souls (psychostasis) (A). Two papposilenoi with Erotes (B)

Acquired in May 1844

22. Campanian skyphos
Inv. GNV8

Italy
Painter of the Leyden skyphoi
Ca. 350-325 BC

Horseman and horse (A). Youth holding bird (B)

Acquired in November 1886

23. Campanian skyphos/kotylos
Inv. GNV9

Cumae, Italy

Young man with right hand on the chest and left hand on the hip (A)
Woman's head with headscarf (B)

Acquired in November 1886
Collection Martinus Nijhoff

24. Campanian bottle

Inv. GNV11

South Italy

No picture available

Naked winged young man (seen from left) with a wreath in his hand. Woman with a box in her left hand and a belt in her right hand (A). Palmettes and leaves (B)
Broken but repaired

Acquired in November 1886
Collection Martinus Nijhoff

25. Campanian amphora/pelikè

Inv. GNV55

Nola, Italy

No picture available

Women's head on all sides, seen from the left

Acquired in January 1887
Collection Martinus Nijhoff

26. Campanian aryballos

Inv. GNV63

Nola, Italy

No picture available

Horse head, seen from left (A).
Palmette with vine leafs (B)

Acquired in January 1887
Collection Martinus Nijhoff

27. Campanian amphora

Inv. GNV130

Find spot unknown

Faun with his left foot on a square block, in his right hand a branch with leafs and his left arm put over his head. Woman's head on the neck (A). Faun with a round object in his left hand and a branch with leafs in his right hand. Young man's head on the neck (B).

Acquired in February 1888
Collection Martinus Nijhoff

28. Campanian amphora

Inv. GNV133

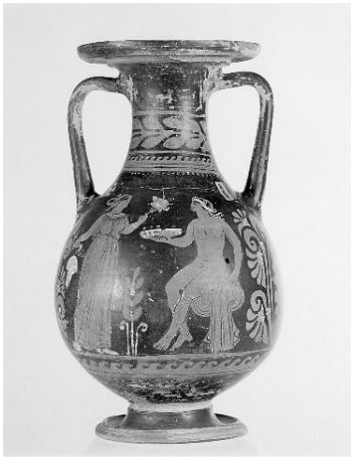
Nola, Italy

Woman sitting on a seat, in front of her a standing woman with his left hand reaching to the sitting woman (A). Man in clothing, standing in front of a cippus (B).

Acquired in November 1888
Collection Martinus Nijhoff

29. Campanian pelikè

Inv. GNV134



Italy
Ca. 350-330

Men with phiale and woman with mirror, accompanied by flying Eros (A).Man with phiale and woman with mirror (B).

Acquired in November 1888
Collection Martinus Nijhoff

30. Campanian krater

Inv. GNV135

Find spot unknown

Two women; one naked, sitting with a box in right hand, the other clothed, standing with a mirror in right hand (A). Two men, standing, clothed; one man with the hands in his coat and the other man with a stick in his right hand (B).

Acquired in November 1888
Collection Martinus Nijhoff

31. Campanian lekythos (alike)

Inv. GNV136

Find spot unknown

Woman with a box in right hand (A). Woman's figure (B).

Acquired in November 1888
Collection Martinus Nijhoff

32. Campanian skyphos/kotylos

Inv. GNV141

Find spot unknown

No picture available

Naked youth with his left leg on a tree trunk and in his right hand an oval object, probably a shield. Wreath on his head (A). Clothed woman (B). Restored from seven pieces.

Acquired in November 1888
Collection Martinus Nijhoff

33. Campanian pelikè

Inv. K 1894/9.6

Italy

Ca. 400-300 BC

Woman near altar (A). Youth (B).

Acquired in September 1894

34. Campanian bell-krater

Inv. K 1894/9.7

Italy

CA-Painter, CC-sub group (325-320)

Seated woman (semi-naked) holding phiale and tambourine (A); Seated woman draped in mantle holding similar objects (B).

Acquired in September 1894

35. Campanian dish and lid

Inv. K1894/9.16

Capua, Italy

Female dancer with tambourin and dish (A). Winged genius with chains in his hands (B).

Acquired in September 1894

Collection L. Verschoor-Bonfanti

No picture available

36. Campanian oil bottle

Inv. K1894/9.27

Capua, Italy

Small sieve and garlands

Acquired in September 1894
Collection L. Verschoor-Bonfanti

No picture available

37. Campanian phialè

Inv. K 1895/1.8

Italy
Ca. 400-300 BC (Classical period)

Three fish

Acquired in 1895

38. Campanian bail-amphora

Inv. AMKZ 4

Exact find spot unknown, Italy
Siamese Painter (325-300 BC)

Woman dancing (A/B)

Acquired in the 19th century
Collection 'Rijks Museum Amsterdam'

Paestan ware

39. Paestan oinochoe
Inv. GNV138

Find spot unknown

Naked satyr, between two cippe, moving forward quickly, with a box in left hand and his right hand stretched out to the back.

Acquired in November 1888
Collection Martinus Nijhoff

Sicilian ware

40. Sicilian lekythos/aryballos
Inv. KRS4

Selinus, Sicily, Italy

No picture available

Woman's head with kekryphalos[19].

Acquired in August 1888
Collection August Kleine

[19] Female head dress

South Italian ware[20]

41. South Italian hydria/ kalpis (probably Attic)
Inv. GNV6

Italy
Ca. 450-350 BC

Man and woman holding cosmetic objects.

Acquired in November 1886
Collection Martinus Nijhoff

42. South Italian pot
Inv. GNV14

Cumae, Italy

No picture available

Acquired in November 1886
Collection Martinus Nijhoff

43. South Italian hydria
Inv. GNV129

Area of Canzetto, Italy

No picture available

Woman with box in left hand and part of her coat in right hand. Next to her a cippus.

Acquired in February 1888
Collection Martinus Nijhoff

[20] The vases of this category are not classified into one of the other categories, primarily because their exact find spots are unknown and/or their stylistic appearance does not give any information about the production place.

44. South Italian pelikè

Inv. H III VV 2*

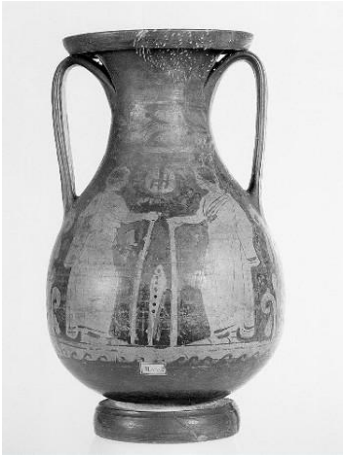
Italy

Ca. 350-300 BC (Hellenistic period)

Man with situla and woman with box (A)

Two figures in mantles (B)

Acquired in the 19th century



45. South Italian squat lekythos/aryballos

Inv. Vst (geel) 29

Italy

Ca. 400-300 BC

Woman holding box and wreath

Acquired in the 19th century
By auction

(N.B. Photos courtesy of the National Museum of Antiquities)

4. 19th century restorations on South Italian vases

4.1 Restoration methods

When investigating the 19th century repairs on archaeological objects, it is necessary to distinguish these adjustments from earlier repairs on the items. Unfortunately, archaeologists rarely make explicit mention of the presence of repairs. If repairs are mentioned at all, this is not usually done systematically or in a statistically reliable manner (Dooijes and Nieuwenhuyse 2007, 16).
Moreover, the methods used in the restoration practices of both time periods are quite comparable. The use of metal connection parts for example, is a technique that has been practiced from the moment people started using metals.
Because the restorations of different time periods are alike in many cases, it is not always sufficient to divide the restoration techniques in a simple typological division. Still, both the ancient and the 19th century repairs have some features that distinguish them from each other. These characteristics are described in the next pages.

Apart from the differences in techniques between ancient and 19th century repairs, it is important to consider the cultural biography of the vases as described in chapter 1. As stated before, restoration can be seen as part of the reclamation process of an object (figure 4). Moreover, one should realize that also the reason behind the adjustments could vary. In ancient times, the vases were mainly repaired to *reuse* them and to maintain their (original) function. In terms used by Schiffer, this means that the objects stayed in the systemic context and that the 'use phase' was repeated after the restoration (phase 3a, see pp. 10). On the other hand, when the vases were *recycled*, their function could also change (phase 3b, see pp.10). If they were initially made to hold liquids, for instance, after mending they might be used mainly for dry goods (Clark *et al*. 2002, 140).
The original purpose of the vases was also changed with their recycling (i.e. restoration) in the 19th century. Now, not functionality, but the aesthetic appearance of the vases was the principal aim of the restoration. The vases were reclaimed from the archaeological context and, with their restoration, the new life stage in the cultural biography commenced. Because the vases were intended to be in a collection, the aesthetic value was esteemed higher than its functional value. To speak with Pomian, the vases consequently lost their places in the exchange processes.

Ancient repairs

Following the typology of Renske Dooijes, restorer of the National Museum of Antiquities in Leiden, the ancient restoration of pottery from the classical period can be divided in three main groups:

1. drilling holes
2. the use of metal staples
3. the use of alien fragments

[figures 48-51] (Dooijes and Nieuwenhuyse 2007, 16).

The drilling holes technique is the earliest and most common restoration method. In this technique, tiny holes were drilled into the damaged parts of the pottery; often paired along the fracture path. Consequently, the sherds were tied together with a rope or leather. Because these organic materials were used, only holes are the visible remains of the restorations.

Later, the vulnerable organic materials were replaced by pieces of metal –either lead or bronze– which are referred to variously as pins, wires, staples, rivets or clamps, depending on their shape and manner of application (Clark *et al*. 2002, 140). A simple staple, for instance, could be used to connect two sherds; a T-shaped staple could be used to tie three sherds together. Occasionally, these staples still remain in place on some vases or have been found aside [figure 52]. The pins could be applied on the pottery in several ways; again the appearance of the fracture defined which method was used. The staples could be applied on (a) both the inside and outside of the vase [figure 49], (b) on both sides of the vase, set in carved grooves [figure 50], and (c) only on the outside of the vase [figure 51].

Because holes and metal staples have also been used in previous and later times, dating the metal staples is perhaps the best method to discern the restorations in an accurate manner. Though, several studies[21] to these connection parts have shown that many staples had been weathered and corroded, so that only holes remained. Luckily also investigations to these holes have been undertaken, in particular by Maya Elston, Assistant Conservator of Antiquities Conservation in the J. Paul Getty Museum. According to Elston, there is a clear difference in the outlook of ancient and modern holes: the latter are more precise and the borders are sharper (Schöne-Denkinger 2007, 21).

[21] For example the studies to repairs on five kraters from the Berliner Antikensammlung, described in (Schöne-Denkinger 2007, 21).

The third restoration technique, the use of alien fragments, differed from the former methods, as this does not concern a connection technique, but rather a complementary method. With this technique, an equalized pottery sherd –not belonging to the vase itself– was placed into the gap of a broken vase and connected by using one of the linking techniques described above [figure 53]. There is no evidence that an adhesive was used in conjunction with the metal pins; elaborate repairs suggest that the ancient restorer relied mostly on the structural integrity of a mechanical joint. However, the use of some kind of resin, such as pine pitch, is probable in many cases, though it may have been used more as a sealant than an adhesive (Elston 1990, 66)

Apart from these commonly used restoration methods, also other, more inventive, methods were used to tie parts together or to cover the cracks on the pottery. Such concern for objects was not unusual in antiquity. When reattaching the foot to the bowl, or the handles to the body of a vase, or when joining together broken sherds, ancient craftsmen seem to have possessed a keen appreciation for the importance of the objects being repaired. Such care suggests that the object was considered important for aesthetic, ritualistic, or monetary reasons (Elston 1990, 55).
The only visible evidence of a restoration on an Attic red-figure kylix from the J. Paul Getty Museum, for example, was a bronze disc under the foot and a section of a bronze pin inserted into the stem (Elston 1990, 55). When the vase was exposed to X-rays, the whole pin and a horizontal thin sheet of metal became visible [figures 54-55].
Also few examples are known of the application of precious materials on the cracks. Figures 56-57 for example, show an Attic cup which was found in a prominent Celtic grave of the La Tène period in Ludwigsburg, Würtemberg, Germany. On both the inside and the outside of the cup, gold leaf in the shape of a Celtic lancet has been applied. Although not repaired by the Greeks themselves, this is a perfect example of the restoration and reuse of Greek pottery.

19th century repairs
In the 18th and 19th century, the taste of time mainly consisted of the admiration of classical times, as commenced in the Renaissance. With (neo)classicism as most important art movement, the Greek vases were examples for artists of the time. Obviously, also the original Greek vases that were found in excavations, were valued highly.
Along with the expansion of the art trade from the 18th century onwards, also the restoration of the offered objects increased considerably. As with all processes of supply and demand, the objects were adjusted to the taste of time; the 19th century conception.

This principally meant the replenishment of the missing and broken parts of the pottery: complete vases were simply better selling objects than damaged ones. For the same reason mainly large vessels were restored. It simply was not worth the effort to restore small, relatively cheap vases.
The restorers made use of different techniques to restore the vases. In Naples, the centre of the 19th century vase trade (see 4.2), for example, different levels of restorations were applied: no restoration, *completo restauro* and *mezzo restauro*. As the denomination suggests, a vase was completely restored when completo restauro was used. A vase could be finnished out of a few sherds, and the pictorial programme and lost colours were repainted. Initially, completo restauro was considered to be the highest aim of a restorer: for it was the best manner to approach the ancient artists. Later, completo restauro was exchanged for mezzo restauro. This method was somewhat of a compromise between completo restauro and no restoration at all. Figures were painted in a style that approached the original design, but the ancient paintings were still distinguishable from the modern replenishments [figures 58-59]. Still, mezzo restauro did not exclude an important pictorial reintegration of the missing parts, nor the use of a colour palette different from those of antiquity (Milanese 2010, 26).

The skills of the restorer and the access to qualitative materials resulted in different levels of restoration techniques, which are commonly known as ‘restauration visible’ and ‘restauration cachée’. As the term already makes clear, the restorations applied with restauration visible remained visible after the adjustments. Missing parts of the vase were left open, or were filled up with unpainted clay. On this clay, the decoration of the vase was drawn with a pen (Halbertsma 1995, 121). In contrast, restauration cachée was not visible with the bare eye. A black varnish was applied to the surface and took away the sight on underlying cracks (Halbertsma 1995, 121). If necessary, parts of the picture were (re)painted to complete the painting.
The second method in particular led to a great admiration for the restored vases. Throughout the years, the restoration of the vases had become an art practice itself. The restoration of the vases therefore became an important –if not essential– factor in the flourishing international art market. When restoring the vases, the artists showed such an expertise, that it was hardly possible to distinguish the repaired vases from complete, original objects.

4.2 Naples as centre of the 19th century vase trade

Because of the discoveries of antiquities in and around Naples from the 17th century onwards, the city had developed itself into the centre of the 19th century art trade. When the interest in pottery eventually came up (see 2.2/3.1), Naples logically also became the scene of the vase trade and the vase restorations. Within a few years, Naples changed into a rapidly evolving trading town in which the most important European collections of Greek vases were offered. But also in other European cities, as Paris, restoration companies began to emerge. Because purchasers had a preference for intact, undamaged vases, the art of restoration became a flourishing business.

Because of their desire to perfection, the Neapolitan vase restorers were famous and infamous at the same time. In 1813, the Dutch-English archaeologist and numismatist James Millingen wrote the following about the vase restorers in Naples:

> ***Comme la plupart des vases se trouvent brisés, souvent même en un grand nombre de mourceaux, il est nécessaire de les faire rassembler et lorsqu'il en manqué d'y suppléer. Plusieurs artistes, surtout à Naples, ont porté l'art de restaurer les vases au plus haut degré de perfection; on peut même dire à une perfection dangereuse pour la science; d'après la difficulté qui en resulte de distuinger les parties restaurées.***
>
> ***Il arrive quelquefois que des restaurateurs, ou moins habiles, ou pour s'épargner du travail, au lieu de raccorder la partie supléée avec l'antique; couvrent le tout de plusieurs couches de coulour moderne, et souvent ne s'astreignent pas à suivre exactement les traces de l'antique. Heureusement que l'imposture se découvre plus facilement dans cette branche de l'antiquité, que dans toute autre; en frottant les vases où on en soupçonne, avec une éponge trempée dans l'eau forte ou de l'esprit de vin rectifié, on fait disparoitre tous les repeints.***

(Millingen, J., 1813. *Peintures antiques et inédites de vases grecs, tirées de diverses collections, avec des explications*. Rome: Imprimé par de Romanis, XI.)

> ***Because most of the vases are broken, often even into a large amount of pieces, it is necessary to assemble these and, if some are missing, to supplement them. Several artists, in Naples in particular, have brought the art of vase restoration to a higher***

level of perfection; one could even say to a perfection dangerous for science; considering the resulting difficulty to distinguish the restored parts.

It sometimes happens that the restorers, be it the less skillful or to save themselves work, instead of connecting the substituting part with the antique (part), cover the whole with several layers of modern colours, and often do not force themselves to follow the traces of the antique exactly. A good thing that the fraud lets itself discover more easily in this branch of antiquity than in any other; when rubbing the vases that are suspicious with a sponge soaked in aqua fortis or in purified spirits of wine[22], it makes all the repaints disappear.

(Own translation)

Millingen's description has shed light on the practices used by the Neapolitan vase restorers and the difference of quality used by the numerous artists who worked in Naples. His paradoxical quotation of a 'perfection dangereuse' has been cited widely to indicate the restorers' sublime but risky expertise.

Neapolitan vase restorers

19th century descriptions and journals as Millingen's text have revealed the names and works of some of the best restorers, of whom Raffaele Gargiulo (1785-1870) was considered to be the superb artist. Gargiulo was 'Primo Restauratore' at the Real Museo Borbonico –present Museo Archeologico Nazionale di Napoli– and owned a restoration company with two companions, Onofrio Pacileo (see 3.1) and Giuseppe de Crescenzo. Gargiulo's customers were mainly part of the high elite of Europe, like prince Christian of Denmark, Duc de Blacas, King of Naples Joachim Murat and many others (Milanese 2010, 21).

That Gargiulo's work was famous among Europe's upper classes, is shown by a citation of the Minister of Internal Affairs of the Two Sicilies of that time, Giuseppe Zurlo, to King Murat about Gargiulo's restoration practices: *'l'esattezza e maestrìa nel supplire i pezzi mancanti, nel ritoccare le figure, ed imitare l'antico […] nel disegno e nel colorito'*[23] (Milanese 2010, 21). That Gargiulo himself aimed for this accuracy and mastery, becomes also clear from his own citations. Together with his assistant,

[22] i.e. an aqueous solution of ethanol.

[23] 'The accuracy and the mastery to substitute the missing pieces, to retouch the figure, and to imitate antiquity in design and colour.' (own translation)

Domenico Fortunato, he tried to restore the vases in a manner that '*serbandone con molta scrupolosità l'antico*'[24] (Gargiulo to Arditi, 8 September 1820, in Milanese 2010, 21). Gargiulo principally restored 'beautiful vases', i.e. monumental italiotic[25] vases and Attic red-figure vases (Chazalon 2010, 35). In the rare cases when he had to restore black-figure pottery, he even was inspired by the features of red-figure vases which he was used to restore.

To link the sherds together, Gargiulo made use of a sort of glue, 'colla', that he had developed himself. Although the recipe for Gargiulo's colla is not documented, the invoices submitted by him reveal the supplies used in making his restorations (Svoboda 2010, 52). One such document is an invoice dated 11 May 1825:

- Acqua Forte	Aqua fortis
- Spirito di vino	Spirits of wine
- Colla	Glue
- Stucco	Plaster
- Creta per li pezzi nuovi, a cuocitura di medesimi	Clay for the new pieces, to bake them identically

In the restoration process, Acqua Forte was used for cleaning the ceramics, Spirito di vino to remove and mix adhesives, Colla to glue the broken parts together, Stucco as a bulking and colouring agent and Creta to create the new pieces (Svoboda 2010, 52).

Especially when completo restauro was used, Gargiulo and Fortunato accomplished the restorations so well, that the line between restored, authentic and imitated vases faded. This was the main reason that the restorations were not admired by everyone and through which the paradox described by Millingen became suddenly concrete. Scientists discussed about the question whether aestheticism or authenticity was the most important feature of an ancient object. Michele Arditi, director of the Museo Borbonico, loved completo restauro and had instructed Gargiulo to restore some vases completely, to '*dare a quelli l'aria di antichità, che giungono talvalta a far quasi illusione anche alle persone più esperte*'[26] (Arditi to Zurlo, 1812, in Milanese 2010, 22). Because of Arditi's high position, many vases of the Museo Borbonico were completely restored in the first decade of the 19th century. Several scholars, on the contrary, were of opinion that the restorations were overdone: they pleaded for a limitation of the interventions on ancient

[24] 'puts down antiquity with much scrupulosity.' (own translation)
[25] South Italian vases.
[26] 'give the air of antiquity to some; [something] that sometimes even can come in as an illusion, also by the most competent persons.' (own translation)

objects, and protested against what had lead to a 'camouflage', or even a falsification, of the works (Chazalon 2010, 32).

