

Monumental Fountains in Roman North Africa

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Abstract

Understanding and contextualising monumental fountains

This book deals with monumental fountains, commonly known as nymphaea, in the cities of North Africa in Roman times, from the Atlantic coast to Tripolitania, over a period from the 1st to the 6th centuries AD. Unlike other water monuments, notably baths, which are now well-known thanks to Yvon Thébert's thesis (2003), African fountains have been the subject of only one study: Pierre Aupert's thesis (1974), comprising in the first part a monograph on the nymphaea of *Tipasa* in Algeria, and in the second, a "pre-inventory" of African fountains. However, Aupert's list of monuments is only partial and its parameters are poorly-defined, due to the lack of studies devoted to fountains at the time of its publication. While the fountains of Italy, and more generally those of the West, as well as those of Asia Minor, have been the subject of catalogues and syntheses, the monuments of the provinces of Africa deserve to be treated in more depth.

What is the point of studying fountains, even the most monumental among them? The subject allows us to explore multiple facets associated with the edifice: the hydraulics, the city, the decoration, euergetism, and many other aspects which are more interrelated than they might appear at first sight. How can we study hydraulics in Africa and what documentation is at our disposal? What is known about fountain construction techniques and hydraulic operations? What architectural reconstructions can be proposed? To what extent does the study of fountains provide a better understanding of urban hydraulic networks? What was the place of fountains in the city? What about in Late Antiquity?

The term *fountain* refers to a "man-made device to facilitate the intake of water." The epithet *monumental* is understood as a modern appellation that has a double meaning relating to the material, visual, and memorial value, intentional or understood *a posteriori*. Two criteria are used to include buildings in the category of monumental fountains. The first is the notion of monumentalisation, i.e. the development of distinctive architectural and decorative elements, including architectural sculpture, statuary, and epigraphy. The second element is the autonomous character of the building in an urban context characterised here by the existence of a street network and the presence of the main public, civil, political, and recreational buildings. Thus, it is the study of fountains which are independent of any other monument, visible and accessible from the street, and built "for their own sake", monuments in full.

This survey is based on a catalogue of about fifty monuments compiled from bibliographic and archaeological sources, and data collected through fieldwork. Each monument has been studied in detail in a catalogue entry. The integration of data from different sources has been essential to best understand the

buildings. A corpus of about fifty inscriptions has also been compiled to complete this corpus, with commentary and a date for each entry.

Hydraulics in Africa, from the colonial era to the Annales

From very early on, Roman hydraulics attracted the interest of researchers in all parts of the empire. Pompeii and Volubilis were especially fruitful sites for interpretation due to the intensive clearance and the good state of preservation of their remains. The construction of aqueducts, the supply of cities, and the organisation of hydraulic networks became the focus of attention. This was coupled with a meticulous analysis of the Vitruvian texts, in which one finds a theoretical model, though evidence for the practical application of this model has been denied in successive studies.

As for monumental fountains more specifically, in Africa, the first excavations and identification of this type of building date from the 19th century, as in the other provinces of the empire. Discovered during early explorations, when they were not preserved in elevation, the fountains attracted attention firstly for their architecture and decoration, and only secondly for their hydraulic operation and their positioning within the urban grid.

A great deal of data, both in terms of archaeological remains and hydraulic infrastructures, had been collected by travellers and researchers in North Africa since medieval times. Later, French colonisation institutionalised and systematised research, with the establishment of scientific missions and military support, until real structures were created to direct research. However, the political context of colonisation, which was very significant, guided these investigations and their conclusions: intended above all to meet the needs of the colonists and to facilitate their establishment, research on hydraulic systems was not guided primarily by a desire to better understand Roman constructions but, rather, to exploit their technical potential. The result is a rich inventory, but one which is very diverse and uneven in its analyses.

In addition, problems relating to the availability of water resources and climate change interested researchers from the beginning of the colonial era. Today, new archaeometric techniques are improving our understanding of these environmental changes. Recent studies by Philippe Leveau (2013; 2016b), for example, emphasise that the importance of the Romans' hydraulic works must be an indication of problems with the availability of water resources which needed to be overcome.

