

Hybrid Hydraulics

Colonialism and the Archaeology of Water Management in the Maghreb

Lena Johansson de Château

“From time to time, to be sure, there is a reaction to this tendency, but will it ever be possible to catch up with the Romanizers?” (Laroui 1977 (1970): 28)

In this paper, colonialism is used as a key concept for a discussion on the relationship between classical archaeology and archaeological practice in the Maghreb region. Archaeological studies of rural water management in Algeria, Tunisia and Libya are reviewed, focussing on the representation of the Romans and the indigenous people. Drawing on postcolonial theory, an alternative approach to water management in the Maghreb during the Roman period is suggested. A strong relationship between modern colonialism and the representation of ancient colonialism in archaeological writings is evident from my analysis. It is suggested that postcolonial approaches may contribute to a reevaluation of the Maghreb as an archaeological region.

Lena Johansson de Château, Department of Archaeology and Ancient History, Uppsala University, S:t Eriks torg 5, SE-753 10 Uppsala, Sweden.

Keywords: colonialism, postcolonialism, classical archaeology, Maghreb, North Africa, land use, water management, creolisation, hybridity

INTRODUCTION

In recent years, the study of ancient colonialism has taken on a new direction in classical archaeology through the introduction of postcolonial perspectives. The Greek and Carthaginian expansion in the western Mediterranean in the first millennium BC and the Roman provincial rule in France and Britain in the first centuries AD are examples of ancient colonial situations that have been reassessed using postcolonial approaches (e.g., van Dommelen 1997, 1998a, 1998b; Webster 1997, 2001). Simultaneously, within the field of classical archaeology, there has been growing awareness of the close relationship between modern Western colonial society and the formation of classical archaeology as a discipline (e.g., Trigger 1989; Morris 1994; Shanks 1996; Marchand 1996; Hingley 1996, 2000; Dyson 1998). Consequently, in classical archaeology the concept of colonialism is currently being addressed on several levels. The inquiry into colonialism concerns the subject of our study, that is the colonial processes in antiquity, as well the

development of classical archaeology as a professional practice. Therefore, the concept of colonialism as a tool of inquiry touches the very essence of our discipline and ourselves as archaeologists. The experience of postcolonialism as both a methodological and epistemological issue is one that archaeologists share with scholars within other fields of study, where postcolonial theory has been applied during the 1990s, such as anthropology and sociology (see e.g., Arnfred 1995).

My aim in this paper is to apply some of the experiences gained from post-colonial thinking to a specific set of archaeological material that has commonly been regionally defined. The archaeological material in focus consists of remains related to rural water management in the Maghreb region, primarily Algeria, Tunisia and Libya. The discussion operates within two colonial contexts. On the one hand, the discussion concerns Roman provincial rule in North Africa from the 2nd century BC to the 5th century AD. On the other, it concerns France's colonial government in Algeria, Tunisia and Morocco from the mid-19th century until political independence around 1960 and the period following independence.

My interest in past land use and water management practices was originally initiated when working on a development project in Sidi Bouzid, Tunisia, which was partially funded by the Swedish International Development Agency (SIDA). In discussions with farmers, agricultural extension workers and researchers, both in the field and in the office, I sensed that rural history was a genuine, local concern. Early on, I also became aware of the immense impact that French colonialism has on current views of the rural past in the region. Subsequently, the impact of colonial and postcolonial attitudes on the archaeology of water management in North Africa has formed part of my study interest (Johansson de Château, forthcoming Ph.D. thesis 2002).

This paper begins with a discussion of the role of modern colonialism in the formation of the Maghreb as a regional study unit in classical archaeology. The second section addresses comparative approaches to colonialism as expressed in recent studies by classical archaeologists. Thirdly, the archaeology of water control in the North African region is analysed, focussing on representations of ancient Roman colonialism. Finally, an attempt is made to discuss the archaeological material in a postcolonial perspective, drawing on some key ideas and concepts of postcolonial theory. It is concluded that water management practices were the product of local colonial meetings and as such produced a varied archaeological material.