Less skilled artists often made use of these camouflages, in which simple techniques and materials were employed. According to Jean-Emile Humbert in one of his letters, also earth and remains of lime and roots were sometimes applied to prove an object's great age (Halbertsma 1995, 118). However, for some of the vase restorers or vase owners, perfection and completeness were not the main reasons for the restorations. The figure of Silenus on a red-figure bell-krater (BM Vases F77) of Sir William Hamilton for example, was represented clothed, and not naked as was usual [figures 60-61]. Sir Hamilton said the following about the vase:

> ***The learned Antiquarian[27] has displayed in his dissertation on that vase much of his erudition to explain the reason why a Silenus was represented there completely clothed, and not naked as in most monuments of antiquity. When that vase came into my possession, having purchased the whole collection, I soon perceived that the drapery on the Silenus had been added with a pen and ink, as was the case on the figures of many other vases in the same collection, the late possessor being very devout having caused all the nudities to be covered. However, soon as the vase was mine, a sponge washed off at once the modern drapery, and Passeri's learned dissertation.***

Citation in (Jenkins and Sloan 1996, 140)

To restore or to not restore

On 15 January 1818, a Royal Decree was ordered which made –temporary– an end to the discussions. The Decree provided precise regulations for restoration practices and was initially applied on the collections of the Museo Borbonico (Milanese 2010, 22-23):

> ***Da un rapporto della R. Accademia Ercolanese ha rilevato il Re, che, generalmente parlando, i restauri sono di ostacolo alla sicura interpretazione de'monumenti antichi, i quali vengono di essere notabilmente alterati, tanto se i Restauratori non siano eminentemente informati così dello stile, come delle idee [degli antichi], quanto ancora se per molta destrezza, come accade ne'vasi antichi di terra-cotta, sappiano confondere l'antica pittura colla moderna. Che è universalmente desiderato da'dotti, che le antiche opere di arte si lascino nello stato in cui si trovano,***

[27] Meant is the Italian painter and art biographer Giovanni Battista Passeri (1610-1679), who published, contemporary with Hamilton's publishing project, also a book on 'Etruscan' vases.

commettendo solo i frammenti in modo che i contorni antichi non ne vengano alterati.

On the base of a report by the R. Accademia Ercolanese, the King has noticed that, generally speaking, restoration becomes an obstacle to a clear and certain interpretation of ancient monuments. The monuments end up being significantly changed both if the restorers are not sufficiently aware of the style and ideas of the ancients or, if being extremely skilled (as it happens with ancient terra-cotta vases), they manage to mingle the ancient painting with the modern one. Scholars find it universally preferable that works of art be left in the same state in which they are found, with the exception of getting together the fragments so that the ancient outlines are not modified.

(Translation by C. Cellerino)

The Accademia Ercolanese was founded in 1755 and acted as an institution that published about archaeological findings which –in that time– were primarily the objects found in the recently discovered cities of Pompeii and Herculaneum. The regulations of the Royal Decree made that the restorations done on vases of the Museo Borbonico should now be executed with scientific accuracy. The higher demands that were made had important consequences for the restoration practices. Completo restauro was now prohibited and the creation of new designs and paintings was hence not allowed anymore. Still, not all restorers did obey the regulations of the Accademia. Arditi remained director of the Museo until 1838, and therefore continued to have a high influence on the restoration practices.

After the Royal Decree, the restorers followed either Gargiulo's manners and Arditi's taste, or the strict demands of the Accademia. Some searched for a compromise: mezzo restauro (Milanese 2010, 23).

But, restoration was still practiced on a large scale. Among these numerous restorations, there were also poorly restored vases, as the vase described by Sir Hamilton, or even fakes.

4.3 Investigations to 19th century restorations on South Italian vases

4.3.1 The Lasimos Project

Investigating the Neapolitan vase restoration practices of the 19th century is a relative new practice. The pioneers of these studies were primarily the scholars of the French organization INHA (Institut National d'Histoire de l'Art) in collaboration with the C2RMF (Centre de Recherche et de Restauration des Musées de France) and several (inter)national museums. Martine Denoyelle of INHA and Brigitte Bourgeois of C2RMF developed the Lasimos Project, a 'scientific network on the history of knowledge of ancient vases'[28]. The main reason for the project was to fill up the gap that existed in the research to 18th and 19th century restorations (Bourgeois 2010, 5). The role that the restoration practices possibly had played in the 18th and 19th century vase trade was completely unknown.

Apart from the studies to the restoration history of the vases, also a general discussion is going on of how to deal with these restorations today. The views can roughly be divided into two groups: a group which proposes the removal of all adjustments to reach the pure ancient form of the object, and a group which wants to keep the objects in their present condition; restorations included. This latter opinion embraces the entire cultural biography of Kopytoff and sees Schiffer's archaeological context as equally important as the systemic context. Obviously, the participants of the Lasimos Project also support this second view. Although there was a time when the scientific approach to Greek vases seemed to imply that all their previous overpaintings should be removed indiscriminately, over the last few decades the interest in how classical art was perceived and its place in the history of taste has encouraged reflection on the role of previous restorations, as a corollary to the history of the collections (Denoyelle 2010, 55).

The investigations to modern restorations on antique objects have thus become more and more part of the research programme of archaeological and art historical museums, although the research is still in its infancy.
Since its birth, the Lasimos Project has created a network of museums from all over the world. The participants of the Lasimos Project are[29]:

[28] Official subtitle of the project.
[29] Participants who joined the Lasimos conference, 2009.

Institut National d'Histoire de l'Art, Paris
Centre de Recherche et de Restauration des Musées de France, Paris
Ecole Normale Supérieure, Paris
J. Paul Getty Museum, Los Angeles
Museo Gregoriano Etrusco, Città del Vaticano
Rijksmuseum van Oudheden, Leiden
Scuola Normale Superiore, Pisa
The Beazley Archive, Oxford
Università di Padova, Padova

The participants try to share their knowledge about the investigations they have carried out on their own classical collections. These studies have been quite successful in their attempt to reveal some of the restorers' adjustments.

4.3.2 Previous research

Modern techniques that have come up in archaeological studies in the last decades are essential in investigating the ancient objects in a non-destructive manner. The most important methods that have been used in the investigations related to the Lasimos Project are described in the next pages, together with their major results.

Visual examination

A very important first step in the practical analysis of vase restorations is the analysis with the naked eye. Flaws and cracks are of course visible signs of restorations, but also colour and style differences can give more information about the restoration practices. In the study to a South Italian loutrophoros (F3264) from the Berliner Antikensammlung, for example, a grey-coloured material was visible underneath the paint, suggesting that those areas were not original [figure 62] (Svoboda 2010, 49). Flaking is in fact a sign of a restoration, as ancient vases were not painted but rather glazed. In areas where break joins were exposed, a rose-coloured adhesive was visible, which was most probably the colla used by Raffaele Gargiulo [figure 63].

As with the identification of the original painters, also the restorer can sometimes be discovered through a style examination. Gargiulo, for example, preferred colouring the scenes, while Domenico Fortunato tried to put in motions (Chazalon 2010, 37). Likewise, the identification of style differences has proved to be a good method to distinguish modern from antique. Studies to an Attic black-figure amphora (Naples

81305) from the Museo Archeologico Nazionale, have shown a slight difference in the painting of certain figures. In figure 64 it can be seen that –especially when compared to the other figures– the head of the middle male figure has been reformed and enlarged. The 'archaic' eyes (full face) which were often created in antiquity, were also changed on this amphora. The restorers have painted somewhat of a round eye with excessive lines, to suggest a side profile eye [figure 65] (Chazalon 2010, 34). And on another Attic black-figure cup (Naples 81113) , the restorer –identified as Gargiulo– has given the maenads a more dynamic outlook. Instead of only showing the right arm of the maenad –which was supposed to reach the neck of the ram– Gargiulo had the ability to crop the right arm and to put the left hand in a posture which induces a slight turn of the woman figure [figure 66] (Chazalon 2010, 37).

Another striking example is an Apulian krater (MGE 37 000) from the Vatican Museums. In 1800, the Musée Central des Arts[30] in Paris decided that the artist Jean-Jacques Lagrenée (1739-1821) got the care to restore the vases that had been seized from Italy and that were in need of restoration (Bourgeois 2010, 63). Lagrenée restored the Vatican vase in an 'antique style', which was characteristic for the artist's creations for the Manufacture de Sèvres[31] (Bourgeois 2010, 68). Significant in particular is the depiction of a woman's head on the neck of the krater, which can be traced back to the neoclassic depiction of a woman on an aquarelle of Lagrénee [figures 67-68]

Radiography

Through the use of X-radiography the degree of restoration and reconstruction of a vase becomes apparent (Svoboda 2010, 50). A radiographic image depends on contrasts reflecting the capacity of materials to absorb the X-rays to some extent. These absorptions relate to chemical elements present in the material and the thickness of the layers. Radiography also enables to reveal supporting, heterogeneous materials; the technique is however less effective in visualizing modern contribution on a decorative level, considering the fineness of the layers that need to be examined (Balcar *et al*. 2010, 73).

The loutrophoros that has been described above, was also exposed to X-rays, which revealed areas that were overpainted with white paint by their lighter appearance on the film. It also appeared that pre-formed pieces had been used for building up the missing portions of the vase [figure 69] (Svoboda 2010, 50).

[30] Le Musée Central des Arts was opened in 1793 by the revolutionary French government and was a forerunner of the Louvre.

[31] La Manufacture nationale de Sèvres is a porcelain factory at Sèvres, France. Lagrenée was director of this factory.

Radiography can also reveal other restoration techniques. Although not often used by the Neapolitan vase restorers, the application of metal parts to strengthen parts of the vase becomes also visible by X-radiography, as figure 70 shows. Sometimes, this can even lead to the discovery of unknown restorations, which was for example the case with the Little Master cup (MTC 1006) of the Musée Pincé, France. Its modern handle, attached to the cup with a metallic reinforcement, had never been detected so far, but became visible through radiography [figures 71-72] (Bourgeois and Balcar 2007, 42-43).

A radiographic technique that has not been used yet in the investigations to restorations on vases, is X-ray Fluorescence (XRF). XRF is used to determine which chemical elements are present in an object. By using XRF, multiple paint layers on objects can be identified. XRF has proven to be a useful method to discover underpaintings.

Ultraviolet Illumination (UV)

Unlike radiography, ultraviolet illumination cannot penetrate ceramics and other solid materials. Instead, it is a good method to discover earlier restorations on decorative level. There are two quite distinct ways in which the UV spectrum is used in –archaeological– photography. One is direct UV, or UV reflectance, where what are recorded are the UV rays reflected from a surface; the other is UV fluorescence, where the camera records the rays that reach the surface as UV, but are reflected as visible light (Dorrell 1994, 198). Direct UV has only limited value in archaeology and conservation. UV fluorescence, on the contrary, can be really helpful in the search to earlier restorations.

With UV fluorescence photography, the need is to ensure that only UV radiation reaches the object, and that only the fluorescence excited in the visible spectrum is recorded (Dorrell 1994, 202). Therefore, the analysis must take place in a darkened room and camera filters should be used to absorb all the visible light and to let the ultraviolet radiation to pass. However, UV fluorescence can also be applied without using a filter or a camera. When pictures are being made of extremely luminous paint, it is not necessary to use a filter (Spitzing 1979, 122). UV fluorescence is also visible with the naked eye.

UV fluorescence has proven to be a good method to uncover supposedly lost decorations, such as paint. On a grave stele from the ancient city of Demetrias for example, a seated woman became visible in UV light [figures 73-74]. Also texts can be made more readable, as a 6th century parchment Bible page shows [figures 75-76].

When executed on Greek vases, the UV light lets fluoresce the parts of the paintings that are overpainted. The ancient surface appears dark, without detail or any fluorescence, whereas the various materials used by the restorer can fluoresce differently under UV

illumination (Svoboda 2010, 51). The clay used by the fabrication of a vase –be it the ceramic paste or the ancient black varnish– does not fluoresce at all; while adhesives and other retouching materials (binders, varnish and some pigments) fluoresce strongly (Balcar *et al*. 2010, 72). In most cases, parts which are covered with modern paint fluoresce in an orange colour, which is typical for shellac, which was often used as a filler (Bourgeois and Balcar 2007, 42).

A good example of a restored South Italian vase lightened by UV light can be seen in figures 77-78. The neck of this nestoris of the Berliner Antikensammlungen is obviously a modern addition, and the shoulder consists of parts that are reconnected. The colour differences on these parts suggest that some areas are overpainted.
Studies to other vases have revealed much more of the restorations of the vase paintings. Figure 79 for example, again shows the loutrophoros of the Berliner Antikensammlungen, now exposed to UV light. Considering that the ancient surface appears without any fluorescence, the percentage of figures restored on these vase is substantial: almost one third of the loutrophoros turned out to be a modern reconstruction (Svoboda 2010, 53). The study to a krater (K 81) of the Louvre has shown a similar outcome: only the two prominent figures on the obverse were left untouched, while everything surrounding the figures was adjusted [figures 80-81]. Remarkable on this krater is that two different colours fluoresced when lightened with UV light. The orange reflection of the shellac is visible on some parts of the body of the vase, and a milky yellow colour is situated on the neck and on the right side of the body. This yellowish fluorescence had come into being because a vegetable resin was used on these parts instead of a resin of animal origin, as shellac[32]. It seems that this coexistence is the result of successive interventions. However, the possibility that the same restorer knowingly has chosen to apply different resins to make best use of each of their characteristics, according to the type of retouching, is not excluded (Balcar *et al.* 2010, 77). This can for example be conducted from a bell-krater (G 486) from the Louvre. The details on the clothing of one of the figures were retraced with a black colour, based on a vegetable resin (which fluoresced yellow); while at larger parts, for example around the foot of the figure, shellac was used (which fluoresced orange) [figures 82-83].

That the restorers sometimes even went further and altered the figures to their own vision, has been described earlier in the description of the restoration practices of Gargiulo and Lagrenée. Evidence of this practice has also been exposed on an Apulian bell-krater (K

[32] Shellac is the secretion of a female lac bug (*Kerria lacca*).

128) of the Louvre [figures 84-85]. Although UV light revealed that the figures are again not restored, many of their accessories and decorations are indeed. Most remarkable are the pearls of the necklaces and other jewellery that have been painted in white lead paint. It is doubtful if the ornaments –and the necklace of the left figure in particular– in antiquity were really painted as such.

Infrared Imaging (IR)

Although not as widely used as UV fluorescence, Infrared imaging may also be a good, non-destructive method to investigate vase restorations. In archaeology, the usage of IR fluorescence photography has mainly been used in aerial and long-distance photography, but also in the examination of painted surfaces it has proven to be a great help. The technique is quite unpredictable however, as the variability of daylight –which is strongly connected to IR radiation– also influences IR.

When IR is used by the examination of paintings, many pigments reflect IR. The degree of reflectance differs greatly from one pigment to another, even though visually they may appear very similar. In combination with its penetrative power, IR can be used to record details masked by semi-opaque varnish and to examine underpainting (Dorrell 1994, 204) IR has for example been used in the research to the Dead Sea Scrolls. A large amount of the Scrolls had turned black and could not be read anymore. With IR, these documents have been made readable again [figures 86-87].

Microscopic analysis

Microscopic analysis can give more information about the materials used by the restorers and the components of the paint. With a micro drill, a small sample –approximately 1/50 micrometer– is abstracted from the vase painting and then studied under a scanning electron microscope (SEM). Additional techniques, as X-ray fluorescence, X-ray diffraction and UV fluorescence could be applied to clarify the individual elements.

Microscopic analysis to the Neapolitan vase restorations revealed somewhat of the restoration techniques of the restorers. First of all, it was possible to distinguish the modern paint from the ancient paint efficiently. Figures 88-89 for example, show the stratigraphic section of a restoration of a bell-krater (D 863.3.26) from the Musée des Beaux-Arts et d'Archéologie (Besançon), in which the division between the ancient layer and the restoration is clearly visible. The restoration layer could even be subdivided into a black repaint layer and a varnish layer (shellac).

Furthermore, the 'dangerous perfection' of the restorations was not limited to the surface layers, but instead resulted from the usage of a well-thought out technique which

commenced in the deeper layers (Balcar *et al*. 2010, 77). This is for example visible in figures 90-91, which show a stratigraphic section (1/2 mm) of all the paint layers of an Attic bell-krater (G 502) of the Louvre. The repaint layers and the varnish layers are succeeding each other in this sample.

The exact colours used by the restoration of the vases have also become clear by microscopic and chemical analysis. In most cases, the basis of the colour was obtained by a mixture of lead white, carbon black and earth pigments, but sometimes bone char was preferred over carbon black. And for the orange repaints, the colours were made by adding pigments as vermilion, Naples yellow[33], chrome yellow, or more rarely, orpiment[34] (Balcar *et al*. 2010, 76).

[33] Naples yellow is a synthetic pigment made from the mineral bindheimite.
[34] Orpiment is a yellowish mineral (As_2S_3).

5. 19th century restorations on red-figure South Italian vases of the National Museum of Antiquities

5.1 Previous research

Already since the acquisition of the vases by the National Museum of Antiquities in the 19th century, the presence of restorations has been a topic in the museum. In the inventory books, the curators often mention their doubts about the authenticity or restoration of a particular vase. The vases were examined closely, but adequate methods did not exist yet.

More recently, Renske Dooijes, restorer at the National Museum of Antiquities in Leiden, has investigated the restoration history of several Greek vases, mainly black-figure Attic ware. Studies to a black-figure kylix (K1894/9.15), for example, revealed that almost the entire vase had been restored. Initially, the kylix appeared to be intact and no earlier treatment reports were known (Dooijes 2007, 105). However, when testing the surface of the vase, it appeared that the kylix had been almost completely covered with stucco on which several paint layers had been applied to disguise the fragmented state of the object (Dooijes 2007, 106). Also, two sherds in the rim were not original, but had been added as fillings.

Similar fillings were used at a black-figure hydria (PC47). Investigations to this vase also revealed a stucco layer on the original surface, which was overpainted with a shellac based paint (Dooijes 2007, 106). Not only the outer surface of the vase was restored, but also the inside of the vase was covered with a layer of plaster or gesso, which most likely was applied to support the repairs.

A black-figure plate (ROII88) and a black-figure pyxis (ROII91) showed comparable restorations: the retouching covered the original surface with overpaint and several sherds had been glued together. Yet, also other traces of restorations became visible on these vases. Holes had been drilled into the surface of the break edges of both objects, and two grooves were found in the stand ring of the pyxis, which were traces of antique repairs (Dooijes 2007, 107).

Dooijes has also investigated a red-figure South Italian neck-amphora, the so-called Stadhouders vase (AMM1; catalogue nr.21). It appeared that the majority of the original surface was overpainted and the original decoration was reconstructed (Dooijes 2007, 105). This particular vase has also been examined in this study (described in the following pages).

5.2 Methodology

Dooijes' investigations were mainly executed when objects needed to be restored or prepared for exhibitions. It was therefore occasionally possible to investigate the restorations with destructive methods, which have given insight into the surface layers and adhesives used in the restorations.
Because a thorough examination with the use of these methods is not always possible, museums obviously also make use of non-destructive methods. Examples of these methods are already described in paragraph 4.3.2.

Techniques
In this examination, some of the non-destructive methods which had been used in earlier studies were followed. The investigators of the Louvre had mainly made use of radiography and UV fluorescence, which turned out to be sufficient techniques to identify 19th century restorations. Destructive methods, as the sampling and microscopic analysis of paint layers –which had also been used at the Louvre– were not used in this study.
The decision was made to make use of UV fluorescence. This non-destructive method appeared to be the best way to investigate restorations on the paint layers, which naturally was the primary focus of this research. X-ray would have been helpful too, but would primarily give more information about the restoration of the material itself (e.g. added sherds or supportive constructions).
The main focus of this UV investigation was to examine the fluorescing parts of the vases with the naked eye and to capture this on camera. Although UV fluorescence with the use of a camera black filter might give better results, earlier research had also shown that examination without a filter would be sufficient.
In a completely dark room, two UV bulbs in a metal lampshade were placed on a table so that they could shine upon the studied objects. When needed, the bulbs could be moved to zoom in on specific parts of the vases. A camera (Canon EOS 1100D) on a tripod was used to make pictures.

With the use of this modern technique, it was hoped to check both the observations of the 19th century curators and Dooijes' earlier examinations.

Research objects

From the catalogue of red-figure South Italian vases that had been acquired by the National Museum of Antiquities in the 19th century (see 3.2.), six vases were selected for further examination. There were several criteria for selecting these particular vases. The first criterion concerned the information that already existed about the vases. Information about 19th century restorations is sometimes found in inventory books or comparable archives. Some other vases had been investigated in modern times. A second criterion was the shape of the vases. As mentioned before, small vase types –as aryballoi, dishes and bottles– were not often restored. This was simply not worth the effort, because these small vases were relatively cheap. The small vases of the catalogue were hence not further investigated. Thirdly, several large vases were visually examined to see if there were any signs of restoration on the surface. From this visual examination it became clear that the Paestan and Sicilian vases from the museum, GNV138 and KRS4 (catalogue nr. 39 and 40) had not been restored. For this reason, it was not possible to examine vases from each of the five South Italian pottery styles (Lucanian, Apulian Campanian, Paestan, Sicilian).

The following six vases were selected during the selecting process:

Lucanian krater	R.Sx.4	Catalogue number 1
Lucanian nestoris	K1894/9.1	Catalogue number 2
Apulian column krater	GNV1	Catalogue number 3
Apulian hydria	GNV107	Catalogue number 6
Campanian neck-amphora	AMM1	Catalogue number 21
Campanian neck-amphora	GNV133	Catalogue number 28

5.3 Results

All six vases were illuminated with UV light. The results are described below.

5.3.1. Lucanian krater (R.Sx.4)

The exact find spot of this vase is not known. It has been transported from Italy to the National Museum of Antiquities in October 1888, as part of a collection of four Greek vases. It was the second supply which was acquired by the medium of Jan Six (1857-1926); archaeologist, art historian and later professor and rector magnificus of the University of Amsterdam. Six had transported three Greek vases to the museum earlier that year (June 1888).
There are no comments of restoration practices in any of the 19th century archives of the National Museum of Antiquities.

However, when exposed to UV light, it became clear that this vase has been restored. On both the front side and the back side, large cracks are visible, which fluoresce orange on the figures and greyish black on the background [figures 92-94]. These cracks are glued together and filled with a filling of a different material. Sometimes, the cracks are surrounding the sherds entirely, so that they seem to 'hang' in the vase [figure 95].
Also the decoration has been adjusted. Parts of the floral decoration, for example, fluoresce orange and are thus overpainted [figures 96-97]. Remarkable is one crack on the back side of the vase, which splits the middle figure vertically, and the left figure horizontally, into two [figures 98-101]. It is clearly visible that a filling has been used here, but also that the figures have been overpainted. The right figure fluoresces orange entirely, and the wipes of the restorer's brush have even become visible here. The bottom side of the left figure also fluoresces orange. A similar overpainting can be seen on the right figure on the front side, from which parts of the arms, legs and hat fluoresce orange [figures 102-103].