The study of water in North Africa very much remains centred around Roman hydraulic techniques. Whether they were specialists or not, early investigators had identified most, if not all, of the remains as Roman, without ever considering the possibility of a pre-Roman origin for this type of development. However, irrigation technologies and important rural developments must in part be attributed to indigenous peoples who mastered traditional techniques that were widespread before the arrival of the Romans. In France, the Bénabou-Leveau-Thébert debate published in the *Annales* of 1978 had already highlighted the importance of a "decolonised history" of North Africa, a discussion subsequently pursued further by Anglo-Saxon postcolonial studies. These approaches have made it possible to take a new look at the territory of ancient North Africa, and

studies on hydraulics must draw on these ideas in order to reassess the results of former surveys and publications.

Fountain construction and architecture

Several aspects of monumental fountains and the hydraulic networks of Roman North African cities have held my attention. Firstly, I have undertaken a technical and architectural analysis of the structures. With regard to the construction and hydraulic function of monumental fountains, I comment on a number of aspects: the development of fountain catchment basins, composed of slabs embedded in pillars, a type of structure that is not very widespread and for which one should look to pre-Roman origins in the African territories; the scarcity of “water walls”, a type of façade down which water streamed, an *image d'Épinal* of a monumental fountain, whereas the majority of outlets were located in the lower part of the structure, often above a settling basin that then fed a catch basin.

My attention then turned to the architecture of fountains, their elevation, and their sculptural decoration. The façades were very diverse, in both their forms and dimensions. Some fountains of modest size presented only a semi-circular niche, often with a *cul-de-four* vault, or an *aedicula* on a podium with very limited statuary. Others, more imposing, had a façade which rose on one, two, or more rarely, three levels. I have chosen to study the fountains according to their elevation and not their ground plan (e.g. rectilinear façade, apsidal with or without wings) because in my estimation, it was more the decoration and its arrangement on the façade than the shape of the fountain that conveyed a message. This aspect has been well-treated for the fountains of Asia Minor, whose *frons scaenae* façades have generated a vast literature. I have now taken up this question for Africa, highlighting gaps in the documentation of the remains, the architectural elements, and the statuary, in order to present reconstructions of the sculptural decoration of the fountains. What emerges from the analysis of the remains and comparisons with the well-preserved monuments of Asia Minor, is the quest among the élite for a building and setting capable of satisfying their desire for self-representation in the heart of their city and in the eyes of their community. Their involvement in the construction of fountains explains this very well.

Water networks, urban planning, and fountains

A second point of my research concerns the water networks of Roman African cities. Previous research on the subject has already highlighted certain characteristics, such as the essential role that “*castella*” played in controlling water distribution and the importance of cisterns as storage and distribution structures (Ellis 1996; Wilson 1997). Within this network, fountains occupied different places. They were found at the point of arrival of the aqueducts but also at the heart of the system, a position partly defined by the time and opportunity available for their construction, for example, during the development of an additional water supply for the city, a large-scale urban planning programme, or more simply the redesign of a neighbourhood.

The relationship between fountains and urban space is also an important topic to explore. Their location was dictated by obvious visual and decorative choices, whether located along a main road, at a crossroads or major axis change, or serving to define the edge of a plaza. The earliest buildings can be dated to the 1st century AD, but more commonly they belong to the 2nd and 3rd centuries, when the majority of towns were equipped with aqueducts and water supply systems. However, a particularity of African fountains is their construction until a very late period, throughout the 4th century, an additional illustration of the vitality of African cities in Late Antiquity, as highlighted by the work of Claude Lepelley. During this period, the inscriptions reflect two essential motivations on the part of the benefactors in the construction or restoration of these buildings: their *amœnitas*, which can be observed in the choice of decoration and location, but also their *utilitas*, which needs to be analysed in greater detail.

From a more functional perspective, the use of fountains and their distribution provide information on their daily use. Wear marks on the walls of the basins indicate that water was being drawn directly from monumental fountains. However, it is difficult to assess their impact on the water supply of the inhabitants and craftsmen. The distribution of monumental fountains in the city, compared with that of other street fountains, does not allow for the identification of implementation strategies defined by the need for an additional water supply point at a given location. The role played by fountains, whatever their size, in the cleanliness of streets and sewers, is also difficult to evaluate and was dependent on the topography, the layout of the streets, the overflow of the basins, and the proximity of a sewer drain. The example of Pompeii, very rich and widely cited, is once again a special case that does not allow for generalisation: the drainage of waste water along the streets does not seem to have been the norm in Africa. The question of the volume of water discharged must be considered from another perspective, that is, the volume of water distributed.

