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Aqua, Aqua, Undique
Aspects of Roman Domestic Water Use

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A thesis submitted for the degree of Master of Arts at the University of Otago, Dunedin, New Zealand

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Abstract

This thesis examines the nature of Roman domestic water usage, but unlike many previous studies in this field, does so from a social rather than technical viewpoint. Its aim is to provide a consolidated analysis both of the chief ways in which water was used in the urban domestic environment, and the implications this had on the nature of daily life for Romans of all social classes during the first century AD. Throughout this study, an attempt will be made to set aside modern preconceptions regarding the use of water and to focus instead on the Roman point of view, in order to better determine how they themselves regarded this commodity and the value that they placed on it. Indeed, it soon becomes clear that priorities for water usage in the ancient household varied greatly from those displayed by urban dwellers today.

The body of this thesis examines in turn several different aspects of domestic water usage, from the most basic through to what might be considered the most superfluous. An investigation into the accessibility of drinking water marks the important distinction between the experience of the wealthy Roman and that of the poor Roman. The nature of urban life and domestic living arrangements for the latter group meant that even with the introduction of aqueduct water and subsequently, public fountains, access to this water remained problematic. This was true also in terms of both domestic and personal hygiene. Because the majority of urban dwellers did not have running water supplied to their *insulae*, and so were faced with the difficulties of fetching this themselves from the public fountains, sanitation was not considered a priority for water use within the apartment context. Similarly, it is discovered that even wealthy citizens who purchased their own private water connections, as a general rule, did not direct any of this water to domestic areas to assist with maintaining a state of cleanliness. In contrast, however, water was used in abundance within the peristyle garden for the purposes of display, and it is discovered from an analysis of surviving archaeological evidence that this was almost always the sole function of such a private water supply.

This thesis concludes, then, that while water may have been an omnipresent commodity in many Imperial Roman towns and cities, the individual experiences of, and priorities for this element depended greatly on social class. For the poor, it was valued for little more than its most fundamental use as a sustainer of life. For the wealthy, it was enjoyed not for its utilitarian purposes, but rather for the ways in which it could facilitate luxury and the projection of wealth and status – factors which in their own eyes at least, were not necessarily considered superfluous.
Acknowledgements

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Last, but certainly not least, a very special thank you to my husband James Sim, who is unfailing in his support of me, and who will probably never quite know how much I have appreciated his long-suffering patience through all my years of study.
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<tr>
<td>Aelian, De Natura Animalium</td>
<td>Ael. NA</td>
</tr>
<tr>
<td>Celsus, De Medicina</td>
<td>Cels. Med.</td>
</tr>
<tr>
<td>Homer, Odyssey</td>
<td>Hom. Od.</td>
</tr>
<tr>
<td>Libanius, Orationes</td>
<td>Lib. Or.</td>
</tr>
<tr>
<td>Paulus, Sententiae</td>
<td>Paul. Sent.</td>
</tr>
<tr>
<td>Plutarch, Cato Maior</td>
<td>Plu. Cat. Ma.</td>
</tr>
<tr>
<td>Plutarch, Lucullus</td>
<td>Plu. Luc.</td>
</tr>
</tbody>
</table>

Modern Sources

AIA: American Journal of Archaeology
ArtB: The Art Bulletin
BABesch: Bulletin Antieke Beschaving. Annual Papers on Classical Archaeology
BAR: British Archaeological Reports
JRA: Journal of Roman Archaeology
JRS: Journal of Roman Studies
JSNT: Journal for the Study of the New Testament
MAAR: Memoirs of the American Academy in Rome
MedNedInstRom: Mededelingen van het Nederlands Instituut te Rome
PBSR: Papers of the British School at Rome
WHO: World Health Organisation
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Introduction

*Tot aquarum tam multis necessariis milibus pyramidas videlicet otiosas comparas aut cetera inertia sed fama celebrata opera Graecorum?*

Frontinus, *De Aquaeductu Urbis Romae*, 16.

Aside from air itself, there is nothing more fundamental to human life than water. It is access to this simple element that has dictated the locations for human settlement across the globe. Wells, cisterns, fountain houses and even simple aqueducts were all variously designed and used by different ancient cultures to ensure a sufficient supply of water for industrial, public and domestic uses. In most cases, however, such devices supplied water in only modest quantities, and from very localised sources. It was the Romans who expanded the possibilities for systems of water supply beyond anything that had gone before. From the late fourth century BC, they began developing and constructing aqueducts which were soon able to convey water many miles from its original source to towns and cities across the expanding Empire.

The Roman aqueduct has been viewed through the ages as an enduring symbol of a culture who often prided itself on its technical achievements. Its grand, soaring arches have inspired successive generations to admire and wonder at the level of ‘civilisation’ that these structures represented. No people before the Romans, and none, too, for many years after, went to such lengths to ensure that wherever they went, their towns and cities were equipped with a continuous supply of fresh, flowing water. Yet, it is perhaps less well-known that this famous, arched aqueduct form was simply one manifestation of the typical conduits which stretched across the Roman world. Wherever possible, water pipes were set beneath the ground, only emerging in the more dramatic and visible arcade form when it was necessary to bridge rivers and small valleys.

The technological workings of these aqueducts have long captured the interests of modern scholars. Along with other features of water supply and distribution, these technical aspects have received much attention in recent years, through the publications of such excellent comprehensive studies as Hodge’s *Roman aqueducts and water supply*, and the compilations arising from conferences like *Cura Aquarum in Campania* (Pompeii, 1994) and *Cura Aquarum in Sicilia* (Syracuse, 1998).

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1 Cf., for example, the early works of Forbes (1899), Van Deman (1934) and Ashby (1935).
2 Hodge 2002.
Like the subterranean conduits of the aqueducts themselves, however, the actual purposes to which the water they carried was put have often been neglected. Admittedly, this is less true in terms of the public context, in which certain features have, in fact, received their fair share of attention for water consumption. Public baths are perhaps the most prominent example of this, but agriculture and irrigation, industry, public aesthetics, and even public toilets, have all been studied in terms of their relationship with water.

What still remains largely overlooked, then, is the role that water played in the domestic context. This may seem somewhat surprising, considering the important place occupied by water in our own domestic lives; we need only consider the frequency with which we turn on a tap in our homes to realise how indispensable a private water supply has become. Nevertheless, although there are a small number of scholars who have chosen to study certain aspects of domestic water usage, and countless others who have touched on it in passing as part of a broader study, there has, as yet, been no comprehensive investigation into the everyday contexts in which water was used within the Roman household. It is the aim of this thesis, therefore, to address this lacuna by examining in turn the chief purposes for which water was used in daily life, from the mundane through to the extraordinary. In this, I endeavour to focus solely on the urban context, and in particular, on those town centres which were supplied by aqueduct systems. The intention here is to provide a more coherent view of water usage within the town setting, and although occasional references may be made to rural examples, this will only be when it is considered appropriate either to highlight or contrast with certain features of the urban situation. The inhabitants of country estates and farms often had their own, quite different methods of water collection and dispersal, which are worthy of their own independent analysis.

It is not enough, however, simply to describe the ways in which water was used in the typical Roman household. It is equally important to interpret this evidence for its social implications; that is, how the Romans themselves regarded this commodity. Can the relationship between water usage in different parts of the average domus tell us whether it was valued for its utilitarian purposes, or purely for the luxuries that were made possible by its supply? Was water viewed in this context as an indispensable functional commodity, necessary for sustaining life and completing everyday tasks, or was it simply seen as a non-

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6 Jansen, on Roman domestic toilets (Jansen 1991, 1997, 2000a, 2003), and de Haan, on private baths (de Haan 1994, 2001), are two notable examples.
essential luxury product, symbolic of wealth and status? These are all questions that will be addressed in turn, in the following chapters.

It must be noted that for the purposes of this analysis, it is necessary to draw on both literary and archaeological sources which relate for the most part to Roman Italy, although some references to North Africa and other provinces may occasionally be made for comparative purposes. As any study is, to a large degree, limited by its sources, much of this thesis will be centred around the evidence provided by the two Roman-colonised towns that were buried by Vesuvius in AD 79: Pompeii and Herculaneum. This is due primarily to the fact that Pompeii in particular contains the single best-preserved (although still incomplete) water system in the Roman world, and in many cases, the relationship between the aqueduct system and both public users and private households is still clearly evident. We must always remember, however, that although Pompeii was without doubt a prosperous Roman market town in the years immediately preceding its demise, it was still a relatively insignificant centre in the Empire as a whole. It is important, therefore, not to overplay its importance and see it as a 'Rome in miniature', but rather to view it in terms of its place as a subsidiary provincial town. Nonetheless, the fact that its fine atrium houses often bear such a strong resemblance to those described as typical by the Roman architect Vitruvius, may suggest that they can be tentatively taken as representative of the many Roman houses built in similar towns across the Roman world, and perhaps even some of those in Rome itself.7

As a consequence of the reliance on the Pompeian evidence, the majority of this argument will be centred on the early Imperial period of Roman history, specifically, the first century AD, following the widespread introduction of the aqueduct system. Examples from both the Republic and later Imperial periods will, however, be called upon at times, once again, for the purposes of either comparison or contrast.

An attempt will be made, wherever possible and appropriate, to analyse the experiences of all social classes, since it is important to determine how the wealthy Roman's experience of, and relationship with water differed from that of the poor Roman. This will prove to be no easy task, due in large measure to the dearth of primary evidence relating to the lower classes. In these instances, the best attempt will be made to piece together the most likely scenario; an often frustrating task, but one that must be attempted in order to make a truly balanced judgement regarding the extent to which water affected and permeated everyday Roman life.

7 See appendix 1 for a complete list of the archaeological reference numbers for the Pompeian houses cited in this thesis.
It is essential, too, that any evidence is viewed completely within its own context and that the Roman situation is considered as objectively as possible. It is easy simply to assume that water *must* have been used within the household for much the same purposes as it is in our own today. There is a danger, however, in regarding the Romans as so advanced for their time that certain features, such as piped water, appear positively ‘modern’. To carry this too far would be to fall into the trap of failing to acknowledge the very different nature of the society in which they lived. In order to truly appreciate their situation, we must do our best to set our own preconceived notions aside and view the Roman world through the eyes of the people who lived in it.

Thus, with the above considerations in mind, we will begin in chapter 1 with a brief introduction to the typical nature of the urban domestic water supply system, which will set out sufficient technical background for understanding the ways in which water was both supplied and used. The chief focus of this chapter will then be to discuss the most fundamental use of water; that is, for drinking. The question of how accessible clean drinking water was to urban Romans of all social classes will be considered, in order to determine how far-reaching the municipal supply truly was. We shall examine, too, the various criteria by which the Romans themselves classified ‘healthy’ and ‘unhealthy’ water sources, before turning to analyse the actual value that they placed on drinking water.

Chapter 2 will introduce the topic of domestic sanitation, and will aim to address certain modern assumptions regarding the role of water in this. Several different aspects in which one would expect water to be a fundamental element will be examined, from general household cleaning, through to domestic laundering, toilet facilities and systems for waste and wastewater disposal. By analysing the role that water apparently played in these arrangements, we will be able to judge the extent to which the Romans valued water for the purposes of cleaning.

Following on from this theme of domestic sanitation, chapter 3 will discuss the role water played in maintaining personal hygiene within the home, an area which has not been widely studied, often being overlooked in favour of public bathing. We will begin by examining whether the Romans engaged in any form of washing within the home, but outside of the bath, and the contexts in which this occurred, before turning to the evidence that we have for the inclusion of private bath suites within the urban *domus*. As we will discover, these were surprisingly uncommon, and so the key question of why most Romans appeared to have favoured the public establishments over private facilities, and the role that water played in this, will ultimately be addressed.
Finally, one cannot engage in a discussion of water usage within the Roman household without discussing at some point its conspicuous use in the context of the garden. Fountains, pools and other water features became an increasingly popular inclusion in the domestic hortus following the advent of aqueduct-borne water supplies. Chapter 4 will thus provide a consolidated review of the main water features as represented by the typical Pompeian peristyle garden. This will be followed by an investigation into the potential reasons behind this use of water. Issues concerning self-display, a desire to create a sense of rus in urbe, and a love of simple aesthetics, will all be discussed in this context, in order to gain a deeper understanding of the nature of the Roman relationship with this most basic of elements.
Chapter 1: Water for Drinking

...saluberrimum ad potus aquae liquorem natura dederit...

Pliny the Elder, Naturalis Historia, 14.137.

Introduction

One of the most mundane, but at the same time, most fundamental uses of water in everyday life, is as the elemental beverage, a basic ingredient of human physical well-being. Access to adequate supplies of healthy drinking water is recognised today as one of the most essential human rights,¹ and so the ancient Romans have justifiably been praised for taking considerable steps, over two thousand years ago, towards ensuring that their citizens enjoyed copious supplies of this commodity. The grandiose remains of their aqueducts are viewed as a silent testament to the importance that they placed on this most basic element, and the lengths to which they went to attain it. Such impressive structures, however, which conveyed millions of litres of water a day into Roman towns, often create a somewhat distorted impression in one’s mind regarding how many people actually had access to this water. As we shall soon see, such access was perhaps more of a problem for many citizens of Rome than has popularly been imagined.

As in any society predating the discovery of bacteria, the Romans were of course unaware of the various chemical and biological criteria by which we today classify what constitutes safe drinking water.² We cannot, therefore, expect to compare their standards with our own modern ones. This in itself raises some important questions: what value did the Romans themselves place on drinking water, and what were their own views on ‘healthy’ and conversely, ‘unhealthy’ sources of water?

In this chapter an attempt will be made to answer these questions both through interpretation of relevant archaeological remains, particularly the water supply and distribution systems as preserved at Pompeii and Herculaneum, and by analysis of contemporary literary sources. Particular attention will be paid to evaluating how accessible domestic drinking water was to both the wealthy and poor sectors of the Roman urban population, as well as identifying any common attitudes towards desirable water quality and water as used for the purposes of drinking. In the latter, the question of how common it actually was for the Romans to drink water, and in what contexts within the home this occurred, will be analysed.

² Refer WHO 1993.
Access and Quality

In order to determine, then, how accessible drinking water was to the Roman urban population as a whole, it is first useful to review the various means by which it may have been obtained. Frontinus, Rome’s curator aquarum (water commissioner) under the emperor Nerva, informs us that prior to the building of the city’s first aqueduct in 312 BC, its people, “...were satisfied with the use of whatever water they drew from the Tiber, from wells, or from springs” (...contenti fuerunt Romani usu aquarium quas aut ex Tiberi aut ex puteis aut ex fontibus hauriebant) (Aq. 4.1). This situation may also be seen represented at Pompeii, where the earliest inhabitants of the Oscan town drew the majority of their water supplies from the Sarno River, supplemented by a few wells, and from the sixth century BC, rainwater cisterns. At Herculaneum, where no spring has yet been discovered, water was similarly drawn in the earliest stages, from streams and later, from domestic wells and cisterns.

As time went on, however, and increases in the populations of such towns and cities meant that conventional water sources were no longer deemed sufficient, these traditional methods were combined with newer ones, made possible with the delivery of additional water from further afield, by means of aqueducts. The situation as it existed in the early Imperial period may be interpreted as a versatile approach towards the collection and distribution of water. It appears that the Romans made good use of all available means of water collection, and never relied entirely on one system. The reason for this may become clear when one considers the long, dry summers typical of the Mediterranean region, which might have put strain on any one or more water sources during this time.

Accordingly, we find that springs (fontes), naturally abundant at Rome and intimately linked with the myths of the city’s founding, never went out of use, and wells (pulei) too, a fundamental water resource used by many societies throughout Antiquity, continued to be

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5 Jansen observes that because the water table at Herculaneum was not deep (eight to ten metres), it was “…just as easy to dig a well as to build a cistern” (Jansen 1991: 160, 161). Indeed, because groundwater and rainwater have different qualities, many citizens chose to have both a well and a cistern in their homes (Jansen 1994: 218). This is in marked contrast with Pompeii, where groundwater could only be found at a depth of 20-39 metres, meaning that only a few wealthy citizens could afford the expense of digging a well (Adam 1994: 235; Jansen 1991: 161-2, 1994: 218). Only five public wells have been discovered there (Adam 1994: 235).
7 Nowhere was this more true than in Roman North Africa, as Wilson has demonstrated in recent publications (for example, Wilson 2001). Here the inhabitants took advantage of local springs, wells and rainwater cisterns as well as remote aqueduct-borne springs (Wilson 2001: 83, 95).
8 Romulus reputedly chose a place abundant in springs when he founded Rome in 753 BC. See Koloski-Ostrow 2001: 4-5, and especially Purcell 1996 on the importance of water; in particular, the River Tiber, sacred springs, and marshes in the mythology surrounding Rome’s origins and early history.
used in Roman towns even after the advent of the aqueducts. De Kleijn observes that this appears to have been the case in Pompeii at the time of its destruction, as well as in Ostia, where the aqueduct introduced in the first century AD “...did replace the wells, but not completely.” According to Columella (1.5.1) and the Elder Pliny (Nat. 31.38), wells continued to be an important supply of drinking water in rural areas and small towns that were not connected to an aqueduct supply. Hence Pliny (Nat. 31.38-9, 43-49) and Vitruvius (8.1.1-6) find it necessary to advise on the best methods of water-finding and well-digging. In the former’s opinion (Nat. 31.38-9), the best water for drinking is, in fact, that which comes from a well, provided that the water is kept in constant motion with frequent withdrawals, is sufficiently shaded, and issues from the bottom rather than the sides. Columella (1.5.1-2) places well water second only to spring water in his list of ideal water sources for a villa rustica.

Fig. 1.0. Atrium of the House of the Silver Wedding at Pompeii, showing both compluvium and impluvium. Note also the puteal in the foreground, which covers the entrance to the cistern below.

10 Hodge 2000a: 29. Jackson notes that wells are found on most Roman sites, “...either as an alternative or a supplement to streams or aqueducts” (Jackson 1988: 46). The high water table of Rome, which is due to its numerous springs and groundwaters, meant that wells were a particularly viable traditional water source in that city. Indeed, even when the aqueduct system was destroyed in the Gothic siege of AD 537, the city was still able to be sustained by its wells (Taylor 2000: 39). Cf. also the siege of Naples in AD 536 (Owens 1996: 28).

11 de Kleijn 2001: 85. Some Pompeian wells, however, had evidently fallen into disuse by the time of the eruption of Vesuvius. A deep well directly behind a street fountain on the Via della Consolare was found filled up with items such as pottery and lamps, which date to the Augustan period (when Pompeii was connected to an aqueduct). Laurence suggests that this might imply that Pompeii’s citizens favoured the new aqueduct-borne water for drinking, as it may have been of better quality (Laurence 1994: 44).
Rainwater cisterns (cisternae), although not mentioned by Frontinus in his note on traditional water supplies, were also an important means of collecting and storing water in Roman domestic contexts. The cistern, a "cool, subterranean reservoir",\(^{12}\) is a typically Mediterranean method of water storage, and a common feature in ancient Roman houses. Vitruvius (8.6.14) observes that they should be constructed if the groundwater lies too deep to facilitate digging a well, while Columella (1.5.2) places them third on his list of rural water sources, to be built only when a natural spring or suitable well source cannot be found, as does Varro (R. 1.11.2), after springs and streams.

Domestic cisternae followed a standard system of operation, whereby rainwater was directed through an opening in the roof of the atrium (compluvium), falling into a trough below known as the impluvium, which was commonly decorated with plants, statuary and fountains (fig. 1.0). From here, the water was led through a hole into the cistern, which lay beneath the atrium, and any excess water was conducted through pipes into the streets.\(^{13}\) Jansen has found that at Herculaneum, both wells and cisterns were covered by large masonry slabs, with holes in the middle for lowering buckets, and that these holes were in turn closed with decorative ‘lids’, or ‘puteals’ (puteales), to guard the water against dirt and sunlight (fig. 1.0).\(^{14}\) Signs of wear caused by the ropes with which the buckets were repeatedly hauled up are evident on the rims of these slabs and puteals.\(^{15}\) Vitruvius (8.6.15) advises that cisterns should, ideally, be divided into two or three compartments, so that the water can be changed by ‘percolation’. This, he believes, makes the supply of water much more wholesome (muito salubriorem), as sediment has a place to settle in, thus, “...the water will be more limpid and will keep a flavour unaccompanied by smell.” (...limpidor fiet et sine odoribus conservabit saporem.)\(^{16}\)

Vitruvius’ inclusion here of the word saporem, ‘flavour’, seems to imply that rainwater collected in these cisterns was indeed used for drinking, although the ancient sources are divided on the salubritas (‘wholesomeness’) of such water. Pliny (Nat. 31.31) notes that some physicians recommended drinking water from cisterns, due to the perception that rainwater was the ‘lightest’ type of water. This is confirmed by Celsus (De Med. 2.18.11-13), who places rainwater in the weakest category of food and drink, appropriate for invalids. Vitruvius (8.2.1) appears to have been convinced of this reasoning, as does Columella (1.5.3),

\(^{12}\) Jansen 1991: 149.
\(^{13}\) Adam 1994: 236; Brothers 1996: 38; Jansen 1994: 149-50; Richardson 1988: 54; Sear 2004: 164-165. Also Jansen 1991: fig. 4. See also fig. 2.12 below.
\(^{14}\) Such slabs and puteals are also a common feature at Pompeii (Sear 2004: 165).
\(^{15}\) Jansen 1991: 152. See also Sear 1994: 100.
\(^{16}\) Such an arrangement may be represented in the Villa lovis of Tiberius on the island of Capri, where four large subterranean cisterns were found to be divided into three or four compartments (Jackson 1988: 47).
who notes that rainwater is especially good if conveyed to the cistern in earthenware pipes. Pliny (Nat. 31.34), however, remains unconvinced, citing the stagnant, sluggish nature of cistern water, as well as its hardness, as evidence for its unwholesomeness,

Nam cisternas etiam medici confitentur inutiles alvo duritia faucibusque, etiam limi non alis inesse plus aut animalium quae faciant taedium.

But cistern water even physicians admit is harmful to the bowels and throat because of its hardness, and no other water contains more slime or disgusting insects.

Furthermore, Pliny (Nat. 31.32) observes that rainwater is full of dirt, and for this reason is more likely to become warm, which was considered an undesirable quality.

It is evident, then, that during the early Imperial period a combination of local springs, public or private wells, and domestic rainwater cisterns would have been the chief sources of drinking water for country villas, and those smaller towns which lacked a piped water supply. There were, of course, further options available for the inhabitants of Rome and other cities that were connected to an aqueduct system.

Rome’s first aqueduct, the Aqua Appia, was constructed in 312 BC, and by Frontinus’ time (ca. AD 97), there were nine aqueducts bringing water of varying qualities into the city. The citizens of Pompeii are generally thought to have received their piped supply early in the reign of Augustus, and although little is known about this particular project, it is considered most probable that the town was served by a branch of the aqueduct which carried water from springs at Serino, to Neapolis (Naples) and the naval port at Misenum.

17 Vitruvius (8.6.11) also agrees that water conveyed in earthenware pipes has the most wholesome taste, and Pliny (Nat. 31.57) recommends earthenware pipes as the best means of carrying water from a spring. In towns however, lead was generally used for the water pipes (fistulae) which ran from holding tanks (castella) to private homes and public fountains. It was favoured, where possible, over the cheaper earthenware pipes on account of the ease with which it could be bent, manipulated, cut open and soldered back together (Hodge 1981: 486; Keenan 2004: 154). It was once a popular belief that the Romans’ widespread use of lead for the pipes through which they conveyed their drinking water, led, over time, to a significant degree of lead poisoning. The harmful qualities of this metal were well-known in ancient Rome, as Vitruvius himself testifies (8.6.10-11), although it is now accepted that he was in fact confusing the lead used for piping with its more toxic derivative, white lead (Adam 1994: 254). Hodge (1981) has demonstrated that the lead water pipes used by the Romans would not have been a major source of poisoning, for as most of the water conveyed through them seems to have been ‘hard’ water, the inside of the pipes quickly became encrusted by a calcaceous layer, which prevented the water and pipe from coming in contact. Furthermore, in contrast with our modern systems, where water may sit in a pipe for hours before use, water constantly flowed through Roman distribution systems, and thus would not have had the same opportunity to become contaminated. More serious sources of lead poisoning may instead have been found in other aspects of Roman daily life, such as lead pans and cauldrons in which food and beverages were heated, wine additives, lead-based cosmetics, and pottery glazes. See Hodge 1981 and 2002: 307-308 for further detail on this issue, as well as Jackson 1988: 36-7; Keenan 2004: 154 and Scobie 1986: 423-4.

18 This hardness was perhaps due to the fact that cisterns were generally constructed of cement, the mixing of which, Vitruvius advises, should include five parts of sand to two of the strongest lime.

19 See Appendix 2 for Rome’s aqueducts, their date of construction, length and total water discharge.

20 The Augustan dating has recently been challenged by Ohlig (2001). In an examination of the sinter deposits (the mineral deposit created by ‘hard’ water) in the Serino aqueduct and the Pompeian branch line, he has
The water was fed into the main holding tank (castellum) situated at the highest point of the town, next to the Porta Vesuvio (fig. 1.1). From here, it was directed through three large pipes to different regions and users within the town, including private homes, businesses and industries, communal fountains, and other amenities such as the public baths. \(^2\)

The provision of an external water supply had two major implications in terms of sources of drinking water for its inhabitants. It meant that wealthy citizens had the opportunity to purchase a private supply, conducted directly into their homes from the public mains, and that those less fortunate may at least have access to free drinking water through the provision of public fountains \((lacus)\). In order to make a balanced judgement regarding the accessibility of drinking water for urban Romans in this period, however, it is necessary to deal with these two sectors of society separately.

Frontinus (Aq. 99, 103-111) tells us that anyone who wished to draw water from the public supply for private use must follow a complicated procedure, which first involved making an official application to the emperor himself, and then delivering the written imperial

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\(^2\) See Hodge 2002: 273-303 for a detailed analysis of the typical Roman urban water transport and distribution system. See also Jansen 2000b: 111-124 for a more concise discussion.
authorisation, provided it was granted, to the water commissioner.\textsuperscript{22} This would imply that one would have had to have been influential and relatively wealthy to obtain a private connection to the city water supply, as a fee was also required to be paid to the emperor for the service.\textsuperscript{23} These regulations, however, do not seem to have hampered many of the inhabitants of Pompeii, as the archaeological record testifies. Recent studies at this city, which contains the best-preserved (but still incomplete) urban water distribution system in the Roman world, have indicated a significant number of houses with connections to the main town supply.\textsuperscript{24} The enthusiasm with which many citizens of Pompeii met the establishment of an aqueduct-borne water supply, may, however, have been a reflection of the poor means of water supply that existed before.\textsuperscript{25}

In general, water entered the house through the entranceway (\textit{fauces}), and was led through underground pipes directly to the \textit{impluvium}, where a lead distribution box directed the water to various fountains in and around the \textit{impluvium}. From here it was sometimes led to a second distribution box in the \textit{peristylium}, and so to other fountains situated there.\textsuperscript{26} The overflow from the fountains was drained into the cistern(s) beneath the \textit{atrium} or peristyle gutter, and any excess was conducted into the streets.\textsuperscript{27} Thus, the rainwater cisterns of old maintained their role as domestic reservoirs, allowing water to be drawn from them by

\textsuperscript{22} Frontinus was keenly aware of the need to put an end to the illegal tapping by private individuals, which had led to a sharp reduction in Rome’s public water supply. Indeed, the severe repercussions of this illicit behaviour were evident in the great fire of AD 62, when the city’s much reduced water supply hampered fire-fighting efforts (Tac. \textit{Ann.} 15.43). Therefore, with the ‘energetic interest’ of the emperor, Frontinus actively set about remedying this situation. Once the water which had been fraudulently diverted was returned to the main supply, he notes that the total volume nearly doubled, as if entirely new sources had been introduced (\textit{Aq.} 75, 87).

\textsuperscript{23} We know that Martial, for one, was apparently not influential enough to have a piped water supply to his house. He complains about this on more than one occasion, especially since he can hear the water of the Marcian aqueduct close by (Mart. 8.67, 9.18). Carcopino was one of the first to argue that contrary to popular belief, very few private homes at Rome received a piped supply (Carcopino 1964: 49-50). Judging by the figures given by Frontinus, he proposed that the bulk of the immense water supply was intended for public use. Furthermore, it was not until the Aqua Traiana was completed by its namesake, the emperor Trajan in AD 109, some 400 years after Rome’s first aqueduct, that the inhabitants of the city living on the east bank of the Tiber received a piped supply. It is assumed that up until this point, these citizens were still relying on more traditional sources, such as wells and rainwater cisterns. Cf. also Bruun 1991: 110, and in contrast, Evans (1994: 139-147), who analyses in detail Frontinus’ figures, and concludes, “Rome’s aqueducts in Frontinus’ time certainly met public needs, but in terms of actual volume delivered, almost 40% of the water they supplied went to consumers who were willing to pay for it or had been granted water rights by the emperor.” (Evans 1994: 141).

\textsuperscript{24} Andersson has found that approximately 160 of the 400 or so houses in the excavated section of Pompeii were connected to public supply systems (Andersson 1994: 29). See also Jansen 2001. Unfortunately, though, scholars are not able to attain as full a picture of this system as would have once been possible, due to the fact that little regard was paid to such aspects in the early excavations of Pompeii and Herculaneum. Hence we find that features such as cisterns and wells were excavated incompletely, and piping was not adequately documented. In fact, most of the lead pipes from Herculaneum were sold during the Bourbon period to raise money for future excavations (Jansen 1991: 147-8; 2000: 103, n. 1). Only one house at Pompeii, the House of the Hanging Balcony, survives with a completely preserved water pipe system (Jansen 2001: 28-29).

\textsuperscript{25} See above, n. 5. Also, Hodge 1996: 13; Keenan 2004: 151; Zanker 1998: 118.


\textsuperscript{27} See Hodge 2002: 304-331 for a thorough analysis of the typical Roman domestic water pipe system and its components. Cf also Jansen 2001 for the system as represented at Pompeii.
buckets on the end of a rope.\textsuperscript{28} It is much rarer, however, for water pipes to be found heading towards domestic facilities such as the kitchen, toilet, or private baths.\textsuperscript{29}

This leads one to question the prime purpose of such piped supplies. Did those wealthy citizens with a private reserve use this for drinking, or solely to operate decorative fountains? At first consideration, it would seem probable that at least a portion of the supply was used for the former purpose, and certainly, some scholars have assumed that this would have been the case.\textsuperscript{30} In order to determine this, however, it may be prudent to review the various qualities which the (aristocratic) Romans valued in their drinking water, so as to identify what their preferred source may have been.

We have already considered the Elder Pliny’s attitudes towards the \textit{salubritas} of drinking water contained within a domestic cistern. While he might have been referring primarily to rainwater, would his reasoning not hold for aqueduct-borne water also? After all, even water conveyed from the purest spring would lose its attractiveness and become stale and undesirable after sitting still for any length of time in a cement-lined cistern. This is the reason why Vitruvius (8.6.15) suggests building a cistern with three compartments. His chief motivation for encouraging installation of such an arrangement is so as to make the water clearer and without odour. A consideration of the qualities inherent in cistern water is what has also led some scholars to suggest that it may have primarily been used, on account of its hardness, for washing “...people, clothes and floors...”, and only as a supplement to the public supply if the latter were to run dry in the middle of summer.\textsuperscript{31}

The ancient sources do appear to be united in the belief that water which is constantly flowing is more desirable, and sluggish or motionless water is to be avoided at all costs. Pliny (\textit{Nat. 31.31}) summarises the general attitudes held by himself and the physicians of his day:

\begin{quote}
\textit{Quaeritur inter medicos cuius generis aquae sint utilissimae. stagnantes pigrasque merito damnant, utileores quae profluunt existimantes, cursu enim percussuque ipso extenuari atque proficere...}
\end{quote}

It is a question debated by the physicians what kinds of water are most beneficial. They rightly condemn stagnant and sluggish waters, holding that

\begin{itemize}
\item \textsuperscript{28} Adam 1994: 237; de Kleijn 2000: 84; Jansen 1994: 219; 2000b: 117; 2001: 37. These cisterns might have continued to collect rainwater as well as aqueduct water, especially important when the latter may have been under strain during the drier months (McKay 1975: 49). Indeed, there is evidence to suggest that after Pompeii’s water supply system was damaged in the earthquake of AD 62, many inhabitants were forced to return to their traditional methods of water collection, which included storing rainwater in cisterns (Adam 1994: 237). Only two houses at Herculaneum have been found to have abandoned their cisterns completely by filling them up after receiving a piped supply (Jansen 1994: 219).
\item \textsuperscript{30} Ellis 2000: 137; Scobie 1986: 423.
\item \textsuperscript{31} Ellis 2000: 137.
\end{itemize}
running water is more beneficial, as it is made finer and more healthy by the mere agitation of the current...

Seneca (Nat. 3.26.8) also agrees with this sentiment, providing a very logical observation of his own: Nam in his quibus cursus est non possunt vitia consistere, quae secunda vis defert et exportat. ("For, in water that has a current, impurities are not able to settle; the force of the current sweeps them along and carries them away.") Columella (1.5.3) is very aware of the dangers inherent in stagnant waters, and Horace (S. 1.5.7) had the misfortune of experiencing the ill-effects of such water first-hand, after drinking near the Pomptine marshes just outside Rome, while en route to Brundisium:

hic ego propter aquam, quod erat deterrima, ventri indicum bellum, cenantis haud animo aequo expectans comites.

Here I declared war on my stomach because of the water, which was quite appalling, and waited impatiently as the other travellers enjoyed their dinner.

So, evidently water which is profluens ('running'), is considered more desirable than that which is stagnans ('still'). We can also tell that for water to be deemed wholesome it had to be clear, and free of mud or other such particles. Again, Pliny (Nat. 31.34, 36, 37) is informative in this, remarking that limus ('mud', 'slime') in water is bad, and those waters that have mud at their source are especially condemned. Also denounced (Nat. 31.37), are waters which smell or taste of anything at all. In order to be considered salubris, it appears that drinking water was required to meet one final criterion: it must possess frigor ('coolness'). This is why Pliny (Nat. 31.39) advises that wells should be shaded. He also discusses how this desired coolness can be achieved artificially, by forcing water aloft and allowing it to fall from a height (Nat. 31.39). It was the emperor Nero, though, who first discovered a more efficient means of artificially cooling drinking water (Plin. Nat. 31.40):

Neronis principis inventum est decoquere aquam vitroque demissam in nives refrigerare. Ita voluptas frigoris contingit sine vitiis nivis.

It was a discovery of the emperor Nero to boil water and cool it in a glass vessel by thrusting it into snow. In this way is obtained a pleasant coolness without the injurious qualities of snow.