Summarizing, it can be said that this krater has been restored tremendously. Most restorations are done to the ceramics; the vase has been composed of many sherds.
The decoration has also been adjusted heavily, but it seems that most of the overpaintings on this vase are concentrated on the parts that were damaged. Seen the fragile condition the vase once may have had, these overpaintings were apparently necessary to create a decorative programme. This red-figure Lucanian krater R.Sx.4 seems to be an example of 'completo restauro' and 'restauration cachée', albeit that most overpaintings are concentrated only on the break lines.

5.3.2. Lucanian nestoris (K1894/9.1)

The exact find spot of this vase is not known, but most probably, it originates from the area around Naples. It was bought by the National Museum of Antiquities from Ludovina Verschoor-Bonfanti, widow of Giovanni Verschoor, a doctor who had lived in Naples. This nestoris was part of 50 antiquities –pottery and lamps– that Mrs.Verschoor-Bonfanti had sent to the museum in September 1894. Many more supplies with antiquities were sent to the museum before and after this particular shipment, which were often arranged by Martinus Nijhoff (1826-1894), a publisher and antiquarian working in The Hague. Already at the time of the acquisition, the director of the museum, Willem Pleyte, wrote about the restorations of the vase in the inventory book:

> ***'De vaas is zo sterk gerestaureerd en bijgeschilderd dat men niet kan zien wat echt is. Hals en oren zijn geheel en al gerestaureerd.'***

(Inventory book September 1894)

> ***'The vase is that heavily restored and repainted that one cannot see what is authentic. Neck and handles are completely restored.'***

(Own translation)

Exposed to UV light, it appeared that Pleyte had seen it right. The vase fluoresces in UV light, but in a different manner than the other investigated vases. A granular, spotted texture is present on the entire surface [figures 105-106, 108-109]. This can, in a lesser degree, also be seen in visible light. This is probably the flaking of the overpainting, which has been described by Marie Svoboda. If so, this nestoris has been varnished and overpainted entirely. This is supported by the absence of the fluorescence of large cracks, as was for example the case with vase R.Sx.4. Also the fluorescence of the decorative programme points into this direction: all figures and the floral decoration fluoresce orange.

When zooming in on the figures, there are a few remarkable things visible. On the front side, two large brown spots can be seen on the shoulder of the male figure and the waist of the female figure [figures 105-106]. These spots are of the same colour of the –hardly recognizable– filled cracks on the vase. Most likely, these spots are added sherds of a different material, which have been varnished and overpainted. A part of the female figure on the back side of the vase has also been replenished with another material: a large, white fluorescence at the legs of the figure has become visible in UV light [figure 108].

However, the restorations to the decorative pattern are surely not applied in the 19th century, but rather in the 20th century. A 20th century photograph shows a different image of this vase [figure 110]. Two large added pieces can be seen in the picture, which match the two brown spots mentioned before. Also, many break lines are visible, which suggest that the 20th century restorers have covered the entire surface with a varnish-like material.

When it comes to the neck and the handles of the vase, it is clear that these parts indeed have been restored as well. Fillings comparable to the brown and white spots have also been used here, and the decoration fluoresces orange. However, more research (e.g. X-ray) is necessary to see if any supporting material has been used in these parts of the vase.

Summarizing, it has become visible that the vase has been composed from many (original) pieces. However, the cracks between the sherds are hardly visible, even in UV light, because a –20th century– coat of varnish has been applied to the entire surface of the vase. The orange fluorescence of the figures shows that the decoration has been overpainted subsequently. Because it is very difficult to distinguish the 19th century restorations from the 20th century restorations only by using UV light, we cannot –just like Pleyte in 1894– see what is authentic and what is not. More investigation, mainly to the object's history, is needed to say something about its authenticity.

5.3.3. Apulian column krater (GNV1)

The exact find spot of this krater is not known. The vase was one of two objects which were transported from Italy to the National Museum of Antiquities in May 1886. The krater came to the museum by medium of Martinus Nijhoff; it was in fact part of the first collection that Nijhoff sent to the museum. In the years after this shipment, over a hundred antiquities were acquired from Nijhoff's mediation.
In the inventory book, a remark about the restorations was written by Conrad Leemans, director of the museum at the time:

> ***'De beide ooren hebben een geheel vreemden vorm, de profielen der gezichten wijken af van den gewonen griekschen vorm, de voeten en handen, maar vooral de rechtervoet van de vrouw op de voorzijde, zijn vrij slordig bewerkt, en zouden wellicht eenige aanleiding kunnen geven tot betwijfeling van de echtheid.'***

(Inventory book May 1886)

> ***'Both handles have an entirely strange shape, the profiles of the faces differ from the normal Greek shape, the feet and hands, but especially the right foot of the woman at the front, are quite sloppily worked, and might give some occasion to doubt the authenticity.'***

(Own translation)

Exposed to UV light, it became clear that a major part of the decorative elements of the vase indeed had been restored, as was already believed at the time of the acquisition. Figures 111-114 show the krater illuminated by UV light. Only few parts of the entire vase do not fluoresce and are the original paint layers of the vase. The orange parts are traces of overpaintings, whereas the black indicates the original paint. The grey areas surrounding the figures do fluoresce, and are most likely traces of the varnish the restorers used before they applied the decoration.

When looking to the front of the vase, there are several striking elements visible. In the centre of the scene –just above the youth's drum– a restoration can be seen which is also present in visible light. Exposed to UV light, however, an eye-catching black area becomes visible [figures 115-116]. This black spot probably indicates the original surface, but seen the heavy restoration, it rather points into the direction of a filling or an

adhesive. A comparable black line next to a repaired break line on the neck of the vase enhances this theory [figure 112].
Another remarkable element is the drum itself. In the UV images it can clearly be seen that the drum fluoresces in two colours: orange at the top part and black at the lower part. Same is visible at the wreath the youth is carrying in his other hand. The orange parts are traces of overpaintings.
There is also a rather strange, brownish mark visible next to the wreath. Because there is a clear difference between this spot and the rest of the vase, it seems that also this discolouration is an indication of a filling [figures 117-118].
It seems that Conrad Leemans was partly right when he wrote about the adjustments of the hands and feet of the figures in the inventory book. Most body parts remain black in UV light, but the woman's feet indeed fluoresce orange. These parts have been accentuated [figure 121].

Immediately visible on the back side of the vase is a rectangular area, which crosses both painted figures. This spot fluoresces black on the figures and light grey on the intermediate places. When seen in visible light, this area was not immediately recognizable as a restoration, but a closer examination revealed that this most probably is an addition with a different material. A comparable –but smaller– filling is visible on the back of the left figure [figures 122-125].
A result of this large rectangular filling can be seen very well at the staffs the two men are carrying. Whereas the top part of these staffs fluoresces black, the bottom part fluoresces orange. Same is the case with some parts of the surrounding floral decoration.
Another remarkable aspect of the back side of the vase is the difference in fluorescence of the two figures. The left figure fluoresces orange; the right figure fluoresces black. The latter figure is thus original for the greater part, apart from the filling and his feet. The left figure has –except from his head– totally been overpainted [figures 122-123].

Not only the body of the vase has been restored. Also on the neck of the vase, a diagonal break line can be seen. It has already been described that a filling was used here –which fluoresced black– to fasten the sherds together. Around the cordate leaves, also black-fluorescing wipes are visible [figures 128-129].

Summarizing, it can be said that the suspicion that already had fallen on this vase in 1886, is indeed true. The krater has been restored tremendously; both on the material and the decoration. Broken sherds have been glued together (e.g. on the neck) and new pieces have been added (e.g. on the body). Unfortunately, this research is inadequate in

identifying the type of filling used. The entire vase has been covered with a black varnish and most likely, the figures have been overpainted as well. Some detailed parts of the figures (e.g. hands, feet) have been accentuated.

This red-figure Apulian column krater GNV1 seems to be an excellent example of 'completo restauro' and 'restauration cachée'.

5.3.4. Apulian hydria (GNV107)

The exact find spot of this hydria is unknown. The vase was part of the fifth supply made by Nijhoff, which covered 20 antiquities (July 1887).
In the inventory book, there is nothing mentioned about possible restorations.

From the investigation in visible light, it was clear that this vase was heavily restored in recent times. On the inside of the hydria, many added plaster sherds had been applied. A similar filling had been placed on the back side of the foot. Also, a white substance with a granulate texture was visible on the foot and on the bottom part of the front side [figures 130-133].
When exposed to UV light, this material fluoresced strongly. The granulate texture was indeed concentrated on the foot and bottom side of the vase, but was also visible on the female figure of the front side and on the entire rim. The floral decoration on the back side did not fluoresce.

However, seen the recent restorations on the inside of the vase, it is most likely that also the fluorescing parts are recent. Another possibility is that earth or another material has been applied in the 19th century to make the vase seem authentic, as mentioned by Humbert (pp. 58). If this is the case, the vase has been restored in an obvious manner, and can for example be identified as mezzo restauro.

Unfortunately, as with nestoris K1894/9.1, it is difficult to distinguish the 19th century restorations from the 20th century restorations only by using UV light. More investigation, mainly to the object's history, is needed to say something about its authenticity.

5.3.5. Campanian neck-amphora (AMM1)

This large neck-amphora has an extensive biography. The vase was bought in Rome in 1738 by Frederick Count de Thoms (1669-1746), probably from the antiquarian Francesco Gori[35] (Halbertsma 2011, 11). When de Thoms moved to the Netherlands in 1741, his collection of antiquities moved with him to his houses in Leiden and Oegstgeest. After his death in 1746, the antiquities collection came into the possession of Stadtholder Willem IV, Prince of Orange. The present-day nickname of the amphora, 'Stadhoudersvaas'[36], refers to this period in the amphora's biography. However, after the conquest of the Netherlands by Napoleon in 1795, the vase was seized and transported to Paris, where it stayed until the Battle of Waterloo in 1815. In that year, the vase was claimed back by the director of the Rijksmuseum of that time, Cornelis Apostool, and was transported to Amsterdam. The amphora stayed in Amsterdam for many years, even after the establishment of the National Museum of Antiquities. Although Caspar Reuvens asked for the conveyance of the amphora several times, Apostool constantly refused. Only after Apostool's death in 1844, the amphora came into the possession of the Leiden museum.

During its time in Paris, the amphora was heavily repaired. Here, where the piece had arrived '*brisée en mille pièces'*, the vase was restored and put up in the Bibliothèque Nationale (Halbertsma 2011, 11). These restoration practices are also mentioned by Conrad Leemans in the description of the vase in the inventory book:

> ***'Deze vaas is het eerst uitgegeven door Passeri […]; toen zij door de overheersching der Franschen te Parijs gekomen was heeft Millin dezelve gerestaureerd en uitgegeven.'***
>
> (Inventory book May 1844)

> ***'This vase has been published for the first time by Passeri […]; when it had come to Paris, because of the dominance of the French, Millin has restored and published it.[37]'***
>
> (Own translation)

[35] Mentioned earlier at page 17.
[36] Translation: 'Stadtholder's Vase'
[37] Publication mentioned: Aubin Louis Millin, *Peintures de vases antiques vulgairement appelés Étrusques* (Paris 1808-1810).

Ever since its transportation to the National Museum of Antiquities, this amphora has been studied extensively by curators and scholars. One of these scholars was Carel Claudius van Essen, archaeologist and vice-director of the Dutch Institute in Rome, who published an article about the vase in 1932. Remarkable is that van Essen assents the restorations done by Millin, but adds that the conservation is in fact better than presumed (van Essen 1932, 59). He states that only a part of the backside of the foot and some parts of the rim have been filled up, and that the greater part of the decoration has been left untouched. According to van Essen, the restorations of the figures were mainly situated on the filled cracks. Examples of restorations as such are described in detail: the right knee of Memnon (figure 134; right male figure), the crest of Achilles (left male figure), a part of the left foot of Hermes (top male figure) and the ankles of the left Papposilenos on the back side of the vase [figure 146] have slightly been adjusted. The other images, including the weighing scales next to Hermes, have not been restored.
As mentioned before, this vase has also been investigated recently by Renske Dooijes (see 5.1.), but not by using UV fluorescence. By her research, it had become clear that van Essen was wrong; the majority of the original surface was indeed overpainted and the original decoration was reconstructed.

Exposed to UV light, the restored parts of the vase became clearly visible. Figures 134-135 show the neck-amphora illuminated by UV light.
At the front side, three different elements can be distinguished: a coat of varnish, overpaintings and ancient pieces. The UV image of this vase can be compared to the image of the Berliner Antikensammlungen [figure 79]. The varnish is mainly visible in the spaces between the figures, where a greyish black colour fluoresces. Even the brushstrokes of the restorers' brushes are still visible. The varnish can also be seen very well on the bottom part of the body. Here, no decorations are painted, but the varnish has nonetheless been applied, probably to match the upper part of the vase. It can be said that the entire vase has been varnished.
When zooming in on the figures, it seems that most parts have indeed been overpainted [figures 136-155]. It appears that the clothing of the figures has been repainted, and from some figures (e.g. Memnon) also the skin has been adjusted [figures 138-139]. Most probably, also the white parts, present on almost all figures on the front side and on the papposilenoi and the Erotes' wings on the back side, have been repainted [figures 146-151]. This cannot be said with certainty, because also ancient white can fluoresce in this manner.
Highly remarkable are two sherds, which do not fluoresce at all. The break lines which cross the left piece have not even been filled or covered with varnish, what has been done

with all other cracks on the body [figures 156-157]. It is very interesting that exactly these pieces are not varnished or overpainted, because they perhaps present the most difficult part of the painted scene. Painted here are two pairs of scales on which the souls of the two warriors below –Achilles and Memnon during the Trojan War– are being weighed (psychostasis). The balance tips to the advantage of Achilles, who kills Memnon in the fight. Very difficult to see on the amphora are the souls that are painted on the scales. On each scale, a winged representation of the soul is painted in grey; barely distinguishable from the background. It seems that the restorers have left these parts as they were, probably to avoid damage to these fragile particles, or simply because the figures were already indistinct at the time of the restoration. In this case, the restorers have chosen to not repair these parts rather than adjusting them to their own views. These weighing scales are in fact the only parts which were described correctly by van Essen in 1932. The scales have not been restored, in contrast with the other figures – from which van Essen also believed that these had been left untouched.
Also the foot and the rim of the amphora have been restored. It is striking that these restorations are not executed with that much precision as done on the body of the vase. On the foot, for example, there are still large break lines visible; there is no coat of varnish applied on this part of the vase [figures 134-135]. Also a large filling is visible on the back side of the rim, which fluoresces orange [figure 158].

Summarizing, it can be said that what was highly suspected by recent investigations, is indeed true: this amphora has been heavily restored. As described before, the amphora consisted of many pieces when it arrived in Paris. It is remarkable that only a few of these break lines are visible under UV light. Most of the cracks are fully covered with a coat of varnish, which has been applied onto the entire body of the vase. The only exceptions are two small pieces, which were difficult to adjust, and the foot of the vase, which was less important. It is also likely probable that all figures have been overpainted; or at least their garment. What is plausible, but not entirely clear, is that also the white parts have been adjusted. An additional material analysis is necessary to give a decisive answer about this issue.
This red-figure Campanian neck-amphora AMM1 seems to be an excellent example of ‘completo restauro’ and ‘restauration cachée’.

5.3.6. Campanian neck-amphora (GNV133)

This neck-amphora was found in Nola, Italy. The vase was part of the seventh supply made by Nijhoff, which covered 24 antiquities (November 1888).
In the inventory book, there is nothing mentioned about possible restorations.

In visible light, it can be seen that the surface of the vase is covered with fillings. When exposed to UV light, it became clear that the decoration of the vase fluoresced hardly [figures 159-162]. Only the fillings that were already visible, fluoresced white. This is for example the case on the left side of the vase, where parts of the floral decoration have been filled [figures 163-164]. These parts are not overpainted. A similar filling can be seen on the feet of the left woman's figure on the front side of the vase. Also this filling can be seen in visible light and is not overpainted [figures 165-166].
It seems that this neck-amphora has not been restored heavily. The only things that fluoresce are fillings made of a different material.

Of the six investigated vases, R.Sx.4, GNV1 and AMM1 are the ones which have been restored most heavily. They seem to be examples of completo restauro and restauration cachée. It cannot be said what role Raffaele Gargiulo has played in these particular restorations. Because of the confirmed restoration of neck-amphora AMM1 by Millin in Paris, Gargiulo has obviously not taken part in any restoration practices of this neck-amphora. However, his involvement with krater R.Sx.4 and column krater GNV1 is possible. Although it is not exactly clear where these vases have been excavated or sold, it is likely probable that they were restored and sold in (the area of) Naples. More research is necessary –mainly into the characteristics used by Gargiulo– to discover if he indeed has also restored these vases.

Conclusion

Aim and research question

As a reminder, the main aim of this thesis was to get more insight into the restoration history of a part of the red-figure South Italian vase collection of the National Museum of Antiquities. The promising results of the Lasimos Project and the lack of information about 19th century restorations on the Leiden vases had led to the desire to investigate a selection of these vases.

Most important is the question whether the vases indeed were restored in the 19th century. The principal research question of this investigation was therefore*: To what extent were the selected red-figure South Italian vases of the National Museum of Antiquities (Leiden, The Netherlands) restored in the 19th century?* This research question mainly focused on the decorative programme of the vases and –to a lesser degree– also on the ceramics.

Methodology

To achieve the aim of the research, the cultural biography of objects was taken as a principle. Restoration must be seen as a reclamation process and hence as an essential part of an object's life cycle. In fact, a 'renewed' life begins when an object has been restored, in which also the function and meaning could have changed. When studying an object which is exhibited in a museum, it is therefore important to notice the meaning that the object may have had in the past, what it has nowadays, and what it will have in the future. This theoretical framework was kept in mind in the actual research to the vases of the National Museum of Antiquities. A selection of six vases of the total collection of 45 red-figure South Italian vases (acquired in the 19th century) owned by the museum was investigated on the appearance of 19th century restorations. These six vases were chosen on the basis of information that existed about their restoration history, on their shape and on a visual examination. Selected were Lucanian krater R.Sx.4 and nestoris K1894/9.1, Apulian column krater GNV1 and hydria GNV107 and Campanian neck-amphorae AMM1 and GNV133.

The vases were investigated with the use of ultraviolet fluorescence. This non-destructive method appeared to be the best way to investigate restorations on the paint layers.

This method worked out well for this investigation. The fillings used to tie the sherds together and to fill the gaps became immediately visible. More importantly, also the

original decoration, the 19th century varnish and the overpaintings were easily distinguishable.
However, because of the lack of a restoration database in the National Museum of Antiquities, it was not always clear if the restorations dated from the 19th century or the 20th century.

Results
From the investigation, it became clear that all six investigated vases have been restored. The Lucanian krater R.Sx.4, Apulian column krater GNV1 and Campanian neck-amphora have been restored most heavily. The decorative programme of these three vases has been restored entirely.
On krater R.Sx.4, most of the overpaintings were concentrated on the parts that were damaged. Seen the fragile condition the vase once may have had, these overpaintings were apparently necessary to create a decorative programme. Column krater GNV1 has been totally covered with a black varnish and some figures have been overpainted as well. Remarkable is that some elements of the decorative programme have only been partly overpainted. The detailed parts of the figures have also been accentuated. Neck-amphora AMM1 has been restored in the same manner. A coat of varnish has been applied onto the entire body of the vase and the figures have been –at least partially– adjusted. Perhaps, also the white paint dates from the 19th century. The only exceptions are two small pieces, which match a difficult part of the decoration. It seems that the restorers have left these parts as they were, probably to avoid damage to these fragile particles, or because the figures were already indistinct at the time of the restoration.

These three vases seem to be examples of *completo restauro* and *restauration cachée*. The vases share the same modus operandi: all vases have been composed of many sherds and have been varnished and consequently overpainted. However, the degree of completo restauro differs. On krater R.Sx.4, the varnish has only been applied to the break lines, whereas the bodies of column krater GNV1 and neck-amphora AMM1 have been varnished entirely. Same is the case with the overpainting, which has only been applied to the damaged figures on R.Sx.4, but to almost all figures on GNV1 and AMM1. When it comes to the details, it seems that the restorers have left these parts as they were. This is for example visible at the feet of the figures of GNV1 and the weighing scale of AMM1.

It cannot be said what role Raffaele Gargiulo has played in these particular restorations. His involvement with kraters R.Sx.4 and GNV1 is possible, because these vases might

have been restored and sold in (the area of) Naples. Because neck-amphora AMM1 has been restored by Millin in Paris, Gargiulo's involvement with this vase can be excluded. Although only a small part of the total collection of the 45 red-figure South Italian vases has been investigated for this research, it is remarkable that all six of them have shown signs of 19th century restorations when exposed to UV light. Moreover, it is striking that three of the vases have been adjusted tremendously.

Future research

This research, but above all the other investigations carried out in the Lasimos Project, has shed light on the 19th century restorations on Greek vases. It seems that the decorative programme of many vases that are displayed in museums all over the world, need reconsideration.

It is striking however, that archaeologists and other scientists are still paying most attention to the systemic context of an object's biography and less to the archaeological context. This research has shown that this context is equally important, and even essential to understand the entire cultural biography of an artefact.

For the red-figure South Italian vases, this means that also the restoration phase of the pottery needs to be underlined. It is important to notice that the vases already have had a life after their discovery, and that the meaning and the function of these vases in the 19th century differed from those in the past and present. For a proper interpretation of the decorative programme of Greek vases, it is essential to know which parts are authentic and which parts are 19th century restorations. Now, because research mainly focuses on the systemic context, the 19th century adjustments are often interpreted as authentic decorations.

It is therefore necessary to create more knowledge by the experts, and at the same time also to conduct more research to this subject. The studies to 19th century restorations on Greek vases are still in their infancy, but the initial results show that the investigated vases are only the tip of the iceberg.