NORTH AFRICA - THE CONSTRUCTION OF AN ARCHAEOLOGICAL REGION

In archaeology, as well as in other cultural and historical studies, Morocco, Algeria and Tunisia and sometimes also Libya are commonly treated as a coherent unit of analysis (Fig. 1). Frequently, the environmental similarities between the Maghreb countries are cited as factors of regional unity. Metaphorically, the region has

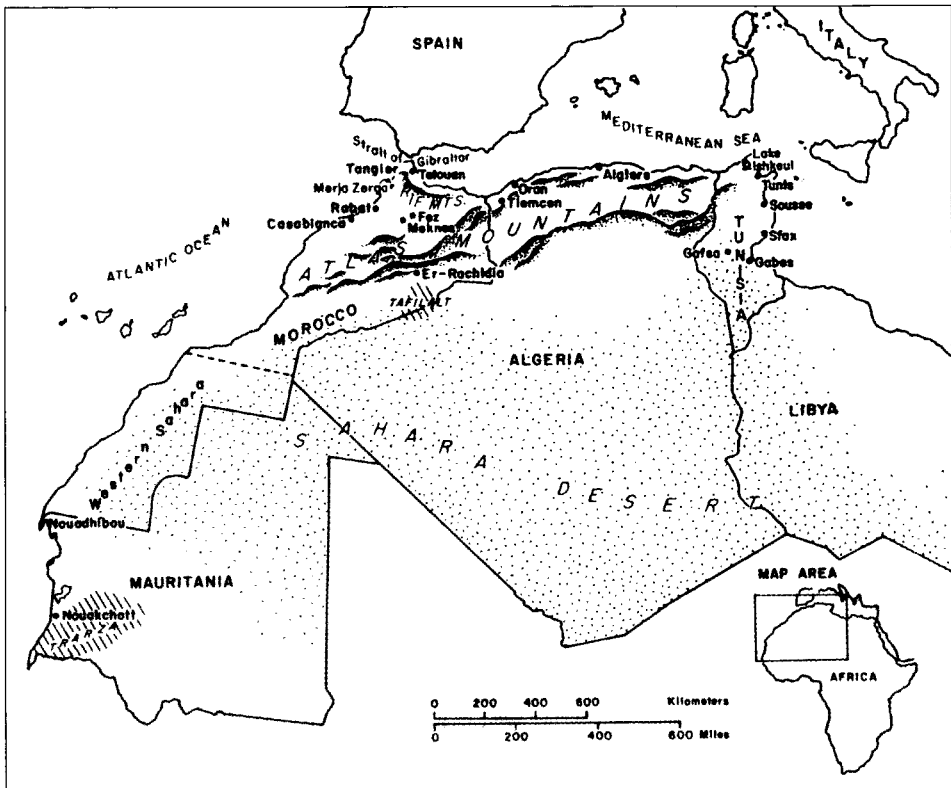


Fig. 1. The North African region, with the countries of Morocco, Algeria, Tunisia and Libya discussed in the text (Source: Swearingen & Bencherifa 1996:2).

been described as an island surrounded by seas of water and seas of sand. In the north and west, the Mediterranean and the Atlantic limit the region, to the south the Sahara (Brown 1997:7-8).

In classical archaeology, the approach to the Maghreb as a region of inquiry is closely related to European colonial rule of the region in the 19th century and the first half of the 20th century. Through France's occupation of Algeria (1830), Tunisia (1881) and Morocco (1912), an exclusive French research territory was created in the region. The French research privilege excluded most local, indigenous participation, and also, in practice, any other Western scholarly engagement. The French dominance in Maghreb archaeology has remained strong after political independence (Tunisia and Morocco 1956, Algeria 1962) (Mattingly 1996; Mahjoubi 1997).

The development of a French archaeology in the Maghreb is connected to the colonial conquest in its most concrete sense. With the establishment of a French protectorate in Tunisia in the 1880s, field activities were intensified in both Tunisia and Algeria. The common interest in field surveying was clearly expressed in the co-operation between the French military and the colonial antiquarian authorities.

In joint expeditions, military land surveyors (*brigades topographiques*) and antiquarians documented the archaeological remains of the occupied territories (contributions in Khanoussi, Ruggeri *et al.* 2000). Significantly, the production of the first archaeological atlases of North Africa was the result of co-operation between the French military, historians and antiquarians (Cagnat and Merlin 1893-1913; Gsell 1911). The French archaeological-military co-operation continued through the period of colonial rule, into the 1950s.