32 deterrima palustris, quae pigro lapsu repet; et pestilens, quae in palude semper consistit. ("Worst of all is swamp-water, which creeps along with sluggish flow; and water that always remains stagnant in a swamp is laden with death."); cf. also Col. 1.5.6.
33 Cf. also his remarks regarding rainwater (Nat. 31.32).
Incidentally, the desire for coolness and clarity was also the chief motivation behind the decision to use covered pipes to convey water by aqueduct from its original source.\textsuperscript{34}

The Romans were very definite about the sources that they believed provided water which possessed these ideal qualities. Water from low-lying plains was not considered wholesome due to its exposure to the “violent power of the sun” (Vitr. 8.1.7). River water was not generally considered the most healthy either, although there are some that are regarded as acceptable, as Pliny (Nat. 31.35) notes that their qualities differ with the locality. Veins of clear groundwater undeniably receive the most praise; either those that come to the surface as springs, or those that could be reached via wells. The importance of the former to the ancient mentality may be seen reflected in the efforts spent by many authors relating the qualities of various known springs in different localities.\textsuperscript{35} Even springs which originate on level ground, however, are not the most sought after, for Vitruvius (8.1.2) denounces these as \ldots salsae, graves, tepidae, non suaves (“\ldots salty, coarse, lukewarm and unpleasant”). The ‘palm of honour’ is granted to those that emerge from rocks in the mountains and northern regions. Shaded from the sun, they are cool and wholesome, and so the most highly prized for drinking.\textsuperscript{36}

Thus, the qualities which drinking water must ideally possess in order to be considered salubris, are unsurprisingly, concerned primarily with taste, temperature and appearance; these being the only indicators available to the ancient Romans by which to judge ‘healthiness’.

So how does this relate, then, to the domestic context? After all, a city-dweller could hardly step outside to a mountain spring for a drink of cool, clear water.\textsuperscript{37} I would suggest that if given a choice, water drawn from household cisterns would not have been the most desirable, as it would not have met the ideal criteria. Even with regular withdrawals its water did not flow continuously, and so despite being underground, would have had more of an opportunity to become lukewarm and to form a ‘slimy’ deposit on its walls. Furthermore, the cement lining would have ‘hardened’ the water, and added an unpleasant taste. Finally, not all wealthy citizens would have taken Vitruvius’ advice for building a tripartite cistern (such a cistern is yet to be found in Pompeii or Herculaneum, for instance), and so dust and dirt from the roof, and the ‘disgusting insects’ of which Pliny speaks (Nat. 31.34), would have had more of a chance to contaminate the water. The undesirable nature of such water is ultimately

\textsuperscript{34} Cf. Fron. Aq. 89.4.
\textsuperscript{35} See above, n. 9.
\textsuperscript{36} Cf. Vitr. 8.1.6.
\textsuperscript{37} More is the pity, according to Horace, who in a letter addressed to his city-loving friend Fuscus (Ep. 1.10.20-1), remarks on how much purer the water in a babbling country stream is than that which threatens to burst its leaden pipes in the city streets.
reflected in its receiving third place in the lists of the ideal water sources for a rural villa, as drawn up by Varro and Columella,\textsuperscript{38} which might subsequently imply that cistern water was only used for drinking when no better source was available. Why, then, would the wealthy citizen favour such water in his urban domus when other options were available?

It has been suggested that drinking water could have been drawn directly from a domestic fountain, that is, before it ran off into the cistern.\textsuperscript{39} Would this water have met the desired criteria? It would certainly have been in constant motion, and because of this, may have also attained a desirable coolness. Much would depend, however, on the source of one’s domestic supply. For the citizens of Pompeii, who received their water from the springs at Serino via a single aqueduct, this may have been quite feasible, as the water that the wealthy inhabitants had piped into their homes was in no way different to that which fed the public fountains. It has already been mentioned, though, that Rome’s aqueducts ran from various sources, of sometimes very different quality. Naturally, the highest praise was given to those that conducted high-quality spring water into the city. Chief among these was the Aqua Marcia, constructed by the praetor Quintus Marcius in 144 BC, and which led water from a ‘deep green’ spring\textsuperscript{40} of now uncertain location. Pliny (Nat. 31.41) highly commends this water source:

\textit{Clarissima aquarum omnium in tot orbe frigorts salubritatisque palma praeconio urbis Marcia est inter reliqua deum munera urbi tributa.}

The first prize for the coolest and most wholesome water in the whole world has been awarded by the voice of Rome to the Aqua Marcia, one of the gods’ gifts to our city.

Vitruvius (8.3.1) also extols the Marcian aqueduct as does Frontinus (Ag. 14.2; 91.5; 92.1), remarking at one point in his treatise (Ag. 91.5) that it possesses the all-important coldness and clarity valued in good drinking water: \textit{Marciam ipsam et rigore et splendore gratissimam}... (“Marcia, so very delightful for both its coldness and its clarity...”). Next in the order of preference was perhaps the Aqua Claudia, completed by the emperor Claudius, and whose water flowed from “two very copious and beautiful springs”\textsuperscript{41}

The quality of such waters is in marked contrast to that brought into Rome by certain other aqueducts. The Aqua Tepula, for instance, received its name from its undesirable lukewarm temperature. The Aquae Anio Vetus and Anio Novus received water from the Anio

\textsuperscript{38} It is interesting to note that this is despite the latter professing that rainwater is considered the most wholesome source of drinking water, in accordance with the physicians of his day.

\textsuperscript{39} Ellis 2000: 137; Keenan 2004: 154.

\textsuperscript{40} Front. Ag. 7.7.

\textsuperscript{41} Front. Ag. 13-14.
river, which, although flowing from a clear lake, had a tendency to run muddy and turbid. This, Frontinus (Aq. 15, 90-1) tells us, was due to the fact that the river eroded the loose, cultivated soil that ran along its banks as it flowed; a situation made even worse after a storm. An attempt to remedy this was made by establishing a settling tank near the intake, into which the water would flow before entering the aqueduct. Even so, it would still frequently enter the city in a less than clear state.

Worst of all was the Aqua Alsietina, which was thoroughly condemned by Frontinus (Aq. 11.1) as possessing no good qualities whatsoever, \textit{nullus gratiae, immo etiam parum salubre nemusquam in usus populi fluentem} ("...it has no commendable quality; indeed it is so thoroughly unwholesome that it is nowhere delivered for use by the populace"). This water was brought from Lake Alsietina by Augustus, presumably to provide water for his Naumachia. Any surplus he then granted to nearby private properties and for private irrigation. Its water was used as an emergency reserve for the public fountains, but only when the Tiber bridges were being repaired and other water sources were cut off.

Therefore, if we take these different qualities into consideration, it is clear that some waters would have been more desirable than others for drinking; namely, those whose source was coveted ground water, as opposed to less wholesome surface water. As a result, if a resident of Rome was to drink from their own domestic piped supply, it would have to depend upon which aqueduct this supply was drawn from. If the citizen was fortunate enough to own a connection with the Aqua Marcia, then there would be nothing at all wrong with taking the household drinking water supplies from one of the domestic fountains. If, however, such a purpose was not high on one’s priority list, and water was desired primarily for ostentatious display, and/or irrigation of a private garden, it would not have mattered which aqueduct was tapped, and so it could easily have been one which was not considered good for drinking.

As the Romans were keenly aware of the varying qualities of water, it follows that they would have distinguished between different waters and correspondingly different functions. Frontinus himself actively encouraged this. He is aghast upon discovering that the prized water of the Aqua Marcia was being delivered to public baths, fullers, and other

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42 Fron. Aq. 15.2. All the aqueducts of Frontinus’ time, bar Virgo, Appia and Alsietina, flowed through such a settling tank at some stage in their journey (Fron. Aq. 19-22). See Adam 1994: 249, fig. 571; 251, fig. 578.
43 Fron. Aq. 15.3.
44 Fron. Aq. 11.1.
45 Fron. Aq. 11.1-2.
46 This seems to have been the case in North Africa at least. Wilson has found that the reservoirs at Dar Saniat at Carthage were designed as "...a multi-purpose complex designed to purify water and to create a tripartite division by quality, probably for different functions (drinking, washing and bathing, fountains and pools)” (Wilson 2001: 91). Furthermore, the aqueduct at El Djem provided poor quality water, and so the one house discovered here with a piped supply used it to operate a fountain, and the overflow to water a garden. Several cisterns were found in the house strictly separate from the piped supply, indicating that in this case rainwater must have been favoured for drinking (Wilson 2001: 93-4).
‘more dubious’ establishments (*Aq.* 91.5), and so sets about clearly separating drinking water from service water (*Aq.* 92). The Aqua Marcia was to be reserved entirely for drinking, and thus directed to the public fountains, whilst the Anio Vetus, for example, was to be used for irrigating *horti* and large estates, and other, more sordid tasks. Each was to be assigned to appropriate uses according to its particular qualities, but it is not known whether these recommendations were actually carried out.

So, in the wealthy urban domestic context, poorer quality water could have been tapped to operate fountains and irrigate gardens, cistern water could have been used for washing and other such domestic purposes, and drinking water could have been fetched by a domestic slave from the nearest public fountain that contained the highest grade of water. Slaves are, in fact, known to have existed for such a purpose, but these domestic water-bearers (*aquarii*) are referred to, in the words of Carcopino, as ‘...the scum of the slave population.’ This is largely on account of a passage in Juvenal’s sixth satire (6.327-334), which relates how a licentious woman attempts to find a man to ‘service her needs’. It is only after running through her lover, his young brother, and some other slaves, that the *aquarius* is considered; he rates only one above the donkey. The reason for this low status can only be surmised, but I would suggest that it may be due to the fact that water-carrying is almost universally considered a female domain, and so for a male to undertake this task would have been viewed as somewhat demeaning, even for a slave. Other ancient sources which might give credence to this include a brief reference in Horace (S. 1.4.37), which refers to both old women and slave boys on their way home from the *lacus*, as well as an extract in the *Cena Trimalchionis* of Petronius’ *Satyricon* (70), in which two slaves appear, *...tangquam qui rixam ad lacum fecissent; certe in collo adhuc amphorae habebant* (“...apparently having had a quarrel at the well; at any rate they still had water jugs on their shoulders”).

While there can be little doubt that the provision of water represented “a great public service” to “Romans of all economic levels”, for the lower economic sector, access to such

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47 See ch. 4 for this use of water.
48 See chs. 2 and 3.
50 Cf. Pl. Ps. 157, where the character Ballius addresses a slave in the following manner: *tu qui urnam habes aquam ingere*... (“You who are holding the water jar, fetch in the water...”). Unfortunately, he does not tell us from where the slave was to fetch this water, but we can infer from the use of the verb *ingerere* (‘carry in’), that it was from outside the house.
51 Carcopino 1964: 50.
52 Juv. 6.332.
53 Cf. Goubert, on traditional French custom: “From a symbolic point of view... the carrying of water and its social uses were part of the female world, and men were very often excluded from handling it” (Goubert 1989: 217).
54 The possibility also exists that if these *aquarii* were shared by the inhabitants of an *insula* (cf. n. 61, below), their status would have been even less than those slaves who were owned by one wealthy owner.
water sources was certainly not as easy as it was for those in the upper. The poor urban masses did not have sufficient wealth to construct their own domestic wells or rainwater cisterns, let alone pay for a piped supply. Many dwelt, moreover, in the multi-storeyed tenement blocks known as insulae, and so were immediately at a disadvantage in terms of ready access to water, for there is no extant evidence anywhere in the Roman world to suggest that piped supplies reached beyond the ground floors. Consequently, the only option available to them was to fetch their own water supplies from the public wells and fountains, or basins. For those tenants of the upper floors, or rooms (cenacula), this would not have been as straightforward a task as it sounds; the higher the cenaculum, the more difficulties involved in carrying water up the stairs and into the apartment. The fact that, following the Great Fire, citizens had to be encouraged to keep water in their apartments, provides some indication that many insularii may have simply found it too difficult to maintain a constant supply of water in their cenacula.

Hansen has reasoned that in contrast with modern American life, which is centred around the home, the ‘typical Roman’, “…must have lived almost entirely outside his tenement room, in the streets, shops, arenas, latrines, and baths of the city”, his abode being merely a place to sleep and store possessions. As a result, not having a domestic water supply, “…was probably not the inconvenience it is today.” If one is to concur with this argument, then it is easy to imagine the citizen simply stopping to quench his thirst at one of the public fountains, while ‘out and about’ during the day. A nice image, but probably an oversimplified one, I believe. For example, Hansen does not consider the prospect that many of these citizens would have worked during the day in shops and other businesses and industries, and so would not have been free simply to ‘wander about’ the city. He uses, moreover, the gender-specific ‘he/his’, which immediately excludes the consideration that women might have had a very different experience of day-to-day life. They are also known to have worked in shops and other such businesses, but perhaps they more commonly remained at home, caring for children, attending to housework and the family’s meals. The task of fetching the domestic water supplies, including water for drinking, would, therefore,

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56 Tac. Ann. 15.44.  
60 Such an assumption must remain as such, for in the words of Shelton, with respect to the many thousands of lower-class Roman women, “We know virtually nothing about their daily existence or how they coped with the often conflicting demands of work, children, and marriage. They did not themselves write, and no one else wrote about them. Only their tombstones provide evidence that they once existed...” (Shelton 1998: 303).
have fallen to them, and unless they were lucky enough to enlist the service of an *aquarius*, this would have been an arduous daily chore.

One feature that must have made this task slightly easier, though, was the fact that public fountains tend to have been distributed relatively evenly throughout the Roman city; that is, if the situation at Pompeii and Herculaneum is to be regarded as typical. In Pompeii, the 40 *lacus* so far discovered are spaced, on average, 70 to 80 metres apart, meaning that the inhabitants of most neighbourhoods had access to water less than 50 metres from their homes (fig. 1.2). Similarly, the public fountains as yet uncovered in the excavated section of Herculaneum are all situated in busy sections of the town and close to apartments which do not appear to have had a water supply of their own. In both cities, when fountains are found, it is nearly always at street junctions (fig. 1.2), often close to local shrines, and in many cases, they actually created an obstruction to traffic in the street. They would have been

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61 According to the jurists of the third century AD, *aquarii* were so much a part of each *insulae*, that they were inherited with the building, along with the porters (*ostiarii*) and sweepers (*zetarii*) (Paul. Sent. 3.6.58; cf. Digest 33.7.12.42 (cited in Carcopino 1964: 50)). It is unknown, however, whether this was the case two centuries earlier.  
62 Frontinus (Ag. 78.3) informs us that at the time he became *curator aquarum* (AD 97), there were 591 *lacus* in the city of Rome. He does not tell us, however, exactly where these were located, and because much of the evidence has been destroyed over the years by continuous habitation, any detailed archaeological investigation is therefore impossible.  
65 Laurence believes that this was so that they did not encroach on private property (Laurence 1994: 46-8).
used by those who lived in the dwellings close by, and as such, must have been an important 'point of contact' between neighbours.\(^{66}\)

It is accepted that people will generally fetch their water from the nearest source, especially if the water in the city is of a uniform quality, as at Pompeii. Laurence refers to John Snow's study of an outbreak of cholera in Soho in 1854 to highlight this point.\(^ {67}\) Snow found that by plotting the localities of the victims on a map of the general area concerned, he could locate the source of the outbreak, as the mortalities were clustered around the nearest neighbourhood water-pump.\(^ {68}\) This implies that water use was localised, but it also showed that some people travelled from further away to collect water from this pump, as it was known to provide good quality water. This latter practice would have been common in Rome, where different fountains were supplied by water of varying quality. The problems involved in fetching water must have been even more difficult for those insularii whose nearest local fountain supplied only poorer quality water; the decision would have needed to have been made on a daily basis, whether to travel the extra distance to a higher grade source, or to 'make do' with the nearest, but less wholesome supply.

Many scholars in the past have praised Rome's provision of a public water supply as a conscientious effort to improve the health and wellbeing of its citizens. Dupont, for instance, writes, "...Rome was a clean city; it streamed with water day and night and was washed by the running water of the fountains whose murmuring could be heard wherever one went",\(^ {69}\) and, "Streets were unlit and houses were unheated but Romans did have baths, mains drainage and plentiful clean water."\(^ {70}\) Similarly, but somewhat less fancifully, Jackson observes, "...the opportunity to fetch uncontaminated water from street fountains would have helped to keep disease and infection at bay."\(^ {71}\) This popular impression is generally based on the following comment made by Frontinus (Aq. 88.1):

_Sentit hanc curam Nervae principis sui regina et domina orbis in dies, et magis sentiet salubritas eiusdem aeternae urbis aucto castellorum, operum, munera et lacuum numero._

Thus from day to day, Rome, queen and mistress of the world, perceives the watchful care of her emperor Nerva, and the wholesome environment of this same eternal City will be perceived all the more by an increased number of delivery-tanks, public works, munera, and basins.

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\(^{66}\) Keenan 2004: 153; Laurence 1994: 44. Cf. also Wilson, who notes that the public nymphaeum at Cirta, Algeria, would have been, "...a focus of continual activity, a place to chat and exchange gossip." (Wilson 2001: 84)

\(^{67}\) Laurence 1994: 48-50.

\(^{68}\) See Laurence 1994: map 3.3.

\(^{69}\) Dupont 1993: 152.

\(^{70}\) Dupont 1993: 153.

\(^{71}\) Jackson 1988: 45.
Might it be possible, though, that Frontinus is painting an impression of the city which is more concerned with flattering the emperor Nerva, than creating a truly accurate reflection? Indeed, such a pristine image was famously challenged by Scobie, who, in his discussion on water supply, cited the nature of the public water basins themselves as evidence that they might not have been as clean and salubris as is commonly thought. Judging again from the Vesuvian cities, the construction and appearance of such public lacus is fairly standard (figs. 1.3-1.4). A rectangular basin was formed by placing four large basalt slabs on their edges, half on the pavement, half on the road, and sealing the corners together with iron clamps. A jet of water was directed through the back of an upright stone slab placed above one of the edges, generally or the pavement side. This stone slab was usually decorated with a simple sculptural motif, such as a calf’s head, a Medusa’s head or a bust of Mercury, and the water was often made to flow through the mouths of such emblems into the basin below. The fountains at Pompeii were not connected to a sewer system, and so the overflow spilled through a groove and onto the street and gutters.

According to Scobie, the open nature of these basins would have left them prone to pollution from various sources, which might have included animals such as dogs and birds, as well as casual refuse disposal. There was, moreover, also the risk of transmission of various bacteria and diseases from potentially contaminated containers used by aquarii and inquilini (‘tenants’). He mentions, too, that one of the few public basins to have been discovered in Rome (the lacus Servilius, situated in the Forum and fed by the Aqua Marcia), unlike the Pompeian lacus, appears to have drained directly into a sewer - none other than the Cloaca Maxima. Such a connection with the main sewer system certainly has the potential for serious contamination, especially when one considers Pliny’s remark regarding how the Forum was sometimes flooded with the backwash from the ‘Great Drain’, when the Tiber was in flood (Nat. 36.104). Finally, Scobie notes that while the continuous flow of water in and out of these tanks would have inhibited the growth of algae and weed, it would not have prevented it entirely, and therefore the tanks would have needed to have been drained and

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74 This, incidentally, would have been the principal means of cleansing the streets, as fountain overflow would have helped wash away waste (cf. Fröm. Aq. 88.3). It is also one of the reasons for the raised stepping stones so famous in the streets of Pompeii, by using them, one could cross the road without getting one’s feet or garments wet and dirty.
76 Scobie 1986: 423, 424.
77 See also Scobie 1986: 423; ch. 2: 64, below.
cleaned from time to time, in order to remove, "...accumulations of slime and other extraneous rubbish."\textsuperscript{78}

![Fig. 1.3. Public water fountain in Via della Fortuna, Pompeii, decorated with a calf’s head emblem. Note the water drainage hole at the base of the fountain.](image1)

![Fig. 1.4. Public water fountain at Pompeii adorned with a head of Mercury. Note the overflow groove in the rim of the fountain.](image2)

What do we make, then, of Scobie's ghastly portrayal of the much-praised public fountains, which were so much a part of Roman urban domestic life? I believe that he has made some very valid points, which must be taken into consideration in any discussion regarding the nature of the water supply of Roman towns and cities. However, I doubt the situation was always so dire. The continuous flow, which Scobie himself quotes as inhibiting the growth of weed and algae, would have also helped keep bacteria and disease at bay, even if it might not have eliminated them completely. This would have been more probable than in the case of a well or cistern, where the static nature of the water would have given bacteria a chance to breed.\textsuperscript{79} Weed and algae would certainly still have formed on the inside walls of the basin, but whether it was regularly cleaned, we have no way of knowing. What is certain, is that to the Roman mind, 'slime' in water was regarded as bad. As discussed above, upper-class Romans judged their water in terms of appearance, taste and smell, and the best water was considered that which was clear, flowing, and without taste or odour.

It appears that the common citizen also shared this perception, judging from evidence at Pompeii and Herculaneum. In these towns, noticeable wearing of the slabs on the pavement side of the fountains, on both sides of the mouth, rather than further down next to the basin, clearly indicates that users preferred to take their water straight from the inlet,

\textsuperscript{78} Scobie 1986: 423.

\textsuperscript{79} This was observed at a more basic level in terms of visual impurities, by Seneca (\textit{Nat. 3.26.8}) (cited above, p. 14).
where it appeared the most fresh, and was flowing the fastest. In this way they would have avoided coming in contact with the visually unpleasant algae, and any other rubbish that might have been floating in the tank, and were assuring themselves that they were collecting the best quality water that they could. Although they would not have realised it, this would also have protected them to some degree from contamination from any bacteria which did happen to be present in the basin below.

In light of this evidence, I do not think that there is necessarily much credence to the argument that, "...those who drew their drinking water from such tanks were more at risk than the few who had water piped directly into their homes from covered distribution tanks (castello)." As we have seen, cistern water was probably not desired as drinking water, which means that the slaves of the wealthy would have drawn the household supplies either from domestic fountains, or from the very same public fountains as the poorer classes and thus been subject to the self-same potential health benefits or hazards.

In sum, I would maintain that on the surface, access to drinking water for the Roman urban population would not have varied much between wealthy and poor. In most cases they would have drunk the same water from the same sources, namely the public fountains, which, it seems, were conveniently and evenly spaced throughout the city. When one examines this further, however, it emerges that the major difference that set the two classes apart was the fact that wealthy citizens had slaves (aquarii) to fetch their daily supplies and so did not need to give much, if any, thought to where their drinking water came from, whereas this would have been more of a daily chore for the poorer classes, one that required considerable planning and effort.

**Water as a Beverage**

Now that we have examined the accessibility of drinking water for the Roman populace, and considered the qualities that they prized in good quality water, it is necessary to examine how common it actually was for the ancient Romans to drink water at home, and whether, in reality, they valued it as a beverage in itself. Hodge suggests that only a small portion of the water that entered Rome via the aqueducts was used for this purpose, with the majority going either to the public baths, or overflowing from the public fountains straight into the drains. In truth, however, there has been no comprehensive discussion on this issue;

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82 Hodge 2000b: 97.
Hodge himself notes that, "...one of our best modern authorities, in a book of 230 pages on Roman cuisine, cannot stretch out the topic of 'water' for more than half a page."\(^3\)

The fact, though, that there were definite opinions on what sort of water was the best for drinking tells us that it was certainly drunk to some extent; the difficulty is in determining this extent. It might help to consider the ancient sources and the contexts in which references to water-drinking appear. We have already discussed the opinions of several authors on the best kinds of water for drinking, and we know that they were all concerned primarily with *salubritas*, 'wholesomeness', or, 'healthiness'. The noted interest of the physicians on this matter also strengthens the impression that the Romans believed drinking good-quality water was beneficial to one's health. This is what leads Vitruvius (8.3.28) to observe,

> Nulla enim ex omnibus rebus tantas habere videtur ad usum necessitates, quantas aqua... sine aqua vero nec corpus animalium nec ulla cibi virtus potest nasci nec tueri nec parari.

For of all things, not one seems to be so necessary for use as water... without water, neither the animal frame nor any virtue of food can originate, be maintained, or provided.

Pliny (Nat. 14.137) similarly extols the healthfulness of water: ...*saluberrimum ad potus aquae liquorem natura dederit* ("...nature has given us water, the most healthy of beverages to drink..."). The fact, though, that he goes on for a further eleven sections (Nat. 14.137-148) deploring the time and trouble that people spend on wine and wine-drinking, seems to indicate that not everyone shared his love of water as a beverage.

There is certainly evidence to suggest that water-drinking had a reputation as an activity undertaken by 'boring', sober Romans who were following a simple and austere lifestyle. In Plautus' *Aulularia* (574), one character is ridiculed by another for his decision to drink nothing but water, while Martial (11.104.3-4) derides his prudish wife for this practice, using it as proof of her dull and restrained nature:

> Me iucunda iuvant tractae per pocula noctes: 
> *tu properas pota surgere tristis aqua.*

I like nights drawn out by cups that cheer: 
You drink water and hasten sour-faced from the table.

Horace (*Ep.* 1.19.1-3), moreover, follows the opinion of Cratinus, a Greek poet from the fifth century BC, in remarking that poems written by 'water-drinkers' will never enjoy fame or

\(^3\) Hodge 2000b: 98 (referring to André 1961: 163).
longevity on account of their dreary nature and lack of creativity, and on this reasoning, notes that both Homer and Ennius were fond of wine (Ep. 1.19.6-8).

Plutarch (Cat. Ma. 1.7) tells us that the austere Elder Cato made a point of drinking nothing but water while on military service, unless a particularly raging thirst compelled him to drink a little vinegar or wine. The Stoics were another group who attempted to maintain an ascetic lifestyle, which involved avoiding excesses of any kind, including those of eating or drinking. Seneca, one of the most famous Stoics of the early Imperial period, devotes almost an entire letter (Ep. 83) to discussing the nature of drunkenness, and observing how much more sensible are the men who drink only water. He informs us, for example, that there have been instances where important secrets have been entrusted to habitual drunkards; the implication here is that it would have been much more prudent to entrust such things to a ‘water-drinker’. He uses as an example the plot to murder Julius Caesar (Ep. 83.12),

De illa C. Caesaris caede... tam creditum est Tillio Cimbro quam C. Cassio. Cassius tota vita aquam bibit, Tillius Cimber et nimius erat in vino et scordalus.

With regard to the notorious plot to murder Gaius Caesar... Tillius Cimber was trusted with it no less than Gaius Cassius. Now Cassius throughout his life drank water; while Tillius Cimber was a sot as well as a brawler.

Seneca himself is described by Tacitus (Ann. 15.44) as living simply on fruit and running water, but this was probably more to do with the fact that he feared Nero was trying to poison him, rather than any actual desire to live in this fashion.

The poet Ovid was one Roman who did not choose to follow a plain and simple lifestyle, but rather had it compelled upon him when he was forced into exile. In a verse letter to a friend (Pont. 1.10), he describes his poor physical condition, brought on by the harsh conditions under which he was now living. One of his main grievances is the fact that he has very little opportunity to drink anything other than water (Pont. 1.10.30-35),

Non haec inmodico contraxi damna Lyaeo:
scis mihi quam solae paene bibantur aquae...

These troubles I have not brought upon myself by immoderate drinking – you know that water is almost my only drink...

84 In Cratinus’ Wine Jar, the poet, as one of the characters, remarked, “No water-drinker can produce anything clever” (Mayer 1994: 259). According to Mayer, this became something of a proverb in Greek (Mayer 1994: 259).

85 This is also alluded to in Pont. 3.4.55.
While it appears that water-drinking did carry with it this rather austere reputation, we must remember that the above opinions are in reference to people who drank nothing but water. Hodge makes the observation in relation to Plutarch's description of Cato (above) that, "...the very fact that this was thought worthy of notice tells its own story..." He may be missing the point, however, in that it was not Cato's choice to drink water that was regarded as unusual, but rather it was his decision to drink only water that was considered worthy of note. In fact, Horace, whom we have seen condemn 'water-drinking' poets as dull and uncreative, himself expresses interest in the nature of drinking water in two small towns that he is considering visiting (Ep. 1.15.15-16).87

Collectosne bibant imbres putoesne perennes
iugis aquae – nam vina nihil moror illius orae.

Do they drink from tanks that collect the rain or from wells of water that never fail? For I don't think much of the local wine.

Horace (S. 1.5.88) also thought it interesting that water, the most common of commodities (vilissima rerum), was so scarce in a certain town through which he passed, that they actually charged for it. Martial (3.56) later remarks on a similar situation in the town of Ravenna, where they also sold water, one presumes for drinking, judging by the following statement.88

Sit cisterna mihi quam vinea malo Ravennae,
cum possim multo vendere pluris aquam.

I'd rather have a cistern at Ravenna than a vineyard, since I could sell water at a much better price.

Pliny, too, despite his diatribe on the evils of drunkenness, does not at any point suggest total abstinence from wine, but instead recommends certain times of the day when it is regarded as beneficial to drink some water. These include during a bath, so as to prevent overheating (Nat. 31.40), before and during a meal, prior to going to bed, and even throughout the night (Nat. 28.55).

There is other evidence, too, to suggest that water might have been drunk at the meal table. Martial (14.106) refers to an earthenware jug used to contain cold water, and Vitruvius, in his discussion regarding the wholesomeness of water when conveyed through earthenware pipes (8.6.11), writes,

86 Hodge 2000b: 98.
87 Although it is also important to note here the presence of the explanatory nam; Horace clearly sees water as taking second place to wine.
88 Cf. also 3.57.
Saporemque meliorem ex tubulis esse cotidianus potest indicare victus, quod omnes, et si rectas cum habeat vasorum argenteorum mensas, tamen propter saporis integritatem fictilibus utuntur.

Our daily table may show that the flavour from earthenware pipes is better, because everybody, even when they pile up their tables with silver vessels, for all that, uses earthenware to preserve the flavour of water.

If we are to judge, therefore, by these observations, then a water pitcher would have been a common feature on a dinner table, and even in wealthy households, earthenware jugs were still used so as to better preserve the flavour of the water. Water, it seems, was also drunk at dinner parties (convivia), although this took very much a second place to wine, and appears to have been called for when it was necessary to ‘cool down’ after much eating, and drinking of wine. Juvenal (5.49-52) illustrates this in his fifth Satire, in which the fictional character Trebius is offered inferior food and drink as a client at his patron’s dinner party,

Si stomachus dominis fervet vinoque ciboque,
frigidior Geticis petitur decocta pruinis.
Non eadem vobis ponis modo vina querebar?
vos altum potatis aquam.

If the master’s stomach is fevered with food and wine, distilled water cooler than Thracian frosts is ordered. Was I complaining just now that you are not served with the same wines? You drink different water too.

Not only is the reference to drinking water at a dinner party interesting, but so, too, is the description of this water. It is evident that it is not just ‘any old’ water, but water imbued with a certain luxury. The use of the word decocta, originating from coquere, indicates here that it has been ‘boiled down’. Pliny (Nat. 31.40) tells us that Nero drank boiled water, after it had been cooled with snow, and he himself (Nat. 31.40) maintains that boiling increases the purity of the drink: omnem utique decoctam utiliorem esse convenit... vitiosae aquae remedium est, si decoquat ad dimidias partes. (“At any rate it is agreed that all water is more serviceable when boiled... It purifies bad water to boil it down to one half”).

Presumably, upper class Romans valued the salubritas of their water to such an extent that

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89 Juvenal (5.63) refers to a slave in charge of serving hot and cold water at the convivium. Martial, too (14.105), refers to small jugs for hot and cold water as part of a table service. In these instances, however, the water was most likely used for mixing with wine. See Revel 1982: 83-86, and esp. Dunbabin 1993 and 2003: 21-22 on the practice of mixing water with wine.

90 Suetonius (Nero 48) chooses to illustrate the miserable circumstances surrounding that emperor shortly before his murder and after his escape from Rome, by describing how necessity compelled him to drink lukewarm water. As de Kleijn eloquently puts it, “Nero’s wretched position is progressively more symbolised by the loss of frigor and salubritas of his drinking water” (de Kleijn 2000: 91).

91 Cf. also Nat. 19.55.
they sought out novel ways of ensuring that even if their drinking water came from the same sources as those of the masses, it was still somehow made superior. This is reinforced by Pliny’s comment (Nat. 19.55), *aquae quoque separatur, et ipsa naturae elementa vi pecuniae discreta sunt* (“Even the water-supply is divided into classes, and the power of money has made distinctions in the very elements”). It also accounts for Trebius’ incredulous reaction to his host receiving superior water.92

Together with boiling, the act of artificially cooling water with snow or ice in order to bring about excessive frigor, seems to have been very popular amongst the upper classes. This display of unnecessary excess is something that the Stoic Seneca (Nat. 4b.13.4) felt strongly about,93

*Hoc quod illa fluere et patere omnibus voluit, cuius haustum vitae publicum fecit, hoc quod tam homini quam feris avibusque et inertissimis animalibus in usum large ac beate profudit, contra se ingeniosa luxuria redegit ad pretium, adeo nihil illi potest placere nisi carum. Unum hoc erat quod divites in aequum turbae deduceret, quo possent antecedere pauperrimum; illi cui divitiae molestae sunt excogitatum est quemadmodum etiam caperet aqua luxuriam.*

This water, which nature has allowed to flow for everyone and be available to all, the drinking of which she has made common to life; this water which she has poured forth abundantly and generously for the use of men as well as wild animals, birds and the laziest creatures; on this water luxury, ingenious against itself, has put a price. So, nothing can please luxury unless it is expensive. Water was the one thing which reduced the wealthy to the level of the mob. In this, the wealthy could not be superior to the poorest man. Someone burdened by riches has thought out how even water might become a luxury.

These are revealing words. The fact that Seneca feels the need to condemn this practice indicates that it must not have been entirely uncommon.94 Martial (14.116) certainly seems to have been in favour of it, as he refers to the “noble chill” of iced water, and expresses indignation at being forbidden by his doctor to drink melted snow, with ‘Setine wine’ (6.86).95 Furthermore, he observes that (14.117),

*Non potare nivem sed aquam potare recentem de nive commenta est ingeniosa sittis.*

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92 Juv. 5.49-52.
93 Perhaps we may compare Seneca’s reaction here with the indignation felt by many in the contemporary world at having to pay for bottled water.
94 For the whole discussion, and Seneca’s own opinions as to the reason why people crave excessively cold water, refer Nat. 4b.13.4-11.
95 Interestingly, the ‘curse’ that Martial issues on those who would wish him ill, involves letting them drink warm water (6.86.5-6) This is a further indication of the fact that frigor was a desirable quality in water.
Ingenious thirst has invented a way of not drinking snow but drinking water fresh from snow.

Pliny, too (19.55), remarks on how some people drink snow, others ice, ...poenasque montium in voluptatem gulae vertunt ("...and turn what is the curse of mountain regions into pleasure for their appetite."). Seneca himself (Nat. 4b.13.8) testifies to the popularity of this custom, when he relates how there had arisen quite a trade in snow, with people becoming more adept at collecting and selling it,96

Quae non e summo tollitur sed, ut vinum maiores habeat et pertinacius frigus, ex abdito effoditur. Itaque ne unum quidem eius est pretium, sed habet institores aqua et annonam, pro pudor! variam.

The ice is not taken from the surface but is dug out from a covered layer in order that it might have more strength and its cold last longer. And so water does not even have a uniform price but has hucksters and – for shame! – quotations for its value.