This is also the case with the vase collection of the National Museum of Antiquities. To say something concrete about the quantity of 19th century vase restorations present in the museum, a large investigation is needed to all 45 red-figure South Italian vases, or even to the entire Greek vase collection. In future examinations, it is also necessary to extend the methodology. Although UV fluorescence was a sufficient method for this investigation, an extensive –multiannual– plan should be arranged in which also microscopic analysis, IR, X-ray and perhaps XRF are used to create a complete picture about 19th century restorations. Microscopic analysis, for example, would have been

useful to discover the elements of the white paint that has been applied to neck-amphora AMM1. And, a thorough research to Gargiulo's style characteristics can give a decisive answer to the question if he indeed has also restored vases of the National Museum of Antiquities.

Apart from creating the scientific world about these issues, archaeological museums also have the task to inform the public about the adjustments that had been done to ancient objects in later times. Nowadays, objects are often presented in their authentic surroundings; and again, the only information given concerns the systemic context of the artefact. Instead, information of the entire cultural biography, for example displayed on signs or computer screens, need to be provided.

To get to a better understanding of 19th century restorations on Greek vases and of all phases in an object's cultural biography, the 'frozen in time' approach should therefore be released, both in the worlds of the academics and of the general public.

Figures

Chapter 1

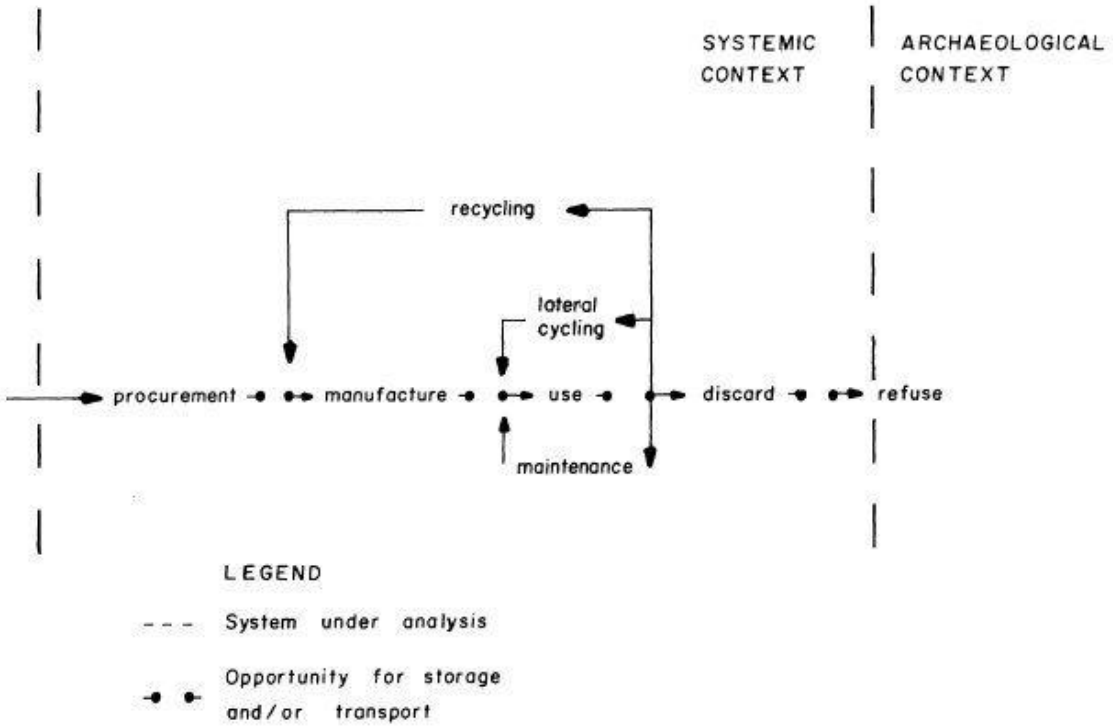


Figure 1. Model of the life cycle of (durable) objects.

(Schiffer 1972, 158)

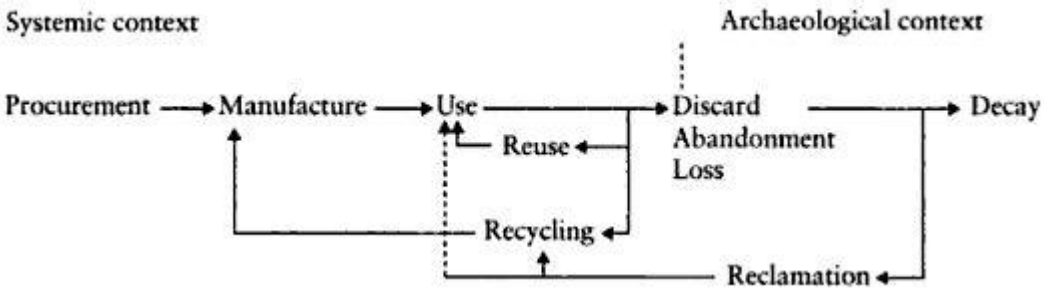


Figure 2. Model of the life cycle of (durable) objects; reclamation included.

(LaMotta and Schiffer 2004, 21)

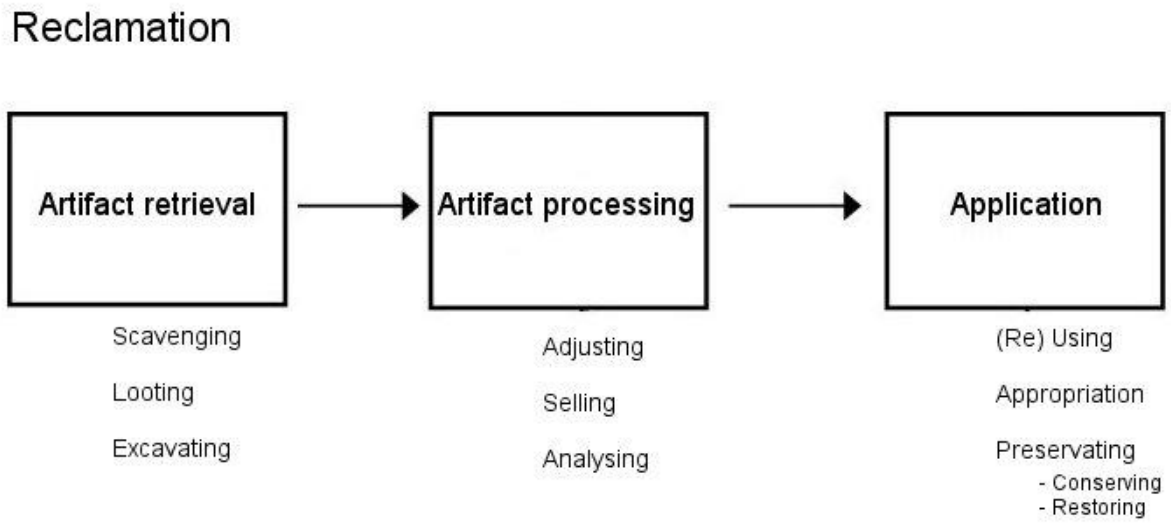


Figure 3. Possible processes in the reclamation phase, which follow a set path of artifact retrieval, artifact processing and application.

Note: With 'excavating' a professionally excavation, executed by qualified archaeologists, is meant. Non-authorized digs of amateurs are ranged under 'looting'.

(Own figure)

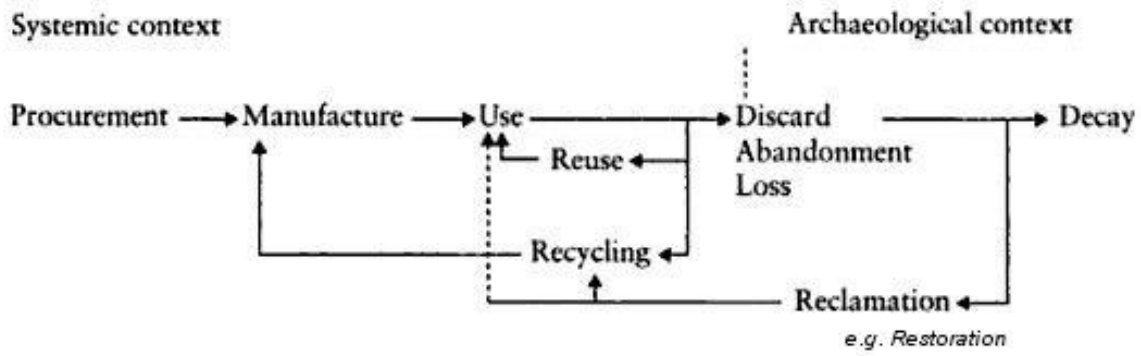


Figure 4. Schiffer's second model (figure 2) with the addition of 'restoration'. Restoration can be seen as part of the reclamation process

(After LaMotta and Schiffer 2004, 21)

Figure 5. Tazza Farnese/Farnese Cup (Museo Archeologico Nazionale di Napoli, MANN 27611)

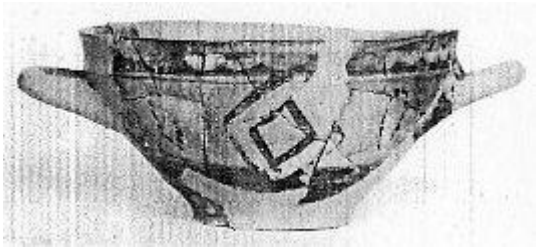
This cup from Hellenistic Egypt was bought in 1471 by Lorenzo de'Medici and became later part of the collection of the Museo Archeologico Nazionale di Napoli.

http://museoarcheologiconazionale.campaniabeniculturali.it/itinerari-tematici/galleria-di-immagini/RA147

Chapter 2

Figure 6. Magna Graecia

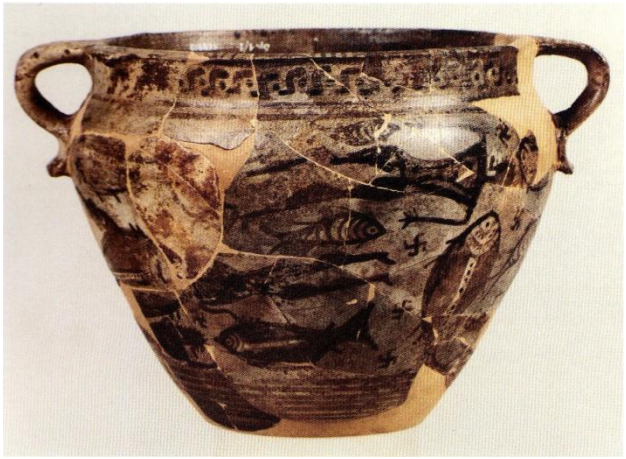
(Bennet and Paul 2002, 16)

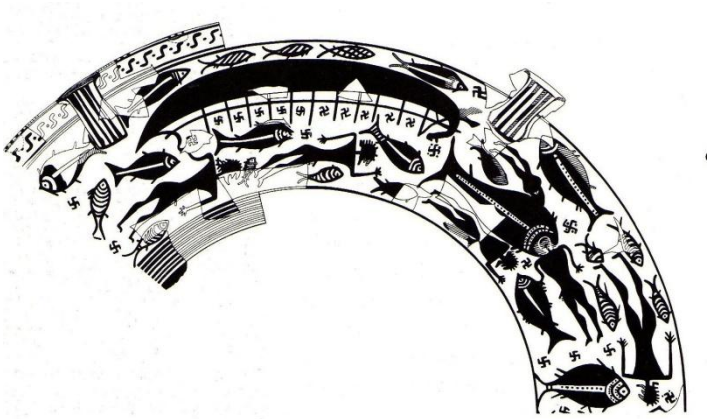


Figures 7-8. Two Late Geometric II Euboean cups.

Characteristic features are the open, conical forms and the simple Geometric patterns drawn in outline and filled with white paint.

(Boardman 1998, 57)





Figures 9-10. Krater showing a shipwreck scene (Museo Archeologico di Pithecusa, 168813).

Earliest painted figural scene found in Italy (725-700 B.C.).

Left: *(Iozzo 2002, 48)*
Right: *(Bennet 2002, 24)*

Figure 11. Orientalizing dinos (mixing bowl) found in an ancient commercial depot next to the Greek colony of Siris.

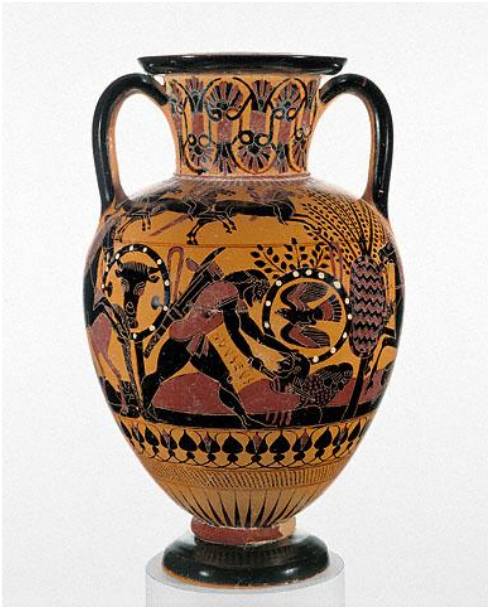
Depicted are Bellerophon and the Chimera, and a fawn being attacted by two lions.

(Jenkins and Sloan 1992, 50)

Figures 12-13. Examples of black-figure Corinthian and Attic pottery.

Left: Corinthian dinos. Attributed to the Polyteleia Painter (630-600 B.C.; Metropolitan Museum of Art, New York 1997.36)
http://www.metmuseum.org/toah/works-of-art/1997.36

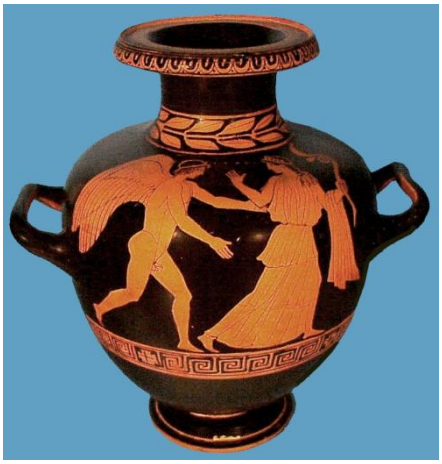
Right: Attic aryballos (570 B.C.; Metropolitan Museum of Art, New York 26.49)
http://www.metmuseum.org/toah/works-of-art/26.49



Figures 14-15. Chalcidian pottery

Left: Amphora depicting Diomedes and Odysseus. Attributed to the Inscription Painter (540 B.C.; J.P. Getty Museum, Getty Villa Malibu 96.AE.1)
http://www.getty.edu/art/collections/images/l/01520401.jpg

Right: Chalcidian cup (name vase) by the Phineus Painter (530 B.C.; Würzburg L 164)
(Steinhart and Slater 1997, Plate V)

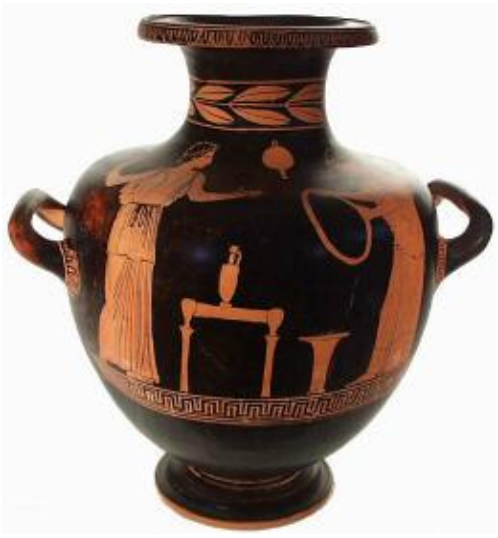


Figures 16-17-18. Early Lucanian ware

Left: Hydria by the Pisticci Painter (5th century B.C.; Ashmolean Museum, Oxford 1879.169 (V 263))
(CVA Database)

Middle: Calyx-krater (name vase) by the Cyclops Painter (420-410 B.C.; British Museum, London 1947,0714.18)
http://www.britishmuseum.org/collectionimages/AN00106/AN00106016_001_l.jpg

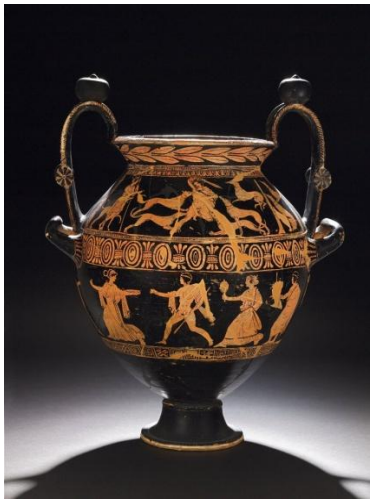
Right: Hydria by the Amykos Painter (420-400 B.C.; Metropolitan Museum of Art, New York 91.1.466)
www.metmuseum.org/toah/images/h2/h2_91.1.466.jpg



Figures 19-20. Early Apulian ware

Left: Hydria by the Painter of the Berlin Dancing Girl (Ashmolean Museum, Oxford 1974.343)
(CVA Database)

Right: Bell-krater by the Sisyphus Painter (Victoria & Albert Museum, London 4803-1901)
http://media.vam.ac.uk/media/thira/collection_images/2008BR/2008BR9403_jpg_l.jpg



Figures 21-22-23. Lucanian vase painters

Left: Bell-krater by the Anabates Painter (400-375 B.C.; Los Angeles County Museum of Art 50.8.36)
http://collectionsonline.lacma.org/MWEBimages/all%20departments/full/50_8_36_Detail01.jpg

Middle: Bell-krater by the Creusa Painter (390-370 B.C.; British Museum, London 1986,0403.3)
http://www.britishmuseum.org/collectionimages/AN00284/AN00284951_001_l.jpg

Right: Nestoris by the Dolon Painter (390-380 B.C.; British Museum, London 1865,0103.17)
http://www.britishmuseum.org/collectionimages/AN00339/AN00339887_001_l.jpg

Figures 24-25. Apulian vase painters (Plain style)

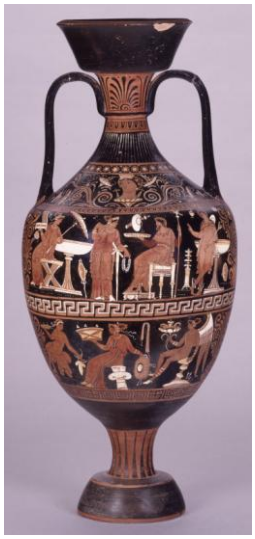
Left: Calyx-krater by the Tarporley Painter (400-390 B.C.; Metropolitan Museum of Art, New York 24.97.104)
http://www.metmuseum.org/toah/images/h2/h2_24.97.104.jpg

Right: Pelike by the Dijon Painter (380-360 B.C.; British Museum, London 1824,0501.27)
http://www.britishmuseum.org/collectionimages/AN00600/AN00600714_001_l.jpg

Figure 26. Apulian vase painters (Ornate style)

Volute krater by the Illiupersis Painter (name vase) (330-310 B.C.; British Museum, London 1870,0710.1)

http://www.britishmuseum.org/collectionimages/AN00672/AN00672858_001_l.jpg



Figures 27-28-29. Apulian vase painters (Late Ornate style)

Left: Hydria by the Varesse Painter
(Trendall 1989, 120)

Middle: Loutrophoros by the Darius Painter (340-330 B.C.; Metropolitan Museum of Art, New York 11.210.3a, b)
http://www.metmuseum.org/toah/hd/five/hd_five.htm

Right: Amphora by the Patera Painter (340-330 B.C.; British Museum, London 1867,0508.1334)
http://www.britishmuseum.org/collectionimages/AN00285/AN00285928_001_l.jpg

Figure 30. Hydria attributed to the Owl-Pillar Group (late 5th century B.C.; Metropolitan Museum of Art, New York X.21.23)

http://images.metmuseum.org/CRDImages/gr/web-highlight/DP1820.jpg



Figures 31-32-33. Campanian vase painters

Left: Hydria by the (circle of the) Cassandra Painter (365-340 B.C.; British Museum, London 1867,0508.1310)
http://www.britishmuseum.org/collectionimages/AN00054/AN00054297_001_l.jpg

Middle: Lebes gamikos by the Capua Painter (360-340 B.C.; British Museum, London 1772,0320.558.1)
http://www.britishmuseum.org/collectionimages/AN00056/AN00056087_001_l.jpg

Right: Skyphos by the CA-Painter (350-325 B.C.; Metropolitan Museum of Art, New York 91.1.444**)**
http://www.metmuseum.org/toah/images/h2/h2_91.1.444.jpg

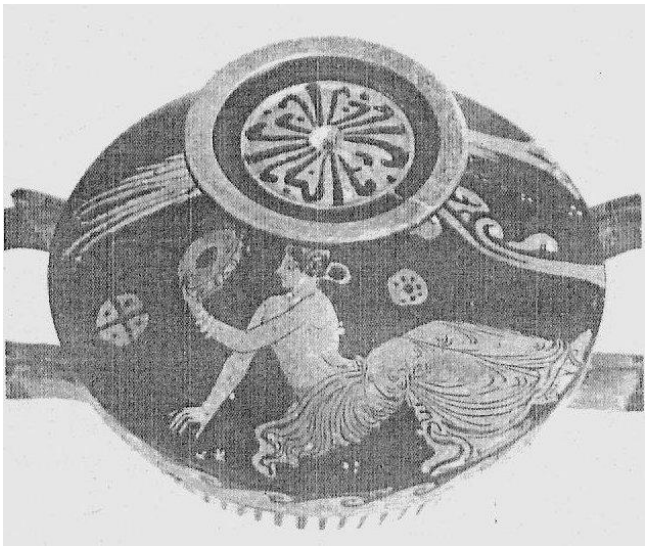
Figure 34. 'Framing palmettes' on Paestan vases

(Trendall 1989, 197)


Figures 35-36. Paestan vase painters

Left: Bell-krater by Asteas (360-350 B.C.; Metropolitan Museum of Art, New York 62.11.3)
http://www.metmuseum.org/toah/images/h2/h2_62.11.3.jpg

Right: Bell-krater by Python (360-350 B.C.; Metropolitan Museum of Art, New York 1989.11.4)
http://www.metmuseum.org/toah/images/h2/h2_1989.11.4.jpg



Figures 37-38. Sicilian vase painters

Left: Lekanis by the Lentini Painter
Right: Lekanis by the Etna Group (Zürich University 3581)

(Trendall 1983, Plate XXXI)

Figures 39-40. Feminine elements on Sicilian pottery.