Modern historians commonly consider French colonialism as a disruptive process, which split traditions of regional, cultural unity. In many ways, this holds true for the way archaeology and history were practised during colonial rule. For example, by advancing ideas of binary oppositions in the past, such as the opposition between mountain and plain and between sedentary and nomad society, colonial archaeology and history reinforced contemporary processes of intra-regional division (Leveau 1977, 1986; Lacoste and Lacoste 1995:19). On a more general level, however, colonial archaeology operated on the basis of regional unity. This is clear from the way the countries were grouped by the Europeans into one single geographical area referred to as North Africa, in French, *l'Afrique du Nord*. Externally produced, the appellation *Afrique du Nord* created an image of regional unity that implied both distance and a sense of cultural otherness. The rationale for producing an image of regional unity in the past can be understood as an expression of France's colonial policy. The image of the region as a governmental and cultural unit under Roman rule, offered by colonial historians, served as historical legitimacy in the modern colonising process.

The construction of North Africa as a cultural region through colonial writings, bears strong resemblance to the process brought forward by Edward Said with regard to the Middle East. In his influential work *Orientalism*, Said showed how the production of 'knowledge' in Orientalist studies went hand in hand with European colonial domination in the Middle East (Said 1978). Central to his argument was the way language and literature were used to reproduce an image of the Orient as culturally different and strange in relation to Europe. According to Said, the reproduction of the Orient as a cultural 'Other' served the definition of Europe as the self-evident centre of reference and, thus, supported colonial domination. Although Said has been criticised for disregarding the colonised's version of the colonial process, and ascribing too much of historical continuity to the way Europe regarded the Middle East, his writings stand out as basic works of reference in postcolonial studies (Loomba 1998:43-51).

Further, the way *Afrique du Nord* was constructed, as a region of reference to European history, calls to mind an often cited paragraph by Dipesh Chakrabarty, a leading contributor to postcolonial theory: "'Europe'", writes Chakrabarty, "remains the sovereign, theoretical subject of all histories, including the ones we call 'Indian', 'Chinese', 'Kenyan' and so on...Third-world historians feel a need to refer to works in European history, historians of Europe do not feel any need to reciprocate...What allowed the modern European sages to develop such clair-

voyance with regard to societies of which they were empirically ignorant? Why cannot we, once again, return the gaze?" (Chakrabarty 1992:1-3). To this statement one could no doubt add the historical reproduction of the Maghreb, as a case of European sovereignty. Without going into the feasibility of Chakrabarty's project of 'returning the gaze' from Europe to the colonised, it must be concluded that archaeological and historical writings of the Maghreb have served to define European cultural values and promote an image of European supremacy. These writings are acutely at play, since Maghreb historians and archaeologists, as well as other scholars engaged in the region's past, feel compelled to relate their work to colonial studies in their current practice.

COMPARING COLONIALISMS IN CLASSICAL ARCHAEOLOGY

"The point here is that Western archaeologists cannot explore colonialism in the past without attending to our *own* place in history; to our own complicity in the continuance of colonial discourses. And in order to develop a reflexive understanding of these issues, we *must* compare colonialisms" (Webster 1997:330).

Although not always as imperatively expressed as by Jane Webster, several scholars have recently argued for a comparative approach to colonialism in classical archaeology. As already noted, the recent interest in ancient colonialism may be understood as part of an ongoing disciplinary reassessment of classical archaeology. This involves a reflection of the discipline in a modern historical perspective, to which Western colonialism is central. Writing in quite a different context, Homi Bhabha expresses a similar feeling of necessity of understanding past colonial processes, in order to understand ourselves and our use of what we think are self-evident concepts. Bhabha, whose ideas are central to postcolonial studies, writes: "In order to understand the cultural conditions, and the rights, of migrant and minority populations we have to turn our minds to the colonial past, not because those are the countries of our 'origins', but because the values of many so-called 'Western' ideals of government and community are *themselves* derived from the colonial and post-colonial experience" (Bhabha 1996:209). Applied to ourselves as archaeologists, this implies that in order to understand our current views and methods, in other words, the working basis of our discipline, we need to come to grips with the concept of colonialism.