He recounts further (Nat. 4b.13.9), that there were pack animals devoted to carrying snow and ice, which had been wrapped in straw to protect it, and shops even existed in which it was specially stored.97

Although his descriptions of gluttonous drunkards gulping down scalding hot food, and then greedily swallowing draughts of snowed water, probably contain more than a little rhetorical exaggeration, the fact that Seneca (Nat. 4b.13.6) links the drinking of iced water to the cena (‘dinner’), suggests that it might have been common at wealthy dinner parties to have a glass of iced water alongside their wine cup on the table at a dinner party, just as we often do today.

So, it seems that the Roman upper classes sought ways in which to make water-drinking more ‘luxurious’; namely by purifying (boiling), and cooling by snow or ice. This was a way of setting themselves apart from the mob (vulgus), with whom they shared a common water source. There are few ways of knowing, however, how this ‘mob’ viewed water as a drink. It has naturally been assumed that the lower classes would have drunk more water than the wealthy, as the former could not have afforded to drink as much wine.98 That water may not have been their first beverage of choice, however, might be indicated in their protestations to the emperor Augustus regarding the scarcity and high price of wine (Suet.

96 Cf. Martial (14.118), on the price of snowed water: Massiliae fumos miscere nivalibus undis/ parce, puere, costet ne mihi pluris aqua (“Forbear, boy, to mix Massilia’s smoke with snow water, lest the water cost me more than the wine”).
97 Cf. Plin. Nat. 19.55, servatur rigor aestibus excogitataturque ut alienis mensibus nix alget. (“Coolness is stored up against hot weather, and plans are devised to keep snow cold for the months that are strangers to it.”)
Aug. 42). In reply, Augustus is forced to remind them that his son-in-law, Agrippa, has “made adequate provision for thirsty citizens”, having just completed several aqueducts. Whittaker notes, too, that the state provision of cheap wheat in the Late Republic and Early Empire led to a great increase in the purchase of wine among the ‘less-poor’ plebs. It also seems apparent that the poorer classes were willing to accept a low grade quality of wine rather than subsist entirely on water, as the existence of the drink known as posca, testifies. Posca was a kind of sour wine, similar to vinegar, made by mixing low-quality wine with water, and was drunk by soldiers and lower-class citizens. From an extract in Suetonius’ biography of Vitellius (Vit. 12.1), we know that it was sold in towns as a cheap drink, as he relates how a slave-boy of this emperor’s, tiring of his attentions, had escaped, only to be discovered selling posca at Puteoli.

Conclusion

For a society that had no knowledge of the existence of bacteria or germs, the Romans still had very definite ideas about what constituted ‘healthy’ (salubris) and ‘unhealthy’ (pestilens) drinking water. Naturally, these focused on issues of appearance, temperature, taste and smell. Those ancient authors who discuss water are united in the belief that in order to be considered salubris for the human body, it must be constantly flowing, free from any (visible) impurities, cool, and without any distinguishing taste or smell. They recognised groundwater especially as possessing these qualities, and that which could be reached via a well or sprang from shaded mountain regions was the most highly prized for drinking. Conversely, the most unhealthy and undesirable water of all was that which was still, lukewarm and polluted with mud, slime or other matter. For all or some of these reasons, surface water such as that from ponds, rivers and marshes, was generally avoided for drinking, and it was for this reason also that Pliny did not favour drinking water contained within domestic cisterns. Consequently, the most desirable supplies of drinking water for urban dwellers were those that were piped into the city from known wholesome sources, provided the city was supplied by more than one aqueduct, that is. In Rome, the particular supply favoured above all others was without doubt the Aqua Marcia, whose origin was a mountain spring.

100 Varro, L. 5.122.
101 Jackson 1988: 36. See also Pl. Truec. 609, Mil. 836.
In theory, the inhabitants of those Roman cities that were connected to an aqueduct supply enjoyed good access to drinking water. Wealthy and influential inhabitants could pay a fee to the emperor for a private connection to the public mains, and judging from the archaeological remains at Pompeii and Herculaneum, public fountains were evenly and generously distributed across the city, with access free to all. In reality, however, ready access to copious supplies of fresh drinking water was much easier for the wealthy than it was for poorer citizens. Despite the fact that in many cases the former had their own domestic cisterns, as well as water piped directly into their homes, there was no guarantee that either of these would have been valued for drinking. There is enough evidence to suggest that cistern water was an undesirable source, and unless such a purpose was high on one's priority list, the piped supply may often have come from an aqueduct which conveyed water suitable for ornamental display or domestic irrigation, but not for drinking. In these instances, then, domestic slave water-bearers (aquarrii) were utilised to fetch the household drinking water from the nearest or best quality public water source.

For those less fortunate, however, this task would have fallen only to themselves, and so would have been more of an immediate concern. Many dwelt in the upper stories of tenement blocks, which did not receive running water beyond the ground floors. The difficulties involved, then, in fetching and carrying water to upper cenacula, especially if one were a woman, hardly need emphasised. This would have been complicated by the fact that the nearest source to one's abode may not necessarily have been considered the most salubris, and therefore the insularius would have had to make the daily decision whether it was worth travelling the extra distance to fetch better quality water. Although it has been proposed that the public lacus might have been a significant means of transmitting disease due to their open nature leaving them prone to external contamination, extant traces of wear commonly found at the mouths of fountains indicate that citizens consistently took their supplies from the part where the water appeared the most wholesome. In doing so, they would have avoided coming in contact with many impurities either visual or microscopic.

Water was certainly not the beverage most favoured by the Romans; this position was taken by the many and various types of wine, whose nature is not our focus here. It appears, though, that water was valued in some quarters as a drink conducive to health, but while these Romans may have acknowledged its importance for the human body, this was evidently not a significant enough factor for them to encourage drinking nothing but water. Those who did, were generally regarded as dull, sober and austere. The most common circumstances, then, for drinking water in the domestic context seem to have been at mealtimes, and a water pitcher would probably have been a common feature on a daily dinner table. Furthermore, the
drinking of water had a place at the dinner parties of the wealthy, where water chilled with
snow or ice was often drunk after a large meal or much wine-drinking. While the upper
classes would have received their drinking water from the same sources as the common
people, they actively set about ensuring that this was somehow ‘superior’, by boiling, or
‘purifying’ and artificially cooling it, in order to obtain excessive frigor. While we cannot
know for sure how often the poorer classes drank water, the fact that there are implications
that they favoured drinking inferior wine (posca) over subsisting entirely on water, indicates
that the latter may not have been their beverage of choice either.
Chapter 2: Domestic Cleanliness and Sanitation

*Munditias volo fieri.*


Introduction

It is very difficult to remain truly objective when dealing with concepts of sanitation. As a result, our modern preconceptions regarding the inseparable relationship between water and ‘cleanliness’ or ‘hygiene’ have too often been projected back onto the distant past. It has simply been assumed, for instance, that water *must* have been used in ancient Roman households for the purposes of cleaning, but there have, in fact, been no comprehensive studies on this particular use of water.¹ In response to this, it shall be the chief focus of this chapter to determine as far as we are able the ways in which cleanliness and hygiene were maintained in and around the Roman home, and the extent to which water was involved in this. In doing so, we will be able to determine whether the Romans considered water as fundamental for this purpose as we do today.

In order to approach this issue, several aspects of household sanitation, in which one would expect water to be an important element, will be analysed. These will include general cleaning, such as that of floors, walls and other surfaces, the washing of clothes, toilet facilities, and systems for waste and wastewater removal. It will be of prime importance throughout to identify and consider the concepts of ‘clean’ and ‘hygienic’ in a Roman sense, by identifying their own particular views regarding these notions. Special consideration will also be given to the vastly different living conditions of the rich and poor, and where possible, I shall highlight how the daily experience of attempting to maintain a state of domestic cleanliness, and the role of water in this, would have differed between the two socio-economic sectors.

Domestic Cleaning

It is hard for us to imagine how any Roman who possessed a piped water supply could not have used this to assist in everyday, domestic cleaning. Ready access to a plentiful, continuous supply of water ‘on tap’ would surely have made such household tasks easier, yet it has already been noted that in actual fact, very few Roman houses have been found to contain water conduits which fed domestic areas such as the kitchen and toilet. The implications of this are clear, as Andersson states:

...water conducted into the house would not in any way directly facilitate the working conditions of anybody engaged in household activities.

This may seem startling to the modern observer, as such ‘household activities’ are among the chief purposes to which our own domestic water supplies are put. Does this mean, though, that the Romans were unconcerned with domestic cleanliness, or at best, did not consider it a high priority? In order to determine this, we need to set aside our modern sentiments regarding this matter, and set ourselves more firmly within the reality of the ancient Roman household.

Let us consider, then, some of the most basic household cleaning tasks; the cleaning of floors, walls, and other surfaces. In the modern house, the ubiquitous presence of carpet means that adequate ‘cleaning’ of floors normally entails the use of a motorised vacuum cleaner. The floors of many wealthy Roman homes on the other hand were made from slabs or tiles of marble or other stone, mortar and cement, or brick, and were also often decorated with mosaic. As anyone today whose home contains a polished wooden or stone floor will testify, such surfaces rapidly attract all manner of dirt and dust, meaning that they require frequent cleaning in order to remain visually and hygienically ‘clean’. This may be done simply by sweeping with a broom, or, to achieve a more thorough finish, by washing with a mop and soapy water or disinfectant.

The question we face is whether the Romans felt the same need to purge their surfaces of all visible grime. Our evidence for this is limited as there are, not surprisingly, only passing references to such matters and no in-depth account of ‘domestic cleaning’. Tasks like this were mundane, common ones, without doubt often undertaken by slaves, and as such, of no interest to our aristocratic authors. One might presume in many cases that as long as their...
residence was kept in tidy order, they did not greatly care how it was done. Such a lack of interest in domestic arrangements may be seen reflected in a letter of the Younger Pliny (Ep. 5.6), in which he enthusiastically describes the features of his grand Tuscan villa. While demonstrating an avid interest in the decorative water arrangements of the house, Pliny shows not even a passing concern for the ways in which water was either supplied or used in the day-to-day domestic running of the villa. As de Kleijn observes, "This sort of practical information was not the letter's focus"; such matters were the concern of his domestic staff.

These household staff, kept by upper-class Romans to run their domus and villae, were almost always slaves who did not leave their own account of their daily lives and activities in the historical record. As a result, we are forced to depend on the somewhat less reliable genres of comedy and satire to piece together their tasks. There exists an episode in Plautus' Stichus (347-359) which illustrates the household slaves busily engaged in tidying the house, under the command of the boy Pinacium, who declares, Munditias volo fieri ("I wish everything to be made clean") (347). One of his chief concerns in achieving this munditia ("cleanness") is to rid the doors and walls of spider webs, which is accomplished by means of a long pole (harunda). Pinacium also calls for brooms (scopae) to sweep the floor with, and a bucket (nassiterma) and water. The intended use of the latter is somewhat intriguing, however, as it does not seem to be meant for use within the house: ...pinge humum, consperge ante aedis (...paint the ground, sprinkle in front of the house") (354). It is possible that this is an allusion to the responsibility of the owner whose urban dwelling fronted the street, to keep such frontages clean. While the general cleanliness of the streets was the duty of the city's aediles, there was no official street cleaning service at Rome, and much of the maintenance of the city's domestic areas in fact fell on the private property owners themselves, with the state "...acting only in a supervisory role, ensuring that the work was carried out." Perhaps, then, the reference to 'sprinkling' water in front of the house alludes to some form of external cleaning, such as rinsing mud and dirt from the street frontage. In this case, a water vessel such as a nassiterma may have been used in lieu of a modern hose.

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7 de Kleijn 2000: 80.
8 Although this play is actually set in Athens, it contains many references to Roman customs. See, for example, the reference to the aedilitas ('aedileship') (Pl. St. 353), a position of public office in Roman cities, chosen by the votes of the common people. We should still avoid taking Plautus' work as a truly accurate reflection of Roman society, however, and at most use it as a cautionary insight into the kinds of activities that might have been carried out in Roman domestic settings.
10 A water vessel with three spouts.
11 This responsibility fell to the tenants of rented properties if their landlord failed to do it. Refer Dig. 43.10.1.3-5. Refer also Robinson 1992: 67, 71.
If we return now to a consideration of floor-cleaning, we find that Plautus’ slaves do not use water for this, but rather, simple sweeping with a broom appears to suffice. This is suggested also in an extract from Juvenal’s fourteenth satire (14.59-67) in which an over-anxious master sets his slaves to work cleaning his house before a friend arrives. Standing over the slaves with a rod, the master orders, *verre pavimentum*... (“Sweep the floor...”) (14.60). The use of the verb *verrere* ‘to sweep’, rather than *lavare*, or *abluere*, suggests the use of a broom rather than a mop, brush, or sponge and water. Furthermore, Horace (S. 2.4.83) refers to mosaic flooring being swept with a palm broom prior to a dinner party.¹⁴ This does not quite imply the same level of attention that Ellis has suggested,¹⁵ although it would still be dangerous indeed to base all our assumptions on such meagre sources. The fact, however, that Juvenal’s satirical ‘clean freak’, whose depiction is perhaps a little exaggerated, sees simple sweeping as satisfactory treatment for floors, may be sufficient answer in itself.

Another substance was sometimes utilised, though, when more ‘heavy-duty’ cleaning was called for. Several authors testify to the sprinkling of sawdust (*scobis*) on floors, commonly in anticipation of, or even during a *convivium*, where food scraps and wine spillages frequently found their way to the floor (fig. 2.0).¹⁶ This was done, presumably, both in order to protect the surface and to facilitate easier cleaning by absorbing scraps, liquids, dirt and grease, which could all be swept up together with the sawdust. In the context of a particularly sumptuous dinner party, this sawdust might also have been sprinkled with other materials such as saffron and vermilion, or attractive light-reflecting particles like mica.¹⁷ The very wealthy even employed a slave (*analecta*), whose specific job it was to pick the food scraps from the floor by hand.¹⁸ In this task, it seems they were sometimes joined by the owner’s dogs.¹⁹ The hygiene implications of this are dubious in the least, although to the Romans, this was quite probably simply regarded as an effective means of waste disposal.

The apparent lack of water for cleaning floors might well seem surprising to us, especially when one considers the fine finish that might have been achieved on marble and mosaic floor surfaces. On further consideration, however, we might also wonder if such a

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¹⁴ Horace and Martial (Hor. S. 2.4.83; Mart. 14.82) both inform us that such *scopae* were made from palm branches tied together, although myrtle was also used (Plin. Nat. 23.166). For further references to brooms and sweeping floors, see Petr. 34.3; Pl. Bac. 4; Men. 78; Ps. 164; St. 375; Var. L. 10.24.

¹⁵ “It may be presumed that attention was given to ensuring that figured mosaics were cleaned, and suitably exposed, before important guests arrived.” (Ellis 2000: 137).

¹⁶ Sen. Con. 9.2.4; Hor. S. 2.4.81; Juv. 14.67; Petr. 68. This is testified by the presence of food scraps discovered in garden *triclinia* areas at Pompeii (see Jashemski 1979: 96).

¹⁷ Cf. Petr. 68.

¹⁸ Mart. 7.20.16-17; 1-82.

¹⁹ Mart. 3.82.18; 7.20.16-17. Dogs appear to have been common in Roman houses, both as pets and as guard-dogs (see Scobie 1986: 418-420, 432; cf. also Petr. 29, 72). We might infer, however, that these animals may not necessarily have been house-trained (see n. 20 below).
finish could have been achieved efficiently without the use of mops and detergents, materials not used by the ancient Romans. Perhaps their chief desire was simply to keep their floors clear of highly visible dirt and foreign matter.²⁰ After all, the floor is what one tramples on day-in and day-out, and even wealthy citizens may not have considered it important for their slaves to spend excessive amounts of time polishing it, when they could be better engaged elsewhere. The important point to bear in mind is that evidently water was not always required to attain a ‘clean’ state by Roman standards.

Marble columns, however, seem to have been a different case, as again demonstrated by the fretful master of Juvenal’s fourteenth satire. He is most concerned that his friend does not see a colonnade that is splashed with mud (perfusa luto) (14.66), and commands his slaves to “polish the columns till they shine” (…nitidas ostende columnas…) (14.60). Unfortunately, he does not tell us what the slaves are to ‘polish’ the columns with, but it is possible that some kind of oil might have been used to create a desirable sheen.²¹ What is significant, is that while floors were merely swept, columns, arguably more visible upon first entry into a house, were required to be polished.

²⁰ Such ‘foreign matter’ might also have included dog faeces (Juv. 14.64-65). This would appear most likely in a situation where the dog was left chained to his post.
²¹ Perhaps this is the purpose of the verb ungere (‘to smear’, ‘oil’ or ‘grease’) in another small Plautian extract that refers to household cleaning tasks: Ps. 164 (below, p. 43).
Walls too, required cleaning, especially when one takes into account the use of oil lamps and braziers for lighting and heating. Roman houses were not designed with chimneys to conduct smoke out into the open, and as a result, walls and other surfaces would quickly become sooty and blackened without frequent cleaning. Vitruvius (7.3.4.) was very aware of this fact and observes that plaster work, on account of its whiteness, especially attracts smoke. For this reason he advises that in apartments, where there are lamps and a fire, cornices should be plain so that they might be more easily wiped clean (facilis extergeantur), whereas these may be more ornately carved in summer rooms and exedrae, where there is very little smoke and soot to ruin their appearance.

For this reason also, as well as on account of everyday dust and dirt, other household surfaces, which might include tables, furniture, ornaments and statuary would have needed wiping down periodically. Juvenal (14.62.) refers to the polishing (levare) of silver and the ‘wiping’, or ‘cleaning’ (tergere) of embossed vases, whilst Plautus (Ps. 164) makes reference to the ‘washing’ of silver: tu argentum eluito... (“You wash clean the silver...”). It is difficult to imagine how any of these tasks might have been achieved easily without water, and indeed, Plautus’ use of the verb eluere (‘to wash clean’), certainly strengthens this impression. As it happens, Martial (14.144) may provide us with a clue for this in his description of a spongea (‘sponge’):

Haec tibi sorte datur tergendis spongea mensis
utilis, expresso cum levis imbre tumet.

This sponge is given you by lot; it is useful for wiping tables when it becomes light and swells after the water is squeezed out.

It is easy to envisage how useful such an item would be for the afore-mentioned household cleaning purposes. Spongeae might also have been used to clean dirty dishes and eating utensils, another household cleaning task undertaken by slaves. Evidently some Romans had little tolerance for inadequately washed dishes; Horace’s friend Catius (S. 2.4.78-80) colourfully portrays his disgust at such an instance:

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22 Some of these items may also have been covered for their protection; Martial (14.139) refers to tablecloths possessed by the wealthy, whilst there are references elsewhere to coverings for couches (Pl. Ps. 164, St. 356; Hor. S. 2.4.84).
23 Although cf. Pliny (Nat. 35.199) for the use of a cretaceous earth known as ‘silversmith’s earth’ (creta argentaria) for polishing silver, and liquid vegetable pitch to rub up bronze and copper items (Nat. 34.99).
25 Interestingly, Homer (Od. 22.450) mentions that the great hall of Odysseus is cleansed after the slaying of the suitors with the use of ‘water and porous sponges’ (βητατ και σπόρροια πολυτριπτοιοι).
26 Pl. Aul. 270, St. 595; Juv. 3.262.
Magnamovet stomacho fastidia...
...gravis veterae craterae limus adhaesit.

It very much turns the queasy stomach...
...(if) a nasty deposit has built up on the antique wine bowl.  

While there is no direct evidence for the use of *spongeae* in the context of washing dishes, the fact that those authors who refer to such a task use the verbs *lavare* 28 and *eluere* 29 make it certain that it at least involved water.

This, in turn, brings us back to the question of water supply. If the domestic staff did not usually have access to a supply of water ‘on tap’, where did they obtain their water for cleaning from? It is unlikely that they would have drawn it from the master’s decorative fountains, especially for such ‘sordid’ uses, despite the convenience this might have presented. 30 Wealthy aristocrats did not obtain a private piped water supply just to make their slaves’ lives easier. It is equally unlikely that they would have made repeated trips to the public fountains when a more practical solution existed within the home itself. The traces of wear that have been found on the rims of the slabs and puteals of domestic *cisternae* at Herculaneum indicate that water was drawn from them with some frequency. 31 While we already know that cistern water was probably not valued for drinking, 32 I would maintain that it would instead have been considered most appropriate for cleaning purposes, 33 and indeed this might even have been its chief function. There is enough evidence to suggest that the Romans clearly differentiated between different qualities of water and the correspondingly different functions to which that water was put. 34 Within the domestic context, therefore, this would have meant that the best quality public or private fountain water was used for drinking, private piped water for decorative and display purposes, and the least desirable cistern water for the least desirable function, namely, household cleaning.

Although we have become so reliant on the convenience of running water that we may feel that drawing it in this way would have been a very tiresome and inconvenient chore, in actual fact, a continuous supply of running water is really not a precondition for domestic cleaning. As de Kleijn points out, “…foodstuff, clothing and dishes can be cleaned in a bowl.

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28 ...*vasa lautm...* (Pl. St. 595); ...*patelles iam lavat...* (Juv. 3.262).
29 ...*vascula intus pure propera itaque elue...* (Pl. Aul. 270); *tu argentum eluuo...* (Pl. Ps. 164)
30 Contra Hales 2003: 125. It is possible, however, that the water outlets discovered attached to columns in the *atria* and peristyles of Pompeian houses such as the House of the Ephebe and the House of the Little Bull may have been used for domestic purposes as well as for fountain arrangements (see Andersson 1990: 218-219, 221, fig. 11).
31 See ch. 1: 9.
32 See ch 1: 9-10.
33 See also Ellis 2000: 137.
34 See ch. 1: 17-18.
bucket, or basin.” Thus, domestic slaves could have drawn water from the household cistern either as and when required or on a daily basis, storing this daily supply in basins or urns (urnae) in the kitchen until it was needed (unless of course there was an opening to the cistern in the kitchen itself, as in the House of the Faun at Pompeii). In these cases they could have minimised the hassle by ensuring that they did in fact have their own convenient water supply close by at all times.

For the poorer inhabitants of Roman cities, however, the situation was not always so convenient. We have already considered the difficulties that many tenement-dwellers experienced in conveying water to their upper-storey cenacula. As water was not piped beyond the ground floors, and such piped supplies were well beyond the economic means of the vast majority of Romans anyway, these citizens had no other option but to draw their supplies from the nearest public fountain and make the precarious trip back along the street and up the stairs to their apartment. What we need to consider here are the implications that this might have had on domestic sanitation. Carcopino and Hansen have both maintained that a lack of ready access to water would have encouraged many Romans to live in a state of squalor:

The higher the flat was perched, the harder the task of carrying water to scrub the floors and walls of those crowded contignationes. It must be confessed that the lack of plentiful water for washing invited the tenants of many Roman cenacula to allow filth to accumulate...

The hardships of having to carry water up several flights of stairs must have encouraged many of the lazier Romans to allow filth to accumulate... Many must also have lived in a constant state of squalor.

It would be foolish to disregard these statements, for laziness is, in truth, an inherent part of human nature, although admittedly, some people possess it to a greater degree than others. The fact that insularii had to be reminded on more than one occasion to keep water in their apartments incase of fire, seems to indicate that many actually did find it too difficult to keep a constant supply on hand.

33 de Kleijn 2000: 79.
36 Cf. Var. L. 5.126; vocabatur urnarium, quod urnas cum aqua positas ibi potissimum habebant in culina. ("...it was called an urnarium, because it was the piece of furniture in the kitchen on which by preference they set and kept the urnae ‘urns’ filled with water.")
34 Ch. 1: 18-21.
39 Carcopino 1964: 51.
41 Tac. Ann. 15.43; Dig. 1.15.3.5.
Does this necessarily imply, though, that they also found it too difficult to maintain even some degree of cleanliness in their dwellings? It is difficult to know for sure in view of the complete lack of primary evidence, but it might be worthwhile to consider that while laziness might be an intrinsic human quality, so too is a desire for order in one’s life. All that differs between individual people and societies is how that order is defined. For us, this might entail upholding what we regard as a high level of domestic and personal hygiene, for the benefit of our own health and that of our family. For the Romans, however, it might have involved simply maintaining what they, as individuals, considered an adequate degree of practical and visual cleanliness. In the case of insularii, this might only have meant keeping the floors of their often cramped apartments swept and clear, although walls, which would quickly have become blackened from cooking and lighting in such a confined area, were perhaps washed as well, whether on a weekly or monthly basis, or whenever the desire or need arose (if at all). Aside from anything else, this would have had the practical benefit of increasing the amount of natural light which entered the room by day, otherwise absorbed by the blackness.

I would suggest, too, that the use of sawdust or a similar material to absorb dirt and grime on floors might have been a feature of lower-class dwellings as well. This could potentially have been a very cheap and practical solution for maintaining cleanliness without the need for water. The dirty sawdust could simply be swept up, disposed of and changed as frequently, or infrequently, as desired. From the following passage in Horace’s Satires (2.4.81-87), we can infer that most cleaning materials such as scopae, mappae and scobis were inexpensive and the implication, moreover, is that even the average citizen may be expected to have had access to them in order to maintain a clean and tidy home:

\[
vilibus in scopis, in mappis, in scobe quantus consistit sunptus? neglectis flagitiium ingens.\]
\[
ten lapides varios lutulenta radere palma et Tyrias dare circum inlota toralia vestis,\]
\[
oblittum quanto curam sumptumque minorem haec habeant, tanto reprehendi iustius illis quae nisi divitibus nequeunt contingere mensis?\]

Ordinary brooms, cloths, sawdust – think how little expense they involve; but when they’re forgotten the disgrace is enormous.

Imagine sweeping a mosaic pavement with a dirty broom

42 Jansen highlights this disparity: “According to Roman practice, cleaning a room by sweeping it out... would have made it hygienic. By our modern criteria, however, a room must be free of disease spreading bacteria, or completely disinfected, before it is ‘hygienic’” (Jansen 2000a: 276).
43 Cf. Martial’s ‘blackened taverns’ (nigra popina), (7.61.8).
44 We might compare here the Medieval peasant’s practice of strewing rushes on the clay floors of their dwellings to absorb all manner of domestic waste, including human and animal refuse (see Wright 1960: 68).
of palm-leaves, or keeping grubby covers on Tyrian upholstery, forgetting that, as these items cost little trouble and money, failure to provide them is less excusable than it is in the case of things that only the rich can expect to have in their dining-rooms.

An extract from Plautus’ *Pseudolus* (164) summarises well the typical methods of cleaning in Roman houses. In this episode, the character Ballio is ordering his slaves to thoroughly clean the house, in anticipation of his birthday celebrations,

...*quom ego a foro revortar, facite ut offendam parata, vorsa sparsa, tersa strata, lautaque unctaque omnia ut sint.*

Take care that when I return from the Forum, I find things done; that all be swept, sprinkled, scoured, made smooth, cleaned, and oiled.

Here we have a convenient list of verbs denoting the key actions of Roman domestic cleaning, from which we may assume the objects that they refer to. There is the sweeping of floors, the sprinkling or scattering of sawdust (in anticipation of the *convivium*), the scouring, or perhaps rather ‘cleaning’, or ‘rubbing up’ of ornaments and vases, the spreading of couch covers, the washing of dishes and maybe walls, and, finally, the oiling (perhaps) of the columns and metalware. The intriguing aspect for us is how few of these actions appear to have involved water. This points to a definition of cleaning that is very different from our own.

In general then, the defining differences between the upper and lower classes not only included the fact that the wealthy had more varied domestic cleaning requirements in their grand houses, but that as always, they had scores of slaves to carry out these chores for them. In most cases these slaves also had access to the house’s domestic cistern from which to draw water for cleaning purposes, when required. The poorer private citizen, on the other hand, who did not possess either piped supply or rainwater cistern, was forced to draw their water from a public fountain and carry it back to the apartment. The difficulties involved in this may have meant that many found other means of maintaining what they regarded as sufficient cleanliness, without having to resort to great quantities of water. The question of how often water was actually used, then, probably depended in large part on the physical inclination of the individual to go to the trouble of fetching it, and the standard of cleanliness which that individual desired. The reality may have been that, faced with not only the physical inconvenience but also the conflicting commitments of work and family, the task of thoroughly ‘cleaning’ the house may not have been considered a high priority, especially considering they were unaware of the relationship between ‘dirt’ and bad health. We must bear in mind, too, that even basic household cleaning tasks, such as wiping the grime from
walls, would have been far more difficult when using water alone than with the aid of modern cleaning fluids and detergents. Undoubtedly, despite what we may like to imagine, many poor Romans did live in what we today might label a state of 'squalour'. Whether they themselves saw this as adequate, or at least 'normal', can only be surmised.

**Clothes-washing**

Another task which falls under the category of domestic cleanliness and hygiene, and one which we would expect to involve the use of water, is the washing of clothes. For most inhabitants of the contemporary western world this has become a very inconsequential chore, one that requires a minimum of planning and effort thanks to the wonders of modern electrical appliances, soap powders and stain removing detergents. It is easy to forget that such features have only very recently revolutionised the nature of domestic laundering, and even our own grandparents can remember a time when 'washing day' ‘...hung like a dark cloud over most households’, on account of the huge investment of time and difficulties involved in organising the necessary resources.45

What, then, of the ancient Roman context? Did the Romans value frequently washed, 'clean' clothes, and as such, make domestic laundering a common chore, or, like other societies in the past, did they find the task simply too difficult to carry out on a regular basis? In order to answer these questions and find out whether the washing of clothes was an important use for water in the domestic context, we need to examine all surviving evidence. Surprisingly, this is not entirely lacking, at least for the wealthier sector of society, which we shall deal with first.

It has been assumed in passing, and not without reason if one takes into account our own history, that if laundering was practised in ancient Rome, it would have been undertaken within the home itself, most probably by slaves, and using water drawn from the domestic cistern.46 In actual fact, there is no evidence for this whatsoever in satire, comedy, epigram, or any other genre of Latin literature. Nowhere do we find even a fleeting reference to slaves in urban dwellings either drawing water and filling tubs, or engaged in the business of

45 Ewing 1984: 95. For a good summary of pre-industrial practices, see Ewing 1984: 95-104. Because the vast majority of dwellings in the main European cities did not have piped water supplies until the late nineteenth century, repeated trips to the local well or river needed to be made in order to acquire the vast quantities of water necessary for boiling and rinsing (see Ewing 1984: 95-96). Furthermore, there was the problem of what to wash the clothes with, for it was not until the eighteenth century that home-made soap-making became common, and only the nineteenth century saw the large-scale domestic use of commercially manufactured soaps (Ewing 1984: 97; Steele (ed.) 2005: 337). In the Middle Ages, however, most people would not have used soap at all, as it was considered a luxury product. At this time, “Cleanliness was still an attribute of wealth.” (Steele (ed.) 2005: 337).

46 de Kleijn 2000: 79; Ellis 2000: 137; McKay 1975: 49.
washing or drying clothes. There are, however, many references to the profession of the fuller (fullo), and the nature of his business (fullonica).\textsuperscript{47} The Roman fullo was engaged in the trade of preparing raw, mostly woollen, cloth straight from the loom before it could be made into clothing and other material items,\textsuperscript{48} but it appears that fullones also served as the commercial ‘laundrymen’ of Roman cities, with people sending their soiled garments, as well as linen, to them for cleaning.\textsuperscript{49} The fact that the actual washing of clothes might have occurred outside the home shall not concern us here, however, as we may still regard it as a feature of domestic life.

The reasons why the Romans felt the need to send their garments to a professional cleaner in the first place rather than mobilise their own slaves for this task, requires some explanation. This decision does seem startling, as one would assume that most wealthy urban dwellers would have had not only the labour force, but also the water source to be able to complete such a task within their own homes. Part of the answer may lie in the actual process of washing, as well as the nature of the garments themselves.

Fig. 2.1. A worker in a Roman fullonica treading cloth by foot. Wall-painting from the fullery of Hypsaeus, Pompeii

\footnote{See, for example, Apul. \textit{Met.} 9.24-25; Dio 46.4-5; Fron. \textit{Aq.} 2.92; Gel. 16.7.3, 16.7.5; Mart. 6.93, 14.51; Petr. 42.2; Pl. \textit{Aul.} 508, \textit{Pseud.} 782; Plin. \textit{Nat.} 8.196, 28.91, 35.57; Sen. \textit{Ep.} 15.4, \textit{Nat.} 1.3.2.}

\footnote{This was necessary before dyeing, for unless the fibres are sufficiently prepared, the dye will not fix to them (Forbes 1964: 82).}

\footnote{(Garments) Dio 46.4-5, Pl. \textit{Aul.} 508 (linen) Gel. 16.7.1; Mart. 14.51. Bradley (2002) has argued that laundering was in fact the sole function of the Roman fullones, although this has been satisfactorily refuted by Wilson (2003) and Flohr (2003).}
From numerous literary references, together with archaeological evidence such as the remains of several fullonicae at Pompeii and some very informative wall paintings, scholars have been able to piece together with reasonable certainty the process that the fullones followed in washing soiled garments. The entire process consisted of various steps, the first of which involved placing the clothing in tubs, or vats (lacunae fullonicae), and treading them by foot in a mixture of water and an alkaline substance. Such tubs are still clearly visible in the fullonica of Stephanus at Pompeii (Lvi.7). Set into niches, they were originally surrounded by low walls on which the treader could lean while trampling the material (fig. 2.1). Because the Romans were unacquainted with soap, other kinds of alkaline materials that were found to be effective in separating dirt from fabric were utilised instead. Chief among these was human or animal urine, which acted as an ‘ammoniacal detergent’ and when combined with the treading action, ‘scoured’ the cloth ‘clean’. Whilst Pliny (Nat. 28.91) recommends camel urine as being particularly good for this purpose, human urine was much easier to procure, and a common means of doing so was to place the bottom parts of amphorae at street corners for passers-by to use as urinals (fig. 2.2). The fullo would then collect the contents once full; a very cheap way of acquiring a vital resource for his trade, at least until Vespasian imposed a tax on it.

After this initial treatment with water and urine, or perhaps sometimes in place of it, the clothes were treated in a similar way with ‘fuller’s earth’ (creta fullonica) mixed with water. Fuller’s earth was a type of clay that had been found to possess dirt-absorbing, or cleansing properties. Treatment with earth also helped to strengthen the fabric by making it heavier, and sometimes added a certain lustre to the material. The various types of cretae fullonicae and their individual properties are described in detail by Pliny (Nat. 35.196-198).