Left: Lekythos with feminine head to the left (4th century B.C.; British Museum, London 1971,1009.1)
http://www.britishmuseum.org/collectionimages/AN00054/AN00054102_001_l.jpg

Right: Pyxis by the Paternò Group (320-310 B.C.; British Museum, London 1978,0414.26)
http://www.britishmuseum.org/collectionimages/AN00209/AN00209106_001_l.jpg

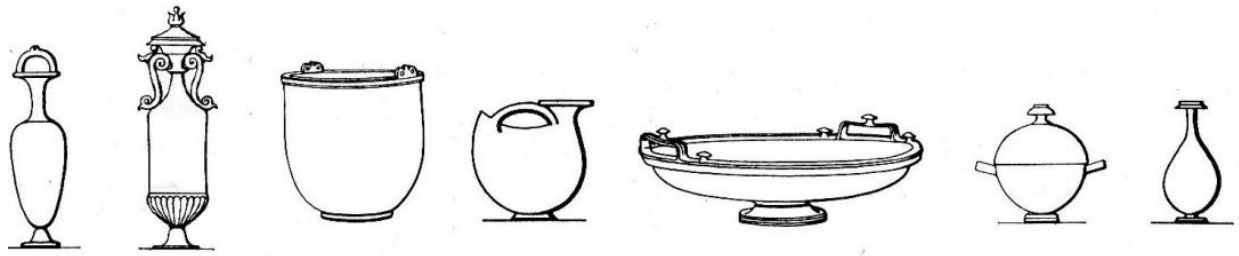


Figure 41. Typical South Italian vase-shapes.

From left to right: bail-amphora, loutrophoros, situla, askos, dish (knob-handled patera), skyphoid pyxis, bottle

(Trendall 1989, 10)

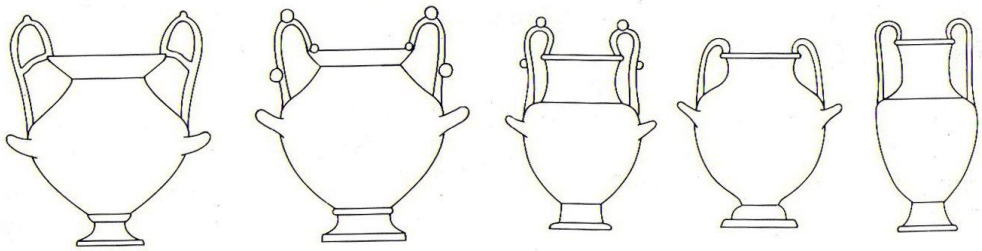


Figure 42. Types of red-figure nestorides found in Lucanian and Apulian pottery.

From left to right: Type I (1 and 2), Type II (3 and 4), Type III (5).

(Trendall 1989,11)

Chapter 3

Figures 43-44. Greek pottery of the first Rottiers collection.

Left: Attic black-glazed pyxis (type D), with lid (Inv. RO I C 25)
Right: Attic black-glazed chalice (Inv. RO I C 28).

http://www.rmo.nl/collectie/zoeken?object=RO+I+C+25
http://www.rmo.nl/collectie/zoeken?object=RO+I+C+28

Figures 45-46-47. Greek pottery of the second Rottiers collection.

Left: Attic black-figure white-ground lekythos (Inv. RO II 50)
Middle: Attic red-figure pelike (Inv. RO II 60).
Right: Attic black-figure pyxis with lid (Inv. RO II 90).

http://www.rmo.nl/collectie/zoeken?object=RO+II+50
http://www.rmo.nl/collectie/zoeken?object=RO+II+60
http://www.rmo.nl/collectie/zoeken?object=RO+II+90

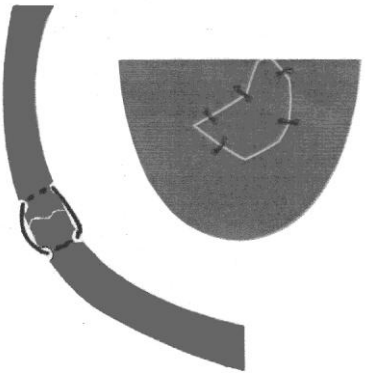


Figure 48. Restoration technique 1 – Drilling holes

Holes are drilled along the fracture path and consequently tied together.

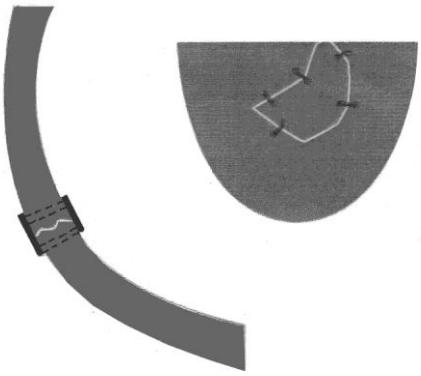


Figure 49. Restoration technique 2a – Use of (metal) staples

Staples are applied on both the inside and outside of the vase.

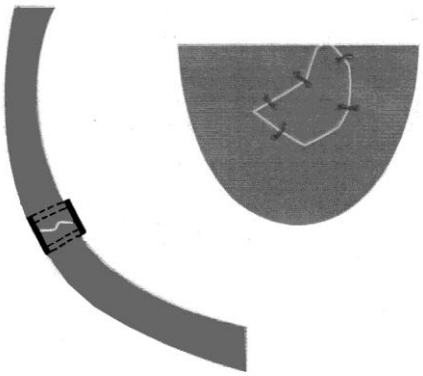


Figure 50. Restoration technique 2b – Use of (metal) staples

Staples are applied on both sides of the vase, set in carved grooves.

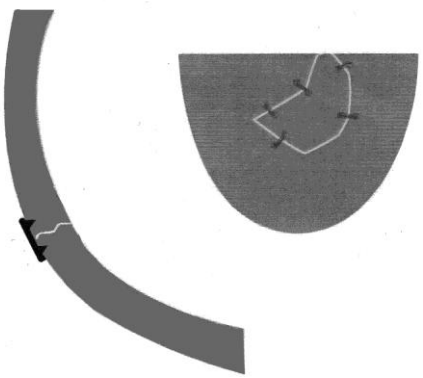


Figure 51. Restoration technique 2c – Use of (metal) staples

Staples are applied on the outside of the vase

(Dooijes and Nieuwenhuyse 2007, 17)

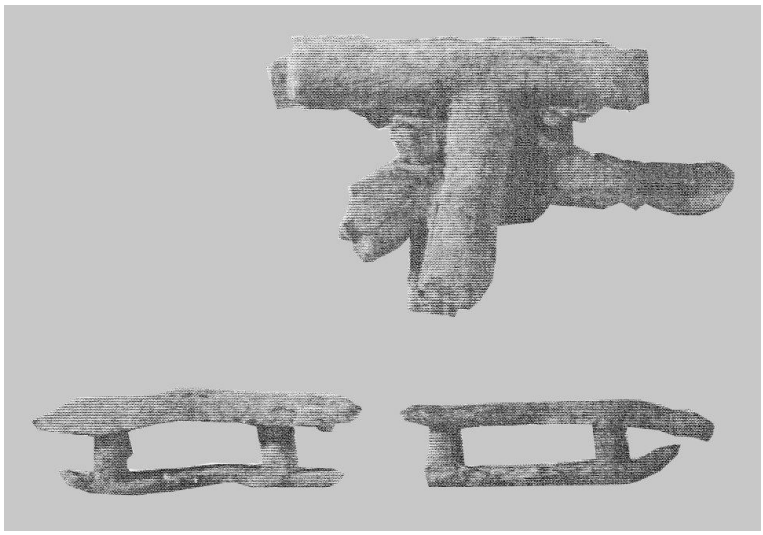


Figure 52. Ancient staples, used to restore vases.

Above: a T-shaped staple, to tie three parts together;
Below: 'normal' staples, to tie two parts together.

(Schöne-Denkinger 2007, 21)

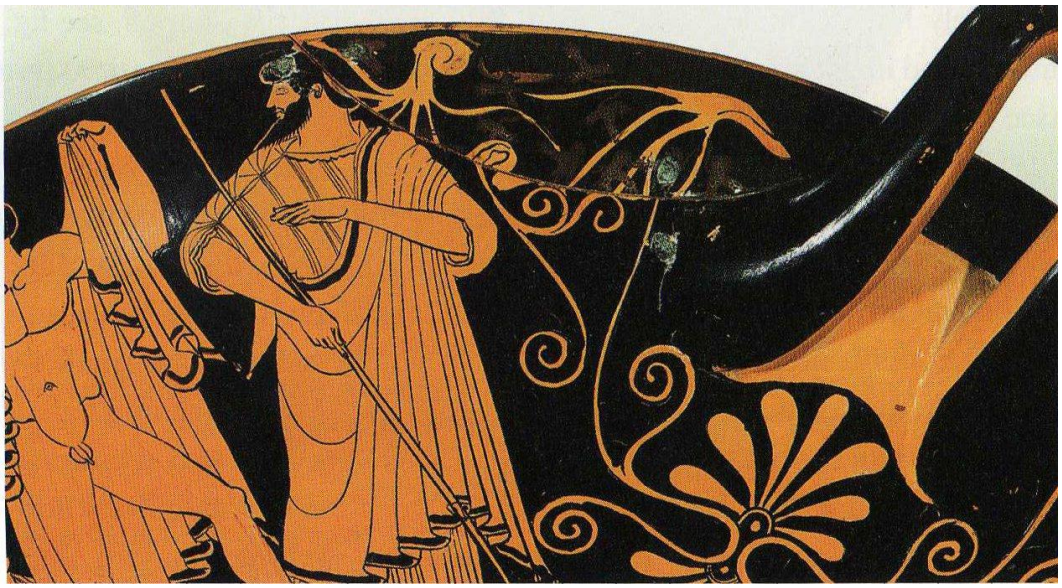
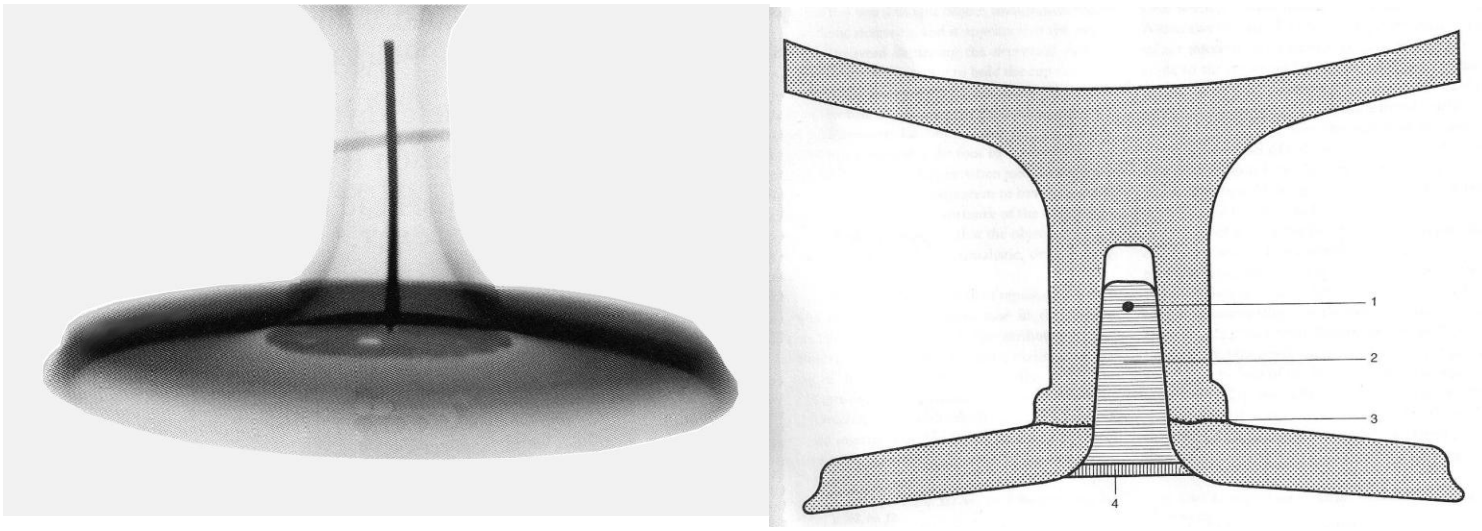


Figure 53. Detail of the exterior of a red-figure kylix, painted by Douris (JPGM 84.AE.569) from the J. Paul Getty Museum, Malibu.

An alien fragment with marine motifs of a kylix painted by Makron has been used as a repair in antiquity. The metal pins are still in place.

(Clark et al. 2002, 65)
(Elston 1990, 65)



Figures 54-55. X-ray image (left) and cross-section (right) of the repaired foot of a kylix (JPGM 86AE.682) from the J. Paul Getty Museum, Malibu.

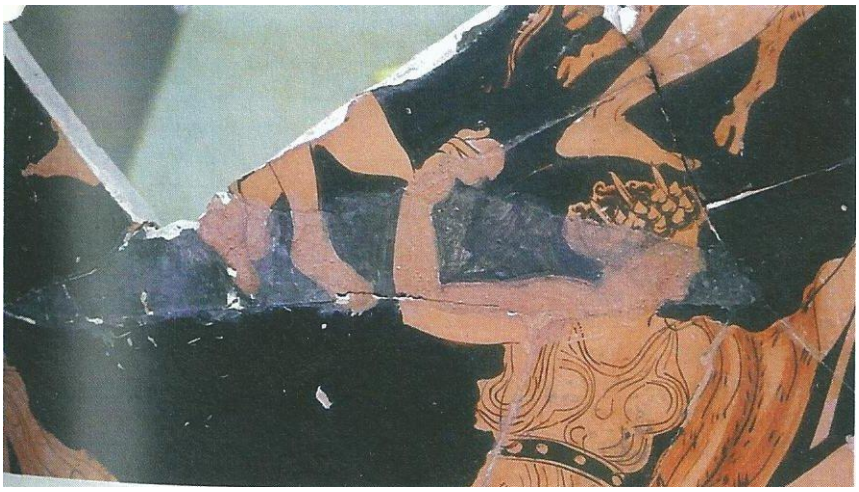
1. Bronze pin crossing the sheet of metal; 2. Sheet of metal; 3. Break; 4. Bronze disk.

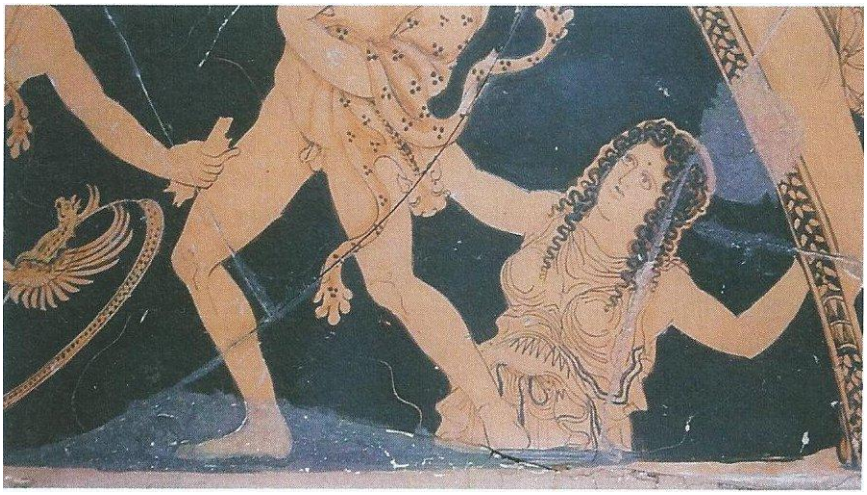
(Elston 1990, 57)

Figures 56-57. Red figure Attic cup (Wurttembergisches Landesmuseum, Stuttgart), restored in the La Tène period.

Gold leaf in the form of a Celtic lancet cover perforations made by the restorers.

(Berducou 2010, 12)





Figures 58-59. Two examples of mezzo restauro on an Attic kylix (81521) from Museo Archeologico Nazionale, Naples.

Restored by Raffaele Gargiulo in 1839.

(Milanese 2010, 25)

Figures 60-61. Red-figure bell-krater of Sir William Hamilton, now in the British Museum, London (BM Vases F77).

Left is the krater in its present condition, right is an image of the vase from Passeri's publication. The figures are clothed here.

(Jenkins and Sloan 1996, 140)

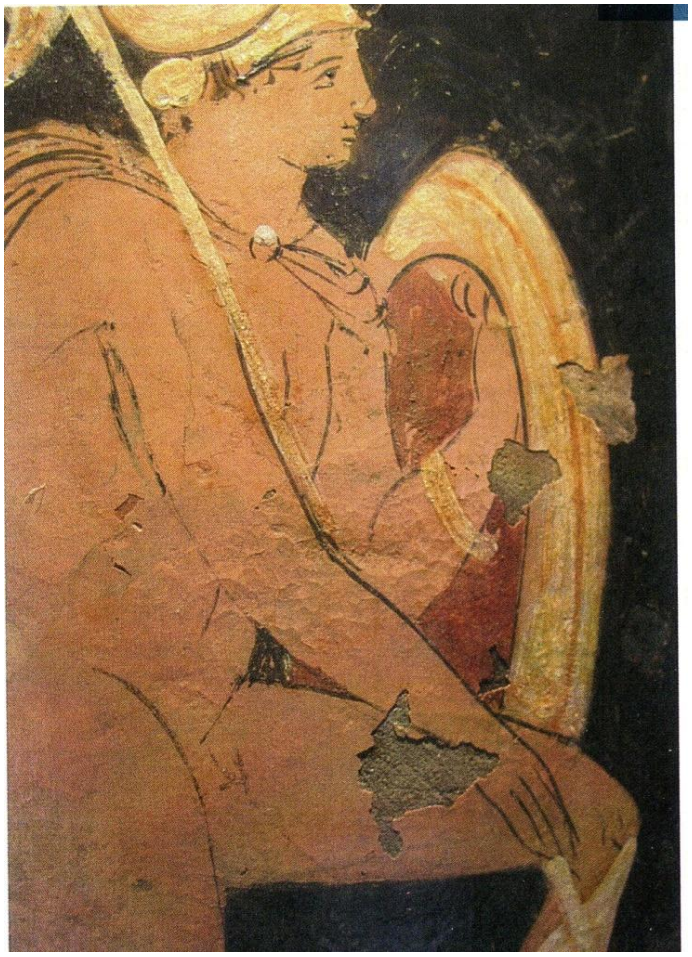


Figure 62. Detail of a South Italian loutrophoros (F3264) from the Berliner Antikensammlung.

A grey-coloured material is visible underneath the paint, suggesting that those areas are not original.

(Svoboda 2010, 50)

Figure 63. Detail of a South Italian loutrophoros (F3264) from the Berliner Antikensammlung.

Break joint with a rose-coloured adhesive, most probably the 'colla' used by Raffaele Gargiulo.

(Svoboda 2010, 50)

Figures 64-65. Attic black-figure amphora (Naples 81305) from the Museo Archeologico Nazionale.

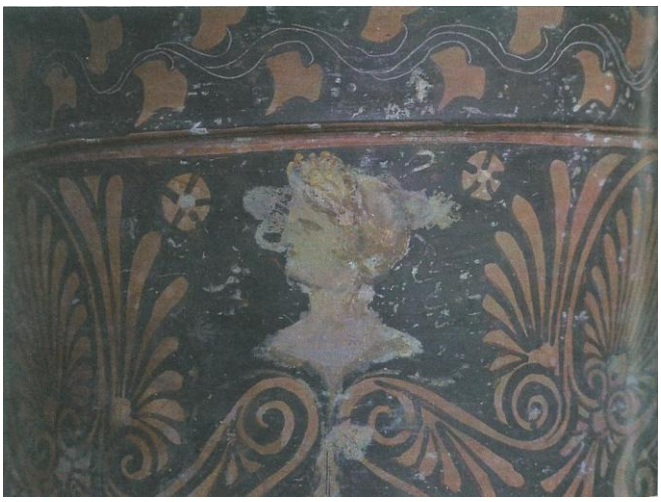
The head of the middle male figure has been reformed and enlarged. The common 'archaic' eyes (full face) were changed into a round eye with excessive lines, to suggest a side profile eye.

(Chazalon 2010, 34)

Figure 66. Detail of Attic black-figure cup (Naples 81113) from the Museo Archeologico Nazionale.

Raffaele Gargiulo has given the maenad a more dynamic outlook by cropping the right arm and putting the left hand in a posture which induces a slight turn of the figure

(Chazalon 2010, 36)




Figures 67-68. Detail (left) of a restored Apulian krater (MGE 37 000) from the Vatican Museums and detail of an aquarelle (right) of Jean-Jacques Lagrenée.

Lagrenée has restored the woman's head on the krater in an 'antique style', which was characteristic for his creations for the Manufacture de Sèvres (visible on the aquarelle).

(Bourgeois 2010, 68-69)

Figure 69. X-ray image of a South Italian loutrophoros (F3264) from the Berliner Antikensammlung.

The X-rays reveal pre-formed pieces that had been used for building up the missing portions of the vase.