In the 1980s, Stephen Dyson argued for a comparative approach to past colonial situations in classical archaeology (Dyson 1985). In the last few years, colonialism as a concept of inquiry and comparison has gained impetus through the introduction of postcolonial theory in classical archaeology, particularly among scholars active in the UK. Originally developed within literary and cultural studies, postcolonial theory addresses issues of cultural identity, domination and resistance in colonial situations. As such, postcolonial studies have mainly concerned recent historical periods and the present. However, recent work shows the fruitfulness of comparative, postcolonial approaches also when dealing with colonial situations in classical antiquity. Jane Webster's, Greg Woolf's and Richard Hingley's studies

of Roman provincial culture in Britain and Gaul, as well as Peter van Dommelen's work on Carthaginian and Roman colonialism on Sardinia, are all examples of how ancient situations of colonial relationships may be addressed from a perspective that more or less expressly shares a postcolonial attitude to cultural contact (Webster 1996, 1997, 2001; Woolf 1997, 1998; Hingley 1996, 2000; van Dommelen 1997, 1998a, 1998b).

From the above studies, a few general conclusions may be drawn. Firstly, comparing colonialisms does *not* imply that ancient and modern colonialism are identical. On the contrary, scholars who work within a postcolonial perspective are careful to point out the primary importance of historical contingency when dealing with colonial situations. As formulated by Michael Rowlands: "while use of the term colonialism allows comparison of differences in shared characteristics, it should not imply any direct or simple parallelism between ancient and modern" (Rowlands 1998:329). Inherent in this view is the emphasis on the local characteristics of colonialism. Acknowledging the differences in local experiences of colonialism does not, however, mean that one cannot generalise or compare between local colonial situations. That is, although the concept of colonialism "covers a vast range of situations which are characterised by different colonial intentions and correspondingly different local responses, it does bring out the essential of the situation" (van Dommelen 1998a:26-27). Differently stated, it is felt that there are particular processes and relationships that are common to colonial situations over time and place, and that these features are subject to comparison.

Secondly, a common critique is directed towards the view of colonialism as constituted by a dual opposition between two homogeneous cultural groups. In this view, one cultural group is thought of as dominating the other in a unidirectional process of colonisation and oppression. The colonised, or subjected group, is understood as in constant opposition to the coloniser. This view is widely represented in classical archaeology and ancient history, as well as in Western historical writing at large. It is understood, however, from the postcolonial critique developed on the basis of recent colonial experiences, that colonial situations are seldom that clear-cut. The postcolonial critique seems to apply to ancient colonialism as well. For example, van Dommelen argues that the dual model conventionally applied to ancient colonial situations, is not applicable to Sardinia. Based on field survey material from western Sardinia, van Dommelen sketches a picture of varied local responses to colonialism that cut across what he calls the traditional 'colonial divide' in previous studies of colonialism around the Mediterranean. As Sardinia was colonised by first Carthage, then Rome, cultural identities were re-defined among the local population in a number of ways. Cultural identity was negotiated locally, on a farm site level, *not* uniformly as a collective 'indigenous response' (van Dommelen 1997, 1998a, 1998b).

In another study, Jane Webster dismisses the concept of romanisation for our understanding of provincial culture in the Roman empire. As an alternative framework she suggests the concept of creolisation, originally designating a

linguistic process, in which a new language is created through the negotiation process between two other languages. Through the concept of creolisation, Webster argues, the material culture of the Roman provinces may be approached in a new way. The creolisation process is illustrated in a case study of the iconography of the goddess Epona of Roman Gaul. It is demonstrated how different iconographical features were negotiated and selectively incorporated into a religious iconography of the Epona goddess. Creolisation, Webster concludes, rather than romanisation, may help us understand the nuances in colonial relations and shift the focus from the local elites to other groups among the colonised, such as the rural population or the urban poor (Webster 2001).