Religion, management, and self-representation

Given the diversity in forms and appearance of African fountains, the problem of terminology is very complex. An analysis of the terms used reveals the absence of any correspondence between a particular form of fountain and a name, with *lacus* and *nymphaeum* being the most commonly used terms. It turns out that in Africa, *lacus* designated monumental fountains from the 2nd century AD onwards; however, today this term remains associated with the small fountains whose archetype can be recognised in the streets of Pompeii. Concerning the term *nymphaeum*, inscriptions associated with fountains demonstrate on the one hand that the term did not designate a particular form of building, and on the other hand that a *nymphaeum* was not necessarily a place of worship. However, the religiosity attached to the building is difficult to appreciate from archaeological and epigraphic sources alone.

The planning, construction, and maintenance of fountains and the hydraulic network required the coordination of several people. This study highlights the importance of the euergetism of the nobility in financing monumental fountains during the High Imperial period, a trend which corresponds to the situation in Asia Minor. The choice of an aedicular façade as the ideal receptacle for a setting to the glory of a personality takes on all its meaning here. It is clear that the

proconsuls, procurators, or legates of the Third Augustan Legion were often involved, but only when it came to the provision of the water supply itself, the importance of which is often difficult to determine. The Emperor interceded only in a limited number of cases, mainly in Numidia, through the Third Augustan Legion as intermediary, by calling on soldiers to contribute labour and expertise. In Late Antiquity, public financing of monuments predominated, and fountains were no exception to this rule. In this context, the emperor's main place in water-related concerns, as the works of Frédéric Hurlet and Christer Bruun have shown, seems to have been limited to the legislative aspect. At the local level, imperial representatives and municipal authorities retained the power to make decisions.

Water networks and urban development: towards a "hydraulic topography"

At the end of this study, several answers are given to questions that still remain about the monumental fountains of Roman African cities. The corpus established here has made it possible to better define a group of monuments that until now have been poorly-known in this region of the empire and I have been able to characterise this collection through comparisons with other provinces, particularly Asia Minor. Several issues have been highlighted but new questions have also emerged.

One of the questions underlying this study is that of chronology. Few monumental fountains in the corpus are well-dated. Some are dated very precisely thanks to epigraphy, and for others a range of dates has been proposed, based on architectural study or stratigraphic data. In most cases, I have suggested a date based on an analysis of the urban environment and the water supply system; however, there are limitations to this approach. The phases of development of cities are, in general, poorly understood, and topographic plans which present the remains of all periods of settlement hinder studies of urban development, as Paul-Albert Février, Noël Duval, and Yvon Thébert have all pointed out. It is therefore difficult to think about the date of construction of a fountain according only to its location in relation to surrounding monuments. To consider it from the point of view of the hydraulic network makes more sense if we recall that a running water supply was necessary to provide a fountain.

It is obvious that in order to better understand the chronology of a hydraulic network, stratigraphic excavations must complement the architectural studies that have long predominated. From a methodological point of view, the work carried out in Leptis Magna by the Italian team led by Francesco Tomasello (2005) and in Ostia under the direction of Évelyne Bukowiecki, Hélène Dessales, and Julien Dubouloz (2008) are indicative of current approaches: systematisation of stratigraphic excavations in addition to the study of the buildings, archaeometric analyses, and reflection on the hydraulic networks at the scale of the city and its neighbourhoods. Where stratigraphic excavation is not possible, especially for syntheses that involve the study of numerous monuments, the vision defended by Julian Richard in his study of eastern Mediterranean fountains (2012) is one of contextualisation of the building within the city and its hydraulic network, moving beyond the architectural study alone. In a domestic context, the same approach was adopted by Hélène Dessales for urban residences in the Vesuvius region (2013), with the aim of defining not only which buildings

were fed in a privileged way in the city, but also which spaces were given priority of supply within the *domus*. I have applied this approach to my own study, attempting to create a “hydraulic topography” of the city to better explain urban changes: it is from understanding how urban spaces and hydraulic systems worked together that we will obtain new results in the future.

Text translated by Nichole SHELDRIK