(Svoboda 2010, 50)

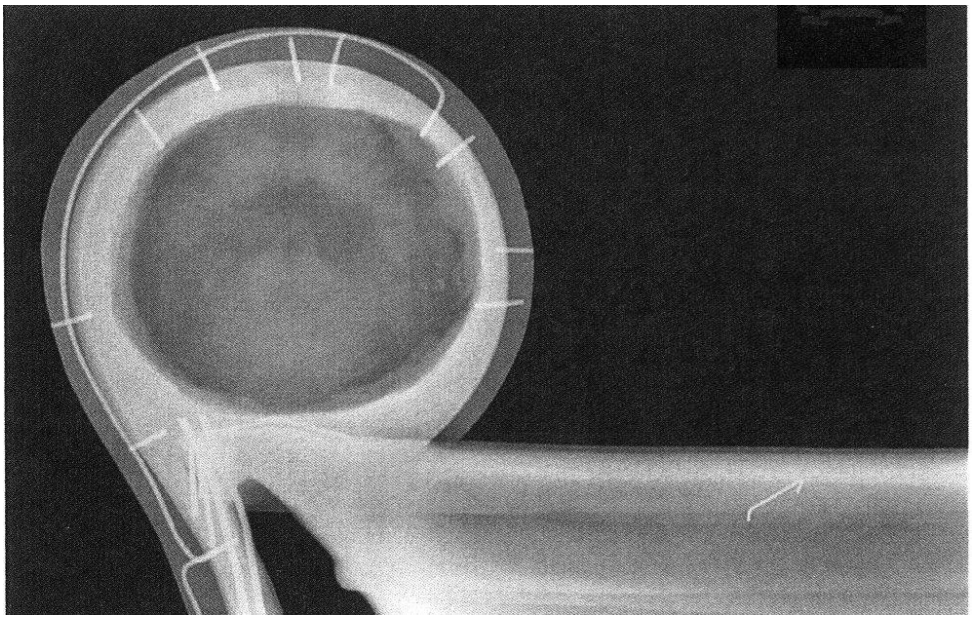
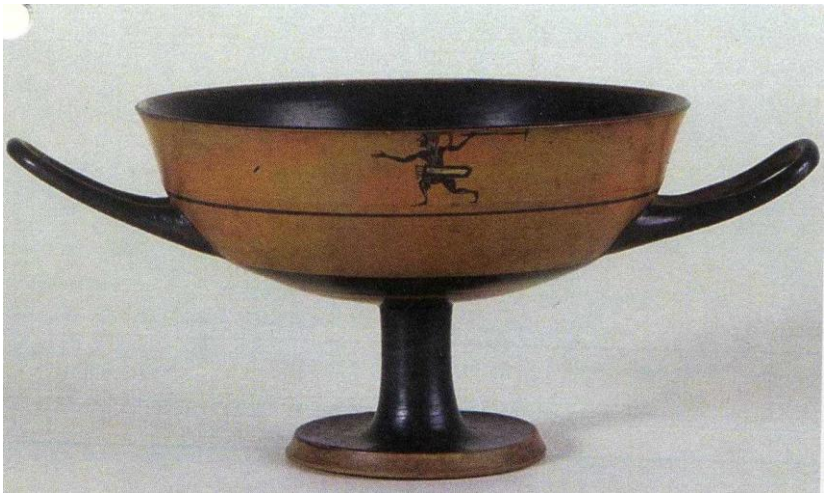
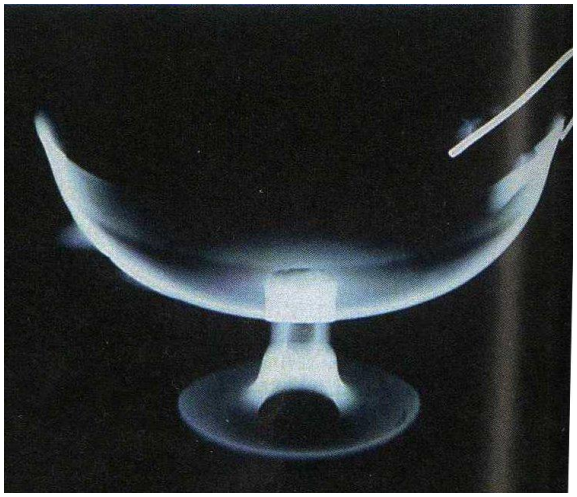


Figure 70. X-ray image revealing metal parts used by restorer Luigi Brocchi (1809).

(Bourgeois 2010, 64)





Figures 71-72. Normal image and X-ray image of the Little Master cup (MTC 1006) from the Musée Pincé, Angers.

Through radiography, a metallic reinforcement in the handle became visible.

(Balcar et al. 2010, 74)

Figures 73-74. Grave stele from the ancient city of Demetrias, in visible light (left) and in UV light (right).

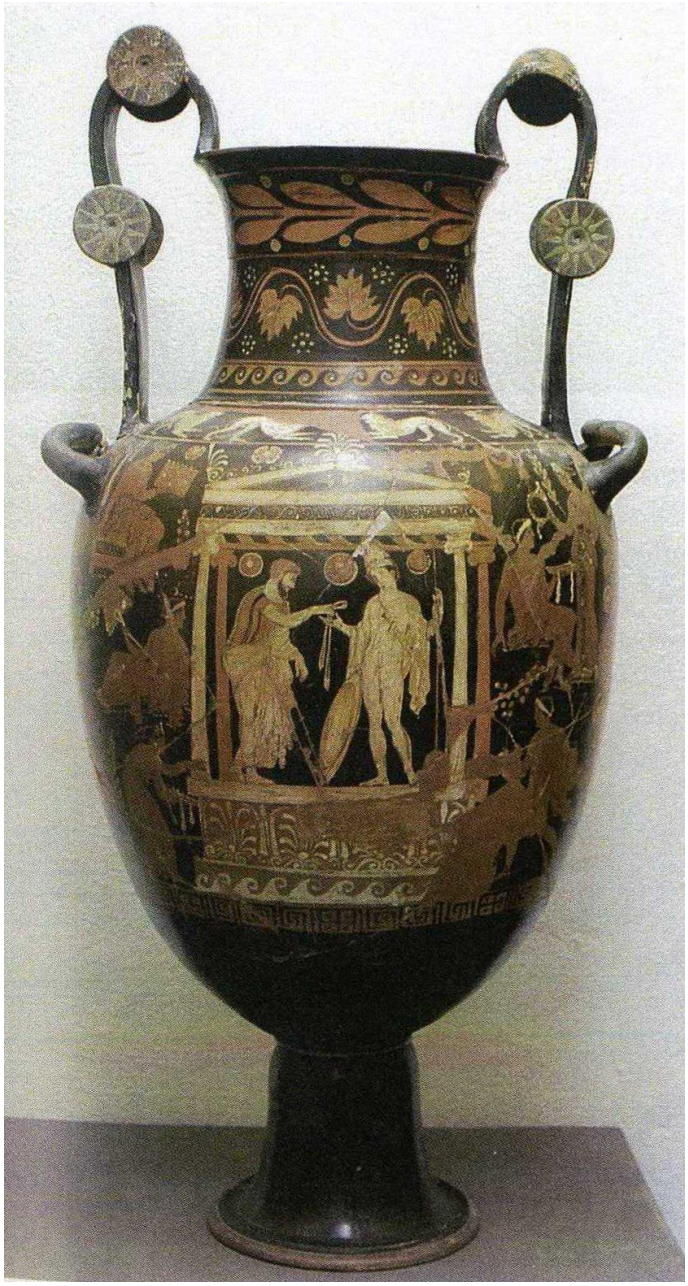
A seated woman became visible when the stele was exposed to UV light.

(Schubert and Grunauer-von Hoerschelmann 1978, ch.31)

Figures 75-76. Parchment page of the Ulfilas Bible (Early 6th century A.D.), in visible light (left) and in UV light (right).

The text became better readable in UV light.

(Schubert and Grunauer-von Hoerschelmann 1978, ch.47)



Figures 77-78. A South Italian nestoris of the Berliner Antikensammlungen in visible light (top) and in UV light (bottom).

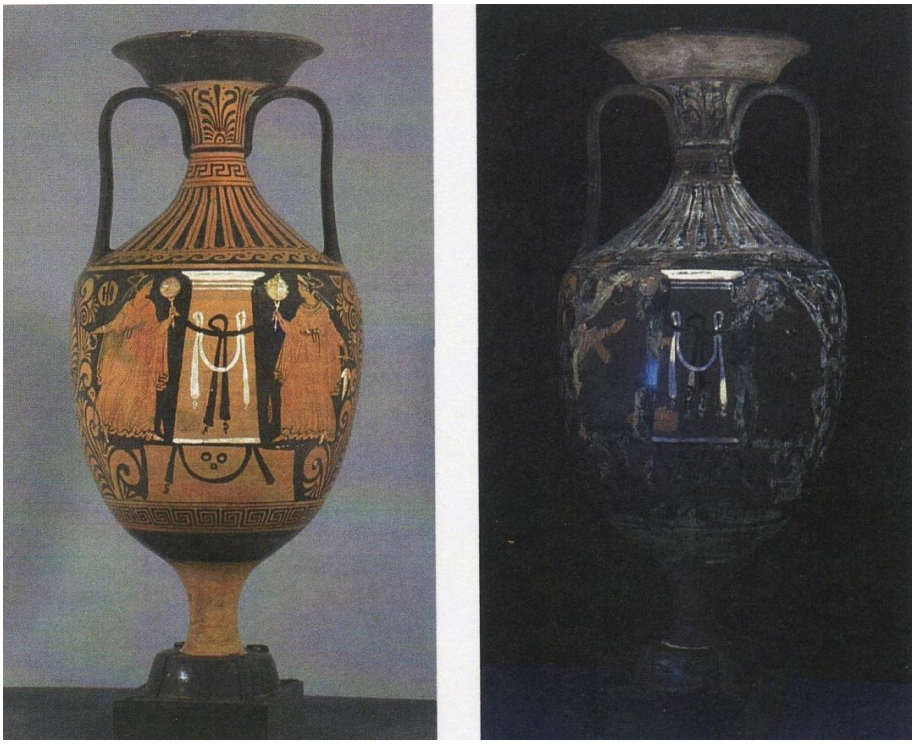
The UV image reveals that the neck is a modern addition; the shoulder consists of parts that are reconnected. The colour differences on these parts suggest that some areas are overpainted.

(Kästner 2010, 41)

Figure 79. UV image of a South Italian loutrophoros (F3264) from the Berliner Antikensammlung.

The ancient surface appears without any fluorescence, while the black varnish used by the restorers, not visible with the bare eye, does fluoresce. The overpaint fluoresces in an orange colour.

(after Svoboda 2010, 53)



Figures 80-81. Krater (K 81) from the Louvre, Paris, in visible light (left) and in UV light (right).

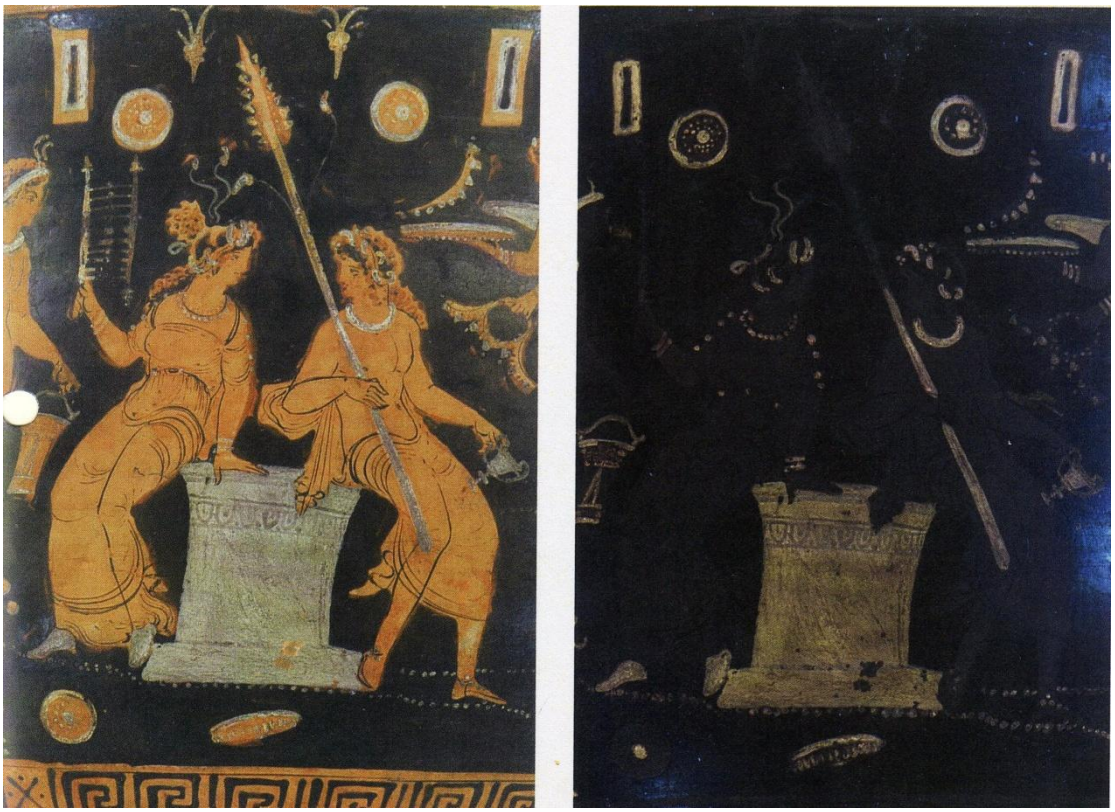
The UV image shows that only the two prominent figures on the obverse are original. Everything surrounding the figures fluoresces and has been adjusted.
The two different fluorescing colours are visible on this krater: the milky yellow on the neck and orange parts on the body.

(Balcar et al. 2010, 78)

Figures 82-83. Detail of a bell-krater (G 486) from the Louvre, in visible light (left) and in UV light (right).

In the UV image, the two different fluorescing colours are visible. The lines on the clothing of the figure were retraced with a vegetable resin and fluoresced yellow; the parts around the foot of the figure were filled with shellac and fluoresced orange.

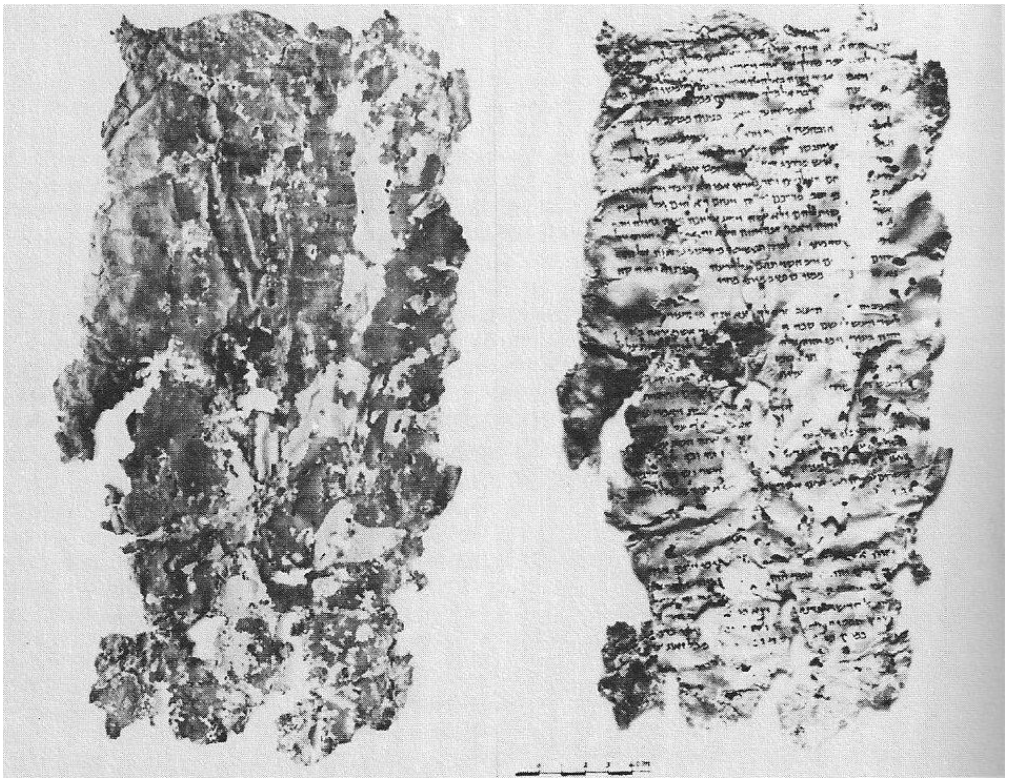
(Balcar et al. 2010, 79)



Figures 84-85. Normal image and UV image of a bell-krater (K 128) from the Louvre, Paris.

The UV image shows that the pearls of the necklaces and other jewellery of the two figures have been adjusted. It is doubtful if the ornaments were really painted as such in antiquity.

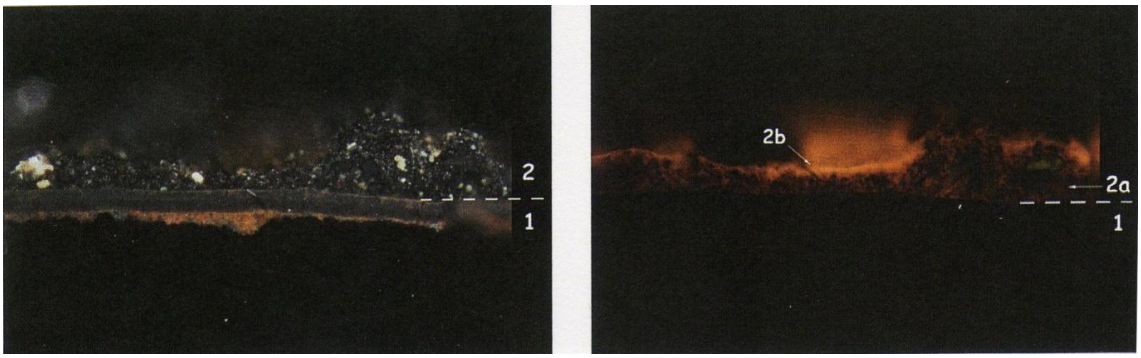
(Bourgeois 2010, 67)



Figures 86-87. A text of the Dead Sea Scrolls, in visible light (left) and in IR light (right).

With IR, the black documents have been made readable again.

(Spitzing 1979, 148)



Figures 88-89. Stratigraphic section of the paint layers of a bell-krater (D863.3.26) from the Musée des Beaux-Arts et d'Archéologie, Besançon (left visible light; right UV light).

(1) Antique layer
(2) Restoration
  (2a) Black repaint
  (2b) Varnish (shellac)

(Balcar et al. 2010, 76)

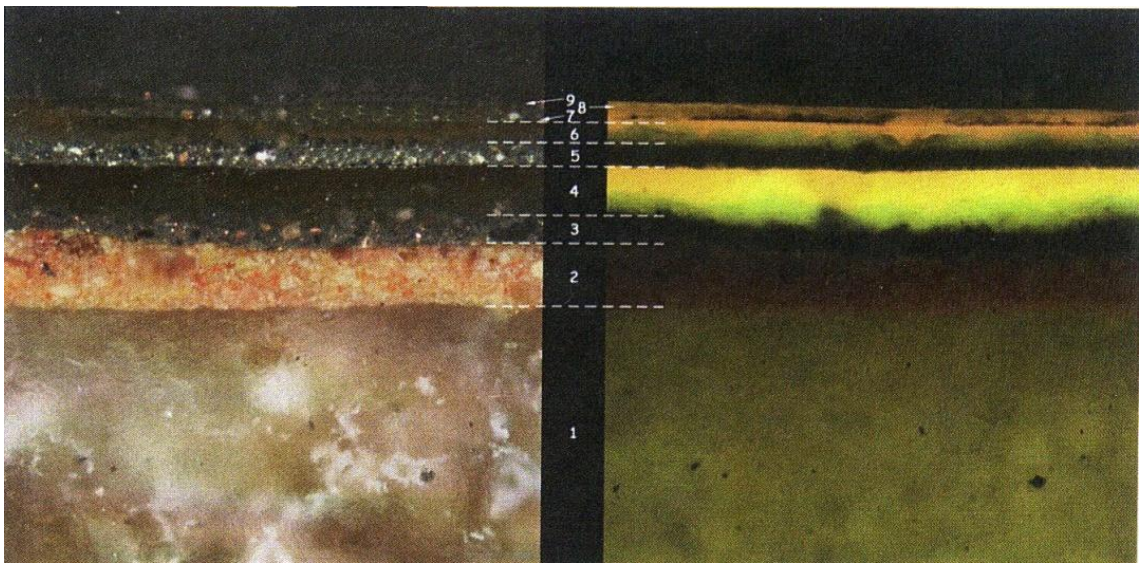


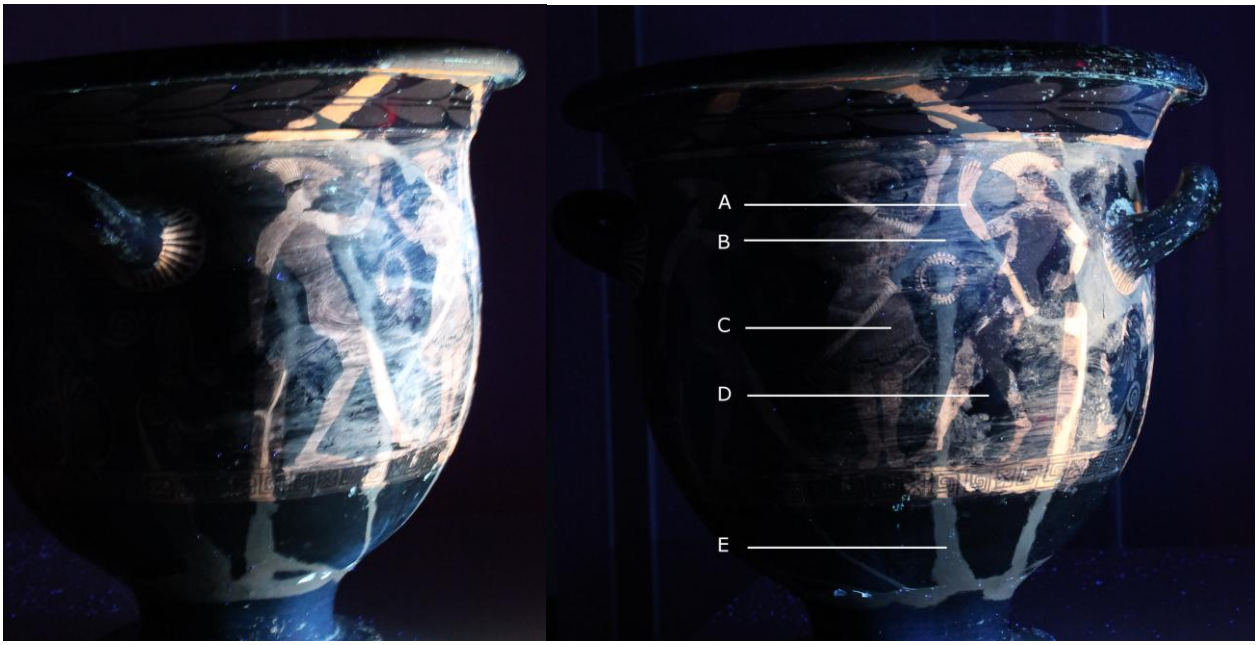
Figure 90-91. Stratigraphic section (1/2 mm) of all paint layers of an Attic bell-krater (G 502) from the Louvre (left visible light; right UV light).