50 Despite its age, the Dictionary of Greek and Roman Antiquities (Smith (ed.) 1870: 551-553) provides a very clear and useful account of the process, with numerous primary references.
51 Probably a slave or slave-boy owned by the fullo.
52 This action is also confirmed by Seneca (Ep. 15.4), who, in describing some short and simple exercises, refers to one named fullonius (‘the fuller’s’), on account of the stamping movement it involved.
53 The Romans are said to have learned of soap from the Gauls, later in the first century AD (Ewing 1984: 96; Mau (rev.edn.) 1982: 393; Wilson 1938: 28). It was not until the seventh century, however, that soap-making became an established craft (Steele (ed.) 2005: 337).
54 Martial (6.93.1-2) famously draws attention to the undesirable hazards which could arise from such a practice, “Tam male Thais olet quam non fullonis avari/ testa venus, media sed modo fracta via... (“Thisi smells worse than the veteran crock of a stingy fuller, recently broken in the middle of the road.”) Cf. also 12.48.8 and Macrob. Sat. 3.16.15. Some of these jars were discovered at a fullonica in Pompeii (IX.xiii.5) (Adam 1994: 325).
55 Suet. Vesp. 23.3. This in itself is a testament to how important urine was to the fulling business.
Following this phase, the garments were rinsed in large vats (fig. 2.3), which sometimes had running water flowing through them, such as in the fullonicae of Primus and Stephanus at Pompeii.\textsuperscript{60} After rinsing, the clothes were hung out to dry (fig. 2.4). Primus' fullery (VI.xiv.21-22), originally a private house of pre-Roman date, possessed a gallery above the peristyle which was used for this purpose,\textsuperscript{61} while a terrace for drying was purposely built above the flat-roofed atrium of Stephanus' workshop.\textsuperscript{62} Furthermore, fullers were granted special permission to leave clothing out to dry in the streets outside their workshops (Dig. 43.10.1.3-5), at a time when all other workshop frontages were required to be kept clear.

\textsuperscript{60} Adam 1994: 260, 325, fig. 742; Mau (rev. edn.) 1982: 397.
\textsuperscript{61} Mau (rev. edn.) 1982: 397.
Once dry, the fabric was ‘carded’, which involved brushing the surface to raise the nap and remove fibres that had become tangled in the washing process (fig. 2.5). After this, the clothes were hung over a wicker frame (viminea cavea) under which sulphur was burned in order to bleach the material (fig. 2.5). Finally, fine white earth was rubbed into the cloth to whiten it still further, and add a lustrous sheen, before it was sprayed with water and pressed in a large mechanical screw press (torcular or pressorium) such as that depicted in a fresco from one of Pompeii’s fullonicae (fig. 2.6).

Having now examined the process involved in washing clothing in the Roman world, the reasons why this task was not commonly undertaken at home are perhaps a little clearer. It is obvious that it was a very specialised undertaking, which required certain resources and equipment which most certainly would not have been present in every house. Furthermore, heavy woollen garments such as the toga would have required “…skilful manipulation to retain their size and shape…”

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63 See Apul. Met. 9.24 for a very clear account of this, as well as Plin. Nat. 35.198.
64 This earth was that labelled Cimolian by Pliny (Nat. 35.198).
65 According to Seneca (Nat. 1.3), this was achieved by means of the fullo filling his mouth with water and then spraying it onto the clothes spread out on stretchers.
66 Some parts of a press were found in Stephanus’ fullonica, and an intact example was uncovered at Herculaneum (Adam 1994: 325).
67 Mau (rev. edn.) 1982: 393
It is clear, too, that the washing of clothes, as performed by the *fullones*, was an important, and heavy user of water. Not only was water required to be mixed with other substances for the actual washing, but it was also used in even greater quantities for repeated rinsing. Archaeologists at Pompeii and Ostia have discovered through investigations of water pipes that *fullonicae* there drew their water straight from the town water supplies. Even in
Pompeii, where a comprehensive urban drainage and sewer system was lacking, these workshops possessed sizeable drains for the efficient disposal of large amounts of wastewater.\textsuperscript{68} Frontinus (\textit{Aq. 94.4}) informs us that fullers at Rome were at one time legally permitted to draw the water that overflowed from the public fountains (\textit{aqua caduca}), provided a fixed fee was paid into the public treasury. Similarly, we learn from inscription (\textit{CIL VI.141}) that in order to belong to the great fullers’ guild at Rome, one was required to pay a fee to the state for the use of two \textit{lacus}. Some fulleries in Frontinus’ own time drew their water straight from the city’s aqueducts, including the esteemed \textit{Aqua Marcia} (Fron. \textit{Aq. 91.5}).\textsuperscript{69} The horrified attitude of the \textit{curator aquarum} towards this gives strength to the impression that some Romans at least believed different qualities of water were suited to different tasks, and ostensibly, the washing of clothes was not a purpose to which the cleanest, highest-grade water was ideally put. This seems somewhat of a contradiction to our modern reasoning, as any water that is intended to clean the dirt from an item should be free of dirt itself. Nevertheless, perhaps that is the difference between a society obsessed with eradicating dirt and ‘germs’ and a society that knew nothing about such micro-organisms.\textsuperscript{70} The fact that we use the same water to flush our toilets as we do to drink, would have seemed equally absurd to the ancient Roman.

The question must now be asked, though, as to how often the wealthy Roman citizen would send his or her garments out to be cleaned in this manner, in order to attempt to determine the importance that they placed on having ‘clean’ clothing, and how it was that they defined this. The fact that fulling was quite a lucrative trade, testified by the numerous \textit{fullonicae} at Pompeii and the relative prosperity and influence of some of their owners,\textsuperscript{71} might imply that this was a sufficiently regular occurrence. Nonetheless, we must remember that fullones had another important component to their business: the preparing of raw cloth for (higher-grade) garment manufacture.\textsuperscript{72} It is impossible to know which of these services was the most important, as both involved virtually the same process of treatment.\textsuperscript{73} We can, however, gain some idea of the frequency of clothes-washing from comments on this matter made by contemporary writers.

\textsuperscript{69} A situation which Frontinus, as \textit{curator aquarum}, hopes to remedy (see ch. 1: 17-18).
\textsuperscript{70} Cf. Douglas (1966: 35), “…our idea of dirt is dominated by the knowledge of pathogenic organisms. The bacterial transmission of disease was a great nineteenth-century discovery… So much has it transformed our lives that it is difficult to think of dirt except in the context of pathogenicity.”
\textsuperscript{71} Cf. Bradley 2002: 33-40. A body, presumed to be the owner of the workshop, or at least his manager, was uncovered in the fullery of Stephanus clutching the receipt for a sum of 1089 sesterces in gold, silver and bronze coins (Adam 1994: 260).
\textsuperscript{72} For more detailed discussion on this, refer Flohr 2003 and Wilson 2003. See also Forbes 1964: 82-95, for the importance of Roman fullers in the textile industry as a whole.
\textsuperscript{73} Cf. Jongman 1988: 169.
Traditionally, it has been assumed that because the Romans mostly wore light-coloured woollen garments, in the hot climate of Italy these would have required ‘frequent purification’ in order to remain clean and white. Yet, somewhat contrary to this assumption is the plain Roman sentiment that the more times a garment had been washed, the less valued it was. In other words, clothing lost more of its original value with each successive wash, which is probably why the emperor Nero chose never to wear the same garment twice (Suet. Nero 30) and why Martial (10.11.5-6) remarks that a toga that has been washed three or four times is a very poor present for someone to give. It is also what leads Trimalchio’s steward (Petr. 30), whose Tyrian-dyed garment had been stolen at the baths, to concede, “...sed iam semel loita. (‘...but it had been washed once already.”)

Such attitudes are hardly surprising, considering the long and harsh treatment that clothing was subjected to during its ‘purification’. This fact in itself is clearly evoked in an analogy drawn by another character in Petronius’ Satyricon (42):

“Ego” inquit “non cotidie labor; baliscus enim fullo est, aqua dentes habet, et cor nostrum cotidie liquescit.”

“I do not wash every day; the bath pulls you to pieces like a fuller, the water bites, and the heart of man melts away daily.”

Repeated washings would have quickly faded dyed material, and ultimately soon rendered the item threadbare. Therefore, garments especially prized by the Roman nobleman, such as those intended for special occasions (namely, the toga), may have been sent to the fuller’s only very infrequently. Perhaps we might envisage a situation in which all wealthy Roman citizens had at least one or two of those very expensive articles of clothing that were only worn on official, or ceremonious occasions. Once these had been worn a few times and had consequently begun to lose their initial ‘pristine’ condition, meaning that they required their first ‘washing’, they automatically ‘moved down the line’ in terms of value, and a new garment was acquired to fill its place. These togae then became more ‘everyday’ wear, and as such, were sent to the fullonica perhaps several more times before they were discarded, or handed down to clients, slaves or the general populace. ‘Everyday’ clothing such as the

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74 Carcopino 1964: 173; Smith (ed.) 1870: 551.
75 Cf. Elagabalus’ statement that linen that had been washed once was fit only for beggars (SHA, Heliogab. 26, cited in Bradley 2002: 29-30).
76 Contrast Mart. 7.86.8, where an ‘unworn cloak’ (rudes lacernae) is regarded as an appropriate gift.
77 Cf. Mart. 10.96.11 and 14.51.
78 Cf. Hor. S. 2.2.60.
79 Cf. Hor. Ep. 1.19.37-38: Non ego ventosae plebes suffragia venor/ impensis cenarum et triae manera vestis... (“I’m not the kind to hunt for the votes of the fickle rabble by standing dinners and giving presents of worn-out clothes.”)

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tunica, worn on its own, or beneath the toga, may have also been washed on a more regular basis. After all, these would have been cheaper to replace than the toga, and it is either this or another special garment (vestimenta cubitoria), rather than a common tunic, whose value and quality Martial and Petronius (above) specifically remark has been harmed by washing.

The common tunic, however, was often the only garment worn by lower class Romans, in combination sometimes with a simple cloak.80 The question of how regularly these might have been washed is a more problematic one, due, as always, to the lack of primary evidence relating to the lower classes. It might well be assumed that while wealthier Roman citizens paid to have their garments professionally cleaned by the fullo, the less fortunate would have found some means of washing their own. It is surprising, however, that we do not hear of any public wash-places for women, such as those common in early modern European villages and cities,81 in Rome itself.82 It is possible that some rudimentary washing was done by women within the common dwelling, but unlikely, for several reasons. Firstly, there was the acute problem of transporting the necessary quantities of water into the apartment, and the subsequent disposal of this water once it had been used. Secondly, without soap, the issue of dirt-removal would have been very troublesome, requiring either the aid of another cleansing substance, such as those used by the fullones, or substantial physical exertion, in the form of vigorous rubbing. Finally, drying would have presented a serious problem, especially within the frequently cramped confines of the cenacula. Washing was maybe hung between insulae and above the street, as seen today in modern Italy; Martial (1.86) certainly seems to provide us with evidence for the necessary close proximity of buildings to one another. Unfortunately, though, we have to admit that there is no evidence for this either. For the very poor, these difficulties would have been complicated by the fact that they may have only owned one set of clothes in the first place.

The less poor might plausibly have owned more than one set of dress, but they may still have been very loathe to have these washed on a regular basis, not only because this would have meant paying someone for the service, but also because the garments would have needed replacing more quickly, due to the harsh nature of the cleaning process. The satirists lead us to believe that many lower class citizens could not afford to do this, and were

80 Hence Petronius’ reference (126) to statores altius cinctos... (“...a servant in short garments...”). Cf. too, Nero’s choice of clothing for his escape from Rome; hoping to avoid identification, he dressed as a common citizen, barefoot and wearing only a tunic and a faded cloak and hat (Suet. Nero 48.4).
81 Specific ‘washing fountains’ and communal wash houses were a common feature of French villages from the end of the eighteenth century; prior to this, “...washing was done anywhere, in buckets, in pools, by the side of a river or stream or in fountains.” (Goubert 1989: 71). In Paris, washing was regularly undertaken on the banks of the Seine (see Goubert 1989: 71-77 for a full account).
82 Robinson 1992: 122.
consequently forced to wear dirty garments and repair worn tunics, as a visible sign of their poverty.\textsuperscript{83}

It is unlikely, moreover, that the removal of odour was an important motivation for sending one’s clothing to be washed, as the process itself, using substances like stale urine and sulphur, were not in themselves conducive to the production of pleasant, fresh-smelling washing such as we would value today as proof of its cleanness. While it is clear that the Romans were not entirely insensitive to these odours,\textsuperscript{84} the smells inherent in the cleansing process would probably have become ‘normalised’ to a certain degree, and would not therefore, have seemed out of place.\textsuperscript{85} As a modern parallel we might consider the omnipresent smell of chlorine at public swimming pools; a very unpleasant scent, but yet one that we are all familiar with, and have learned to accept as ‘normal’.

So, if the Romans did not value fresh-smelling clothing washed in what we would regard as clean substances, how did they define them as being ‘clean’? In this it seems that, not surprisingly, they tended to focus on the visible. In other words, if an item of clothing appeared stained and discoloured, it was regarded as ‘dirty’ or sordes. As long as a garment appeared ‘clean’, that is, white and spotless, it did not matter what was used to get it to that state. Indeed, while true stain-removal at a biological level might have been impossible in the Roman world with such substances as they had available to them, what the fullo did manage to do in his full process was to bleach the fabric and cover it in white chalk, effectively hiding the stains rather than actually removing them.\textsuperscript{86} Bradley eloquently stresses the fundamental difference between this Roman definition of clean clothing, and our own:

...that clothes could be washed ‘clean’ in stale urine and clay, trampled by the bare feet of slaves, rubbed with chalk, and fumigated with sulphur points to a system of cleansing which is a world apart from our own.\textsuperscript{87}

Obsessed as we are today with our own definitions of ‘hygiene’ and the total eradication of all potentially harmful micro-organisms, which might, perhaps, be appropriately labelled ‘invisible dirt’, such a process of washing is inconceivable. ‘Dirt’, as we have observed, is a highly relative term. It may be fundamentally defined as ‘matter out of

\textsuperscript{83}Juv. 3.147-153, 254; Mart. 1.103.5-6. Consider also the common word used to denote a person of the lower class: sordes (‘dirty’), (Petr. 132.3; Suet. Cl. 5; Vit. 1.1; Tac. Ann. 4.21; Hist. 3.74).

\textsuperscript{84}Mart. 6.93; Suet. Vesp. 23. Flohr also cites evidence from recent excavations in Spain, to suggest that fullones there possibly used lavender and other perfumes during the rinsing process (Flohr 2003: 447).


\textsuperscript{86}Cf. Bradley 2002: 29: “Whiteness, however, was not something restored by cleaning, it was something applied.” Cf. also Pl. Aul. 4.9.6 (idea of using white garments to hide bad manners) and Pl. Poen. 970 (metaphorical use of chalk to ‘whiten’ black feelings).

\textsuperscript{87}Bradley 2002: 23.
place',

but the definitions of this ‘matter’ can vary greatly between societies. Bradley notes 
that for us, it might include the ‘unhygienic’ concept of urine in a laundry,

whereas it is clear that for the Romans, ‘dirt’ was something quite different; it focused on the visible rather 
than the invisible. They did not share, for instance, our abhorrence of human waste, but were 
instead happy to utilise its qualities for practical purposes.

I would argue, too, that such a complete treatment, as outlined above by Bradley, was 
available only to the highest paying customers. These were, of course, members of the 
aristocratic class, whose clean clothes were a sign of status and wealth, indicating that they 
could afford properly treated material. This is especially true for the political candidates, 
whose reputations depended on appearing ‘clean’ and ‘white’ (candidus) in public.

It is quite conceivable that a lower-grade service, aimed at the common citizen, was 
simultaneously offered by the fullones, which involved only the initial stages of the full 
garment treatment, namely the soaking and treading in an alkaline mixture, followed by the 
rinsing and drying. One might consider as an analogy the modern commercial carwash, 
where different grades of service are available for different price-ranges.

Incidentally, this also appropriately illustrates the key difference between ‘washing’ 
and ‘laundering’, two often misunderstood terms. Goubert has succinctly summarised the 
distinctions:

To launder clothes is to return used and soiled linen to its pristine whiteness. It 
involves the use of a detergent and the removal of dirt and germs by 
mechanical and chemical means. The term washing, which is increasingly 
replacing the term laundering, implies a more gentle process which can be 
carried out with soap alone, or a mild detergent.

If we place this definition within the ancient Roman framework, we can say that while 
wealthier Romans might have had their garments ‘laundered’, by means of mechanical (foot 
treading) and chemical (sulphur bleaching) treatment, common citizens simply had theirs 
‘washed’ in a mild detergent of urine and water.

To summarise, the elite Roman citizen sent his or her garments to the fuller’s to be 
laundered, that is, to restore the item as near as possible to its original pristine, stainless

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89 Bradley 2002: 23. 
90 See Bradley 2002: 30-32 for a summary of the various uses of urine in the Roman world. 
91 On the importance of ‘whiteness’: Cic. Leg. 2.18.45; Liv. 5.22.4, 27.34; Mart. 8.65.6; Ov. Fast. 4.619; Pers. 5.177; Quint. Inst. 10.1.101 (cited in Bradley 2002: 29, n. 70). 
93 This corresponds also with the initial treatment of fabric prior to garment manufacture. Only fine cloth 
intended for superior garments were given a full preparation by the fuller, whilst coarse, ‘homespun’ cloth was 
simply sewn into clothing for slaves and common people, straight from the loom (Wilson 1938: 28).
condition. Such a condition was a sign of status and wealth, indicating that the person could afford such properly treated material. The common citizen, on the other hand, could afford only to have their clothing washed, specifically, to have the build-up of day-to-day ‘dirt’ rinsed out of it. They were not so concerned with actual stain-removal, as dirt-removal, that is, the removal of ‘matter out of place’. The harsh nature of the fulling process suggests that for both classes, these processes might have occurred on a less frequent basis than we are familiar with; perhaps the same garment was worn for weeks at a time, rather than days. It is interesting, then, that while water was certainly used by fullers in great quantities and was vital for the process of washing Roman clothing, it was not in itself regarded as the fundamental ‘cleansing’ element that we would expect. The fact that this ‘cleansing’ was achieved with substances that we would class as ‘dirty’, effectively emphasises the importance of recognising the vast differences between Roman concepts of cleanliness and our own.

Toilet Facilities

Like the modern washing machine, the domestic toilet is also a very heavy user of water, requiring substantial amounts per day for the purposes of flushing. The question of how much water was used in conjunction with Roman toilet facilities, however, has been the subject of much investigation in recent years. Indeed, the very idea that the Roman toilet could be regarded as a topic worthy of investigation in itself has been a very recent one, headed in no small measure by the work of the Dutch scholar Gemma Jansen, who has successfully demonstrated the importance of studying toilet facilities for increasing our understanding of aspects of Roman hygiene. Before we can begin to make a judgment on the extent to which water was used for this purpose, though, we need to examine the nature of these toilets and consider whether they were a regular feature in Roman households.

Roman domestic latrines are commonly found within a small room or part of a room in the house, which is mostly in, or partly separated from the kitchen. It has been suggested that the reason for this placing was because water would have been readily available in this

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94 This might have included mud, dust, blood or other such undesirable material.
96 Specific attention was first drawn to this topic by Scobie 1986: 409-417.
98 Adam 1994: 307; Brothers 1996: 47; Jansen 1991: 156, 1997: 128; Scobie 1986: 409. From her study of domestic toilets at Pompeii (see below, n. 100), Jansen has found that 33 were situated within the kitchen itself, and 18 were found close by (Jansen 1997: 128). Some toilets have also been found near gardens or under staircases (Jansen 1997: 156; 1997: 128).
part of the house, or so that the toilet may also provide a convenient place to dispose of other household and kitchen refuse. With respect to the toilet itself, from her investigations of the archaeological remains at Pompeii and Herculaneum, Jansen has identified two main types. The first, known conveniently as a 'niche' toilet, was the most common form in pre-Roman Pompeii and Herculaneum, and continued to be used in later periods in the upper storeys of houses and apartments. These niche toilets were built directly above a drainpipe to enable bodily wastes to fall straight down into a cesspit or sewer (fig. 2.7). This meant that they needed to be constructed in a recess in the wall, so that the user (cacaio) could sit above the pit or drain. Because of this, he or she was unable to sit upright, but rather was forced to bend forward (fig. 2.8).

Fig. 2.7. The remains of a niche toilet in the upper storey of a Roman house at Pompeii.

Fig. 2.8. Diagram illustrating a niche toilet in use.

The second type of toilet became common in the Vesuvian cities during the Roman period, and is known as the 'flush' toilet. Flush toilets consisted of a seat built out from the wall, which rested either on brick supports, or on 'a kind of cut-away ledge' in the wall (fig. 2.9). Unlike niche toilets, because these were not built directly over the top of a drainpipe, they required periodic 'flushing' with water so as to wash away accumulated solid matter. To

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100 Despite problems of access and preservation, especially in the overgrown part of the town, Jansen has been able to study 195 domestic toilets in Pompeii (Jansen 1997: 122-123).
102 Jansen 1997: 123.
facilitate this, the tiled floors of such toilets were sloped towards a hole which opened onto the drain, allowing a bucket of water to be simply emptied onto the floor, rather than through the hole in the seat. Furthermore, the edges of the floor were commonly sealed with a layer of opus signinum (Roman concrete), and the walls were plastered with a water-resistant coating of the same to prevent leakage. So that users could keep their feet dry, raised foot stands were also a common feature.

It has been argued that after the advent of piped water supplies in the Vesuvian cities, some inhabitants built multi-seater continual flush toilets, in which, very like the more famous public latrines (foricae), a supply of water was piped continuously beneath the toilet, thus washing away urine and faecal matter straight away.\textsuperscript{103} Jansen no longer believes in this type of domestic toilet, though, and instead has chosen to interpret those few instances where water pipes have been found leading to the toilet, as supplying the 'sponge-basin' rather than the toilet itself.\textsuperscript{104} This was due in part to investigations made on a tap in the toilet of the House of the Silver Wedding.\textsuperscript{105} This tap was connected to the water mains, but was found to have fed water into a bronze basin, thought to be where the 'toilet-sponge' was kept. These toilet-sponges, consisting simply of a sponge tied to the end of a stick, are regarded as the Roman version of toilet paper. Our only solid evidence for the use of such an item are extracts from Seneca (\textit{Ep.} 70.20) and Martial (12.48.7), although samples taken from the Roman sewer system in York have been found to contain sponge particles, possibly testifying to the use of

\textsuperscript{104} Jansen 1997: 130, r. 20.
\textsuperscript{105} See Jansen 1997: 130.
such sticks there. Because it would have been desirable to rinse these sponges in water either before or after use, public latrines usually contained a channel in front of the seats through which water flowed for this purpose, and many private toilets contained fixed brick water basins or moveable buckets or basins.

How common were these toilets, then? Contrary, perhaps, to what we may assume, toilets do appear to have been a familiar feature of Roman houses, at least in Pompeii and Herculaneum. Almost every house or apartment, on upper floors as well as ground floors, had either a ‘niche’ or ‘flush’ toilet. Nonetheless, it is not certain whether this was typical, as evidence or studies of domestic toilets from other Roman towns is meagre and from Rome itself, virtually non-existent. Wilson has made the general observation that private toilets exist in North Africa, but are “…rarer than might be expected…” More detailed analyses on this topic have not yet been carried out, as archaeological investigation in that region has largely been focused on, “…monumental aspects of urban form.”

While most houses in Pompeii and Herculaneum contained at least one toilet, the fact that these were situated for the most part in the domestic areas such as the kitchen, raises the question of whether they were intended to be used by the entire household, or just the staff. There is in fact significant evidence to suggest that upper-class Romans commonly used chamber pots (lasana, matellae) and other such portable receptacles (scaphia). These were often brought to them on request by a slave who would then presumably dispose of the contents on their behalf. This might imply that the head of the house and his family would not normally have needed to use the household latrine, which would, on account of the lack of stench traps and open connection to the cesspit or sewer, have been a rather undesirable place. This is probably what Cicero (ND 2.56.141) is referring to when he writes,

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107 The hygiene implications of sharing such an item with other users hardly need emphasised, but cf. Jackson 1988: 53 and Scobie 1986: 421-422 for a full list of diseases that can be transmitted through contact with faecal matter.
111 Scobie observes that Lanciani, in his investigations of ancient Rome, found evidence of only one private toilet: a brick-lined cesspit (Scobie 1986: 410).
113 Wilson 2000a: 310.
114 Hor. S. 1.6.109; Petr. 41.9, 47.5.
115 Mart. 6.89.1, 10.11.3, 12.32.13, 14.119.
116 Juv. 6.264.
117 Mart. 6.89.1, 10.11.3, 14.119; Petr. 27.6.
118 Jansen 2000a: 277. See, however, Jansen 2003, for an investigation of the 47 private toilets at Hadrian’s Villa at Tivoli. Some of the toilets, mostly ‘single-seaters’ located in the areas identified as the private domain of the emperor and his guests, were found to be extremely luxurious, containing marble, mosaic decoration and fountains, while others, generally ‘multi-seaters’, were more plain and simple in design, and located in service areas. This has led Jansen to argue that in this grand villa, different toilets were designed for people of different
...in aedificiis architecti avertunt ab oculis naribusque dominorum ea quae profluentia necessario taetri essent aliquid habitura...

...architects, when they design buildings, keep those liquids that would, if discharged, be unavoidably foul away from the eyes and nostrils of the householders...

Communal ground-floor latrines were built in some apartments, as in Ostia, where identifiable toilets have been found in sixteen insulae, with five constructed beneath the staircase. Not all insulae possessed toilets, though, and no doubt in many of the poorer areas of Rome, inhabitants were forced to resort to other measures. Insularii could travel to the nearest public forica or they could make use of portable vessels which they could keep at hand in their rooms. Of course, this then presented the problem of disposal, and we might well infer from a certain colourful extract in Juvenal (3.274-277) that many tenement dwellers found it easiest to tip the contents of their chamber pot out the window under the cover of darkness:

...adeo tot fata, quot illa
nocte patent vigiles te praetereunte fenestrae.
ergo optes votumque feras miserabile tecum,
ut sint contentae patulas defundere pelves.

As you pass by at night, there are precisely as many causes of death as there are open windows watching you. So make a wish and a pathetic prayer as you go that they'll be content with emptying their shallow basins on you.

Undoubtedly, the truly destitute had no other option but to relieve themselves wherever they could. At best, this might have involved using the jars put out by the fullers to collect urine, at worst they could have resorted to public dungheaps or secluded places such as alleyways and behind statues and tombs. The fact that numerous inscriptions and

social standing. In this case, it seems the emperor found it more desirable to have elaborate physical toilets constructed for his own use, as well as that of his peers, rather than rely on portable vessels.

120 Scobie 1986: 414. Furthermore, only one insula at Ostia (III.v.1) has been found to have contained an upstairs toilet (Scobie 1986: 415). The greater number of insulae at Ostia may account for the fact that the latter seems to have "...lacked Pompeii's generous distribution of private latrines" (Scobie 1986: 415).
122 The reality that some may have seen fit to drop the entire pot, along with its contents, out the window, may also be suggested in Petronius (79): Neque fax ulla in praesidio erat. quae iter aperiret errantibus... Itaque cum hora paene tota per omnes scrupos gastrorumque eminentium fragmenta traxissemus cruentos pedes... ("...There was no guiding torch to show us the way as we wandered... and so after dragging our bleeding feet nearly a whole hour over the flints and broken pots which lay out in the road...")
123 It has been suggested that there was a minor charge placed on use of the foricae, effectively excluding the very poor (see Carcopino 1964: 53).
124 Such dungheaps were common in Roman towns; three have been identified at Pompeii (see Wilson 2000a: 311).
other emblems warning against public urination and defecation in such places have been found across the Roman world (fig. 2.10) indicates that these unpleasant practices were not uncommon.  

Fig. 2.10. A cacator is blasted with a thunderbolt from Jupiter. Relief from Aquileia.

Now that we have examined the nature of Roman domestic toilet facilities, and considered how common they were, is it possible to make a statement as to the extent to which water played a part in these arrangements? If we think again of our modern experiences, we know that water plays a fundamental role, not only for the purposes of flushing, but also for the washing of hands afterwards. In fact, so ingrained is our sense of correct toilet hygiene etiquette, that we generally view with abhorrence any other form of latrine that does not provide water for these purposes; hence the now widespread disgust expressed at the proverbial ‘long-drop’ of New Zealand pioneering tradition.

The first point to be aware of is the fact that Roman household toilets, as studied to date, appear not to have been continually flushing like their public counterparts. That is, they did not contain a channel directly beneath through which piped water continuously flowed. One might imagine that this would have been a very practical use of overflow water from the house’s ornamental fountains and cistern. Evidently, however, even those homeowners who did possess a piped water supply did not regard this as an important use of this water, especially considering that they themselves may not have directly benefited from such an

125 An inscription from the forum arch at Thigibba in Tunisia threatens, si qui hic urinam fecerit, heebhit Martem iratum ("Anybody urinating here will incur the wrath of Mars"); cited in Wilson 2000a: 310, 2000b: 175. Cf also CIL IV.3782, 4585, 543, 7716, 10488 and 3832; the latter actually occurs inside a house, presumably as a warning for domestic slaves (Hodge 2002: 478, n. 20). Cf. also Juvenal (1.131) for people urinating on statues, and Petronius (71) on Trimalchio’s fear that the ‘common people’ (populus) will defile his tomb by defecating on it after he is dead, therefore appointing one of his slaves to act as guardian over it.
installation. Not only, then, would the wealthy citizen not have considered his slaves’ needs as high on his priority list for water usage, but also such a use for this precious water might well have been regarded as rather sordid and demeaning.

Therefore, as private toilets were not meant to be continuously flushed, they were designed instead so that they either required little cleaning, as in the case of the niche toilet, or with respect to the flush toilet, so that they could be cleaned more easily and efficiently. It is assumed that the latter took place whenever it was deemed necessary, that is, whenever the sight or smell became too unpleasant. We do in fact have a brief reference in Plautus’ Curculio (580) to a maid whose unfortunate job it was to clean the toilet. This could have been done with a small amount of water in a bucket, which need not necessarily have been clean water drawn from the cistern. Using wastewater from the kitchen would have had the practical benefit of achieving two tasks at once: cleaning the toilet and disposing of a waste material.126

It is clear that water was also desired for rinsing the sponge-stick, and Jansen believes that a small number of sponge-basins were fed with water from a piped supply. For those that were not, however, one would assume the water in the buckets or basins would have required frequent changing in order to remain ‘clean’; if not hygienically, then at least visually so. Again, this would not have required a great deal of water, merely one bucketful, probably drawn from the cistern, would have sufficed. The best that we can hope to say, then, is that water was unquestionably used in small quantities both for cleaning domestic toilets, and for rinsing toilet sponges.

Waste and Wastewater Disposal

Since we have now examined some different ways in which water was used within the Roman household, it would be pertinent to examine how this water was ultimately disposed of. The most obvious means would surely be by connection to a public sewer, for the Roman sewer system seems to have been built with water in mind.127 When Rome’s Cloaca Maxima was first designed by Tarquinius Priscus in the sixth century BC,128 it was to drain water from the marshland on which the forum was to be built.129 By the Imperial period, though, this original purpose had been superseded by its function as a great storm water and waste drain,

128 Cf. Liv. 1.38.6, 56.2; Plin. Nat. 36.106.
which emptied straight out into the Tiber. The sewers certainly became an effective means of channelling off and disposing of rainwater and overflow from *lacus* and *castellum*, as demonstrated by the drain gratings that have been found in the streets of Roman towns (fig. 2.11). Frontinus (111.1-2) quotes imperial regulations which also testify to this drainage function:

*Caducam neminem volo ducere nisi qui meo beneficio aut priorum principum habent. Nam necessae est ex castellis aliquam partem aquae effluere, cum hoc pertineat non solum ad urbis nostrae salubritatem sed etiam ad utilitatem cloacarum abluendarum.*

I wish no one to draw ‘lapsed’ water except those who have grants to do so issued by myself or by former emperors. For a certain amount of over-flow from the delivery tanks is needed, this being not only conducive to the wholesomeness of our city but also useful for the flushing of sewers.

It is interesting, however, that in the above extract it is made clear that the flushing of sewers and the ‘wholesomeness’ or *salubritas* of the city were considered two entirely separate things. Evidently Roman sewers, unlike our own, were not regarded as fulfilling an important sanitary function. This is emphasised by the reality that in actual fact, very few houses have been found to possess connections to the public sewer system. 130 This might not be surprising in a town like Pompeii, which lacked an overall drainage system, and where only one street (the Via dell’Abbondanza) was equipped with an underground sewer. 131 This fact in itself might seem surprising, considering the relative wealth of the Pompeians. It has been observed however, that the most well-designed and comprehensive urban drainage systems are to be found in Roman colonial-founded towns, such as those in Europe and North Africa. 132 This is on account of the fact that the planners of such towns were unhampered by any pre-existing urban street plan, and were consequently free to design street grids with the associated sewer systems to cope with surface water runoff. 133 Hence, nearly all streets in the colonies at Djemila and Timgd possessed drains, and similarly, Köln and Trier contain “...two of the largest collector drains in the Roman world...” 134 This is in contrast with old

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130 Scobie 1986: 409, 411.
131 This sewer was constructed primarily to dispose of wastewater from a set of public baths (cf. the situation in Herculaneum (Jansen 1994: 219)). At Pompeii, the streets themselves performed the function of drains, with the overflow from the public fountains rinsing the street surfaces; hence why the footpaths were raised and the streets paved. The gradual slope on which the city was built enabled water to be conducted through the streets and out to the city walls at the south and west sides, where it was collected and disposed of through gutters in the thresholds of the Portae Noceria, Stabia, Nola and Sarno, and into the Sarno river (Adam 1994: 261; Jansen 1997: 131; Keenan 2004: 156; Mau (rev. edn.) 1982: 229). See esp. Koga 1991.
with old Italian towns like Pompeii, where already developed urban infrastructure made further innovation difficult.

![Fig. 2.11. Public fountain with drain grating for overflow. Saepinum.](image)

Even in towns like Cosa and Rome, however, that had sewer systems incorporated into their design from the very beginning, there exists very little evidence for widespread private connections to these.\(^\text{135}\) We know from the *Digest* (43.23.1.9) that home-owners were not legally barred from doing this, but conversely, were certainly not obliged to do it. It is necessary, then, to examine the reasons why many Romans apparently consciously chose not to exploit what we would regard as a convenient and efficient system of waste and wastewater disposal.

The first point to note is that Roman drains lacked stench traps, which meant that anyone with an open connection would have had to have been prepared to live with the associated foul odours. The lack of these traps also carried with it the danger of explosion, caused by the escape of gases such as carbon monoxide, hydrogen sulphide and methane.\(^\text{136}\) Furthermore, Roman sewers were not built on a sufficient enough gradient to enable all solid

\(^{135}\) Brown 1980: 42 (Cosa); Scobie 1986: 409 (Rome). Cf. Lanciani, "In the many hundreds of antique drains discovered (in Rome)... I have never seen a sign of communication with the houses lining the streets through which the drains passed." (Lanciani 1897: 31).

wastes to be flushed through the system. This meant that periodic manual cleaning was required to clear away accumulated solids, which if left unchecked, could lead to blockages and the explosions referred to above.137

The open nature of Roman sewer connections had two further unpleasant potential consequences. Firstly, rodents and other vermin would be granted free access to any house with a connection along the system,138 and secondly, any urban sewer system which emptied into a river would be prone to backwashing if and when this river flooded. We know that this occurred periodically at Rome, with the contents of the sewers backing up into low-lying parts of the city when the level of the Tiber rose.139 Drainage into the nearest river was a common feature of sewer systems in many Roman towns,140 and so as a consequence, most domestic connections carried with them the inherent risk of the house being flooded with 'foreign filth'.141

Thus, we can perhaps understand now why it was that many Romans chose not to utilise the public sewer system for their domestic waste and waste-water disposal. The potential negative effects of such a connection would have far outweighed any benefit of 'convenience'. What methods did they employ, then, to deal with this domestic problem? We have already seen that overflow water from impluvia and household fountains was directed into the house’s subterranean cistern.142 From here, any excess was most commonly conducted via pipes straight out into the street (fig. 2.12), to be led either through a grate and into the town sewer system, or in the case of Pompeii, along the street gutters and out through the city walls.