THE ARCHAEOLOGY OF WATER MANAGEMENT IN THE MAGHREB – THREE DIFFERENT VIEWS

Until recently, people living in the dry interior of North Africa relied mainly on rainwater for drinking water and for irrigation. Rainwater was collected by means of catchment walls and conduits, and stored in large reservoirs. In extensive terrace systems, rainwater runoff was retained and left to pond the cultivated areas behind the terrace walls. Large communal and smaller individual reservoirs assured the supply of drinking water for humans and animals. In agrarian literature, the terms rainwater harvesting and runoff agriculture are used to describe these methods (Fig. 2).

Since the mid-19th century, Maghreb's ancient remains that are related to water collection and storage have been the object of scholarly study. The cultural origin of the water management systems constitutes a main line of inquiry in these studies. The local variations in the layout and types of water collection devices have been described as the result of a Roman or an indigenous land use system respectively, or, simply, as determined by topographic conditions.

A driving force in France's colonial settlement and agricultural development in North Africa, was the idea of the region as the granary of Rome – a prosperous countryside that produced surplus grain for export (Swearingen 1987). Given the dry environmental conditions in large parts of the interior, water supply constituted a challenge to colonial rural development. Ancient dams, aqueducts and cisterns were therefore documented and evaluated in order to be put into use by individual colonial farmers and by the French administration (Shaw 1984:124 ff). Field surveys of the waterworks were carried out by military topographers and hydraulic engineers, sometimes in collaboration with historians and antiquarians. Up until the 1960s, the studies were carried out by individuals related to the French military, administration or academia. Following political independence, the field has undergone a change so that it presently includes Maghreb historians and archaeologists, along with European and American scholars (Fig. 3).

In the following, I will concentrate on three main attitudes that I find significant of the archaeological study of water management in the Maghreb. The attitudes differ in the way coloniser and colonised, the Romans and the locals, are re-



Fig. 2. Runoff agriculture. Olive orchards irrigated with rainwater that is naturally collected in the ravine (light grey in centre) and distributed by means of embankments and dug canals to the cultivation plots. Plain of Hichria, Sidi Bouzid, Tunisia, October 1989. Photo by the author.

presented in the interpretations of the development of rural water management systems. In many of the studies, particularly those from the late 19th century and early 20th century, the waterworks are unanimously interpreted as the product of Roman colonisation, that is romanisation, of the North African interior. In more recent studies, mainly produced after political independence in Algeria, Morocco, Tunisia and Libya, alternative interpretations stressing the local, indigenous origin of the water structures have been advanced. There have also been attempts to accommodate the Roman and indigenous origins through models of interaction.

1) The Roman genius

“...the Arabs were never capable of executing works of this kind” (Payen 1864:6, my translation).

A dominating view in the archaeological history of rural waterworks in North Africa, is that the hydraulic installations are the product of Roman technological know-how. Some scholars have claimed that the water systems are the result of

Roman invention and technological transfer to the North African region. Others regard the systems as a radical Roman amelioration of indigenous, pre-Roman methods. Common to these interpretations is, however, a conception of the Romans as culturally and technologically superior to the indigenous population. Simplified, the argumentation goes as follows: the water management systems are so technologically advanced, well constructed and widespread, that they assume a central power. Historically, in North Africa, this technological knowledge and central organisation could only have been assured by the Romans (Shaw 1984:125-128).

Significantly, many scholars have assumed the attitude of the ‘Roman genius’ quite unreflectedly. Such automatic assigning of the archaeological remains to the Romans is well known from colonial archaeology at large in the Maghreb. It is a common feature among the military officials who contributed field data in the national surveys of ancient hydraulic works, which were carried out in the late 19th and early 20th centuries (Gauckler 1897-1912; Gsell 1902). It is also present in the rich and detailed publication of a field survey carried out by the hydraulic engineer Jean Birebent in Algeria in the 1950s. For Birebent, the question of an alternative origin of the waterworks other than a Roman one, does not seem to exist (Birebent 1962).