(1) Preparation
(2) Orange layer
(3, 5, 7, 9) Black repaint
(4, 6, 8) Varnish (shellac)

The alternating layers of repaint and varnish show that the restorations were not limited to the surface layers, but instead were also implemented to the deeper layers.

(Balcar et al. 2010, 77)

Chapter 5



Figures 92-93-94. The front side of Lucanian krater R.Sx.4, in visible light (top) and in UV light (bottom).

A. Overpainting; B. Varnish; C. Original paint; D. Original surface; E. Crack with filling

(Own figures)

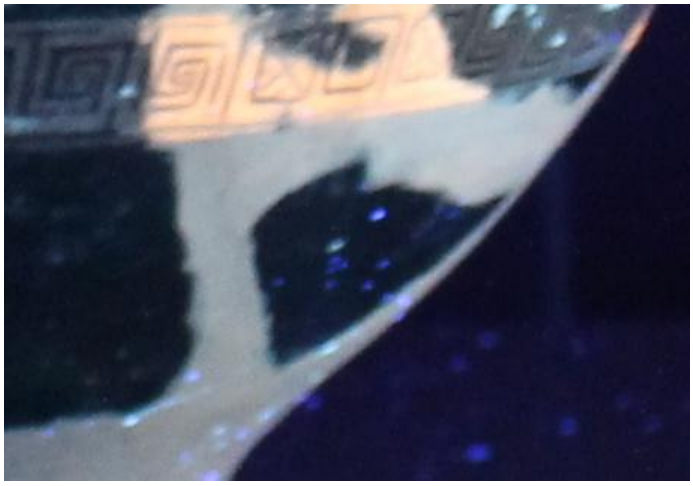
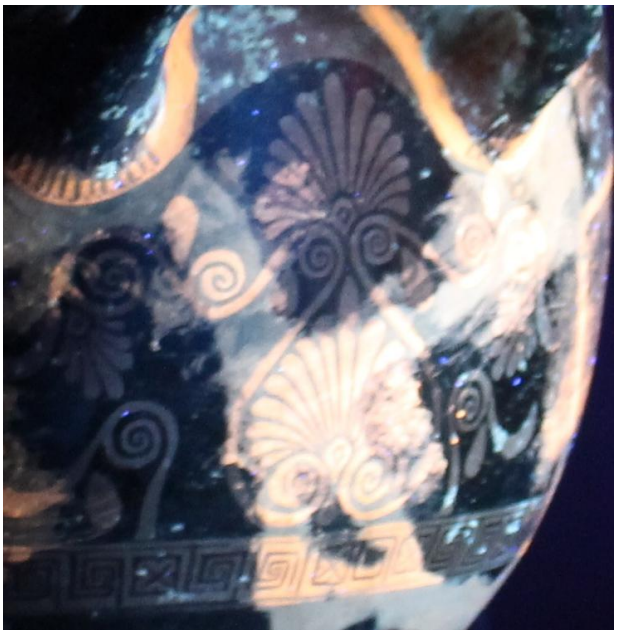


Figure 95. A 'hanging' sherd, surrounded by filled cracks.

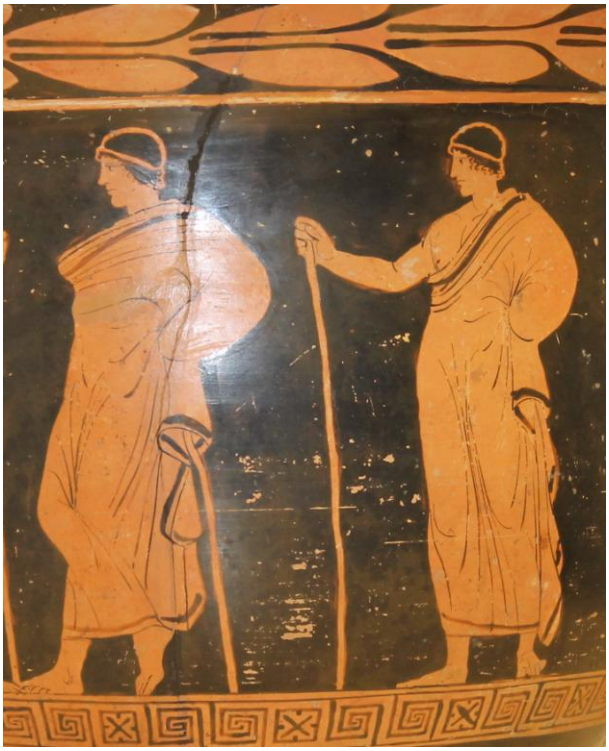
(Own figure)



Figures 96-97. Detail of the floral decoration of krater R.Sx.4 in visible light (top) and in UV light (right).

The grey parts are traces of the filling and the varnish, the orange fluorescing parts are overpaintings.

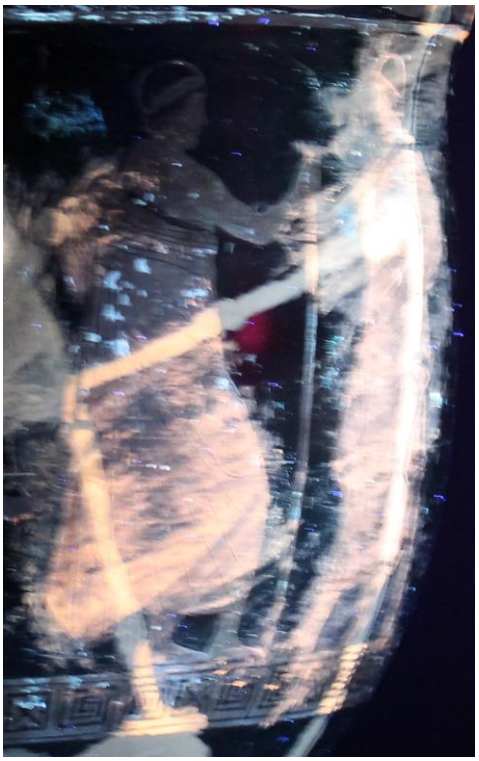
(Own figures)




Figures 98-99. Detail of the middle and right figure of the back side of krater R.Sx.4 in visible light (left) and in UV light (right).

A large crack splits the middle figure vertically. This crack has been filled with a filling. In contrast with the right figure (which does not fluoresces), the middle figure fluoresces orange and thus has been overpainted. The wipes of the brush used have also become visible.

(Own figures)

Figures 100-101. Detail of the left and middle figure of the back side of krater R.Sx.4 in visible light (left) and in UV light (right).

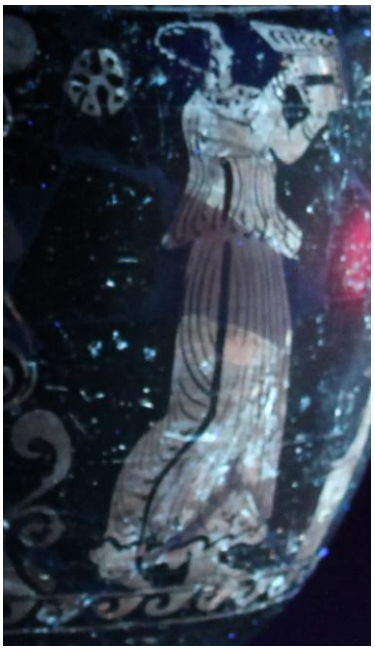
The large crack goes on in the left figure. The bottom part, below the crack, fluoresces orange and has been overpainted.

(Own figures)

Figures 102-103. Detail of the right figure of the front side of krater R.Sx.4 in visible light (left) and in UV light (right).

Parts of the arms, legs and hat of this figure fluoresce orange and are overpainted.

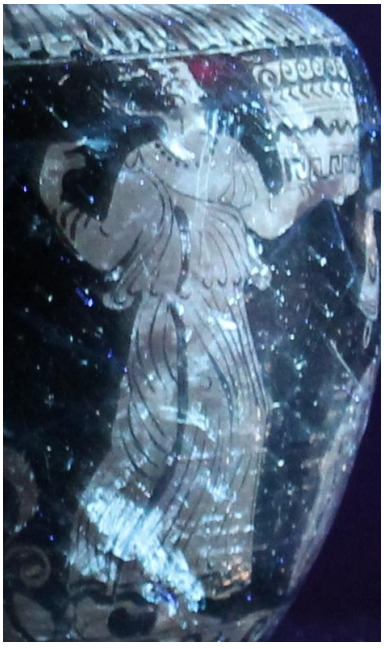
(Own figures)


Figures 104-105-106. The front side of Lucanian nestoris K1894/9.1 in visible light (left) and in UV light (middle and right).

A granular texture can be seen on the UV images. The figures fluoresce orange. Also, brown spots are visible on the waist of the female figure and on the shoulder of the male figure. These are recent restorations.

(Own figures)


Figures 107-108-109. The back side of nestoris K1894/9.1 in visible light (left) and in UV light (middle and right).

A granular texture can be seen on the UV images. The figures fluoresce orange. Also, a white fluorescence (filling) at the legs of the female figure is visible. These are recent restorations.

(Own figures)

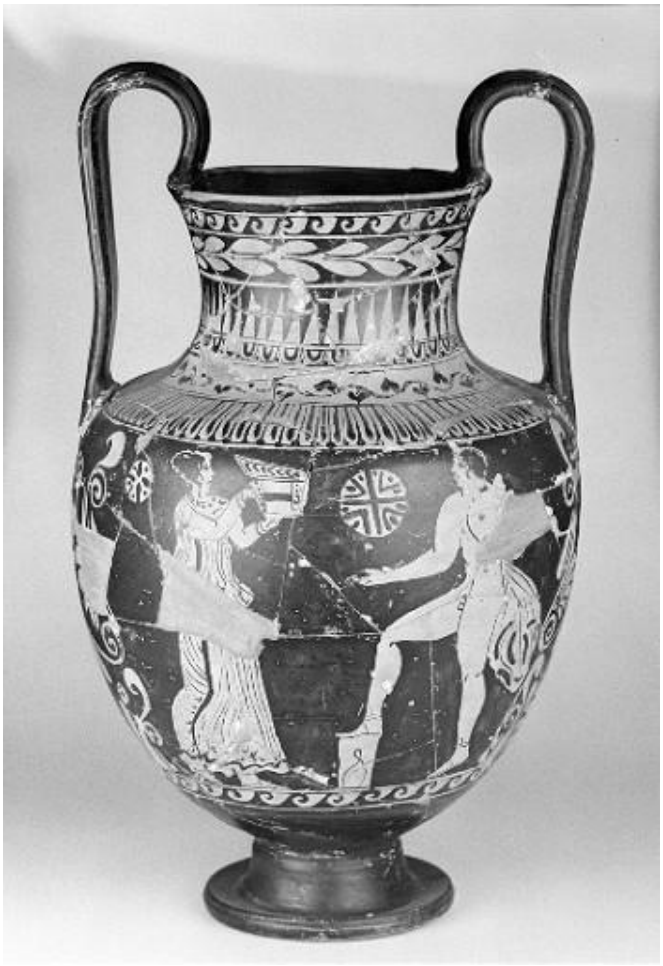


Figure 110. 20th century photograph showing a different condition of nestoris K1894/9.1.

The brown spots which are visible in UV light, match the two missing pieces which are visible on this image. The restorations are hence recent.

http://www.rmo.nl/collectie/zoeken?object=K+1894%2F9.1

Figures 111-112. The front side of Apulian krater GNV1 in visible light (left) and in UV light (right).

(A) Repaired crack; (B) Filling; (C) Original paint; (D) Filling; (E) Overpainting; (F) Varnish

(Own figures)

Figures 113-114. The back side of column krater GNV1 in visible light (top) and in UV light (bottom).

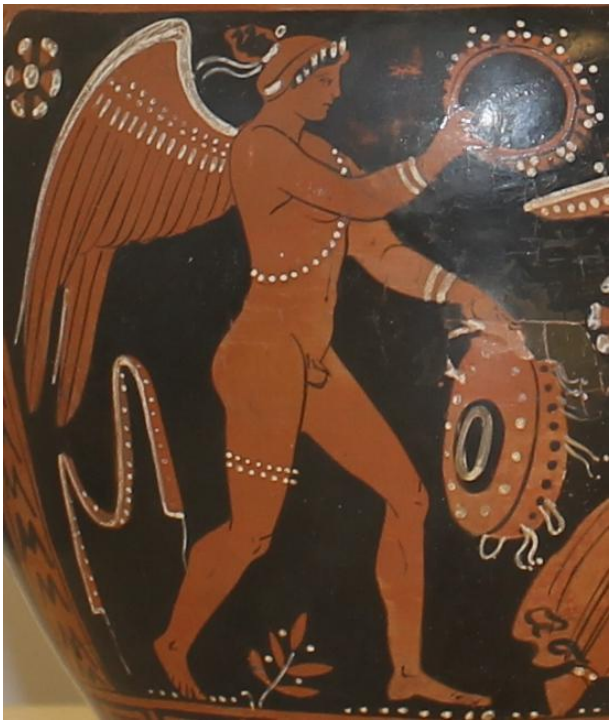
(A) Varnish; (B) Original paint; (C) Filling; (D) Overpainting

(own figures)

Figures 115-116. The front side of column krater GNV1 (zoomed in) in visible light (top) and in UV light (bottom).

In the centre of the scene (just above the youth's drum), a heavy restoration can be seen. This restoration is also present in visible light, but in UV light, a black area becomes visible. This is probably a filler or an adhesive.

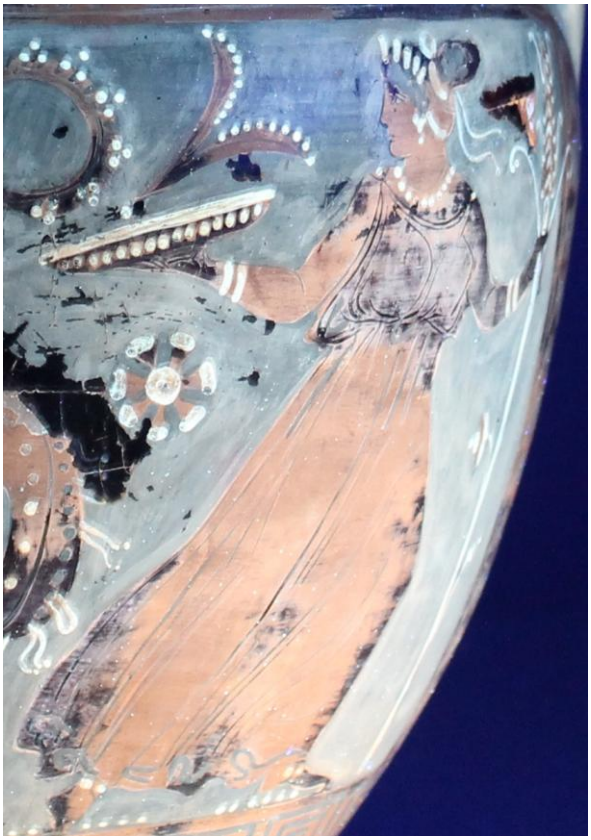
(Own figures)




Figures 117-118. Detail of the left figure of the front side of column krater GNV1 in visible light (left) and in UV light (right)

In the UV image, it can clearly be seen that the drum and the wreath the youth is carrying fluoresce in two colours: orange at the top part and black at the lower part. The orange parts are overpaintings.
There is also a brownish mark visible next to the wreath. It seems that this discolouration is an indication of a filler.

(Own figures)

Figures 119-120. Detail of the right figure of the front side of column krater GNV1 in visible light (left) and in UV light (right).

In the UV image, it can be seen that only the top part of the woman's dress fluoresces black. The bottom part fluoresces orange, and is hence overpainted.

(Own figures)

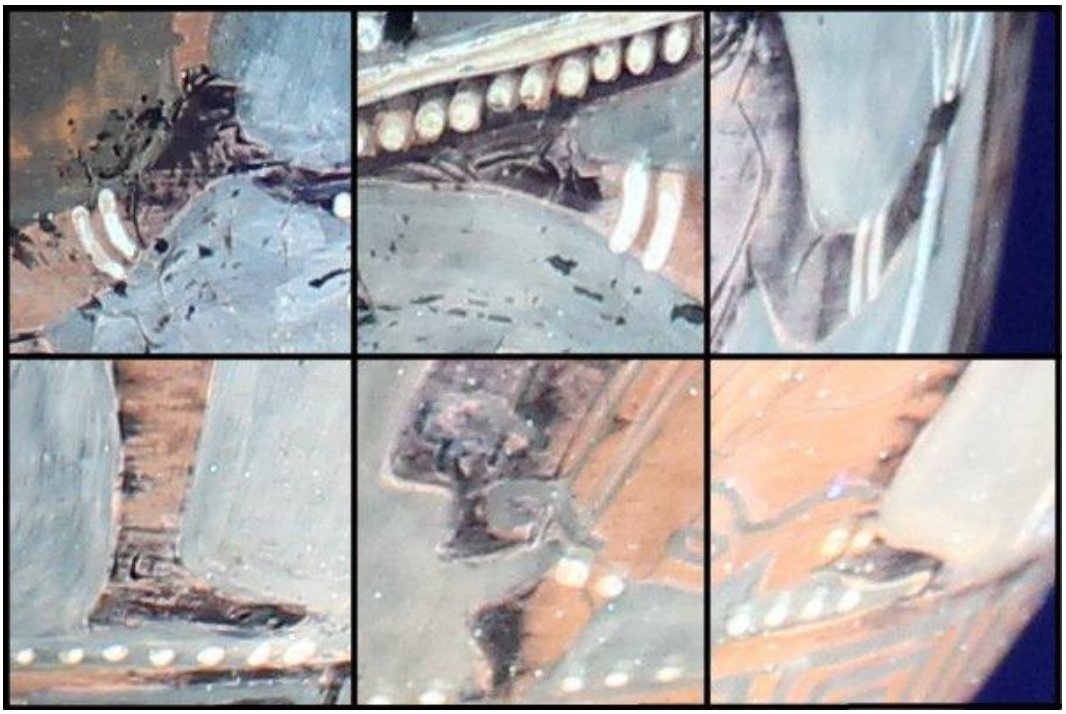


Figure 121. Body parts of the figures painted on the front side of column krater GNV1, in UV light.

Seen from top to bottom, left to right:

- Youth's right hand woman's right hand woman's left hand
- Youth's left foot woman's right foot woman's left foot

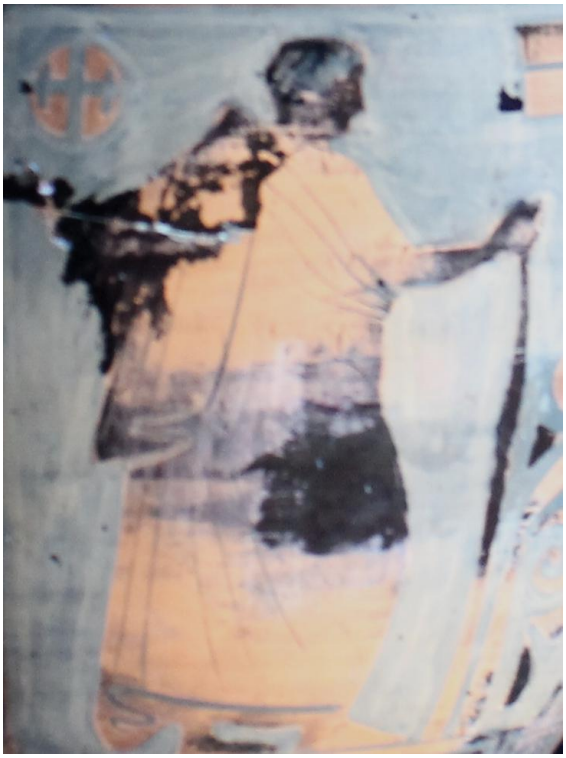
From the UV images it becomes clear that the hands and feet of the figures fluoresce differently. Because of the orange fluorescence, it seems that only the woman's feet have been adjusted.

(Own figures)

Figures 122-123. The back side of column krater GNV1 (zoomed in) in visible light (top) and in UV light (bottom).

In the UV image, a rectangular area is visible, which crosses both figures. This spot fluoresce black on the figures and light grey on the intermediate places. Most probably, this is a filler of a different material.
Also visible is a different fluorescence of the staffs the figures are carrying. The top part of these elements fluoresces black, the bottom part fluoresces orange. The floral decoration seems to be painted on top of the filling.

(Own figures)

Figures 124-125. Detail of the left figure on the back side of column krater GNV1 in visible light (left) and in UV light (right).

The orange fluorescence on the UV image shows that, except for the head, this figure has been entirely overpainted. A mark comparable to the large rectangular filling is visible on the figure's back.

(Own figures)


Figures 126-127. Detail of the right figure of the back side of column krater GNV1 in visible light (left) and in UV light (right)

Comparing UV figure 127 to UV figure 125, it is clear that the two figures fluoresce differently. Figure 127 seems to be hardly adjusted; only the feet fluoresce orange.

(Own figures)

Figures 128-129. The front side of the neck of column krater GNV1 (zoomed in), in visible light (top) and in UV light (bottom).