Furthermore, Jansen has observed that some kitchens at Herculaneum contained a sloping floor which allowed wastewater to be drained outside through a hole in the wall.143 In other cases, waste from both the kitchen and the toilet was disposed of in one and the same way, that is, down the latter. This would have been particularly practical with respect to flush toilets, as wastewater from cooking or cleaning could be simply tipped out onto the sloping floor. As observed previously, this would have had the added benefit of simultaneously cleaning the toilet. Solid wastes such as kitchen scraps and other rubbish could also be

137 Scobie 1986: 412; Wilson 2000a: 307, 2000b: 176. The Younger Pliny testifies to the use of convicted criminals for this task (Ep. 10.32.2), while Libanius (Or. 46.21) relates how certain shopkeepers at Antioch performed this duty (seemingly in return for the right to trade), but were faced with the danger of choking to death.
138 A colourful story in Aelian (NA. 13.6) describes this risk in a somewhat fantastic fashion; in this story, an octopus swims up through a house drain each night to feast on pickled fish stored there.
139 Refer Plin. Nat. 36.104.
140 See Wilson 2000b: 176-177.
142 See Ch. 1: 12.
143 For example, in the kitchens of the House of the Mosaic Atrium (III.1-2) and the House of the Gem (1.1). Refer Jansen 1991: 158, n. 25.
disposed of via the toilet, and so in many houses the latrine also functioned as the kitchen rubbish bin.\footnote{144}

Because the majority of Romans avoided having an open sewer connection in their homes, most domestic toilets were actually connected instead to cesspits (\textit{sterquilinia}). Since Roman cesspits, like toilets, have only recently begun to be investigated, our knowledge of their nature is still limited.\footnote{145} Very few, for example, have been excavated completely beyond ground level, and so there have been next to no detailed analyses of their contents.\footnote{146} Nevertheless, some key points may still be noted.

At Pompeii cesspits have generally been found to be either square or round in shape, and were dug to varying depths into the porous subsoil, either directly beneath, or not far from the toilet, depending on the type of toilet (niche or flush).\footnote{147} The porous soil enabled urine and wastewater to drain away almost immediately, and it was only when solids began to build up to an unacceptable level that the pit would require emptying.\footnote{148} These may have been emptied by household slaves and the contents disposed of at a public dungheap or refuse tip,

\begin{flushleft}
Fig. 2.12. A domestic water outflow pipe leading out into the street. House of Marcus Lucetius, Pompeii.
\end{flushleft}

\footnote{144} This would appear to be confirmed by the results of Arthur’s analysis on the contents of a domestic cesspit at Pompeii, for what he discovered was mostly pottery fragments and bone (Arthur 1993: 194-195). More investigations of this kind are necessary, however, before more general statements can be made with certainty.\footnote{145} See Jansen 1997: 131, ns. 24 and 25 for a list of cesspits identified by various excavators at Pompeii.\footnote{146} Arthur (1993: 194-195) is one exception.\footnote{147} Jansen 1997: 131; Scobie 1986: 409.\footnote{148} Jansen 1997: 132; Scobie 1986: 409.
which appear to have been relatively common in Roman towns, but that facilities existed specifically for this purpose is attested by the existence of the *stercorarius*, or ‘dung collector’. We have several references to *stercorarii* and their wagons, which were permitted to enter the city of Rome in daylight hours, when most other wheeled traffic was prohibited. Furthermore, an inscription discovered at Herculaneum (*CIL* IV Suppl. 3.4.10606) indicates that these tradesmen charged for their services: EXEMTA STE(R)CORA.A(SSIBUS) XI. It is unknown how often *stercorarii* visited individual houses, whether on a regular basis as part of an established route, or whether they were called upon only when the need arose. Nonetheless, what is certain is that the actual process of emptying the *sterquilinium* must have been a very messy and unpleasant one, no: to mention a significant health hazard. To reduce the possibility of the house being polluted by excrement and other filth during this process, however, many cesspits at Pompeii actually opened out onto a garden or the footpath of the nearest street. This would have enabled the *stercorarius* convenient access to the cesspit without having to enter the house at all, thus enabling him to carry out his malodorous task with a minimum of disturbance to the inhabitants.

One can only assume that the adequate removal of waste from the tenement blocks that were inhabited by poorer Romans was more problematic. However, the inherent difficulties of transporting water into upper-storey apartments would have meant that there was a far less amount of wastewater to dispose of. While this could have been conveniently tipped out of an upper storey window without creating too much fuss, the disposal of bodily wastes and food scraps might have presented more of a challenge. Presumably, the chief options available to *insularii* were either to empty their *lasana* into a communal cesspit under the staircase of the *insula*, (if there was one), or carry their refuse to the nearest dungheap. If this proved to be too much of an inconvenience, there was always the window, as Juvenal (3.274-277) recounts. That some degree of communal organisation might have been in place in certain towns, however, is attested by a building inscription from Pergamon, which indicates that cesspits were to be found throughout these domestic quarters and that the

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149 Three have been identified at Pompeii, for example, two from Ostia, several from Carthage and numerous others all over the empire (Wilson 2000a: 311, 2000b: 175). One such heap at Colchester even grew to such an extent in the third century AD that it, “…eventually blocked access to the gatehouse guardroom” (Wilson 2000a: 311).
150 *Pleistra stercoris exportandei causa* (*CIL* 17.593); Tac. Ann. 11.32; Ulp. Dig. 33.7.12.10; Val. Max. 1.7 ext. 10.
151 Jansen highlights well the potential mess that might have been involved in this activity, by illustrating two people in the process of emptying a cesspit in modern Dar es Salaam in Tanzania (Jansen 2000a: 277-278, figs. 4 and 5).
153 Cited above, p. 59.
inhabitants, arranged into associations, were responsible for organising the removal of waste.\textsuperscript{154}

It is important to remember that waste disposal would not have posed quite the same problem for the ancient Romans as it does for us today. All waste was organic; there were no plastics, detergents or other non-biodegradable products, and as such, the Romans found resourceful ways of ‘recycling’ what we would without doubt simply dismiss as ‘waste’. We have already seen how wastewater was used to ‘flush’ toilets, and how the fullers collected human urine to use in their trade. It is also regarded as most probable that the stercorarii sold the contents of the cesspits that they had emptied to farmers on the outskirts of cities, for use as agricultural fertiliser;\textsuperscript{155} Columella (10.85) certainly provides evidence for the use of human excrement as a supplement to animal manure.

Thus, while Roman practices of waste disposal might appear crude and unhygienic to us, this is not to say that the Romans were completely unconcerned with ‘hygiene’. As Jansen rightly observes, the above features of design in domestic waste disposal facilities all indicate a desire for “…getting excreta out of the house as quickly as possible.”\textsuperscript{156} The lack of private sewer connections may be explained by the desire to avoid household contamination, whether from smell, rodents, or the contents of the sewers themselves, whilst the design of flush toilets enabled these to be cleaned easily with a minimum of effort, and also facilitated the convenient disposal of other wastes and wastewaters at the same time. Furthermore, the common siting of the cesspit mouth outside the dwelling displays a conscious effort to keep the most unpleasant of all wastes from coming in contact, whether physically or visually, with the householders. Finally, there even seemed to have been an official concern for maintaining acceptable standards of public ‘hygiene’. This is made most apparent by the public office of the aedile, whose responsibilities included keeping the city’s streets clean.\textsuperscript{157} It is also evident in the numerous inscriptions warning against public urination and defecation and the existence of laws prohibiting such ‘unhygienic’ practices as the contamination of water basins with excrement or filth, and the throwing of corpses, excrement and animal skins onto the street.\textsuperscript{158} It appears that the Romans in fact had very definite ideas about what, for them, constituted adequate waste and waste-water disposal, and their resourceful reuse of this

\textsuperscript{154} Dittenberger, \textit{OGIS} 483, lines 79-84 (cited in Owens 1996: 29).
\textsuperscript{156} Jansen 2000a: 278.
\textsuperscript{157} Evidently this responsibility was taken very seriously, at least by the emperor Caligula, who ordered that the young Vespasian be covered with filth as a punishment for failing in his duty as an aedile to keep Rome’s streets clean (Suet. \textit{Vesp}. 5.3).
\textsuperscript{158} \textit{Dig}. 47.11.1.1 and 43.10.1.5 respectively.
'waste' is something that deserves to be granted due credit, despite the fact that such practices may be condemned as unhygienic now by our own standards.

**Conclusion**

If there is one important factor that we have discovered from an examination of water and Roman domestic cleanliness and hygiene, it is that it played a much lesser role in this than it does for us today. This has effectively demonstrated, too, the fundamental importance of not assuming that ancient water supplies were used in the same ways as our own. Indeed, in contrast with the modern experience, water was not so much regarded by the Romans as an essential 'cleansing' element, but rather simply as one of many ingredients used to attain a 'clean' state. Therefore, we find that other items and substances such as brooms, sawdust and oils, and fuller's earth, urine and sulphur could also be used for cleaning, either together with, or in place of water. This was particularly relevant for *insula*-dwellers, who had relatively poor access to water supplies. Water was not piped to upper-storeys, and despite a generous spread of public fountains in most cities, these residents were still faced with the difficulties of transporting this water to their dwellings. As a consequence, they were forced, to a greater degree than their wealthier fellow-citizens, to resort to other cleaning methods which did not involve water. In truth, however, the actual degree of 'cleanliness' that they managed to maintain in their apartments remains unknown.

Wherever water was used for cleaning purposes in the Roman household, it was mostly only in small quantities. Surfaces could be washed with a sponge and a bucket of water, dishes could be washed in a basin, and a bucket of water could be used to flush a toilet. The fact that the fullers required substantially larger quantities of water for washing and rinsing clothes is perhaps one of the reasons why such a task was not undertaken within the home itself. Therefore, we can perhaps understand now why it was that the majority of Roman houses with piped water supplies did not direct any of this water into the domestic areas of the house, such as the kitchen and toilet. Because household slaves had managed such tasks with a minimum quantity of water for generations, it was simply not considered worth the installation expense.

Since only small amounts of water were used for cleaning purposes, it follows that there was little 'wastewater' to dispose of. For that reason, not possessing a private connection to a public sewer did not present the inconvenience that it would today. The Romans instead found ingenious ways of disposing of the waste and wastewater that they had. Overflow from their fountains and cisterns could be channelled out onto the street, where it
could then be used to help flush the city’s sewers (or streets), while wastewater from cooking or cleaning could be emptied into a toilet so as to dispose of it, but also clean the toilet at the same time. Solid wastes such as human excrement and food scraps were resourcefully collected by *stercorarii* and reused as manure on farms or gardens.

Far from displaying a lack of concern for hygiene or cleanliness, I would maintain that the Romans certainly did have a concept of ‘hygiene’ and that they actively sought to maintain this within their homes wherever practically possible. We cannot, however, judge their standards of sanitation by our own. To do so would not only prove misleading, but would also display a total lack of understanding of the completely different society in which they lived. The Roman definition of ‘clean’ dealt with the visible, with their own idea of what constituted ‘matter out of place’. This might have included food scraps on a floor, mud splashed on a colonnade, soot blackening walls and ornamental statuary, food in unwashed plates, stains or foreign matter on an item of clothing or an accumulation of human and other waste in a cesspit. While these views might not in themselves seem so foreign to us, it was simply the ways in which the Romans dealt with them that was so different.
Chapter 3: Personal Hygiene

etiam carnifices cenaturi manus ablunt...

Seneca the Elder, Controversiae, 9.2.3

Introduction

One cannot consider the topic of water in the Roman world without engaging in some discussion of its role in maintaining personal hygiene. Roman baths have always occupied a prominent place among the subjects of modern scholarship, although admittedly, it is only relatively recently that attention has shifted from studies of the art and architecture of these public edifices, to the social implications of the custom itself.¹

In this chapter I aim to move away from analysing the general institution of Roman public bathing, as there have been numerous studies on this topic in recent years,² and will focus instead on the notion of personal hygiene purely in the context of the domestic environment; an area of study which remains largely neglected. In this respect I wish to differentiate between ‘washing’ and ‘bathing’, two quite different concepts to the ancient Roman. Washing involved the purposeful cleaning of a part or all of the body with a view towards, among other things, achieving a state of perceived cleanliness. Bathing, while also often involving washing, was accompanied by a more complete experience, where the pleasurable social and recreational aspects were just as important as, if not perhaps more than, the ‘hygienic’.

I shall examine first, then, the degree to which the Romans engaged in ‘washing’ at home and the situations in which this occurred, making particular reference to the washing of face, hands and feet, activities that until now have received little attention in this context. Evidence for private baths within the home will also be examined with a view towards evaluating their nature and frequency, as well as the potential reasons why some citizens chose private bathing over public, or indeed, public over private. Of overall importance will be the role that water played in these washing and bathing arrangements, both in a practical, and also social sense.

² See Manderscheid 2004: 15-33.
Washing

The purposeful washing of the extremities, that is, face, hands and feet, is something that we would consider today as the most basic rudiments of personal hygiene. For several centuries, however, this was the extent of our own European ancestors' personal ablutions. Indeed, the practice of full-body washing, and especially public bathing, was condemned to varying degrees by the Church as an unnecessary materialistic luxury from Late Antiquity right through until the early twentieth century, when Catholic puritans still "...forbade the washing of any part of the body other than those that were visible and 'socialised', the only ones considered decent."5

What, then, of a culture whose people did not have such religious impositions placed on them with respect to personal hygiene? At a time when public bathing establishments were a common feature of urban life, did the ancient Romans of the early Empire wash themselves in contexts other than that of the public baths? In his treatise on the daily life of the Romans, Carcopino observes that upon rising, typical citizens, "...did not waste time in washing for they knew they would be going to bathe at the end of the afternoon..."6. He does go on, however, to cite evidence that suggests some form of basic washing was in fact undertaken at the beginning of the day. As a notable example, he considers the story of Domitian’s assassination as told by Suetonius (Dom. 16-17). According to the latter, Domitian had been warned that he would die at the fifth hour, 18 September AD 96. In order to avoid this, the emperor remained in bed on that day until he was untruthfully told that the sixth hour had come. Thus believing that the danger had now passed, he got out of bed and proceeded ‘to the care of his body’ (ad corporis curam) (16.2). Of course, as the story goes, he was drawn from this activity after being informed that an urgent visitor had arrived, and so upon re-entering his bedroom, was assassinated.

3 There were many reasons behind this, including the obvious lack of awareness of germs and a corresponding traditional belief in the beneficial properties of ‘dirt’. Cf. Goubert, on the ancient customs of the French peasantry: "...(they) considered dirtiness not as a lack of hygiene but rather as a protective barrier", and, "...in the country dirt constituted a protection against disease" (Goubert 1986: 216). There was also a fear that total immersion of one’s body in water was a ‘heathen’ practice and only to be carried out at times of major rites of passage, particularly birth and death (Goubert 1986: 213, 217). Cf also Shove 2003: 93.
4 In the late fourth century, St John Chrysostom, Patriarch of Constantinople, issued a total condemnation of the baths (de Bonneville 1998: 33).
6 Carcopino 1964: 174. Mid-late afternoon was traditionally the most common time for upper-class Romans to attend the public baths, prior to dinner.
Some translators have taken the phrase *ad corporis curam* as implying that Domitian actually went to take a bath, but one would expect that if this were the case, Suetonius would have explicitly included some form of the noun *balneum* or even the verb *lavare*. Instead, we have this rather obscure phrase which is not accompanied by any clarifying description as to what the activity entailed. Perhaps this was considered obvious, and so therefore of no importance to the dramatic narrative.

Carcopino, however, maintains that, “The brevity of the allusion, the readiness with which Domitian was turned aside from his attention, indicates that nothing serious was intended…. at most he may have meant to dip his face and hands in fresh water.” This is credible, as certain other sources exist which suggest that washing the face with water was in fact a regular feature of the morning routine. For example, in his account of a trip from Rome to Brundisium, Horace (S. 1.5) notes that after enduring a night’s journey by barge and upon finally disembarking in the morning, he and his friend wash their hands and face in a spring before breakfast (S. 1.5.24). The matter-of-fact way in which this is mentioned tends to imply that it was a normal and expected thing to do. Furthermore, the physician Celsus (*De Med.* 1.2.5-7) maintains that washing the face in cold water upon rising was especially important for the ‘weak’, in other words, the majority of city-dwellers, and that a true bath was to be taken later in the day, prior to eating. In yet another extract, albeit a much later one from the fourth century, the poet Ausonius (*Ep.* 2) lays out a typical morning procedure in the following manner:

\[ \text{Puer, eia, surge et calceos} \\
\text{et linteam da sindonem.} \\
\text{da, quidquid est, amictui} \\
\text{quod iam parasti, ut prodeam.} \\
\text{da rore fontano ablueam} \\
\text{manus et os et lumina.} \]

Come, slave, up! Give me my slippers and my muslin mantle. Bring me the *amictus* [clothing] you have got ready for me, for I am going forth. And pour out the running water that I may wash my hands, my mouth and my eyes.

The fact that we do not have more references to such morning routines and washing procedures is perhaps a reflection of the fact that they were somewhat brief, perfunctory and commonplace, and therefore not worthy of much comment. I would suggest that this

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7 Cf. for instance, Alexander Thomson’s translation: “Overjoyed at this information, as if all danger were now passed, and hastening to the bath…”, and that of Robert Graves: “Convinced that the danger had passed, Domitian went off quickly and happily to take a bath…”.
8 Carcopino 1964: 175.
9 Trans. Carcopino 1964: 175.
'washing' was not only for 'hygienic' purposes, that is, to attain a state of cleanness, but that it might also have acted as an invigorating morning 'wake-up call'.

It is possible that household slaves would have supplied their masters or mistresses each morning with a basin and ewer for water with which to wash in this fashion. Carcopino observes that such equipment has been found in one residence at Pompeii, the Villa of Diomede, and it is probable that others whose provenance has now been lost, originally existed in other houses also.

So, if the Romans can be said to have engaged in a basic form of washing, if only to freshen themselves first thing in the morning, were there any other times throughout the day when they considered it appropriate to wash certain parts of the body with water, while in the home environment? If we think of our own experiences, we know that on account of our knowledge of germs we can wash our hands many times a day, most prominently after going to the toilet and before eating. Is there any correlation at all between our practices and those of the Romans?

The question of whether the Romans washed their hands after going to the toilet is certainly a contentious one. Some scholars have argued that any form of washing in conjunction with Roman toilets was non-existent. This would appear to make sense, on account of the Roman lack of awareness of the transmission of bacteria. However, we do have more than one direct reference in literature to the washing of hands after going to the toilet. The difficulty is that these are contained within the fictional context of Petronius' Satyricon. At the very beginning of the Cena Trimalchionis episode (27), we find Trimalchio himself engaged in a ballgame. At the snap of his fingers, a eunuch brings forth a silver chamber pot (matella), and holds it to him so that he can carry on playing while he relieves himself. Having done so, he demands water for his hands, and then wipes them dry on the hair of a slave-boy. As Scobie rightly observes, the fact that Petronius introduces these events as res novas ('novelties') casts some uncertainty over the scene. In other words, it is unclear whether it is considered a novelty that Trimalchio calls for a chamber pot in which to relieve himself, or that he does so while continuing to play his ball game. It is similarly uncertain whether the novelty lies in his calling for water to wash his hands, or that he subsequently

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10 As a modern comparison, we might consider our own baths and showers. As Shove (2003: 107-108) remarks, "Forms of luxury associated with long lingering baths contrast with accounts of rapid showering as an obligation, as something that simply has to be done, like it or not." In this regard, then, water can either help one relax in the form of a long, lingering bath, or it can act as a wake-up call in the form of a morning shower in preparation for the day ahead (Shove 2003: 108; cf. de Bonneville 1998: 13-14).

11 See fig. 3.0 for the stock jug and basin used for hand-washing at a dinner party. Vessels such as these may also have been used in the context of the morning routine.


dries these on the head of a slave. I would suggest that in the latter case at least, the second option is more feasible, as there is in fact further evidence for hand-washing. Later in this episode (41.9), Trimalchio leaves the banquet to go ‘ad lasanum’, and when he returns (47.1), promptly rinses his hands in perfume (...unguento manus lavit...). Furthermore, he then grants permission for his guests to relieve themselves in the dining-room itself, but cautions that, ‘if the matter is serious’ (Vel si quid plus venit...), they might find all the necessary equipment outside. This equipment includes not only lasana (‘chamber pots’), but also aqua and ‘all the other little comforts’ (...cetera minutalia).

Although Trimalchio has no trouble elaborating on the topic of bodily functions (47), he does not elaborate on what the aqua was used for, presumably because this was already considered self-explanatory. It is difficult for us to know, however, whether it was intended for the rinsing of a toilet sponge,¹⁵ which might be included under ‘cetera minutalia’, or for washing one’s hands. Perhaps the fact that Trimalchio washes his hands once he returns to the triclinium, implies more the former case. Therefore, one might assume that guests would also be permitted to use perfume to cleanse their hands after they returned from the lasana, if they so desired.

As the Satyricon is a satirical work, any details it contains must be treated with caution, due to potential exaggeration. Perhaps the exaggeration in this case is that while people might normally wash their hands with plain water, the ridiculously extravagant Trimalchio has perfume for this purpose. It may also be of relevance to observe here that many public foricae have been found to contain basins that can be interpreted as wash-basins.¹⁶ While we can not be entirely certain that these were not used to store toilet sponges when not in use, the possibility that the spongeae might also have been kept in moveable buckets which have not survived in situ, or originally stood in a depression at the end of the rinsing channel must be considered.¹⁷ This would, by analogy, cast doubt on the interpretation of the fixed or moveable buckets found in many domestic latrines.¹⁸

I would suggest, then, that whilst unaware of the hygiene reasons for washing in this context, it may have been considered desirable, by some, for other reasons. For example, there may have been some element of ritual purification after being engaged in what could have been considered a ‘sordid’, or defiling business. This is an area that could certainly warrant further study.

¹⁵ See eh. 2: 57-58.
¹⁶ For example, in latrines at Thugga, Lepcis, Tingad, Carthage and Thamusida in North Africa (see Wilson 2000a: 309), and Housesteads fort (Vercovicium) in Northumberland, England.
¹⁷ See Wilson 2000a: fig. 3. Cf. also certain toilets in Hadrian’s villa (Jansen 2003: 149).
¹⁸ See ch. 2: 57-58.
We are on much more solid ground, however, when we consider the washing of hands in relation to food consumption. We have enough literary references and artistic representations to be able to say that hand-washing was a common activity in the context of the cena. Where we might value hand-washing prior to eating as taking an important sanitary role, that is, in ridding our hands of those invisible ‘germs’ that may come in contact with our food, the Romans had a much more practical reason for this washing. Since they ate with their fingers, some form of washing facilities needed to be provided in order to maintain a certain sense of dining etiquette.

The ancient world had a tradition in banquet etiquette that stretched back to Homeric times, as testified in various episodes throughout the Odyssey. As an example, we may consider Odyssey 4, when Telemachus and Peisistratus arrive at Menelaus’ palace as a banquet is in progress. Before they can take part in the feast, they are first bathed and anointed, then a maid pours water from a golden ewer over their hands for washing (4.50). The provision of water for guests to wash their hands in the context of a dinner party was a regular, and important feature of Roman hospitality, too. Indeed, this duty appears to have been so common that Horace (S. 1.4.88) is able to refer to the host of a dinner party simply as, *eum qui praebet aquam* (“he who provides the water”), and the Elder Seneca (Con. 9.2.3) can remark that, *...etiam carnifices cenaturi manus abhuent* (“...even executioners wash their hands before dinner”). As in the later Medieval period, this was highly ritualised, and a host could expect to be vilified for making a poor attempt to provide clean water. Horace (S. 2.2.68-69), for instance, makes reference to the bad manners of one Naevius, who offers his guests greasy water (*unctam aquam*), a serious blunder in the former’s opinion.

The Cena Trimalchionis contains more than one reference to the washing of hands, two of which we have already discussed in the context of toilet etiquette. While some aspects of this story are obviously exaggerated for effect, many of the basic elements can be taken as a reasonable insight into what was considered familiar and normal at the time. As the guests first enter the dining room prior to the serving of the first course (31), they are immediately treated to a hand-cleansing by Trimalchio’s Alexandrian slave boys. The wealthy host’s supreme ‘elegance’ is characterised here by the fact that it was not just ‘any old’ water that was poured over the guests’ hands, but *aquam nivatam*, water that had been cooled with snow.

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19 See Wright 1960: 34-37.
20 This would imply that Naevius has not changed his hand-washing water from the last dinner party he hosted. As olive oil was a popular ingredient in many Roman dishes, one can easily imagine how greasy diners’ hands, and the water that they washed them in, would have become.
21 For the cooling of water with snow for drinking, see ch. 1. 28-30.
This initial hand-washing served two main purposes, the first of which may be viewed from a practical perspective as a means of purifying the hands, or ridding them of dirt accumulated in the day’s activities, before engaging in food consumption. The second may be viewed from a more ritualistic perspective, as functioning in the context of hospitality, that is, as a sign of welcome. The stock vessels used for this purpose appear to have been the jug and basin, as represented in numerous examples of Roman art. In a painting from the tomb of Vestorius Priscus at Pompeii (fig. 3.0), the basin and jug used for hand-washing are depicted sitting beneath a *mensa* laden with the silver vessels of the banquet, or *convivium*.

The washing of feet was also a common action of guest-welcoming in the ancient world. Foot-washing was carried out in a variety of contexts, not only at Rome, but also in the Near East. It occurs frequently throughout the Old and New Testaments of the Bible; one only need recall as a famous example the story of Jesus washing the feet of his disciples during the Last Supper (John 13.1-20).

![Fig. 3.0](image-url)

*Fig. 3.0. A silver dinner service. Note the jug and basin used for hand-washing, set beneath the table. Painting from the tomb of Vestorius Priscus, Porta Vesuvio, Pompeii.*

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22 In banquet scenes, a slave boy is frequently depicted holding the jug of water and basin (refer Dunbabin 2003: 150, 156, 165, 169, 178, 192, 197; pls. XIII, XVI; figs. 85, 89, 97, 104).
For peoples who lived in hot, dusty climates, and whose standard footwear was open sandals, foot-washing was “...a routine matter of cleanliness.”\textsuperscript{23} It was widely accepted in the ancient world, however, that this was a demeaning task, and the only person considered fit to wash the feet of another person was someone of servile status.\textsuperscript{24} This would explain why Catullus (64.158-163) chooses to illustrate Ariadne’s utter desperation following her abandonment by relating how she rather wished she were a slave who at least could wash the feet of Theseus, than have to endure his complete rejection. Foot-washing in the context of hospitality is also frequently referred to in Homeric epic, most memorably in the \textit{Odyssey} (19.504-505), when Odysseus returns home in disguise. His identity is realised by his old nurse, who recognises a scar on his leg while washing his feet.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image.png}
\caption{Roman banquet scene. Note the slave-boy in the bottom-left of the picture, attending to the feet of a newly-arrived guest. Wall-painting from the House of the Triclinium, Pompeii.}
\end{figure}

If we return to the context of the Imperial Roman dinner-party, we find that references to foot-washing are common here too. As with hand-washing, this also served the functional purpose of cleansing the feet, particularly important since the Romans reclined at the table to eat. Hence why Petronius notes that while some of Trimalchio’s slave-boys were taking care

of the guests’ hands (30), others were attending to their feet, in this instance, going so far as to pare their hangnails. A wall-painting from Pompeii (fig. 3.1) clearly illustrates a banquet setting in which the various duties of the slaves are depicted. One slave-boy is shown removing the sandals of a guest, in preparation for the obligatory washing. References to the removal of shoes at the beginning of the banquet, such as in Martial (3.50.1-4), may also be taken as implying subsequent foot-washing.

If we turn our attention back now to hand-washing, we find that this occurred not only before dinner, but also during and after the meal. Following the first course, Trimalchio’s guests are given wine with which to cleanse their hands (34). The inference here, betrayed through the narrator’s remark, *aquam enim nemo porrexit* (“for no-one offered us water”), is that this was an extravagant novelty, and normally guests would be offered water between courses. The most probable purpose of this would have been to rinse the remains of the previous course from the hands, serving much the same purpose as a clean set of cutlery at a restaurant today. For undoubtedly the same reasons, hands were also washed after a meal. Seneca (Ep. 83.6), for example, proudly describes his austere lifestyle in the following way, *Panis deinde siccus et sine mensa prandium, post quod non sunt lavanda manus* (“After the bath, some stale bread and breakfast without a table; no need to wash the hands after such a meal”). The implication here, of course, is that people with less ascetic standards of living normally would wash their hands after a meal.

It appears that although unaware of our concepts of hygiene (which might dictate when it was appropriate to wash certain parts of the body), the Romans had their own views about the domestic contexts in which it was considered fitting to wash the face, hands and feet both for practical and ritualistic reasons. Upon rising, the face was rinsed with cold water as an effective ‘wake-up call’, and hands were washed by some, after going to the toilet, perhaps for purification purposes. Hands and feet were also commonly washed with water before, during and after a meal, fulfilling both a practical and symbolic role in the context of cleansing.

**Bathing**

Bathing is an activity loaded with cultural symbolism. Its definition has changed many times within different societies throughout history, as certain perceived societal ‘norms’ have dictated what is acceptable practice, and how the relationship with water is defined.25 For instance, these may determine whether bathing should be a public or private affair,
whether it should involve exposure to water or steam, total or partial immersion, for the purposes of pleasure, ritual, or personal hygiene, and so on. Of course, in many cases a combination of any of these has been considered acceptable; nowhere was this more true than in ancient Rome, where we know that the process and definition of bathing could involve many different aspects at any one time. Most relevant to us, for example, is the fact that bathing occurred not only in public, but also in private.

Although there exists a vast corpus of modern scholarship pertaining to the subject of Roman public baths and bathing, there have as yet been very few studies undertaken on the nature of private bathing. Part of the reason for this may lie in the fact that visually-impressive, large-scale private baths are very few and far between in the ancient city. This is not just a result of the haphazard processes of preservation and re-discovery; it would in fact appear that bathing in private, that is, in one’s own home, was simply not as popular as doing so in the public context. At Pompeii, for instance, where many wealthy citizens enthusiastically embraced the provision of piped water, making ample use of it within their homes for display purposes, there exist no more than thirty extant private bathing facilities. This figure equates to around 7.5 percent of the approximately 400 identifiable houses so far uncovered. Of course, there is no way of taking into account what may lie beneath the unexcavated portion of the city, but nonetheless, there remains the clear impression that even for those who had the money, private baths were not widely favoured over the public establishments. The reasons for this shall be discussed later, but first, it is necessary to define what is meant by the term ‘private bath’, and analyse the role that water took in these arrangements.

Private baths (balnea) may be fundamentally defined as permanent fixtures or facilities within a house whose purpose can be identified as relating to the practice of bathing or personal hygiene. Such baths could take several different forms, but were almost always only to be found in the homes of those wealthy enough to be able to build and maintain them.

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26 See the excellent bibliography compiled by Manderscheid (2004).
27 A notable exception is that of de Haan, who is actively working to fill this gap (de Haan 1994; 2001).
28 See ch. 4.
29 de Haan 2001: 41. Similarly, private baths have proved to be extremely rare at Ostia, one exception being the House of the Dioscuri (III.9:1). This may be due in part to the predominance of multi-storied dwellings in that town, to which water could not be raised. Nevertheless, Ostia more than made up for this in public facilities, of which no fewer than twenty have been identified (McKay 1975: 95; Yegul 1992: 55). The lack of interest in private bathing may be even more dramatically represented by the situation at Timgadin in North Africa. This was a town especially planned and built with peristyle houses for veterans, but none of these houses contain any significant bathing facility. In contrast, in the second century alone, over a dozen public balneae and several thermae were built in the town (Yegul 1992: 55).
30 Varro (L. 9.68) informs us that while public baths were spoken of in the plural (balneae), and never in the singular (balnea), private baths were referred to in the singular as balneum, but not in the plural balnea. In the notes to his Loeb translation, however, Roland Kent observes that the plural balnea for private baths did begin to be used in the Augustan period, hence why I have used it here.
and supply them with water from either domestic cisterns, or a private piped supply. Middle- and lower-class insula-dwellers lacked not only the vast sums of money to make such an installation a reality, but also the space to be able to achieve this, as well as a comprehensive domestic water supply and drainage system. As has been observed already, water was not piped beyond the ground floor of a Roman building, and therefore, the nature of any personal ablutions carried out in such dwellings would, by necessity, have been rudimentary. The extent of this probably only stretched to the obligatory washing of hands and face upon rising and before and after meals, using water that had been carried from a public fountain and poured into a portable basin. In most cases the efforts of transporting the water by hand to the apartment would have ruled out any perceived benefit gained from a basic washing, especially considering that public bathing facilities were open and available to almost everyone.

This does provoke the question, however, of the extent to which such urban dwellers would have washed before the introduction of public baths. Perhaps some answer may be deduced from Seneca’s discussion surrounding the bath of Scipio Africanus (Ep. 86.12). In this, he makes a comment regarding the bathing habits of ‘rustic’ Romans of Scipio’s time:

...brachia et crurae cotidie abluebant, quae scilicet sordes opere colgeant, ceterum toti nudinis lavabantur.

...our ancestors washed only their arms and legs every day, since these parts of the body were covered with dirt from farm work. The rest of the body was washed only once a week. It is possible that this applied also to those urban-dwellers engaged in manual labour, who may have regarded it as sufficient simply to wash the parts of the body most likely to be covered in dirt and grime. Yet, the degree of regularity for such washing, which included a weekly full-body wash, is astounding considering the practices of our own pre-Industrial ancestors. Despite Seneca’s reference to obtaining his information from more ancient writers (Nam, ut aiunt, qui priscos mores urbem tradiderunt...), it is difficult to regard his account as reliable fact. He himself lived some 250 years after Scipio, and the typical Imperial Roman romanticising about supposed rustic origins as exemplified by heroes of the

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31 It is possible that some lower-status rural inhabitants may have had access to the necessary resources with which to wash, if not bathe; cf. Tib. El. 1.10.39-44, Quam potius laudandus hic est, quem prole parata/occupant in parva pigra senecta casa:/ Ipse suas sectatur oves,/ et filius agros:/ et calidam fesso comparat usor aquam. (“Nay, the hero is he whom, when his children are begotten,/ old age’s torpor overtakes in his humble cottage./ He follows his sheep, his son the lambs,/ while the good wife heats the water for his weary limbs.”) It is difficult to know, however, to what degree this image is based on reality, or on poetic romanticising about rustic life.


34 See above, p. 71.
past is clearly evident in this passage. Perhaps we might draw the conclusion, then, that while both farm-workers and urban manual-labourers may have been wont to use water for the washing of limbs and the simple removal of dirt, the frequency with which this was done cannot be determined for sure.