On both the images, a diagonal break line can be seen. On the UV image, a black fluorescing filler is visible, which was used to fasten the sherds together. Around the cordate leaves, also black-fluorescing wipes are visible.

(Own figures)


Figures 130-131. The front side of Apulian hydria GNV107 in visible light (left) and in UV light (right).

A white granulate texture is visible on the bottom part, which fluoresced strongly. Most likely, this is a recent restoration.

(Own images)


Figures 132-133. The front side of hydria GNV107 in visible light (left) and in UV light (right).

A white granulate texture is visible on the foot, which fluoresced strongly. A similar filling had been placed on the back side of the foot. Most likely, these are recent restorations.

(Own figures)

Figures 134-135. The front side of Campanian neck-amphora AMM1 in visible light (left) and in UV light (right).

(A) Overpainting; (B) Original sherd with original paint; (C) White paint; (D) Varnish; (E) Repaired crack

(Left: National Museum of Antiquities)
(Right: Own figure)


Figures 136-137. Detail of the front side of neck-amphora AMM1 in visible light (left) and in UV light (right)

(Left: http://www.rmo.nl/collectie/zoeken?object=AMM+1)
(Right: Own figure)




Figures 138-141. Details of Memnon (top) and Achilles (bottom) in visible light (left) and in UV light (right).

The figures fluoresce orange and have been overpainted. It seems that also the neck of Memnon has been adjusted. Most probably, the white parts have been repainted as well.

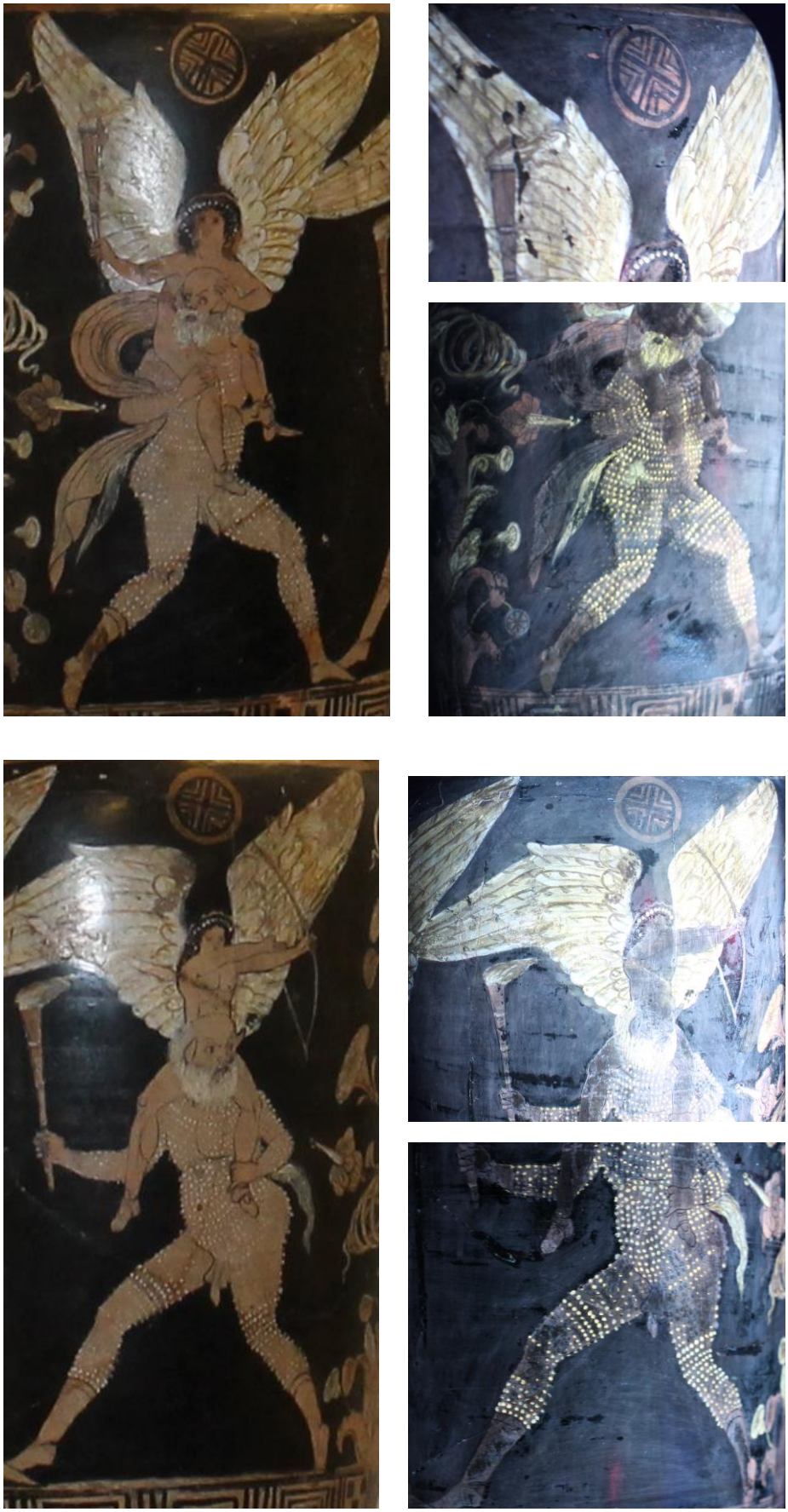
(Own figures)


Figures 142-143. Detail of Thetis in visible light (left) and in UV light (right).

(Own figures)


Figures 144-145. Detail of Eos in visible light (left) and in UV light (right)

(Own figures)



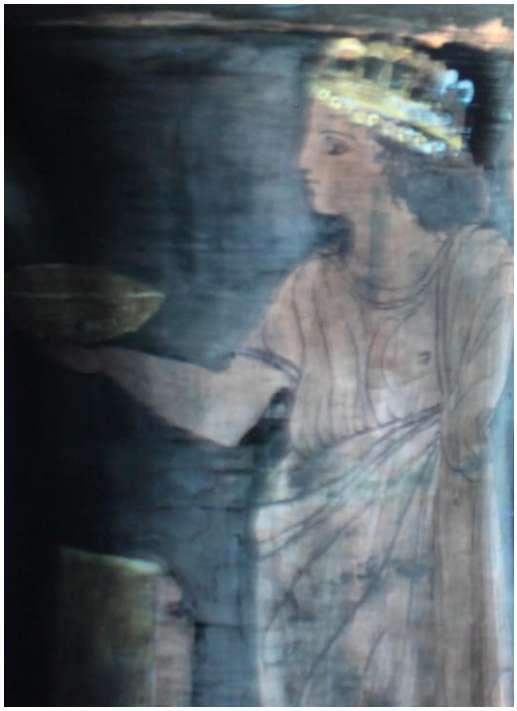
Figures 146-151. Details of the papposilenoi and Erotes in visible light (left) and in UV light (right).

Most probably, the white parts have been repainted.

(Own figures)


Figures 152-153. Detail of the female figure on the front side of the neck of neck-amphora AMM1 in visible light (left) and in UV light (right).

(Own figures)

Figures 154-155. Detail of the female figure on the back side of the neck of neck-amphora AMM1 in visible light (left) and in UV light (right).

(Own figures)

Figures 156-157. Detail of the scales in visible light (left) and in UV light (right).

In UV light, the scales are the only parts which do not fluoresce. The scales are original and are not overpainted.

(Own figures)

Figure 158. Detail of the neck and rim of the back side of neck-amphora AMM1.

A large filling is visible on the rim, which fluoresces orange in UV light.

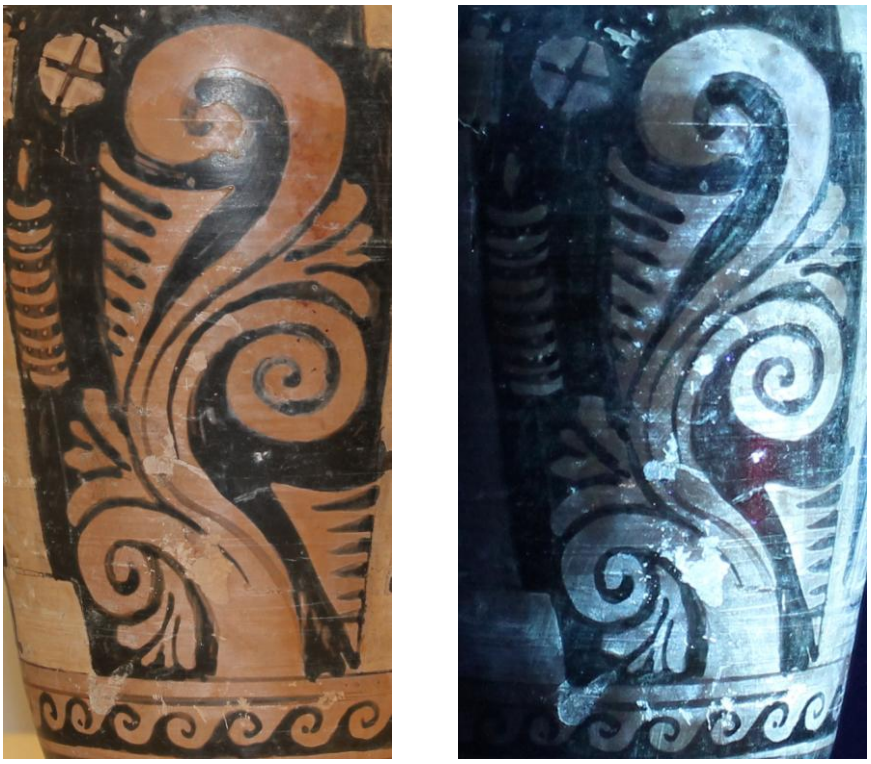
(Own figures)

Figures 159-160. Front side of Campanian neck-amphora GNV133 in visible light (left) and in UV light (right).

(Own figures)

Figures 161-162. Back side of neck-amphora GNV133 in visible light (left) and in UV light (right).

(Own figures)



Figures 163-164. Detail of the left side of neck-amphora GNV133 in visible light (left) and in UV light (right).

The fillings that can be seen in visible light, fluoresce white in UV light.

(Own figures)

Figures 165-166. Detail of the bottom of the front side of neck-amphora GNV133 in visible light (left) and in UV light (right).

The fillings that can be seen in visible light, fluoresce white in UV light.

(Own figures)

Abstract

This Master thesis will investigate the 19th century restorations on red-figure South Italian vases from the National Museum of Antiquities (Leiden, The Netherlands). From a theoretical framework, which considers restoration as being part of an object's cultural biography, the restoration practices of vase restorers in the Neapolitan antiquities trade of the 19th century will be investigated. Although these restoration practices are still unexplored, recent investigations have led to promising results. Not only the broken parts of the vases seem to have been repaired and completed, also the paintings have been restored in some cases. The National Museum of Antiquities also has a broad collection of Greek pottery. Some of the South Italian vases owned by the museum have their history in the Neapolitan art market of the 19th century. Yet, little is known about the restorations executed on these vases. To know whether –and to what extent– the collection of red-figure South Italian pottery has been restored, ultraviolet fluorescence will be used. This non-destructive method will be applied to distinguish the ancient paint from the 19th century adjustments. This research will not only answer the aforementioned questions, but –together with comparable studies– also hopes to change the contemporary perception of ancient vase paintings.

Deze Masterscriptie zal de 19de eeuwse restauraties op roodfigurige, Zuiditalische vazen van het Rijksmuseum van Oudheden (Leiden) onderzoeken. Uitgaand van een theoretisch kader, waarin restauratie beschouwd wordt als onderdeel van de culturele biografie van een object, zullen de restauratiepraktijken van restauratoren van de Napolitaanse antiekmarkt van de 19de eeuw bestudeerd worden. Hoewel deze restauratiepraktijken nog niet volledig zijn onderzocht, hebben recente studies tot veelbelovende resultaten geleid. Het lijkt erop dat niet alleen de gebroken delen van de vazen gerepareerd en vervolledigd zijn, maar dat soms ook de beschilderingen zijn gerestaureerd. Ook het Rijksmuseum van Oudheden heeft een grote collectie Grieks aardewerk. Sommige Zuiditalische vazen van het museum hebben hun wortels in the Napolitaanse antiekmarkt van de 19de eeuw. Echter, er is weinig bekend over de restauraties die op deze vazen zijn uitgevoerd. Om te weten of –en tot op welke hoogte– de collectie roodfigurig, Zuiditalisch aardewerk gerestaureerd is, zal UV fluorescentie gebruikt worden. Deze niet-destructieve methode zal aangewend worden om antieke verf en 19de eeuwse aanpassingen van elkaar te onderscheiden. Dit onderzoek zal niet alleen antwoord geven op de bovengenoemde vragen, maar hoopt –tezamen met andere studies– ook de hedendaagse perceptie van antieke vaasschilderingen te veranderen.

Bibliography

Appadurai, A. (ed.), 1986. *The Social Life of Things. Commodities in Cultural Perspective*. Cambridge: Cambridge University Press.

Balcar, N., B. Bourgeois and Y. Vandenberghe, 2010. Interroger les traces. Étude scientifique d'anciennes restaurations de vases. *Techne 32, Une perfection dangereuse, la restauration des vases grecs, de Naples à Paris, XVIII^e – XIX^e siècles*, 71-80.

Bastet, F.L., 1987. *De Horizon Voorbij. Wandelingen door de Klassieke Wereld*. Amsterdam: Querido.

Bennet, M., 2002. The Euboeans and the West. Art, Epic Pottery, and History. In: Bennett, M. and A.J. Paul (eds), *Magna Graecia. Greek Art from South Italy and Sicily*. Cleveland: Cleveland Museum of Art, 18-33.

Berducou, M., 2010. Bref voyage dans le passé du passé. Continuité et ruptures dans l'histoire de la conservation du patrimoine. *Techne 32, Une perfection dangereuse, la restauration des vases grecs, de Naples à Paris, XVIII^e – XIX^e siècles*, 11-18.

Boardman, J., 1998. *Early Greek Vase Painting: 11^th – 6^th centuries BC. A Handbook*. London: Thames and Hudson.

Bourgeois, B. and N. Balcar, 2007. 'Abili restauratori'. Naples and the Art of Vase Restoration (Count Turpin de Crissé's Collection, Early 19th century). In: M. Bentz and U. Kästner (eds), *Konservieren oder restaurieren. Die Restaurierung griechischer Vasen von der Antike bis heute. Beihefte zum Corpus Vasorum Antiquorum Deutschland (Band 3)*. München: Beck, 41-48.

Bourgeois, B., 2010. 'La fabrique du vase grec. Connaître et restaurer l'antique dans l'Europe des Lumières'. Genèse d'un projet. *Techne 32, Une perfection dangereuse, la restauration des vases grecs, de Naples à Paris, XVIII^e – XIX^e siècles*, 5-10.

Clark, A.J., M. Elston and M.L. Hart, 2002. *Understanding Greek Vases. A Guide to Terms, Styles, and Techniques*. Los Angeles: J. Paul Getty Museum.

Chazalon, L., 2010. Les vases attiques à figures noires restaurés dans le laboratoire de Raffaele Gargiulo à Naples. Étude pratique d'un regard d'époque. *Techne 32, Une perfection dangereuse, la restauration des vases grecs, de Naples à Paris, XVIII^e – XIX^e siècles*, 31-37.

Cook, R.M., 1972. *Greek Painted Pottery*. London: Methuen.

Denoyelle, M., 2010. Vases grecs et réseaux du savoir, d'hier à aujourd'hui. Introduction au projet Lasimos. *Techne 32, Une perfection dangereuse, la restauration des vases grecs, de Naples à Paris, XVIII^e – XIX^e siècles*, 55-59.

Dooijes, R. and O. Nieuwenhuyse, 2007. Ancient Repairs. Techniques and Social Meaning. In: M. Bentz and U. Kästner (eds), *Konservieren oder restaurieren. Die Restaurierung griechischer Vasen von der Antike bis heute. Beihefte zum Corpus Vasorum Antiquorum Deutschland (Band 3)*. München: Beck, 15-20.

Dooijes, R., 2007. Keeping Alive the History of Restoration: Nineteenth Century Repairs on Greek Ceramics from the National Museum of Antiquities in Leiden. In: L. Pelosi (ed), *ICOM Glass and Ceramics Conservation 2007*, Nova Gorica: Goriški muzej, 103-112.

Dorrell, P.G., 1994. *Photography in Archaeology and Conservation. Second edition*. Cambridge: Cambridge University Press.

Elston, M., 1990. Ancient Repairs of Greek Vases in the J. Paul Getty Museum. *The J. Paul Getty Museum Journal 18*, 53-68.

Essen, C. van, 1932. De Vaas van den Stadhouder. Zuiditalische Amphora uit het Museum te Leiden. *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden* 13, 59-69.

Halbertsma, R.B., 1995. *Le Solitaire des Ruines. De Archeologische Reizen van Jean Emile Humbert (1771-1839) in Dienst van het Koninkrijk der Nederlanden*. Leiden: Rijksmuseum van Oudheden.

Halbertsma, R.B., 2003. *Scholars, Travellers and Trade. The Pioneer Years of the National Museum of Antiquities in Leiden, 1818-40*. London: Routledge.

Halbertsma, R.B., 2011. *Het Recht Gebruik van deze Schatten*. Leiden University: inaugural speech.

Iozzo, M., 2002. Black-figure Pottery in Magna Graecia and Sicily. In: Bennett, M. and A.J. Paul (eds), *Magna Graecia. Greek Art from South Italy and Sicily*. Cleveland: Cleveland Museum of Art, 48-67.

Kästner, U., 2010. Vasenrestaurierungen von Raffaele Gargiulo in der Berliner Antikensammlung. *Techne 32, Une perfection dangereuse, la restauration des vases grecs, de Naples à Paris, XVIII^{e} – XIX^{e} siècles*, 38-46.

Kopytoff, I., 1986. The Cultural Biography of Things. Commodization as Process. In: Appadurai, A. (ed), *The Social Life of Things. Commodities in Cultural Perspective*. Cambridge: Cambridge University Press, 64-94.

Jenkins, I. and K. Sloan, 1996. *Vases & Vulcanoes. Sir William Hamilton and his Collection*. London: British Museum Press.

LaMotta, V.M. and M.B. Schiffer, 2004. Behavioral Archaeology. Toward a New Synthesis. In: Hodder, I. (ed), *Archaeological Theory Today*. Cambridge: Polity Press, 14-64.

Leemans, C., 1840. *Grieksche en Etrurische beschilderde Vazen uit de Verzameling van den Prins van Canino*.

Mayo, M.E., 1982. *The Art of South Italy. Vases from Magna Graecia: An exhibition*. Richmond: Virginia Museum of Fine Arts.

Milanese, A., 2010. De la ‘perfection dangereuse’, et plus encore. La restauration des vases grecs à Naples au début du XIX^{e} siècle, entre histoire du gout et marché de l’art. *Techne 32, Une perfection dangereuse, la restauration des vases grecs, de Naples à Paris, XVIII^{e} – XIX^{e} siècles*, 19-30.

Pomian, K., 1990. *De Oorsprong van het Museum. Over het Verzamelen*. Heerlen: De Voorstad.

Ridgway, D., 1992. *The First Western Greeks*. Cambridge: Cambridge University Press.

Rasmussen, T. and N. Spivey, 1991. *Looking at Greek Vases*. Cambridge: Cambridge University Press.
Renfrew, C. and P. Bahn, 2004. *Archaeology. Theories, Methods and Practice.* London: Thames and Hudson.

Shanks, M., 1998. The Life of an Artifact. *Fennoscandia Archeologica* 15, 15–42. (Originally part of a lecture course in Leiden, 1993. Consulted via http://documents.stanford.edu/michaelshanks/229?view=print on 21 October 2011)

Schiffer, M.B., 1972. Archaeological Context and Systemic Context. *American Antiquity* 37 (2), 156-165.

Schiffer, M.B., 1987. *Formation Processes in the Archaeological Record*. Albuquerque: University of New Mexico Press.

Schöne-Denkinger, A., 2007. Reparaturen, antik oder nicht antik? Beobachtungen an rotfigurigen Krateren der Berliner Antikensammlung und Anmerkungen zur Verwendung geflickter Gefäβe in der Antike. In: M. Bentz and U. Kästner (eds), *Konservieren oder restaurieren. Die Restaurierung griechischer Vasen von der Antike bis heute. Beihefte zum Corpus Vasorum Antiquorum Deutschland (Band 3)*. München: Beck, 21-28.

Schubert, F. and S. Grunauer-von Hoerschelmann, 1978. *Archäologie und Photographie. Fünfzig Beispiele zur Geschichte und Methode*. Mainz am Rhein: Verlag Philipp von Zabern.

Spitzing, G., 1979. *Infrarood en Ultraviolet Fotografie*. Amsterdam/Brussel: Elsevier Focus.

Steinhart, M. and W.J. Slater, 1997. Phineus as Monoposiast. *Journal of Hellenic Studies* 117, 203-211.

Svoboda, M., 2010. Exploring the Restoration History of an Apulian Vase from Berlin. *Techne 32, Une perfection dangereuse, la restauration des vases grecs, de Naples à Paris, XVIII^e – XIX^e siècles*, 47-54.

Trendall, A.D., 1982, *The Red-Figured Vases of Apulia, 2. Late Apulian. Indexes*, Oxford: Clarendon Press.

Trendall, A.D., 1983. The Red-Figured Vases of Lucania, Campania and Sicily. Third Supplement. *Bulletin of the Institute of Classical Studies of the University of London 42, 60.*

Trendall, A.D., 1989. *Red Figure Vases of South Italy and Sicily*. London: Thames and Hudson.

Other sources

International Council of Museums – Committee of Conservation, Definition of Profession: http://www.icom-cc.org/47/about-icom-cc/definition-of-profession/ Definition of 'restoration' as defined by ICOM-CC. Website consulted on 2 November 2011.

Final application from the Museum of Antiquities, Leiden University and Delft University of Technology to Science4Arts, programme of the Netherlands Organisation for Scientific Research (NWO). Date of submission: 7 September 2011.