Types of Baths

While there were many individual variations between the private bathing facilities of the wealthy, there are certain shared similarities in features such as size, architecture and decoration, that have enabled researchers to group them, more or less, into three main types. The most basic form (Type 1) is probably that referred to by Varro (L. 9.68) as being used by his forbears. This was known not as a balneum, but as a lavatrina, or ‘wash-room’, and a small number of examples of these may be found in houses at Pompeii which date from the third to the mid-first century BC. Lavatrinae simply consisted of a small room with a basin containing cold water with which to wash and no hypocaust system to heat the floors or walls. The floors were lined with a waterproof coating of opus signinum, with raised edges near the doorways so as to prevent water seeping out of the room.

The second type of private bath (Type 2) appeared after the discovery of the hypocaustum around 100 BC, and was by far the most common form, persisting at Pompeii until its destruction in AD 79. The balnea in this group were composed of two rooms: a tepidarium, or warm room, which also functioned as a changing room (apodyterium), and a hot room (caldarium), which contained the bath itself. In baths of Type 2, caldaria were generally rectangular in shape with a niche for a tub at one end, and an apse containing a raised cold-water wash basin (labrum) at the other. They were always located next to the household kitchen in order to share its heating facilities. This arrangement is well-illustrated in the House of the Faun at Pompeii, where a furnace burned in the wall that separated the kitchen and bath. Because the floor of the bath was raised above that of the kitchen, hot air from the open fire was able to circulate through the space thus created, heating the caldarium and then the tepidarium, from beneath. So that this heating system could run

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36 One such example may be found in the House of the Ephebe (Allison 2005: 114, fig. 5.20; de Haan 2001: 41).
39 See Allison 2005: fig. 5.22.
40 This location in the domestic quarters of the house, together with the cramped nature of the facilities has led some scholars to question whether these baths were intended to be used by the dominus and his family and guests, or just by the household staff (Brothers 1996: 48 (family and slaves); de Haan 2001: 42, Yegül 1992: 31 (slaves only)).
at maximum efficiency, the bathing rooms typically had very few, if any windows, with access being granted only through very narrow doorways. This would explain Seneca’s description of Scipio’s baths (Ep. 86.4-12) as being “buried in darkness according to the old style” ( ...balneolum angustum, tenebrosum ex consuetudine antiqua) (Ep. 86.4), and possessing windows like ‘tiny chinks’ (In hoc balneo Scipionis minima sunt rima magis quam fenestrae muro lapideo exsectae... ) (Ep. 86.8).43

The last category of domestic baths (Type 3) are much larger in scale, and therefore, substantially more rare in the urban environment. As well as including separate rooms for the apodyterium and tepidarium, Type 3 baths possessed a frigidarium (cold-water room) as well as a Caldarium. Upon occasion, houses with this type of bathing arrangement also had a cold-water outdoor swimming pool (piscina, natatio) in the garden or courtyard.44 Unlike Type 2 baths, those of Type 3 possessed their own independent heating systems, and so did not need to be situated next to the household kitchen.45 This meant that they could be constructed in more ‘public’ sections of the house, such as next to the peristylum or triclinium, areas from which guests could easily be conducted. The desired effect of this placing would no doubt have been, “...to reflect the status and wealth of their owners and to impress guests.”46 Incidentally, it is also into this group that the great balnea of the rural villas of the elite, such as the likes of Cicero and the Younger Pliny, may be placed.47

The Use of Water

A good supply of water was a pre-requisite for any type of private bath. The modest nature of the baths of Types 1 and 2 may be explained by the fact that they developed at a time when private piped water supplies were rare in houses, meaning that the actions of filling and emptying were more problematic. Consequently, wash-basins and bathtubs in these houses were small, often able to serve only one person at a time, since it was necessary for them to be filled by hand. Where the bathtub has remained in situ, and its dimensions thus measured, it is possible to calculate its total volume and subsequently, how many regular, 10-litre sized buckets of water would have been required to fill it. Wash-basins such as labra required no more than a few bucketfuls to reach full capacity, whilst an average-sized bathtub

42 Lighting was mostly provided via oil lamp (Adam 1994: 310).
43 Cf. also Petronius’ description of Trimalchio’s private bath as being, “...a tiny place like a cold-water cistera” (balneum intravimus, engustum scilicet et cisternae frigidarieae similis) (Petr. 73).
44 For example, the House of the Centenary, the House of the Silver Wedding, and the Villa of Diomedes at Pompeii (de Haan 2001: 42).
45 The baths of the House of the Labyrinth at Pompeii, for instance, were directly heated by a furnace in the basement of the house (Yegül 1992: 50, 51).
46 de Haan 2001: 42.
47 Refer Cic. Atr. 2.3.4, 13.29; Fam. 9.5.3, 14.20.1; Q.fr. 3.1.1-6; Plin. Ep. 2.17.11, 5.6.25.
in a Type 2 caldarium, such as that in the House of the Little Bull at Pompeii, would have taken around 22 buckets of water, allowing for a 25 centimetre water level.\(^{49}\)

Such a figure suggests that the process of filling a bath would have presented no major inconvenience to speak of, although an incident in Plautus' *Poenulus* (218-224) provides us with some insight into what it must have entailed for the slaves whose job this would have been. In this episode, a young woman complains about the trouble that she and her sister must go through in order to appear attractive to their suitors:

\[\textit{nam nos usque ab aurora ad hoc quod diei est, ex industria ambae numquam concessamus lavari aut fricari aut tergeri aut ornari, poliri expoliri, pingi fingi; et una binae singulis quae datae nobis ancillae, eae nos lavando eluendo operam dederunt, aggerundaque aqua sunt viri duo defessi.}\]

Why, from the very peep of dawn until this moment we've both of us incessantly kept at it, being bathed or rubbed or dried or bedecked, prinked and pranked, made up and done up. Yes, and we each had two maids that helped with the bathing and scouring, and we tired out two men with water-carrying.

Such bathtubs, then, could have been filled without a piped water supply, with the water instead being drawn by slaves from a domestic cistern, as in the House of the Faun, where a cistern well was conveniently placed in the adjoining kitchen.\(^{50}\) In some cases, however, a tank on the roof may have served this purpose, for after being filled with rainwater, such tanks were able to be opened to flow by gravity straight into a designated area.\(^{51}\)

Neither of these systems, though, were as convenient and reliable a solution as piped water available 'on tap'. It is because of this that the majority of the private baths of Pompeii were not constructed until after the town’s connection to a piped supply,\(^{52}\) after which time it also became possible to construct the bigger and more elaborate private bathing facilities of Type 3, which could not exist without a piped water supply. As proof of this point, one need

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\(^{49}\) See de Haan 2001: 45-46 for exact dimensions and figures.

\(^{50}\) This would not only have enabled staff easy access to water for the filling of the nearby bathtub, but also for other general domestic purposes (Adam 1994: 310). See ch. 2: 41.

\(^{51}\) This type of system is now difficult to identify since the roofs of most surviving buildings have collapsed. However, evidence discovered at the House of Julia Felix at Pompeii suggests that this dwelling possessed two roof tanks that supplied a fountain in the triclinium. Roof tanks may also have existed in other houses to provide water to upper-storey rooms (Adam 1994: 310-311).

\(^{52}\) de Haan 2001: 43, 46; Keenan 2004: 155. The baths of the following Pompeian houses have been found to contain water pipes: The House of the Citharist, House of the Silver Wedding, House of the Mariner, House of Fabius Rufus, House of the Centenary and the Villa of Diomedes (de Haan 2001: 43-44; Jansen 2001: 40, n. 40). It is difficult to identify further piped connections as many lead pipes have been removed for various reasons since the town’s initial excavation (refer ch. 1: n. 24). This may be demonstrated by the case of the labrum in the House of the Labyrinth, where a small round hole at its back indicates the original path of a now-absent water pipe (de Haan 2001: 42).
only consider the total volume of the *piscina* in the House of the Silver Wedding. This has been calculated at 12.13 cubic metres, meaning that it would have taken around 1213 buckets of water to fill completely by hand. As de Haan rightly observes, “To fill such *piscinae* tap water was an absolute necessity!” So reliant on a reliable source of water were these Pompeian private *balnea*, that one third of them have been found to have been out of order after the earthquake of 62 AD damaged the town’s water supply.

**Purpose of the balnea**

It has already been noted that despite the Pompeians’ relative wealth and love of water and display, the town sports surprisingly few private bathing facilities, a feature which has been found to be common in other Roman towns also. The reasons why some wealthy citizens chose to build private baths in their urban *domus* and others did not, requires some explanation. Firstly, what were the perceived benefits of having one’s own *balnea*?

One obvious factor that comes through in literature is the idea that at times it was considered preferable to be able to bathe in private, that is, without the ‘rabble’. For instance, Martial (2.70) relates how one man preferred no one to have washed in the bathtub (*solium*) before himself (*Non vis in solio prius lavari/ quemquam, Cotile...*) Similar sentiments are expressed by the fictional freedman Trimalchio, who, upon joining his guests in his private bath after dinner, brags that there is ‘nothing nicer’ than washing without a crowd (*...nam nihil melius esse dicebat quam sine turba lavari*) (Petr. 73). The fact that we are first introduced to Trimalchio in the context of a public bath (28), however, clearly indicates that the fact that he possessed his own bathing facilities did not necessarily mean that he completely shunned those of the public. It simply meant that he could bathe in private if he wanted to. Indeed, there are other examples of (actual) wealthy Romans who had no qualms about attending the public baths (*balnea, thermae*) despite having their own at home. The Younger Pliny (*Ep. 3.14*) recounts the story of an ex-praetor named Larcius Macedo who was murdered by his slaves while in his private bath, also remarking in the process that prior

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52 Furthermore, a mosaic placed at the entranceway to these baths depicts an aqueduct, effectively indicating the source that made them possible (de Haan 2001: 46, fig. 4.12).
53 de Haan 2001: 46.
54 The data for this hypothesis remain contradictory, however, and we cannot discount the possibility that social and economic factors may also have played a part in the abandonment of private baths at this time (de Haan 2001: 46-47).
55 For an indication of the types of noises that could be produced in the baths by such a rabble, cf. Sen. *Ep. 56.1-2.*
56 It appears that in the case of a character such as Trimalchio, having a bath at one’s disposal also had the benefit of enabling him to conveniently sweat off the effects of excessive drinking, so as to be ready for a fresh bout (Petr. 73). The familiar use of the baths as a means of ‘sobering-up’ after too much drinking, or to aid digestion after excessive eating are testified by the warnings of Lucretius (6.799) and Pliny (*Nat. 29.26*), and the accusations of Apuleius (*Apol. 59*), Juvenal (1.144) and Seneca (*Ep. 122.6*).
to this, Macedo had been struck by a Roman *eques* whilst at the *public* baths, in retaliation for the impudence of one of the former’s slaves. Pliny himself, despite possessing baths of his own in his Laurentine *villa*, had no reservations about making use of the public facilities in the nearby town if ‘a sudden arrival or too short a stay’ meant that it was not feasible to heat up his private baths (*Ep. 2.17.26*).

Some Romans may have been motivated to a certain degree to construct their own *balnea* since it provided an opportunity for them to display their wealth by flaunting a personal water supply. The wanton use of water was a popular means of ‘showing off’ one’s wealth, for this not only indicated that the individual possessed a private piped supply, permissible only after receiving authorisation from the emperor himself, but that this person could afford to ‘waste’ this water on non-essential functions.58 This would really have only been the case with baths of Type 3, however, which were able to be constructed in more visible and ‘public’ parts of the house; that is, away from the kitchen and domestic areas. These baths were happily shared with friends and guests, so simultaneously fulfilled an important social and recreational function,59 as seen in the episode from Petronius’ *Satyricon* (73).

The original motive for constructing Types 1 and 2 baths seems more obscure as their nature, which meant that they generally had to be filled by hand, does not permit more than one or two users at a time. The small characteristics of these washing facilities tends to indicate more a desire for functionality than the luxury and recreation characteristic of Type 3 baths. It has been suggested that they may have been built for the use of the household slaves, to enable them to wash without having to go out to the public facilities.60 This is an interesting issue in itself, on which Fagan has written an enlightening article.61 I am not entirely convinced, however, that this was the prime motivation for building such baths, for initially Type 1 and 2 baths actually preceded the public facilities.62 The small nature of the tubs, moreover, would not have proved to be very efficient for the ‘mass washing’ of slaves, even if a situation existed where the bath was heated up on one day of the week, and each of the household slaves took turns to wash in it throughout the day. The nature of these arrangements still appear much more suited to the private use of the *dominus* and his immediate family, with some selected slaves perhaps being permitted to utilise it once the

58 Cf. eh. 4: 117.
59 Cf Dunbabin (1989: 8): “These were places where one expected to spend a substantial proportion of one’s time, to receive, entertain, and impress one’s friends, and from which one expected a corresponding degree of pleasure.”
60 See above, n. 40.
members of the master's family had carried out their ablutions. Other slaves may have simply ‘made do’ with a portable basin filled with water from the cisterna.

By the time that the infrastructure was in place to make the building of Type 3 baths a reality, however, the presence of elaborate public baths had become a common feature in almost all Roman towns of any significant size. This meant that there was increasingly less need to possess bathing facilities of one's own in the urban context. It did not prevent some very fine facilities being built in the country villas of the wealthy, however, as the lack of significant public establishments in the rural setting made this more of a necessity.

Yet the question still remains as to why, when they obviously had the available resources to build private bathing facilities of their own, such wealthy citizens still preferred to frequent the public establishments. What did balneae have that balnea did not? Of course, part of the reason may lie in the availability of domestic space; even a wealthy residence was to some extent a victim of the constraints of town planning and congestion, especially in the sprawling metropolis of Rome itself. The impressive, vast bathing rooms and high-domed roofs of the great Imperial thermae would have been difficult, if not impossible, to reproduce in a private context, as well as proving problematic both to heat up and then keep hot.\(^63\) Of course there were other practical implications to take into account, such as the availability of sufficient fuel supplies and the inherent danger of combustion.\(^64\) In a rural villa, on the other hand, fuel may not have been a problem so long as there was a forested area nearby, and the risk of widespread damage caused by potential combustion could have been minimised by placing the baths away from the main living quarters of the house.\(^65\) This was not always possible, though, in an urban domus with strictly delineated boundaries.

While there are some practical reasons why private baths were not more common in Roman townhouses, there may also be certain social motivations that might account for the apparent preference for public bathing. In considering these, we need to prevent ourselves from allowing our own sentiments on this issue to cloud our understanding of the Roman point of view. After all, the notion of washing in public is something that, try as we might, few of us nowadays can relate to, despite the fact that the concept of bathing itself is familiar to us in many other ways.\(^66\) Where personal hygiene might be our chief motivation for bathing, was this necessarily the case for the Romans?

The fact that Type 1 baths in particular developed prior to the advent of public bathing facilities seems to imply that their primary, fundamental purpose was for the maintenance of

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\(^{64}\) Ellis 2000: 161.
\(^{65}\) Ellis 2000: 161.
the personal hygiene of the wealthy occupants of the house. Types 1 and 2 baths were more than adequate for this purpose, as their functional nature tends to indicate little more than a means by which the whole body could be washed at once, with perhaps the added sensory pleasure of being able to soak in hot water. As I have already suggested, though, washing and bathing were not necessarily the same thing, and when the Romans started building private *balnea* of Type 3, and elaborate public *balneae*, we might gather that further considerations were being taken into account than the purely hygienic.

In this respect, it is not difficult to identify the important social and recreational opportunities that bathing, especially in the public context, presented. As Yegül very aptly observes, the attraction of public bathing lay in its appeal as “…a deeply satisfying personal and psychological experience and a pleasurable social activity.”67 For example, the public baths could offer an unrivalled sensory experience, with their “vast spaces filled with light; marble tubs sparkling with clear, warm water; gentle soothing massage; perfumed oils and soft, fresh towels.”68

Another very significant feature that these public facilities offered that private arrangements did not, was one of the best opportunities both to observe other people and perhaps more importantly, *be* observed. In this regard, the *balneae* were as much an arena for aristocratic display as the *munera* or *theatra*. Despite the fact that some scholars have traditionally viewed the Roman public baths as a rather utopian, democratic environment in which rich and poor alike could share in the ‘dazzling marble grandeur’ that was the ‘palace of the Roman people’,69 the reality was that the *balneae* were as good a place as any to reinforce class and social divisions.70 The most prominent means by which the elite emphasised their own status in this hierarchy was by ensuring that they were accompanied at all times by a large retinue of slaves and clients.71 The larger the retinue, the more impressive the person appeared to all who noticed.72 There is no other more memorable example of this

68 Yegül 1992: 31; cf. Zajac 1999: 103. Such a sensory experience was not appreciated by all Romans, however. Seneca (*Ep.* 56.1-2, 86.6-13, 90.25, 108.16), in accordance with his Stoic philosophy, condemned the baths for their excessive luxury and their role in promoting bodily pleasure, while Marcus Aurelius (*Med.* 8.24) had the following to say: ὅπως τοι φαίνεται τὸ λουσθαί ἢ λαμπρός, ἰδρως, ῥύπος, ἱδρως γλυκόδες, πάντα σικκαντα (“What is bathing when you think about it – oil, sweat, filth, greasy water, everything loathsome” [trans. Fagan 1999: 188]).
71 These slaves all had separate duties to perform for their master or mistress while he or she was at the baths. Such tasks included guarding the clothes in the *apodyterium*, carrying the bathing instruments (on the nature of these see Nenova-Merdjanova 1999), towels, and bottles of oil and perfume, helping the master or mistress in and out of the pools, applying and scraping the oil from their skin with a *strigil*, and performing massages (Fagan 1999a: 199-200).
72 Other means of presenting one’s status included displaying rich bathing equipment and jewellery (Fagan 1999a: 213, 215).
in literature than the account of Trimalchio’s visit to the baths (Petr. 28), where every aspect of his bathing process is “...geared to display his wealth and power.”

Does this necessarily mean, though, that the Romans dismissed the hygiene aspects of bathing completely in favour of the social? That they did in fact make a strong connection between bathing and health, is well documented. The various health-giving properties of hot and cold bathing in both natural mineral springs and man-made baths is strongly advocated by medical writers like Celsus and Galen, and excursions to waters such as the famous thermal springs at Baiae became highly popular amongst citizens in general. Furthermore, images of the deities Aesculapius and Hygieia were regularly placed in public bathing establishments, as a visual reminder of the perceived connection between bathing and health.

One might wonder, though, if ‘health’ is necessarily the same thing as ‘hygiene’. This is really a matter of definition, for while we might define the latter as the removal of dirt (both visible and invisible) by means of washing, and one avenue towards achieving a state of good health, this is not to say that the Romans viewed health and hygiene in the same light. As Wright appropriately remarks, “Sanitas meant health, not the removal of dirt.” It is true that the Romans were perhaps more fastidious over such matters than other ancient societies, but this must be understood within its own context. They had no knowledge of microscopic bacteria, and as a result, many baths, whether public or private, would have been far from ‘hygienic’ by modern standards. So what was it they believed they were doing when they covered themselves in oil and immersed their bodies in water?

I would suggest that their attentions in this respect were mostly directed towards improving and maintaining personal appearance; at least for members of the upper stratum of society, or those who would aspire to this level, that is. The aristocratic Roman citizen had an ideal to conform to, the presentation of a ‘cultivated image’ that was used to visually separate the ‘civilised Roman’ from the ‘uncivilised barbarian’. This ideal was made up of various, mostly visible components and was, “...the result of careful control: hair short, all other bodily hair trimmed or removed, teeth cleaned, body washed and properly dressed in the

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75 Scobie 1986: 425.
76 Wright 1960: 2.
enveloping toga. Thus, the bathing process, whether carried out at home or in public, was one way of ensuring that this image of cleanliness and control was presented at all times.

*The role of water*

So what, then, of the role of water in Roman private bathing practice? We have already discussed the practical requirements and arrangements regarding supply, but how was the element itself viewed as contributing to the bathing experience and production of a ‘clean’ image? If we think in terms of its familiar role as a cleansing element for the body, we might be surprised to hear Frontinus’ (*Aq.* 91.5) horrified reaction to the news that water from the esteemed Aqua Marcia was being delivered not only to fullers, but also to baths:

> Marciam ipsam et rigore et splendore gratissimam balneis ac fullonibus et relatu quoque foedis ministeriis deprehendibus servientem.

No less a water than the Aqua Marcia, so very delightful for both its coldness and its clarity, I detected being delivered to baths, to fullers, even for purposes of which it is distasteful to speak.

The fact that he goes on to rule (*Aq.* 92) that because of its superlative quality, the Aqua Marcia should be reserved entirely for drinking and that the waters of all other aqueducts be designated for uses fitting to their respective qualities, would seem to imply that clean water was not considered an essential precondition for achieving a state of personal cleanliness.

Seneca seems to agree with this attitude, as he favourably relates how men of the old Republic, such as the Roman hero Scipio Africanus, used to bathe in water that was often turbid, and after rain, even muddy (*Ep.* 86.11):

> Neemultumeiusintererat,an siclavaretur; veniebat enim ut sudorem illic ablueret, non ut unguentum. (*But it did not matter much to Scipio if he had to bathe in that way; he went there to wash off sweat, not ointment.*)

Of course, Frontinus was speaking from the rational, practical perspective of his office as *curator aquarum* when he advocated for lesser quality water to be delivered to baths, and Seneca, inevitably, had the proverbial axe to grind regarding anything that might be construed as unnecessarily ‘luxurious’. The fact is that together, they inadvertently inform us that there were those other people in Roman society who did favour clean, higher-grade water for

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81 Incidentally, in many ways this is an attitude that we still possess today, as we retain that same innate desire to conform to the standard that our own society deems as acceptable. Cf. Douglas 1966: 7: “Our idea of dirt is compounded of two things, care for hygiene and respect for conventions”.
82 Cf. ch. 2: 50.
83 Cf. *Ep.* 86.10: *...nec referre credebant, in quam per lucida sordes deponerent.* (“...and they did not believe that it mattered at all how perfectly pure was the water into which they were to leave their dirt.”)
bathing, some even going so far as to choose water that had been filtered *(saccata aqua)*. Water had a functional purpose in being used, along with other materials such as oils and perfumes, to achieve an acceptable state of personal cleanliness. This functional role was perhaps more prominent in the context of the early private bathing arrangements of Types 1 and 2, with Type 1 baths in particular being more appropriately labelled *lavatrinae* than *balnea*; that is, a place simply to go and *wash*.

The basic, cleansing function of water was something that was never lost to the ancient Romans, however, no matter how elaborate and luxurious their bathing facilities became. It continued to be valued for its restorative properties; as a means of restoring the body to its original healthy, or 'clean' state. Despite the fact that oil may have been used to absorb dirt and sweat from their bodies, it was immersion in water that was the true catalyst in this cleansing process.

As the nature of Roman bathing developed from the purely functional act of washing to encompass more and more varied elements, water took on correspondingly different roles that were separate from cleaning; something that we ourselves can relate to in some form or another. For example, it came to be viewed as a pleasurable element, through which one could attain feelings of both physical and mental wellbeing. This could take the form of either an invigorating dip in the cold water *frigidarium*, or a lingering, relaxing soak in a hot tub in the *caldarium*. The sounds of water, trickling, pouring or gushing, also enhanced this sensory experience and perhaps even provoked a sense of wonder at the Roman technical achievement that enabled this natural element to be 'tamed' for human use. Finally, water was seen as the element that facilitated an enjoyable, recreational pastime, an opportunity for socialising, or private reflection; a symbol for what it meant to be 'Roman' and 'civilised'. It is these additional factors that sets 'bathing' apart from simple 'washing' in the Roman world.

**Conclusion**

It may be said that water played a not insignificant role in the general context of personal hygiene in the Roman household, but that the nature of this role varied considerably. Most importantly, it is clear that washing and bathing, activities that we would regard as synonymous with hygiene, were not always centred around concepts of hygiene in the Roman world. Of course, there certainly were those times when water was used in a practical sense in order simply to 'get clean', such as when feet were washed before reclining for dinner and

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84 Sen. Ep. 86.11.
85 See Zajac 1999: 101. See also ch. 4: 121-122.
hands were washed before, during and after eating. In many instances, however, this naturally ‘cleansing’ element took on a myriad of different symbolic functions. The offering of water to guests in the context of a dinner party, for example, had a very significant function in the context of hospitality and guest-welcoming, while it might be suggested that washing after going to the toilet may have been due to a perceived need to ritually purify oneself.

The ritual of bathing involved an even greater number of motivations, which may be seen reflected in the nature and development of the private baths themselves. While washing could be done in a small amount of water, bathing took a lot more, and so the fact that the earliest balnea of Types 1 and 2 variety required only a modest supply of water, tends to imply that the original purpose of such baths was purely functional, that is, to achieve a state of cleanliness. These baths may have been essentially founded in principles of personal hygiene, but as they developed into a third type, the water that filled them took on correspondingly different symbolism. It came to be viewed as a medium which could not only aid in the maintenance of a clean and orderly appearance, but also facilitate a pleasurable social and recreational pastime and sensory experience.

In this respect, while there may be no doubt that the social aspect of bathing was very important to the Romans, this also meant that bathing in private was not widely considered as superior, which accounts in part for the marked lack of elaborate private bathing establishments in wealthy Roman houses. Possessing a private water connection was certainly no precondition for building one’s own baths, and even those who did have their own supply were limited by other practical considerations such as space and availability of fuel. Those who did choose to build their own balnea were motivated by various factors. With Types 1 and 2 baths, which developed prior to the public establishments, the desire to have facilities at home for the maintenance of personal hygiene may have been a motivating factor. After the advent of piped water supplies, however, which made the more elaborate Type 3 baths a reality, we may assume that other motivations came into play, such as a desire for display and recreation, themes which we shall analyse in greater depth in the following chapter.
Chapter 4: Water in the garden

Nowhere was water more conspicuous in the Roman household than in that area known as the hortus ('garden'). Ever since the publication in 1979 of Jashemski’s ground-breaking work on the gardens of Pompeii, scholarly interest in Roman gardens has flourished, and investigations have been undertaken into such diverse areas as the various interpretations of garden paintings to the practice of gardening itself. Some excellent studies have also been made which take a more comprehensive view of this topic, providing the necessary descriptive, and at times analytical view of Roman gardens in general.

From the earliest times, the garden was an important feature of Roman domestic architecture, and there is little doubt that water played a fundamental role in this. Even before the advent of the aqueducts, water was drawn from domestic cisterns to water plants, and systems were invented to operate simple fountains. Once a continual supply of water could be assured by means of an aqueduct, however, water was used to its full advantage for many different purposes within the garden context.

The more general studies of Roman horti all treat the subject of water usage to varying degrees. However, this is usually in the form of a sub-section labelled ‘water features’, or simply ‘water’. With the exception of an article by Jashemski herself no scholar, to the best of my knowledge, has dealt with water use as a topic for study in its own right. It is the intention of this chapter, therefore, to respond to this lacuna by providing an analysis not only of the many and varied ways in which water was actually used in the urban domestic garden, but also the desired effects that such uses would have had. In other words, it is not enough simply to describe the technicalities; we must also try to understand the reasons why water was used in this way. Was it regarded purely as an aesthetic or recreational element, or valued for its functional purposes also? To effectively answer these questions it is necessary first to examine the main water features in turn; namely, fountains and nymphae, pools and fishponds (piscinae), and water triclinia.

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1 Jashemski 1979.
2 Kellum 1994.
5 Jashemski 2000.
The Roman Garden

Before we can begin to consider the nature of Roman water use within the garden, however, it is useful to understand first the nature of the gardens themselves. The characteristics of urban living meant that the Roman domus was required to fit in with strictly delineated boundaries and street networks, designed initially to conserve space within city walls. These townhouses consequently developed as inward-facing structures of an axial form, with an unassuming frontage set right against the street. From this entrance, a passage (fauces) traditionally led directly through to the atrium, which in turn led onto the tablinum, an official reception room. Beyond the tablinum, and visible through a back window or doorway, was the hortus, always situated at the rear of the house (fig. 4.0). Houses of this type have been uncovered at Pompeii, dating to the end of the fourth and beginning of the third centuries BC.

From the second century BC a significant change occurred in Roman domestic architecture, which had a profound effect on the nature of horti. This was the introduction of the peristylium, or ‘peristyle’, a feature common in contemporary grand Hellenistic residences. These peristyles were generally superimposed on top of the old hortus at the back of the atrium, preserving the traditional axial layout, but to a large extent superseding the role of the atrium as a central courtyard which provided access to the various rooms to the sides (fig. 4.0). Where the Roman peristyle differed from the Greek was in transforming this central area from a plain courtyard to a planted garden (fig. 4.1). The ideal Roman peristyle was one in which the central garden was surrounded on all four sides by a covered walkway, although space restrictions meant that this might be reduced to three or even two.

These ‘peristyle houses’ became extremely popular in Roman urban centres and were built across the Empire, including Italian provincial towns like Pompeii, where in the second century BC the wealthy Samnites built some of the most elegant examples that remain to us today. One of these, the famous House of the Faun, was so magnificent that it contained two atria, two peristyles and occupied a whole town block. It is not difficult to appreciate

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6 Jashemski 1979: 15.
7 These frontages sometimes contained shops; cf. Vitruvius 6.5.2.
8 For example, the House of the Surgeon. See also Dunbabin 1994: 166-167 for further examples.
9 Greek peristyles and courtyards typically consisted of stamped earth or cobblestones, with no extant evidence for plantings (Jashemski 1979: 17, n. 41).
10 In some instances, provisions were made for the peristyle to be closed off by means of curtains, perhaps to shade the interior rooms from sun or protect from wind or cold. Hooks for the cords used to draw such curtains have been found at the House of Meleager at Pompeii (Jashemski 1979: 34).
11 It is important to remember that these houses are only representative of those that existed in such provincial towns; one can only wonder at the wealth and scale of those townhouses which were built for the aristocratic class in Rome itself, but no longer survive (cf. Bowe 2004: 76).
why this style of dwelling became popular. It not only enlarged the total living space and provided additional light for the surrounding rooms, but the garden itself became another living area, with the added benefit of shade and fresh air.\textsuperscript{12}

The Romans appear to have valued their gardens so much that they enlarged them, or created additional ones wherever possible. In time, even the \textit{atrium} was adapted so as to accommodate garden elements. The \textit{compluvium} was widened until the area looked almost like another peristyle, and plants were grown in purpose-built pots or troughs around the \textit{impluvium} below, which itself became a water basin, often for a fountain. This development

\textsuperscript{12}Note, however, that not all houses followed this uniform pattern. Jashemski observes, for example, that there are 38 known houses at Pompeii which have interior gardens, but no surrounding porticoes. Instead, windows provided views into these \textit{horti} (Jashemski 1994: 239. Cf. 1979: 22).
can be seen in the House of the Silver Wedding at Pompeii, a residence which had been built during the Samnite period, before the introduction of aqueduct water to the city. After the building of the Serino aqueduct, significant alterations were carried out which allowed for this water to be piped directly into the house. The original function of the impluvium as a catchment basin for rainwater was, therefore, no longer considered essential, and a decorative fountain was built in the pool. The probable addition of potted plants would have enhanced the sense of an ‘indoor garden’. In other cases, the transformations were even more dramatic, and traditional atria all but disappeared, with the majority of the central area of the house being taken up with a peristyle, and the street entrance leading directly into a vestibulum (fig. 4.0).

![Fig. 4.1. Roman peristyle garden. House of the Vetti, Pompeii.](image)

The chief water supply to the horti of dwellings in towns prior to the introduction of an aqueduct was the rainwater cistern, which was located beneath the atrium or peristyle, and from which water had to be drawn manually. This meant that any plants in the garden needed to be species which required little watering. For this reason, trees were especially common in pre-aqueduct gardens, since they required watering only until they had become

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13 Jashemski 1979: 90-91. Cf also the House of Loreius Tiburtinus at Pompeii, and the House of the Relief of Telephus at Herculaneum (Farrar 1996: 5; 1998: 19; Jashemski 1979: 45). In these houses, integral planting troughs had been built to surround the impluvium (see Bowe 2004: fig. 40).
14 See ch. 1: 9 for the operation of cisterna.
established. Water features were also much rarer prior to the aqueducts, although certain methods did exist to enable them to function. Admittedly, this was substantially easier on rural properties which possessed their own springs or streams and natural slopes to increase water pressure. Hadrian’s villa at Tivoli, for example, possessed no less than thirty single fountains, twelve multiple fountains, six grottoes and twelve pools and basins, all made possible by the close proximity of the property to a river. Within the urban setting it was by no means impossible to build water features within one’s garden, but this entailed considerable planning and engineering (see below).

It has been said that the advent of the aqueduct system brought about “almost a revolution in the art of gardening” in the Roman world. In place of the traditional simple tree planting, more elaborate low plantings of shrubs and flowers, which required more frequent watering, became possible. Furthermore, these city-dwellers now had the opportunity to build fountains, pools and nymphaeae, which greatly altered the appearance of most gardens, and enhanced their individual characters.

A valuable insight into what some of these horti may have actually looked like can be gained from a study of the many garden wall paintings that survive from the Vesuvian cities. Painting garden scenes onto the walls which enclosed a real garden was a common way of making a more modest garden appear larger. Often these paintings would depict a fence in the foreground, with a whole new garden beyond containing plants, trees, sculptures, pools teeming with fish, and fountains with birds perched on the rims. These lively scenes can help to engender some impression of what the real garden may once have looked like, and can also help to identify the various species of plants and animals that may have been common in the ancient Roman domestic garden. In certain cases, however, such as at Pompeii, one might wonder whether some of the more elaborate ‘painted gardens’ were an effort on behalf of the merchant class to mimic the gardens and country estates of the aristocracy in the only way

16 The House of Polybius at Pompeii contains a garden which was not watered by an aqueduct supply, and accordingly, very little evidence has been found for small plantings. Instead, excavators uncovered the root systems of five large trees and eight smaller ones which had been started in pots. A mound of dirt and a channel for water surrounded six of the young trees (Jashemski 2000: 51-2).
17 Columella (10.23-24) and Pliny (Nat. 19.20.60) testify to the importance of siting a villa garden close to a spring or stream for irrigation, while Cato (1.7) notes that a well-watered garden is second only to a vineyard as the most important feature of a farm. Despite the fact that these authors are referring more to productive gardens than pleasure gardens, the fundamental need for a reliable water source, if only for irrigation purposes, remains clear.
19 On the nature of this type of planting, see Plin. Ep. 5.6.16-17.
21 Similar methods are still employed today. In the artificial tropical rain forest which has been built at the Otago Museum in Dunedin, a mirror covers one entire wall. This is very effective in creating the illusion of a much greater area.
they were able. Indeed, the garden features often suggested in the paintings would have been far too large in reality to fit into their actual garden. This is especially true, too, in cases where mountains, lakes and streams and wild animals or game are also depicted.

Finally, by no means was the love of gardens limited to the Roman aristocracy or merchant class. Tantalisingly, several ancient authors refer to *insula*-dwellers growing plants on the window ledges of their *cenacula*, although any archaeological evidence for this is sadly lacking. Martial (11.18) refers to his own efforts at this ‘window-box’ gardening, while Pliny (Nat. 19.59) maintains that the practice was intended to provide an ‘experience of the countryside’, and laments that the frequency of burglaries has forced these people to block out any such view with shutters. Both the Elder and Younger Seneca (Con. 5.5; Ep. 122.8) refer also to roof gardens, although these too are undetectable archaeologically, since in most cases upper storeys and roofs do not survive. Archaeological evidence has indicated, however, that the tenants of some of the more spacious *insulae* at Ostia enjoyed communal gardens, complete with working fountains. No doubt the provision of such amenities would have meant higher rent for the inhabitants. If this was indeed the case, it was a cost which evidently these Romans, who did not possess the necessary land or finances to build their own private garden, regarded as worthwhile.

**Fountains and Nymphaea**

The sight and sound of water trickling from a naturally-occurring spring (*fons*) had always been regarded by the Romans with a sense of wonder and awe, and as a consequence, many such sites became revered as possessing supernatural qualities. The agricultural writers advised building a *villa* close to a natural spring wherever possible, and shrines or rustic *nymphaea* were often constructed near or over these water sources to pay tribute to the deity who was thought to preside over them. City-dwellers lacked natural springs of course, but certainly not the desire to express their fascination with them. Man-made *fontes* became a popular means by which the natural world could be recreated, or at least recalled, in the urban environment.

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24 We might also recall here Juvenal 3.270-1; perhaps flower pots, too, were occasionally among those projectiles which crashed down upon the heads of passers-by.
25 The so-called ‘Garden Houses’ at Ostia contain such a garden (Farrar 1996: 6)
26 For the Roman preoccupation with springs and their qualities, see ch 1: n. 9.
27 Col. 1.5.2; Var. R. 1.11.2.
Fountains in houses with no aqueduct supply

As mentioned earlier, fountains were not unknown in pre-aqueduct gardens, but they did require a considerable degree of forethought. Water will rise as high as its source, a fact recognised by Pliny (Nat. 31.57), so in order to make a fountain work without a continuous piped supply, the Romans constructed special holding tanks above their fountains to allow water to flow by gravity to the outlets. These tanks could either be directly filled by rainwater or indirectly by slaves, using water drawn manually from an underground cistern. To minimise the potentially unsightly visual effect, fountain tanks were often installed out of view behind a false garden wall, in a nearby service room, or in a space in the roof.29 Fountains which operated from holding-tanks were, of course, unable to play continuously and so were only used for special occasions such as festivals or dinner parties. On these occasions, the fountain would function for as long as the water in the holding tank lasted, with the overflow usually being used to water the surrounding garden.30 If this fell short of the desired timeframe, the tank could be topped up by slaves. To ensure maximum running time, therefore, most of these fountains possessed only small outlets, which allowed for no more than a gentle burbling of water, or a low jet. Nonetheless, even this would have had a pleasing effect as it evoked the trickling of a small, natural fons.31

Fountains in houses with an aqueduct supply

Once towns and individual houses were connected to aqueduct-borne supplies, the potential for garden fountains expanded dramatically.32 With a continuous source now assured, fountains were not only able to operate continuously, but could also match the more elaborate types previously only found on rural estates with their own springs or streams. The possession of such fountains thus became indicative of a degree of wealth and luxury which had formerly been associated exclusively with the country estates of the elite. Water was conducted to fountain outlets via lead piping,33 and although this was not capable of conducting water under very high pressure, a much greater range of fountain forms became

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29 Bowe 2004: 32; Farrar 1998: 86. Evidence for two roof tanks has been found at the House of Julia Felix at Pompeii (see ch. 3: 83).
32 This may be clearly demonstrated by Pliny the Younger's contrasting descriptions of his Laurentine and Tuscan villas (Ep. 2.17 and 5.6 respectively). He laments that the one thing the former lacks is running water (although it does have wells or springs nearby), and it is interesting to note that this comprehensive description of the house and its grounds does not include a single fountain. Conversely, his villa at Tusculum suffered no such drawbacks, and his description of this estate includes numerous fountains and pools of varying sizes, as well as a bath complex and water stibadium.
33 See ch. 1: 12-13 for the supply of aqueduct water to Roman houses. Incidentally, the lead piping that supplied the twelve fountains in the House of the Vettii, unlike many others in the city, have been so well-preserved that it was possible in modern times to bring them back into working order (Jashemski 1979: 38; 1981: 40).
possible, which included everything from urn and bowl fountains to elaborate façade nymphae."34

**Ur"n and "bow"l fountains**

The so-called ‘urn’ or ‘bowl’ fountain is one of the most common fountain types to be depicted in garden frescoes, where they often act as the central focal point of the composition. As a rather charming touch, birds are frequently shown perched on the rim, drinking the water contained within (fig. 4.2). These fountains, usually made either from stone or marble, are well-represented archaeologically also, and the evidence for plumbing in these reinforces the artistic portrayals of a characteristically low, bubbling jet of water which wells up from the centre (fig. 4.3).

![Fig. 4.2. Garden fresco depicting a bowl fountain in operation. House of the Marine Venus, Pompeii.](image)

As their names suggest, urn and bowl fountains are generally found either in the shape of an urn, with handles jutting out each side, or as wide-brimmed bowls with fluted sides, raised on elaborately carved bases and pedestals. Individual types, however, could vary greatly in size, style and decoration. Overflow water from these fountains was sometimes caught in shallow paved depressions, but since both the water pressure and volume were low, it was simply often left to trickle into the surrounding garden; an economical method of

irrigation in a hot climate. Indeed, in the description of his villa at Tusculum, the Younger Pliny (Ep. 5.6.20) mentions that a marble fountain basin stands in the centre of a courtyard, "...watering the plane trees around it and the ground beneath them with its light spray." (Inter has marmoreo labro aqua exundat circumiectasque platanos et subiecta platanis leni aspergine fovet.) Furthermore, many of these bowl fountains had fluted sides and scalloped rims, ensuring that water overflowed in small, controlled rivulets rather than a continuous sheet of water.

![Fig. 4.3. Bowl fountain. House of the Cæci, Pompeii.](image)

**Waterspouts**

Perhaps the next most common form of fountain present in the Roman garden was the waterspout: a jet of water made to pour from an outlet, whether this be a 'mask' or other such aperture. Waterspout fountains in the form of fluvial masks were often placed against garden walls, with the water falling from the open mouth into a pool below. Theatre masks, either comic or tragic, were common (fig. 4.4), as were masks depicting river gods, drunken

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35 Cf. the two fountains in the middle of the hortus of the House of the Vettii. Jashemski has observed that these were deliberately given very small pipes so as to limit pressure and volume and allow the overflow to be absorbed by the surrounding garden (Jashemski 1979: 38).

36 Cf. public drinking fountains; ch. 1: 22, figs. 1.3-1.4.

37 These were sometimes used in isolation to personify a water source, in recollection of the sacred natural springs (Farrar 1998: 93).
satyrs (fig. 4.5), or wild animals. Of the latter, a lion’s face was an especially popular motif, and these can be found in gardens across the Roman world.38

Waterspouts were not always attached to walls, though. In many other cases, they form part of a free-standing fountain sculpture, where water is conducted via lead piping through the centre of a figure so that it can be made to appear as though it is pouring from the figure’s mouth.39 Animals were again popular for this type of fountain, especially lions, dolphins and fish, but birds, bulls,40 and even striking serpents have also been found.

Interestingly, with very few exceptions, water was never designed to flow from the mouths of human figures. It has been suggested that this may have been regarded by the Romans as crude and vulgar, as though the person was spitting or vomiting.41 This did not

38 Incidentally, the practice of using animal faces for fluvial masks does not appear to have been a Roman innovation, but was common in the Greek world also. Such fountains are depicted in Classical Greek vase paintings, while the oldest surviving animal-faced water spout is a lion from a pedestal at Olympia, which dates to the mid seventh century BC (Andersson 1990: 212).

39 It was also possible to create multiple jets by allowing two or more spouts to share the same pipe, or by making numerous holes in a bronze or stone object, such as a pinecone (see Farrar 1998: 92).

40 The small bull in the atrium of the Pompeian house for which it is named (The House of the Little Bull) is one of the most prominent examples. This sculpture stood on a 0.80m high pedestal on the rim of the impiuvium. A lead pipe, which was removed soon after excavation, originally fed water up between the bull’s legs, passing through the centre of the body, before spurting from an outlet in the bull’s mouth, falling to the impiuvium below (see Andersson 1990: 208-214; fig. 5).

preclude human figures from acting as fountain sculptures, however, and another popular waterspout motif was designed especially for use with human sculptural figures; that of the figure holding an upturned water vessel, from which water pours continuously. This figure is often a child, or ‘putto’, who struggles to hold a *hydria* or *amphora* on his shoulder, or carry it in his arms (fig. 4.6). Not surprisingly, water deities such as nymphs and river gods are also common, sometimes in combination with their watery attendants (fish and other sea creatures), who in such cases can also act as the waterspouts: the working part of the fountain.

![Putto and urn fountain figure. Villa Cynthia, Tivoli.](image)

These free-standing fountain sculptures were constructed either from marble or bronze. The latter could accommodate the necessary piping much more easily. A bronze statue could be made with a hollow core to take piping up through the centre, whereas it was more difficult to chisel out a space through the centre of a marble piece. In these instances, piping could be hidden inside a vessel, or by placing the entire sculpture against a wall or inside a niche.42 Bronze fountain sculptures, however, could be placed on the edges, or as the centrepieces of pools, whether on an island or pedestal, or as though emerging from the water itself.

**Water staircases**

Another popular type of garden fountain was that which allowed water to cascade down a flight of stairs into a pool or basin below. Water staircases were designed to imitate natural waterfalls with the sight and sound of rushing water, and may be found set in specially-designed niches such as those of *nymphaea*, or against garden walls. Usually built of stone, the steps could also be constructed from concrete and decorated with coloured tiles.

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or mosaic. The steps were typically straight, although when space allowed it, semicircular flights of stairs which imitated the seating in a Roman theatre could also be built.\textsuperscript{43}

Free-standing water staircases were a further elaboration on the regular type. These were smaller and more decorative, and as their name suggests, were not designed to stand against a wall, but rather in the centre of a garden. Water tumbled from an outlet at the top, falling down four staircases on each side of the fountain structure. Sculptured relief panels, depicting themes or objects from nature, and/or garden deities and their attendants, commonly alternated with the staircases on the exterior. Most of the surviving examples of free-standing water staircases are now housed in museum collections. One example, however, may be seen \textit{in situ} in the garden of the House of Loreius Tiburtinus at Pompeii (fig. 4.7). Placed on top of an ‘island’, this fountain originally functioned as the apex in a series of interconnected pools.

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{water_staircase}
\caption{Water staircase. House of Loreius Tiburtinus, Pompeii.}
\end{figure}

\textsuperscript{43} An example of such a water staircase may be found in the curved end of the ‘stadium garden’ of Hadrian’s \textit{villa} at Tivoli (Farrar 1998: 89).
Nymphaea

Natural caves and grottoes were regarded by the Romans as the dwelling places of nymphs, semi-divine creatures who were thought to preside over the water source which issued forth from such places. Shrines known as nymphaea were often constructed around these rustic sites, in honour of the nymphs who lived there, and sometimes the mouth of the spring itself would be covered by a fountain mask through which the water could flow. With the introduction of aqueduct-supplied water, town-dwellers sought to evoke this rustic atmosphere by creating their own garden nymphaea. These were by nature less ‘rustic’ in appearance, although efforts were often made to recreate this impression. Purposely rough stone was used in imitation of the walls of a natural cave (fig. 4.8), and seashells could be applied to suggest a sea grotto. A sometimes elaborate combination of niches, pools, statuary and fountains would complete the structure. Many of these nymphaea remain today in varying states of preservation, but the most intact examples, unsurprisingly, come from Pompeii. From these, two main types have emerged, both of which combine several different water features to create the desired effect.

Fig. 4.8. Garden grotto with inlaid pumice detail. House of Loreius Tiburtinus, Pompeii.

44 Pliny (Nat. 36.42.154) recommends pumice as being especially good for this purpose; this is also testified archaeologically, as several examples from Pompeii have been found to possess pumice applications (for instance, the nymphaeum in the House of the Grand Fountain at Pompeii).

45 Like their fresh-water counterparts, sea grottoes held a certain fascination for the Romans. Inspired by myths relating to the South Italian coast (cf. Plin. Nat. 3.5.59), the Roman imperial elite of the first century AD sought to acquire their own private sea-scapes. The most famous of these is the grotto which was incorporated into the villa of Tiberius at Sperlonga, thought to be located near the mythical home of the Homeric witch Circe. This was a natural sea cave, which was enhanced by the creation of artificial pools, fishponds, dining couches and monumental mythically-inspired sculpture, to serve as a private triclinium (cf. Suet. Tib. 39; Tac. Ann. 4.59; see also Bowe 2004: 17, 58, 60-61; Glaser 2000b: 458-461; Ricotti 1987: 138-169). It is generally accepted that Tiberius was not the original creator of this grotto; rather it is thought to have been built by one of the great Republican piscinarii (see below), and taken over by the emperor in later times (Ricotti 1987: 168, n. 12).
Fig. 4.9. *Aedicula nymphaea*. House of the Grand Fountain, Pompeii.

*Aediculae nymphaea* were, as their name suggests, akin to small domestic shrines. They were often similar in appearance to *lararia*, but with the addition of a water supply, so as to act as a shrine to the nymphs. They were generally placed against garden walls, which meant that they could not be incorporated easily into the ideal four-sided peristyle garden. Consequently, most are found in smaller horti such as that of the House of the Grand Fountain (fig. 4.9) and the House of Marcus Lucretius at Pompeii, or the House of Fortuna Annonaria at Ostia. They were frequently placed against the rear wall of the garden, where their effect would be maximised by the axial layout of the house. A guest entering the house, for instance, would be able to look down the length of the *atrium* and see the *nymphaeum* in the garden beyond. *Aediculae nymphaea* were usually covered in painted plaster, but there are several Pompeian examples that are beautifully decorated with coloured mosaic and shells. Water was conducted through a lead pipe at the rear and made to ‘spring’ from an outlet at the top, which was often in the form of a fountain statue or fluvial mask personifying a water deity. It then cascaded down a small set of steps, before falling into a catchment basin below, in which additional fountain figures sometimes stood. The water element was essential in

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46 Cf. also the House of the Dioscuri and the House of the Tragic Poet at Pompeii.
47 Farrar 1996: 24, 1998: 42; Jashemski 1979: 41. See also fig. 4.15, below.
48 For example, the *nymphaeum* in the garden of the House of the Small Fountain (Bow 2004: fig. 23).
these *nymphaea*; even if this was no more than a low-pressure trickle, it would still serve to recall the features of a natural spring.⁴⁹

Facade *nymphaea*, on the other hand, were an elaboration and enlargement of the more simple *aedicula* form, and as such, much further removed from the original bucolic symbolism. They often utilised an entire wall, and combined several *aedicula* niches into one grand, architectural whole. The *nymphaeum* in the House of the Little Bull at Pompeii is a good example of this. It measured 6.65m long and 4.80m high, and water cascaded down staircases in three separate niches, falling into a communal pool below.⁵⁰ The *nymphaeum* in the House of Cupid and Psyche at Ostia is another, even more elaborate example of a façade *nymphaeum*.⁵¹ This consisted of five marble-clad niches separated by columns. Water poured from fountain figures set into each niche and down three steps before entering a shallow basin. Influenced, perhaps, by the monumental public fountains of the Imperial period, this type of *nymphaeum* became popular in gardens across the Roman world, and continued to be built right through until Late Antiquity.⁵²

**Pools and piscina**

Fountains and *nymphaea* were not the only distinctive water features in Roman *horti*. With the introduction of aqueduct-water, pools of varying sizes abounded as well, from small catchment basins for fountains to large *piscinae* that dominated entire garden areas, leaving little space for plantings.⁵³ These pools varied widely in design as well, from the simplest square or rectangular shapes, to the more complex symmetrical arrangements of recesses and curves. Farrar has classified the most common of these designs into seven identifiable types, labelled ‘A’ through to ‘G’ (see appendix 3).

*Opus signinum* was used in the construction of most pools to make them watertight, and inside surfaces were coated with waterproof plaster which was often painted in shades of blue.⁵⁴ Fish and other aquatic creatures and plants were also a common decoration, both in

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⁴⁹ Cf. Bowe 2004: 25: “At the very least, a *nymphaeum* was expected to have a simple trickle of water representing a natural spring, a favoured location for nymphs in the wild.”

⁵⁰ See Andersson 1990: 221-224 and Jashemski 1979: 43-44 on this *nymphaeum*.


⁵² For instance, the pools in the *horti* of the House of the Coloured Capitals and the House of the Citharist at Pompeii (Jashemski 1979: 33; 1987: 40).

⁵³ Evidence of this painting may still be seen in the large pool in the House of Meleager at Pompeii, which had originally been surrounded by plants (Jashemski 1987: 39-40). Cf. also in the House of the Hunt (Farrar 1996: 26, n.14), and the House of the Golden Cupids (Jashemski 1979: 34). See Farrar 1998: 68-69 for more detail on the physical construction of water basins.
painted plaster and, alternatively, in coloured mosaic tile. Such decorated interiors would have helped to make the water appear more visually appealing by not only recalling the appearance of natural pools or perhaps even the ocean, but also by masking, to a certain degree, residue and grime. It is clear, however, that some cleaning must have been undertaken from time to time, or else any decoration would eventually have disappeared under deposits of silt or slime, thus defeating the aesthetic purpose entirely.

Some of the larger garden pools were no doubt used for swimming, although their depth may testify to another popular recreational pastime; that of fish keeping. Pliny (Nat. 9.80.170) informs us that artificial fishponds (piscinae) were first devised by Lucius Licinius Murena, Consul in 151 BC. Fish raising, or ‘pisciculture’, subsequently became an extraordinarily popular and fashionable hobby amongst the upper stratum of Roman society in the late Republic. It came to symbolise the “extravagance and private luxuria” enjoyed by certain aristocrats of this period, whom Cicero (Att. 1.19.6, 1.20.3, 2.9) scornfully branded the ‘fish-fanciers’ (piscinarii). Indeed, extraordinary sums of money were spent and complex technologies developed so as to construct huge salt-water piscinae at seaside villas and equip them with fish of many different species. The most famous example of this is that of Lucius Licinius Lucullus, consul of 74 BC, who reportedly cut a channel through a mountain to allow seawater to circulate in his fishponds. Lucullus’ efforts were considered by many as a most ‘un-Roman’ form of extravagance, certainly unbecoming for a traditional Roman aristocrat, and so consequently earned him the famous label Xerxes in a toga.

Nevertheless, his example set a new trend for luxury and excess.

55 Water plants and fish were painted on the inside of the large pool in the garden of the House of Pansa at Pompeii, although these no longer survive (Jashemski 1987: 39). Mosaics which depict marine themes do still survive in situ at Dougga in North Africa (Farrar 1996: 21; 26, n. 18).
57 It is generally accepted that pools with a depth of at least 0.50m are suitable to contain fish (Farrar 1996: 21, 1998: 70).
58 Cf. Col. 8.16.5. According to Varro (R. 3.3.10), Murena received this cognomen for his close association with the fish species known as murenae – probably to be interpreted as ‘eels.’
60 Cf Var. R. 3.17.2-3: Primum enim aedificatur magnop, secundo impleitur magnop, terto aluntur magnop. Hirrus circum piscinas suas ex aedificis duoden milia sextertia capiebat. Eam omnem mercedem escis, quas dabat piscibus, consumebat... (“For in the first place they [fishponds] are built at great cost, in the second place they are stocked at great cost, and in the third place they are kept up at great cost. Hirrus used to take in 12,000 sesterces from the buildings around his fishponds; but he spent all that income for the food which he gave his fish...”).
61 Of these, murenae enjoyed a special popularity, and seem to have sparked some eccentric behaviour in their owners. The orator Quintus Hortensius was said to have been more concerned about his sick murenae than his sick slaves (Var. R. 3.17.8), and reputedly wept when his beloved eel died (Plin. Nat. 9.172). Marcus Licinius Crassus allegedly adorned his favourite murena with earrings and small necklaces, also mourning its death like that of a daughter (Macro. Sat. 3.15.14).
The popularity of pisciculture continued into the early Imperial period, although the conspicuous extravagance exhibited by the Republican piscinarii was discouraged by Augustus, and later emperors often assumed these elaborate facilities for themselves. With the widespread diffusion of aqueduct systems and advances in construction methods by the mid first century AD, the cost of creating and maintaining piscinae was significantly reduced, which meant that it became possible for those citizens of lesser means to be able to enjoy keeping fish in small freshwater pools in their own gardens. Such small-scale pisciculture was a pastime through which the symbolism of financial and social success, previously reserved for only the upper echelon of Roman society, could be recalled.

Through his comprehensive analysis of the surviving fishponds of Roman Italy, Higginbotham has identified Pompeii as providing "...the most accessible and best documented group of piscinae built within an urban and, specifically, a domestic setting." A study of these shows that at least in this town, fishponds tended to have enjoyed a prominent place in the hortus, a position which was often enhanced by the addition of other complementary garden features such as ornamental plantings, pergulae (vine arbours), nymphaea, water staircases and fountains. Furthermore, over twenty Pompeian piscinae are situated in close proximity to garden triclinia areas, presumably so that their view may be enjoyed whilst dining. Sometimes, they even form the centrepiece of the arrangement, perhaps acting as an extravagant water mensa (see below).

The pools themselves were filled with aqueduct water, tapped from the main town supply. The Romans clearly realised the importance of continually circulating water in fishponds, for in most cases, both inlet and outlet holes are present in the ponds. In many cases, too, the addition of fountains was not merely for decorative purposes; they also served to aerate the water and help create a circulating current.

A further architectural feature typical of domestic fishponds was the construction of square or circular openings into the interior walls. Sometimes these were simply holes lined with stone, but often amphorae were set into the concrete so that their mouths opened out into

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63 Higginbotham 1997: 63.
64 For an intriguing discussion on the social significance of the decline of the large fish farms and the traditional Roman elite, see Higginbotham 1997: 62-64.
65 Higginbotham 1997: 32.
66 For example, the biclinium of the House of Loreius Tiburtinus, or on a grander scale, the grotto of Tiberius at Sperlonga. Here, diners could watch fish swimming in a pool in the centre of the triclinium.
68 As Pompeii lacked a comprehensive sewer system, excess water from pools was usually made to drain into the surrounding garden. Overflow from the piscina in the House of Julia Felix, for example, was discharged through clay pipes which were set below the top of the pool. In this way, the water level in the pool was kept from spilling over the top, and the excess used to irrigate the soil without creating waterlogged pools on the surface (Higginbotham 1997: 14-15).
the pool (fig. 4.10). These recesses imply a certain degree of concern for the welfare of the fish, as the creatures could use them not only as a place in which to lay their eggs, but also as a shady retreat to escape the hot sun. In the case of *murenae*, such places would also effectively imitate their natural environments, as Columella (8.17.2) records (fig. 4.11). In addition, the semicircular niches such as those of pool types B, C, D and G in Farrar’s typology would have also provided additional shaded areas for the fish, and spaces in which smaller fish could hide.

Not all citizens, however, could afford to raise and keep fish in their gardens. An alternative was to have them painted on the bottom of pools and basins, and use the movement of the water to create the illusion that these artificial creatures were actually swimming. These paintings, though, were not always limited to the insides of pools. An assortment of aquatic creatures often feature in the garden frescoes of Pompeian houses. In a small peristyle in the Villa of Diomede at Pompeii, for example, there was a painting of a blue pool filled with all manner of sea creatures, including octopus, wrass, needle fish and a moray eel. Likewise, a raised balustrade surrounding a garden *nymphaeum* in the House of the Centenary was decorated with a representation of a fishpond well-stocked with sealife,

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70 Cf. Col. 8.17.6: *Debeat tamen similes velut cellae parietibus excavari, ut sint, quae protegent refugiones ardores solis*... (“There ought, however, to be excavated in the sides of the pond what may be described as a series of similar cells which may serve to protect the fish when they want to avoid the heat of the sun...”).

71 Jashemski 1979: 110. This painting, sadly, survives today only in a drawing made at the time of excavation (Jashemski 1979: 109, fig. 179).
including a moray, a lobster, porgy fish, mullets and cod, a wrass and three molluscs. Similarly, fish mosaics appear to have been a relatively common addition to indoor *triclinia* areas, and may be found centrally placed in a shallow recess in the floor, so that guests could gaze down not on a living pond, but one “frozen in mosaic” (fig. 4.12).

Fig. 4.12. Mosaic depicting various species of marine fish. From the floor of the *triclinium*, House of the Faun, Pompeii.

What is interesting about all these representations is their preoccupation with sea fish. As Jashemski rightly observes, “Such an assortment of sea creatures would be found only in an elaborate pool connected with salt water, as the large pools of seaside villas sometimes were.” In other words, the residents of Pompeii, who were limited to freshwater ponds,

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72 Jashemski 1979: 110, fig. 181.
73 For instance, the House of the Faun, the House of Gavius Rufus and the House of Arianna (all from Pompeii) (Andersson 1990: 229, fig. 16).
74 Andersson 1990: 229.
75 Jashemski 1979: 110.
76 The presence of plumbing has provided evidence that the Pompeian pools were mostly filled with water drawn from the town supply. It is most unlikely that saltwater would have been transported from the nearby bay, as there was no way that this could be easily renewed (which was why saltwater pools could only be built at great cost, by the wealthy owners of seaside villas). Certain sea fish (namely the mullet and the *murena*) could adapt to fresh water, though, and these would most probably have been the chief species kept by the Pompeians (Jashemski 1979: 108-109).
could enjoy their paintings or mosaics, and imagine that they owned a huge and elaborate saltwater fish-farm. It is also a testament to the central importance of seafood in the Mediterranean diet, which, incidentally, leads us to our next garden feature.

**Water triclinia**

The discoveries of masonry triclinia couches within garden settings across the Roman world has testified to the widespread popularity of ‘alfresco’ dining amongst the Romans. In Pompeii alone, for example, at least fifty garden triclinia and six biclinia have been uncovered. Garden triclinia (also referred to as ‘summer triclinia’) follow the typical u-shaped structure of regular, indoor dining suites, with two parallel couches joined at one end by a third couch. Each of these couches customarily incline towards the centre of the arrangement and are large enough to have accommodated three reclining diners. Their hard marble or concrete surfaces would have been made more comfortable by mattresses and cushions. The fourth side of the square was left open to allow slaves access to the table, which typically stood in the centre. This table was not intended as a repository for individual plates, but rather as a central serving table, from which diners could help themselves to communal dishes. Finally, a narrow shelf was commonly built into the edge of the couches as a place to rest cups, and the entire setting would have been shaded by a vine-covered arbour or shade-cloth (velum).

Variations on this standard triclinium form also existed; the less popular biclinium style consisted of only two opposing couches, whilst the more elaborate stibadium encompassed one large curved couch centred around a circular table or pool. This style became more popular in the later Imperial period, and so more commonly appears in wealthy houses and artistic representations from the third century AD onwards. Stibadium which date to the first century have occasionally been found, however. One example survives from Pompeii, and contemporary literary references testify to its existence at this time also; Martial (14.87) refers to a stibadium that was inlaid with tortoiseshell, while the Younger Pliny (Ep. 5.6.36) describes the outdoor dining setting at his Tuscan villa as being a “curved dining seat of white marble” (...stibadium candido marmore...).

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77 Andersson 1990: 229.
78 Outdoor garden settings have even been discovered at the Villa of Rockbourne in Britain (Farrar 1998: 40).
79 Farrar 1998: 40. It is most probable, too, that in other instances where solid dining couches are not present, portable, wooden dining furniture may have been moved outside the house when required (cf. Andersson 1990: 226. Cf also Dunbabin 1991: 123-124 on moveable triclinium couches).
81 Jashemski 1979: 90.
A significant innovation on the standard summer *triclinium* arrangement was made with the introduction of water. Approximately ten of the outdoor *tricina* and *bicinia* of Pompeii involve water in some way, and examples exist from elsewhere, also. Many of these are grouped around a pool or fountain, and are known as ‘water *tricina/bicina*’, a uniquely Roman garden feature.

An interesting example of a *triclinium* that utilises water may be seen in the garden of the House of the Silver Wedding. This dining set has a circular marble table at its centre, which possesses a hole to allow for a jet of water. Since a stopcock to cut off the water supply was found close by, it has been assumed previously that this table functioned as a fountain only while the setting was not in use, and was consequently shut off for mealtimes. This is contradicted, however, by depictions of dining scenes found painted on the sides of the *triclinium* couches in the House of the Ephebe at Pompeii. Here central ‘table-like’ fountains are clearly shown in operation while dining is in progress. Another explanation has been put forward by Bowe, who has interpreted an identical arrangement in a recently-excavated *triclinium* at Murecine, near Naples, as serving to wash or cool food before eating. I am not convinced, though, that this is a satisfactory explanation either. The ‘washing’ of food, if undertaken at all, is one of the most preliminary steps in its preparation and would, therefore, most probably have been carried out by slaves in the kitchen, rather than in front of the host and his guests. The cooling of food might be slightly more likely, although in practical terms, the continual splashing and flow of water over and around food, would not necessarily have been desirable either.

To understand the inclusion of such water jets in place of the table (*mensa*), we perhaps need to remind ourselves that dining tables were not as indispensable for the Romans as they are for us today. They were not used for eating from, but as a space on which to place communal dishes. It is quite possible, then, that when a fountain took the place of a central *mensa*, the latter was simply relocated to another space nearby, or a portable one placed

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83 A summer *triclinium* found at Vienne, for example, was centred around a modest pool and fountain, while a *sibadium* discovered in a garden at Italic in Spain was situated alongside a decorative fishpond (see Farrar 1998: 40-41).

84 Jashemski 1979: 91. Stopcocks, or ‘taps’ appear to have been a relatively common plumbing apparatus to help regulate or shut off water flow; cf. Plin. *Ep.* 5.6.40: *Fonticuli sedilibus adiacent, per totum hippodromum induci strepunt rivi, et qua manus duxit sequuntur: his nunc illa viridiam, nunc haec, interdum simul omnia lavantur* (“By every chair is a tiny fountain, and throughout the riding-ground can be heard the sound of the streams directed into it, the flow of which can be controlled by hand to water one part of the garden or another or sometimes the whole at once”). See Hodge 2002: 322-326 and Jansen 2001:29-30 for a fuller discussion on the nature of Roman domestic water taps and their operation.

85 Andersson 1990: 227.

86 Bowe 2004: fig. 43.
alongside the couches.\textsuperscript{87} In the case of the ‘table fountain’ in the House of the Silver Wedding, residents had the option of either turning the water off and using the circular top as a table, or leaving it on to enjoy it as a fountain.

While the fountain in the \textit{triclinium} of the House of the Silver Wedding did not stand within a basin which collected the overflow water,\textsuperscript{88} there certainly were other Roman water \textit{triclinia} that were arranged around a central pool or water channel. Like the fountains discussed above, these pools also take the place of the table, and so are known by the term ‘water \textit{mensa’}. One of the best preserved examples of a water \textit{biclinium}, complete with water \textit{mensa}, may be found in the garden of the House of Loreius Tiburtinus. With its series of deep water channels (\textit{euripi}) interconnected with pools, fountains and \textit{nymphaea}, this elegant house contained arguably the most lavish use of water within a garden setting in all of Pompeii.\textsuperscript{89}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{biclinium.png}
\caption{Garden \textit{biclinium} with \textit{euripus} in foreground. House of Loreius Tiburtinus, Pompeii.}
\end{figure}

\begin{flushleft}
\textsuperscript{87} Cf. Andersson 1990: 228.
\textsuperscript{88} A shallow channel discovered near one of the couches indicates where the excess water was instead led into the garden for irrigation (Jashemski 1979:91).
\textsuperscript{89} See Jashemski 1979: 45-47. It is considered probable that, like other grand houses surrounding the Pompeian amphitheatre, the House of Loreius Tiburtinus was converted into a \textit{cauponae} (‘inn’) in the years immediately preceding the town’s destruction. This high-class inn would have served to accommodate patrons from out of town who had travelled to Pompeii to watch the gladiatorial games. It is possible also that local townsfolk whose houses were too small or modest to entertain guests, were able to hire out the facilities of such an establishment when they wished to hold a dinner party. Nevertheless, the water features that have made the house so famous were built before it was converted for this purpose (Ricotti 1987: 170-171).
\end{flushleft}
The *bi clinium* was built at the east end of the terrace-garden (fig. 4.13). The two masonry couches face each other over a pool, and an *aedicula nymphaeum* decorated with rocks and seashells stands at the head of the *bi clinium*, in place of a third couch.\(^90\) The *nymphaeum* originally contained a fountain figure, whose water filled the pool and subsequently flowed on into the *euri pus* which ran the length of the garden, although this has long since been removed and only the pedestal remains *in situ*. A small footbridge crosses the pool in front of the *bi clinium*, and a vine-covered trellis would have shaded the small setting.

We have already acknowledged that the central dining table was not indispensable, and have considered the possibility of another table placed nearby. This may have worked in some circumstances, but was this always the case, or was some alternative sometimes used? The first scholar to address this problem satisfactorily was Ricotti, who made the connection between water *triclinia/biclina* such as that in the House of Loricus Tiburtinus and the Younger Pliny’s contemporary description of the *stibadium* at his Tuscan *villa* (Ep. 5.6.37).\(^91\)

In the latter, a water *mensa* takes the form of a marble basin, and is used in the following manner:

\[
\textit{Gustatorium graviorque cena margini imponitur, levior naucularum et avium}
\quad \textit{figuris innatans circumit.}
\]

The preliminaries and main dishes for dinner are placed on the edge of the basin, while the lighter ones float about in vessels shaped like birds or little boats.

It is quite possible that such an unusual, but elegant method of serving food became fashionable amongst the elite during the early Imperial period. Indeed, some of the grandest examples of water *triclinia* are found in estates which belonged to the emperors themselves. The famous grotto of Tiberius at Sperlonga, for example, contained a magnificent *triclinium*, which was set on an island surrounded by a rocky fishpond filled with seawater. A small footbridge gave access to the island, and allowed the servants a place to stand when serving the meals. In Hadrian’s *villa* at Tivoli, there were no less than three grand water ‘tricliniar’ areas, which included a monumental *stibadium* set on the artificial ‘Canopus’.\(^92\)

Like many other fashions initiated by the aristocratic classes, the building of water *mensae* may well have been one that was eagerly emulated by the ‘nouveau riche’ class of wealthy merchants and freedmen, such as those who made up a significant portion of the population at Pompeii. Indeed, it is not difficult to imagine little dishes of food, like a

\(^{90}\) Cf. the water *triclinium* in the House of the Ephbe, where an *aedicula nymphaeum* emptied into a water channel that ran between the couches (Dunbabin 1991: 124, figs. 10-12).

\(^{91}\) See Ricotti 1987.

\(^{92}\) See Ricotti 1987: 174-181 for a detailed description of these impressive structures.
miniature flotilla, floating around the small pool in the *biclina* at the House of Loreius Tiburtinus.

Not all scholars have been convinced by this interpretation, however. Andersson, for one, refutes the connection between these water *mensae* and Pliny’s *stibadium*, stating that “No receptacle unmistakably designed to float has yet been found during the excavation of Pompeii”, and that, “Pliny’s description is obviously an imaginative creation described to impress the reader...”\(^93\) He not only fails to put forward an adequate alternative, however, but also does not consider the possibility that such vessels may have been made of light, perishable materials such as basketry or wood, which might not have survived to the present day.

![Fig. 4.14. Water triclinium. House of Julia Felix, Pompeii.](image)

Nevertheless, it is interesting to note that while some pools were clearly designed to act as water *mensae*, others simply could not have fulfilled this function. A *triclinium* set into an *exedra* in the garden of the estate of Julia Felix at Pompeii\(^94\) included a water staircase against the rear wall, which emptied into a small canal behind the couches, and then through a lead pipe into a shallow pool in the centre of the arrangement (fig. 4.14). It has been observed that this pool was set too far below the couches to have acted as a water *mensa*; the reclining diners would have found it very awkward to lean down and try to pick up anything from the

\(^{93}\) Andersson 1990: 228.

\(^{94}\) Like the House of Loreius Tiburtinus, this was another high-class inn that offered elegant dining facilities for hire.
surface of the pool. Moreover, it is too shallow to have held fish, which would have otherwise been a potential alternative use.

Ricotti has suggested that the answer may lie in the nature of this *triclinium* as a hired dining facility and the Roman customs associated with dining. As discussed in chapter 3, it was customary for Romans to have their feet washed prior to dining in a formal setting, and it was normal for the host to provide his slaves for this purpose. In a situation where the host had hired the facilities, however, it is possible that additional slaves were not available for such a task, and that guests had to perform this ritual themselves. This, Ricotti proclaims, is the ‘functional’ purpose of the pool in the *triclinium* of the property of Julia Felix, as she remarks that, “Nothing was made [by the Romans] just for the beauty of it.” This might be something of an over-generalised statement, however, and while it is quite feasible that guests to such dinner parties would have expected to wash their own feet, the suggestion that they did so in the central pool is perhaps a little too crass. I do not necessarily agree with the reasoning that *utilitas et decor* was always their motto, there is no reason why a pool could not have been included simply for its aesthetic beauty or to create a certain ambience, and a portable table placed nearby. The theory that such *triclinia* may have been used primarily for drinking rather than dining may also be worth considering, although, admittedly, to do so would be to enter a new area of research entirely.

**Interpretations**

Now that we have examined the many and varied water features common in the Roman domestic garden, it is necessary to consider the possible reasons why water was used in this way. What function did it serve in this context? Was it simply a matter of *ars gratia artis*, or was there some deeper significance?

**Self-display?**

For the modern observer, one of the most striking aspects of water use within the Roman household is the disproportionate amount that was given over to lavish display, or ‘luxury’, as opposed to more utilitarian purposes. In chapter 2 we saw how very little effort

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95 See Ricotti 1987: 172-173.
96 See ch. 3: 77-78.
97 Ricotti 1987: 172.
99 See Richardson 1988a: 295-296, 1988b: 305-312. Dunbabin agrees that it is likely that many *triclinia* served more for drinking than eating, but refutes the idea that they were used exclusively for the former purpose and never the latter (1991: 139, n. 25).
was generally made to conduct water into the service areas of houses, with slaves still having to rely on water drawn from a subterranean cistern for household tasks, even when that house received a piped supply. Indeed, the ultimate overall impression one gets from an analysis of the Pompeian evidence, is that domestic plumbing was installed solely to enable fountains and other water features to operate.\(^{100}\) It was by no means the case, though, that every house located in an area connected to an aqueduct system was itself connected to this supply.\(^{101}\) Nonetheless, it seems that those that were, chose to advertise this fact by using their water in the most conspicuous way possible. This did not include flushing toilets or washing floors, or even building private bath suites, as we saw in chapter 3 how relatively rare these were. Instead, they filled their gardens with formal plantings, pools and fountains - potent symbols of wealth, leisure (otium) and status.

By including water features in their private gardens, residents could promote the fact that they were influential enough to possess their own private water supply, which was not only supplied at a cost, but also required a *beneficium* from the emperor himself (*via* the water commissioners).\(^{102}\) The fact that this supply was then employed for non-essential purposes, which may be termed ‘luxurious’, effectively emphasised this fact still further.\(^{103}\)

It is not an overstatement to say that the introduction of the aqueducts brought about a transformation in the nature of Roman urban gardens. For the first time, town-dwellers who were not fortunate enough to own a country estate were able to create for themselves ‘a villa in miniature’ within the urban context.\(^{104}\) As Ling observes, “Among the most obvious tokens of villa imitation was the ornamental garden enlivened with sculptures and water displays.”\(^{105}\) *Nymphaea, piscinae* and water *triclinia* were features highly symbolic of wealth and status, and their importance was in many cases highlighted still further by their positioning. Higginbotham has observed, for instance, that nearly forty Pompeian *piscinae* are prominently located “…so as to be visible through the atrium and tablinum to clients and other such visitors to the house.”\(^{106}\)

\(^{100}\) Cr. de Kleijn 2001: 79.

\(^{101}\) Cr. Jashemski 1979: 53.

\(^{102}\) Cf. Ling 2005: 76-77.

\(^{103}\) Although it has long been the popular opinion that both public and private water features were designed to run continuously, wasting water in a wanton display of luxury, evidence has arisen in recent years for the employment of control devices such as stopcocks and regulating reservoirs (see esp. Bruun 1991: 110-114; Wilson 2001), suggesting a slightly more rational approach to water use. Studies undertaken around the Roman centre of Petra in Jordan have shown how engineers devised an elaborate system of water storage, transportation and reuse, which meant that even in this arid desert environment, luxuriously elaborate public pools, fountains, *nymphaea* and baths were able to function (see Bedal 2002).

\(^{104}\) Ling 2005: 75.

\(^{105}\) Ling 2005: 75.

\(^{106}\) Higginbotham 1997: 33, n. 90.
Indeed, the axial layout of the Roman house was often used to showcase indirectly a particular part of the residence that would otherwise be private. The axis was designed so as to allow guests and clients visiting the house an impressive vista from the doorway, through the *fauces* to the *atrium*, *tablinum* and then *hortus* beyond. Literary sources from different periods emphasise the importance of this view. Therefore, a strategically placed *aedicula nymphaeum* at the rear wall of a garden, such as that in the House of the Small Fountain or the House of Marcus Lucretius at Pompeii, would be conspicuously visible to anyone entering the house (fig. 4.15). Without being blatantly imposed on the guest, it would still immediately convey the knowledge that the owner of the *domus* possessed a piped water supply which allowed him to build beautiful and elaborate water features. In this respect, then, water was very much an agent of self-display, an indication of social position and affluence.

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Simple aesthetics?

Certain scholars have chosen to interpret the typically pragmatic Roman character as implying that they created nothing for beauty alone and that all objects must have served some functional purpose also.\textsuperscript{109} There is little doubt that the Romans were indeed a very practical-minded people. We need only recall the contrast drawn by Frontinus (\textit{Aq.} 16) between the 'idle pyramids' or 'useless' works of the Greeks and the indispensable functionality of Rome's aqueducts\textsuperscript{110} to see that there were certain individuals amongst them who were not only aware of this aspect of their characters, but also apparently rather proud of it. The Elder Pliny certainly seems to appreciate aesthetics more if the object or feature in question also has a utilitarian aspect. For example, in his \textit{Historia Naturalis}, he refers to several lakes and rivers as \textit{amoenus} ('delightful'), but those which are also \textit{navigabilis}, a means of trade and communication, are especially praised.\textsuperscript{111}

As Farrar notes, however, the Romans also admired display.\textsuperscript{112} This may have been simply because it gave them an opportunity to 'show off' their wealth (see above), something that was indisputably important to them. Nonetheless, in some circles there seems to have been a genuine appreciation of aesthetic beauty. As an example, we might consider the practice of commissioning copies of sculptural works of the famous Greek masters, which became popular in Rome from the late Republic onwards. Similarly, the obvious degree of planning and thought that went into creating the beautiful \textit{horti} of the Pompeian townhouses indicates a clear desire on the part of the owner to create an overall impression that was aesthetically pleasing. The various combinations of garden features all worked towards this end to some degree, with water playing a fundamental part.

The inclusion of fountains and \textit{nymphaea} within the garden, for example, was not so as to supply drinking water for the inhabitants; this they could draw from the nearest public fountain. Rather, the sight and sound of rushing, trickling or burbling water could be appreciated for its own sake and the visual and aural effects it created. This is attested by the Younger Pliny (\textit{Ep.} 5.6.23-24), as he enthusiastically describes a pool and fountain at his Tuscan villa:\textsuperscript{113}

\textsuperscript{109} See above, p. 116.
\textsuperscript{110} \textit{Tot aquarum tam multis necessariis milibus pyramidas videlicet otiosas comparares aut cetera inertia sed fana celebrrata opera Graecorum?} ("With these grand structures, so numerous and indispensable, carrying so many waters, who indeed would compare the idle Pyramids or other useless, although renowned, works of the Greeks?") For a similar attitude towards the pyramids of Egypt, cf. Plin. \textit{Nat.} 36.75: \textit{Dicantur obiter et pyramides in eadem Aegypto, regum pecuniae otiose ac stulta ostentatio...} ("...In Egypt too are the pyramids, which must be mentioned, if only cursorily. They rank as a superfluous and foolish display of wealth on the part of the kings...").
\textsuperscript{111} Plin. \textit{Nat.} 3.54 (Tiber), 5.71 (Jordan). See Beagon 1996: 287-289 for further discussion.
\textsuperscript{112} Farrar 1998: 83.
\textsuperscript{113} Cf. \textit{Ep.} 5.6.
Here is a small fountain with a bowl surrounded by tiny jets which together make a lovely murmuring sound... just below the windows in front is an ornamental pool, a pleasure both to see and to hear, with its water falling from a height and foaming white when it strikes the marble.

Flowing water would also sparkle in the sun, and the still water in a pool could be enjoyed for the sight of the fish swimming below, as well as its surface reflections. Bowe has observed that a shrine in the Villa of Diomede in Pompeii was strategically placed so as to be reflected in a nearby pool. Fountains had the added benefit of cooling and humidifying the air, which would have been extremely welcome in an often hot and dry climate. In the case of water triclinia, just the mere presence of water nearby would have had the psychological effect of helping diners feel cool and refreshed. Such a combination of water features contribute to an overall sense of the hortus as a place of leisure, a quiet retreat in which one could, in theory, forget the bustle of urban life.

Rus in urbe?

The Roman fascination with the natural world has been referred to at various points throughout this chapter. This fascination may have been bound up with the fondness that was commonly expressed by members of the aristocracy for their so-called ‘agrarian roots’. These wealthy land-owners, in the words of Shelton, cherished “…the ‘morality myth’ that Rome owed its greatness to military heroes who were also sturdy farmers, living frugally and working their own land.” Of course the simple, rustic life immortalised by orators like the Elder Cato, Stoic philosophers like Seneca, or poets like Tibullus, bore little resemblance to the difficulties and hardship endured by the real farmers who were actually engaged in working the land. Nevertheless, this ‘romantic’ perception of all things rustic endured, and came to be expressed in many different ways. For the Roman elite, for example,

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114 Bowe 2004: 30.
116 Ellis 1997: 45. Ellis also makes the interesting observation that the sound of a fountain would not only create a pleasing background noise, but would also help to ‘mask’ intimate conversation.
119 See Sen. Ep. 86.12
it may be seen in the positioning of a *villa* so as to take advantage of a particularly beautiful natural landscape.\(^{121}\)

The romantic view of the countryside (*rus*) was one in which the more gentle, or temperate aspects of nature were favoured over the rugged, wild or extreme. It was believed that nature should be *amoenus*, 'delightful' to the senses or pleasing to behold rather than "bold, spectacular, or challenging".\(^{122}\) Furthermore, nature in the raw was considered inferior to nature that had been enhanced by human artifice. This is a view that is most foreign to our own sensibilities, and somewhat difficult to comprehend, yet it remains clear that many Romans believed that the natural world should complement the man-made landscape, and work for human interests, rather than the other way round.\(^{123}\) An interesting example of this view may be found in Ovid's account of the fate of Actaeon (Met. 3.138-164). In describing the grotto where Actaeon chances upon the goddess Diana bathing, he refers to it in the following manner (Met. 3.157-160):

\[
\begin{align*}
vallis erat piceis et acuta densa cupressu, 
nomine Gargaphie, succinctae sacra Dianae. 
cuius in extremo est antrum nemorale recessu, 
arte laboratum nulla: simulaverat artem ingenio natura suo; nam pumice vivo 
et levibus tofis nativum duxerat arcum.
\end{align*}
\]

There was a valley thick with spruce and tapering cypress trees, called Gargaphie and sacred to girt-up Diana, and there was, in its furthest recess, a woodland cave constructed by no art but by nature, in her genius, imitating art; for she had shaped a natural arch out of light tufa and the native pumice stone.

Nature wins special praise here due to the perception that in forming these particular features, it has actually copied human *ars*, making it superior to raw, 'uncivilised' nature.\(^{124}\)

The fondness for ‘tamed’ naturalism can be seen exemplified in grand scale in such spaces as the sea grotto of Tiberius at Sperlonga, where the rustic surroundings of the cave have been both subdued and then enhanced by the inclusion of man-made artworks. It may

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\(^{122}\) Beacon 1996: 286.

\(^{123}\) See Beacon 1996: 289-293.

\(^{124}\) We can compare this with the view expressed by the Younger Pliny when describing the view from his Tuscan villa (Ep. 5.6.13): *Magnam capies voluptatem, si hanc regionem situm ex monte prospexeris. Neque enim terras tibi sed formam altiorem ad extimam pulchritudinem pictam videberiscernere...* ("It is a great pleasure to look down on the countryside from the mountain, for the view seems to be a painted scene of unusual beauty rather than a real landscape.") It must be noted, however, that such a view of nature may not have been held by all Romans. In the Elder Seneca's *Controversiae* (2.1.13), the Augustan moralist Papirius Fabianus attacks "the self-deceit of those who flatter themselves that they are able to create like nature" (Purcell 1987: 190): *...adnuliss gaudere veris setunt, sed adversum naturam alieno loco aut terra aut mare mentia egressi oblectamenta sunt* ("For truly they do not know how to enjoy anything real, but in their sickness they need unnatural fakes of sea or land out of their proper places to delight them").
also help to explain, moreover, why the Romans often felt the need to adorn a natural spring or water source with artistic nymphaea and fluvial masks.

The fascination with domesticated nature was not something that was confined to the aristocratic owners of country estates, however. Many city-dwellers sought to evoke a rustic atmosphere in their own domestic horti, and a number of architectural and natural elements were combined to create a sense of rus in urbe. Water was arguably the one natural element which featured most prominently in such gardens. Artificial springs, waterfalls, fishponds and watercourses could all be found in the small horti which belonged to citizens of Roman towns like Pompeii. Everywhere one turned, these residents had demonstrated in small-scale their mastery over this potentially wild element.

Purcell argues that the Romans had sought to control water since the very beginning, when Romulus chose to build his city on marshland which required subsequent draining, and on the banks of a river which frequently flooded. Roman efforts to control this unpredictable element were just one part of a continual battle to gain mastery over ‘productive nature’, wherever they chose to settle. The ‘wild’ side of water was very well known, as Seneca (Nat. 3.30.3) acknowledges: *Ubi non umorem natura disposuit, ut undique nos, cum voluissent, aggradi posset?* (‘Nature has put water everywhere so that she can attack us from all sides when she chooses’). This in turn helps to explain why water was considered all the more amoenus when ‘tamed’ within the confines of a hortus, where it could recall its natural state without the unpredictability.

The inclusion of water in a garden may also have helped contribute to a desirable sense of ‘closeness’ to nature. This was especially important in the urban context, where it was impossible to enjoy the wide open spaces of the countryside. Because Roman towns were originally designed as inward-facing, and confined behind walls, houses also developed as inward-facing structures. It is quite possible that this led to a feeling of confinement for many inhabitants who were not fortunate enough to own a second property in the country to which they could retreat. The fact that the Romans went to such lengths to develop garden spaces wherever they could within their homes, and then attempted to enlarge these spaces with the illusionary effects of painted landscapes, clearly indicates a degree of ‘escapism’ for the ideals of the open countryside.

125 Purcell 1996: 198-199.
Conclusion

The introduction of the aqueduct system, which brought piped water to towns and cities across the Roman Empire for the first time, brought about some significant changes in the way people lived their lives. For those town-dwellers fortunate enough to secure themselves a private connection to this system, the possibilities available for domestic gardening were greatly increased. From an analysis of the well-preserved gardens of Pompeii, we have seen how water became a central, and indeed fundamental element in the design of urban horti.

Fountains, previously only able to be operated through special holding tanks, became vivid showpieces, which could play continuously or be turned off at the owner’s discretion. These structures, whether small, burbling bowl fountains, trickling waterspouts, or cascading water staircases, filled the garden with the sights and sounds of water. While I would argue that these were certainly appreciated for their intrinsic beauty, the Romans did display an eye for function as well; many fountains were made to overflow into the surrounding garden so as to irrigate the low, formal plantings that were now possible.

Fountains and nymphaea were, however, not only aesthetically-pleasing irrigators. They also served to recall aspects of water in the natural world, namely, springs and waterfalls. The ancient Romans were fascinated by the more ‘gentle’ side of nature, but also considered natural features more desirable when enhanced by human ars. This explains why nymphaea were constructed not as faithful replicas of grottoes, but rather as allusions to, and improvements on these rustic, ‘uncivilised’ places. The mere addition of some rough stones and seashells was considered sufficient to evoke the natural water source and pay tribute to the deities who presided over it.

Piscinae, which were often given pride of place in a garden, were also used to bring to mind natural ponds and lakes, with their fish swimming within. This may have been part of a wider desire for constructing a sense of ‘rus in urbe’, which was particularly important for those who were confined to the city. The impression of ‘bringing the outside in’ is strengthened by the presence of the illusionistic garden frescoes, which created a feeling of the wide open country spaces not otherwise able to be enjoyed by the urban dweller. The inclusion of piscinae had broader implications, however, in that they also alluded in small-scale to the great fish farms constructed by the Republican, and later, Imperial elite at their seaside villas. Such fish farms were emblematic of their power, wealth and status - connotations which were not lost on the ‘nouveau riche’ class who sought to emulate them.

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There is little doubt that water was used as a means of self-promotion. The highly visible way in which it was put to use within the garden made a bold statement about the social position of the inhabitant. This was something that was often projected directly, such as when guests to the house were permitted access to the inner peristyle and garden and then allowed to dine in private water triclinia or biclinia. These might not only possess that luxurious novelty known as a water mensa, but also often allowed for a view across the rest of the garden and its water features. Water features were frequently used as emblems of status indirectly, too, by exploiting the axial layout of the traditional Roman house to ensure that any visitor who entered was able to catch sight of a beautiful nymphaeum framed at the very end of the vista. This would give a tantalising glimpse as to what else might be found within the more ‘private’ areas of the house, for those who were privileged enough to be invited.

In conclusion, then, it is clear that many wealthy Roman citizens placed a high premium on water for the purposes of display within the private garden context. This certainly indicates that they themselves did not see this particular use of water as superfluous, or ‘non-essential’. Rather, it was regarded as an essential part of the wider theme of social display and conspicuous consumption that was so much a part of everyday life for the upper classes of ancient Rome.
For the inhabitants of those towns and cities connected to a Roman aqueduct system, water was a commodity that was both highly visible and accessible. No other ancient society had placed such a premium on personal access to this most basic element. Lofty visions of arched aqueducts supplying water 'on tap' to elaborate public baths and decorative municipal fountains have endured in the popular imagination through to the present day. Indeed, in theory at least, water was something that was available to all Romans who dwelt in such urban centres in the period of the early Empire. Wealthy members of the elite classes had the opportunity to secure themselves a private connection to the urban supply as a supplement to their traditional rainwater cisterns, by submitting an application and paying a fee to the Emperor. Even the vast majority of ordinary citizens who had neither the wealth nor the influence to obtain their own private supply had access to public fountains, which were spread relatively evenly across most town centres. So how did this theoretical picture correspond with the everyday social reality? With water access seemingly assured across all classes, what impact did it have on the domestic sphere?

One of the most fundamental consequences of such an urban supply was the increased accessibility of clean water for drinking. What is interesting in this regard, is that the Romans clearly differentiated between what was considered healthy (salubris) drinking water, and what was not. Knowing nothing, of course, of microscopic bacteria, they formed their own criteria by which to judge water quality, which relied on sensory factors such as appearance, taste, temperature and smell. For water to be considered salubris it had to be clear and flowing, cold, odourless, and without any distinguishing taste. Certain sources were recognised as producing drinking water which possessed these qualities. Groundwater was especially prized, and in particular, that which issued from cool, clear mountain springs. The implication that this had for the urban context was that individual aqueducts were ranked according to their source and corresponding quality. In a city such as Rome, which was supplied by nine aqueducts by the time of Frontinus, citizens had the option of seeking out the best sources for drinking. Within Rome, this was indisputably the water supplied by the Aqua Marcia. In towns such as Pompeii and Herculaneum, however, which were supplied by only a single aqueduct, options were more limited. Nevertheless, the inhabitants of these towns still had the option of utilising the more traditional methods of water collection, such as wells.
and cisterns, although it was widely regarded that water from the latter was not considered the best for the purposes of drinking.

Despite the awareness in some sectors of Roman society that drinking water was beneficial to one’s health, water was not a widely favoured alternative to wine. It appears, though, that there were certain contexts in which it was drunk in the domestic context. These included mealtimes, where even the wealthy are known to have included a water jug, made from earthenware so as to better preserve the flavour of the water, on their tables. It was also common to call for water, excessively cooled with snow or ice, after a large meal or much wine-drinking. The practice of chilling water in this way became popular during this period, and was one means by which the upper classes could ensure that even if they received their drinking water from the same sources as the common people, it was still somehow made ‘superior’.

In terms of actual access to drinking water, much depended on a person’s individual status. Wealthy citizens with private piped water supplies may have simply drawn their drinking water from their own domestic fountains. If this water was of a lesser quality than other public sources, however, slave water-carriers (aquarii) were utilised to fetch the household drinking supplies from the nearest and best quality public fountain. On the other hand, for the less fortunate citizens who dwelt in the tenement blocks known as insulae, access was not so straightforward. Water was never piped beyond the ground floors of such communal buildings, and so inhabitants were forced to fetch their own supplies from the public fountains. The difficulties involved in then transporting this water back through busy streets and up narrow stairwells to upper storey cenacula may have been acute, especially for women, whose job this probably would have been.

These difficulties apply also when water was used for the purposes of maintaining domestic cleanliness - one area in which the differences between our own priorities for water usage and those of the Romans have been clearly highlighted. Where we today place a great emphasis on water: for domestic cleaning, the ancient Romans regarded this as much less of a concern, and for insularii, the difficulties involved in supplying water to their apartments meant that in all probability, any household cleaning undertaken by them would have been rudimentary. Similarly, in the domus of the wealthier citizens, slaves had made do with small amounts of water drawn from domestic cisterns long before the introduction of aqueducts and piped supplies. Furthermore, they had learned to use other materials which could attain a clean state without the need for water. The practice of strewing a floor with sawdust before a banquet, and then sweeping this up along with any scraps and spills, is a notable example of this.
Because a dominus had slaves to perform such menial tasks, providing water ‘on tap’ for domestic cleaning would not have even been considered as a priority for a precious private water supply. This also explains why domestic toilets were not equipped with running water to wash away waste like many of the public foricae, and why Romans of almost all social classes sent their clothing outside the house to be cleaned. Roman clothes-washing methods, as performed by the fullones, used very large amounts of water in combination with equipment, materials and methods that were too specialised to warrant setting up within individual urban households.

Another important facet of water in the context of domestic cleanliness, was the ways in which it was ultimately disposed of once used. In this respect, the Romans appear to have lived up to their pragmatic reputation. Private connections to town sewer systems were rare on account of the lack of adequate trap systems, and so overflow water from domestic cisterns or fountains was generally conducted through pipes and out into the street, where it could help to rinse the city’s streets or main sewer system. In a similar practical fashion, the small amounts of wastewater from cooking or cleaning could be tipped into a domestic toilet, which was often located within the service areas of the house, such as the kitchen. This was not only convenient, but also had the added benefit of simultaneously cleaning the toilet. Even solid wastes from cesspits were resourcefully recycled, as they were collected by stercorearii and later sold as fertiliser.

While water did not play an overly dominant role in household cleaning, one would at least expect it to have been more prominent in connection with personal hygiene within the home. The popularity of public baths in towns and cities of this period certainly testifies to the importance that the Romans placed on personal cleanliness. Yet it is perhaps on account of the very popularity of these public establishments that private bathing facilities are rare in Roman townhouses. Prior to the widespread diffusion of both the aqueduct system and public baths in the first century AD, such baths as existed in private residences were small and functional by nature, designed to be filled by hand with cistern water and to be used by only one or two people at a time. These characteristics indicate that the chief purpose of these early baths was indeed for the maintenance of personal hygiene, functioning as a place where members of the household could go and wash. Once towns were connected to aqueduct systems, however, public bathing establishments became more common and more elaborate, too, meaning that the need to possess one’s own baths was significantly reduced. This helps to explain why, when they had the money and resources, many wealthy Romans who possessed their own water connections chose not to build bathing suites at home. The public
baths, with their complex heating systems and often vast open spaces, were difficult, if not impossible, to reproduce in private residences.

Those citizens who did choose to construct larger and more elaborate private facilities were motivated by factors other than a basic desire for personal hygiene. Water was no longer viewed simply as a medium by which one could ‘get clean’, but rather an element which symbolised a number of different social factors. It began to be valued for the pleasurable sensory experiences it could provide. Moreover, by sharing private baths with selected friends, it was possible for individual Romans to convey their importance and social standing by displaying the fact that they owned a private water supply which facilitated such luxuries. Whether in public or private baths, however, water was still appreciated for its basic cleansing function, which ensured that the ideal elite Roman image of a carefully groomed citizen was presented at all times.

There were situations within the home other than private baths where water was used for apparently ‘hygienic’ purposes. It fulfilled a practical function when used to wash the face upon rising, and to cleanse hands before, during and after meals. Feet were also washed before reclining for dinner, which was particularly important in hot, dusty environments where the footwear of choice was the open sandal. In the context of a dinner party, however, water took on a more ritualistic symbolism, where the obligatory washing of hands and feet formed part of the typical hospitality and guest-welcoming protocol.

In all the various domestic roles of water discussed thus far, excepting its occasional use in private baths of ‘Type 3’ nature, the element has taken a somewhat subordinate role, one in which it was not used in a highly visible way. In the households of the more wealthy citizens of Roman towns, the one area in which water was most conspicuously present was the peristyle garden, or hortus. It is clear that in the vast majority of cases, the operation of decorative water features was the most favoured use for a private water supply, and indeed, it appears that it was often the sole purpose for which that supply was acquired. This is perhaps the single-most striking difference between ancient and modern domestic water use. The fact that water is notably absent from the domestic areas of the house, yet used in bountiful quantities for what we may regard as ‘non-essential’ functions in the garden, tells us much about how these Romans viewed water as a commodity. For the upper classes, water was not considered so much as a functional element, valued for its utilitarian purposes and role in sustaining life, but rather for the way it could be used for the purposes of social display. It would be an over-generalisation, however, to state that this was considered its only purpose.

1 See ch. 3: 82.
Fountains and *nymphaea, piscinae* and water *triclinia* all had their part to play in the peristyle garden. They were individually designed to create an aesthetically pleasing effect when combined; the sights and sounds of rushing, trickling or still water could all be enjoyed for no other reason than their intrinsic beauty. At the same time, though, these water features could bring to mind their counterparts in nature: springs, waterfalls, grottoes and pools. The natural world held a certain fascination for the Romans, especially those features which were considered more 'gentle' and pleasant (*amoenus*). Thus, it was the more *amoenus* aspects of water in its natural environment that were deliberately recalled in the domestic garden context. In contrast with the commonly-held modern view, the Romans believed that aspects of the natural world were improved by human art. Therefore, they sought to recreate within their gardens mere allusions to natural water sources. By 'taming' and masking the original inspiration with artistically designed elements, urban dwellers could create their own ideal sense of *rus in urbe*, something which may have been even more desirable for those citizens who did not possess properties in the country.

One cannot dispute the overall impression of self-display that this 'wanton' use of water must have created. The highly visible way in which it was utilised in the urban townhouses of Pompeii, for example, made a bold statement about the social status of the owner. The fact that many of these features were designed to evoke the country *villae* of the grand aristocrats heightens this impression still further. As one notable example, the inclusion of fish ponds in urban *horti* was a direct attempt to emulate in small scale the great fish farms which were set up as symbols of conspicuous consumption by such extraordinarily rich men as Lucullus in the late Republic. Similarly, extravagant water *mensae*, included as part of an outdoor *triclinium*, were a novel luxury enjoyed by aristocrats and emperors alike. The appearance of such a feature within a garden *triclinium* belonging to a member of the 'nouveau riche' class of merchants and freedmen, such as those who lived at Pompeii, was one means by which that individual could attempt to assert his refinement.

The use of water within the domestic garden context would be enjoyed to its full effect when viewed from within, by those who had been granted access to this part of the house. Many citizens also made certain that their personal water supply was advertised in a more subtle way to all who entered. By exploiting the traditional axial layout of the Roman *domus*, residents could plan their garden to ensure that a particularly beautiful water feature was placed on the rear wall, so as to be visible from the entrance, right down the length of the house.

Certainly, then, water was used in the domestic context as a symbol of wealth and status, which in turn informs us that it was ultimately regarded as a luxury product. Without
doubt, those who benefited most from the introduction of the aqueducts were the wealthy owners of urban *domus*, who had the means to be able to attain their own private water connection and put this water to use for blatantly non-essential functions. They did not need to concern themselves with where their drinking water came from, how to keep their household clean, or even providing themselves with water for bathing, as this was mostly done outside the household. The fact that they required permission from the Emperor to obtain a private water supply in itself meant that piped water was automatically regarded as synonymous with power and influence.

On the other hand, despite popular belief to the contrary, the domestic lives of the urban poor were probably not greatly improved by the provision of public water supplies. It is true that public fountains were often generously spread across town centres and that the water they provided was free to all, but *insulae* never had the luxury of having running water available in their upper storey *cenacula*. As a consequence, they were forced to collect their daily water supplies from external sources, and then transport this back to their apartments, in much the same way as they had always done; it was merely the source that had changed. Instead of public wells or springs, fountains which supplied water from a faraway source were visited instead. In truth, however, the true nature of everyday life for the lower classes, and the role that water played in this, must remain frustratingly elusive. What is certain, is that for these citizens water was not valued for the status it projected, or the luxuries it brought, as these were never available to them. Rather, water was appreciated at its most basic level, as a sustainer of life.

Ultimately, then, there is no better way to summarise the value that water had in the domestic lives of the Romans, and the ways in which this most basic element was used by all social classes, than the words written by the architect Vitruvius (8.1.1): *Est enim maxime necessaria et ad vitam et ad delectiones et ad usum cotidianum.*

Water was indeed very necessary for life, for delight, and for daily use.
**Appendix 1:**  
*Archaeological reference numbers for the houses of Pompeii*

<table>
<thead>
<tr>
<th>House</th>
<th>Archaeological Reference No.</th>
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<tbody>
<tr>
<td><strong>Regio I</strong></td>
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<tr>
<td>House of the Citharist</td>
<td>I.iv.5/25</td>
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<tr>
<td>House of the Ceii</td>
<td>I.vi.15</td>
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<tr>
<td>House of Paquius Proculus</td>
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<td>House of the Ephebe</td>
<td>I.vii.10-12/19</td>
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<td>House of Menander</td>
<td>I.x.4</td>
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<tr>
<td>House of Loreius Tiburtinus</td>
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<td>House of the Marine Venus</td>
<td>II.iii.3</td>
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<tr>
<td>House of Julia Felix</td>
<td>II.iv.2-12</td>
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<td><strong>Regio V</strong></td>
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<tr>
<td>House of the Little Bull</td>
<td>V.i.7/9</td>
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<td>House of the Silver Wedding</td>
<td>V.ii.1</td>
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<td>V.ii.4</td>
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<td>VI.i.10</td>
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<td>House of Sallust</td>
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<td>House of Pansa</td>
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<td>House of the Tragic Poet</td>
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<td>House of the Grand Fountain</td>
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<td>House of Meleager</td>
<td>VI.ix.2</td>
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<td>House of the Labyrinth</td>
<td>VI.xi.9-10</td>
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<td>House of the Faun</td>
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<td>VII.iv.31/51</td>
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<td>House of the Hunt</td>
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<tr>
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<td>House of Marcus Lucretius</td>
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<td>House of the Centenary</td>
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<td>House of Polybius</td>
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# Appendix 2: The aqueducts of Rome

<table>
<thead>
<tr>
<th>Aqueduct</th>
<th>Date of construction</th>
<th>Length of channel (km)</th>
<th>Total discharge (m³/24 hrs)</th>
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<tr>
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<td>16</td>
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<td>Aqua Anio Vetus</td>
<td>272 BC</td>
<td>64</td>
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<td>Aqua Marcia</td>
<td>144 BC</td>
<td>91</td>
<td>187,600</td>
</tr>
<tr>
<td>Aqua Tepula</td>
<td>125 BC</td>
<td>18</td>
<td>17,800</td>
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<tr>
<td>Aqua Iulia</td>
<td>33 BC</td>
<td>23</td>
<td>48,240</td>
</tr>
<tr>
<td>Aqua Virgo</td>
<td>19 BC</td>
<td>21</td>
<td>100,160</td>
</tr>
<tr>
<td>Aqua Alsietina</td>
<td>2 BC</td>
<td>33</td>
<td>15,680</td>
</tr>
<tr>
<td>Aqua Claudia</td>
<td>AD 38-52</td>
<td>69</td>
<td>184,220</td>
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<td>Aqua Anio Novus</td>
<td>AD 38-52</td>
<td>87</td>
<td>189,520</td>
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<td>Aqua Traiana</td>
<td>AD 109</td>
<td>58</td>
<td>113,920</td>
</tr>
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<td>Aqua Alexandriana</td>
<td>AD 206</td>
<td>22</td>
<td>21,160</td>
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</tbody>
</table>

Appendix 3: Suggested typology for Roman ornamental pools

Typology according to Farrar 1998: 71-73.

A Simple forms: square, rectangular and circular. A subgroup contains euripus-like forms.
B Rectangular basins with one semicircular recess. Also the so-called gutter basins.
C Rectangular basin with more than one semicircular recess, for example, at either extremity.
D A basin where the inner outline is shaped, either with semicircular or rectilinear recesses or both, within a rectangular or subrectangular outer framework.
E Demi-lune basins.
F A basin containing watertight caissons.
G Complex designs, in many cases with interconnecting pools.

![Diagram of pool types](image-url)
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*Epistulae*

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*Satirae*

Martial
*Epigrammata*
Ovid

Metamorphoses

Epistulae ex Ponto

Petronius

Satyricon

Plautus

Poeinulus

Pseudolus

Stichus

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Epistulae

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Controversiae

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