By the early 20th century, the Romanness of the water installations went almost unquestioned. A notable exception to this rule was the hypothesis advanced by Carton. Based on his observations of cultivation practices and irrigation techniques employed in contemporary Algeria and Tunisia, Carton sensed that a long

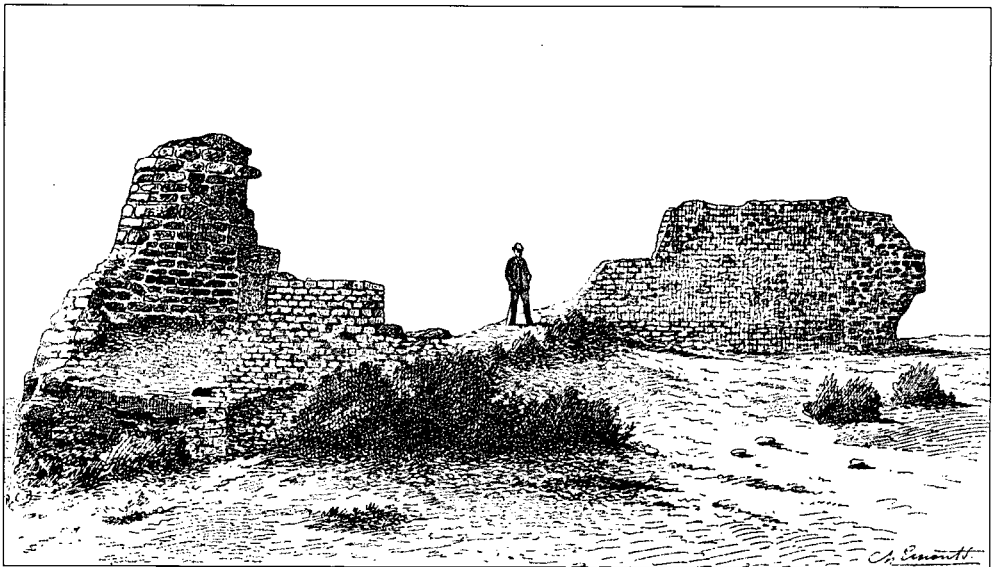


Fig. 3. The French scientific exploration of the North African territories in the late 19th century. Illustration from one of the studies of ancient water management carried out by the French administration in Algeria and Tunisia, showing the remains of a barrage at oued Brek, Enfida-region, Northeast Tunisia. (Source: Du Coudray La Blanchère 1897 (1894):54).

experience of the local conditions was critical to the development of cultivation practices. Therefore, he argued, the rainwater harvesting methods could not have been introduced by the Romans, but had been developed by the indigenous population in the pre-Roman period. According to Carton, the Roman contribution was to solidify the indigenous construction technique, using cement and stone instead of earth (Carton 1909/10:202; Carton 1912:5-6; Shaw 1984:123).

2) *Reclaim the indigenous*

“These communities exploiting the runoff waters in wadis draining the southern slopes of the Saharan Atlas doubtless had a *long* pre-Roman history” (Shaw 1984:163).

In the decades following political independence in the Maghreb region, several scholars argued for an indigenous origin of the archaeological remains of rural water management. In the early 1980s, the first reports of the UNESCO Libyan valleys survey suggested an indigenous origin of the traditional farming and irrigation systems. The British-Libyan team based their conclusions on extensive surveying of past settlement and runoff farming in a zone bordering the desert in Libya. It was suggested that runoff agriculture had been practised in the desert margins both before and after the Roman period, and, consequently, that the water management techniques were originally developed by the local population of the area (Barker and Jones 1982).

Simultaneously, Brent Shaw argued for a pre-Roman origin of the irrigation practices in the Maghreb. Reviewing the different arguments put forward by the proponents of a Roman origin, mainly organisational and technological superiority, Shaw demonstrated their irrelevance for the development of rural water management in North Africa. According to Shaw, the factors that governed water management in the region were neither highly technological nor dependent on a central power. Instead, he suggested that the water structures were part of a long tradition of dryland farming, based on local knowledge and similar human responses to the environmental conditions across the region. This tradition, according to Shaw, was difficult to date, but with all probability was initiated in the pre-Roman period (Shaw 1984a).

As I see it, the timing of this reassessment of the archaeological material should be understood in relation to the general reaction against colonial historiography that was taking place in Maghreb scholarship around and after the onset of national independence. As a reaction to the dominance of French historical writing of the region, some scholars claimed that Maghreb history needed to be revised and rewritten from an internal perspective. Illustratively, Jane Webster has described this process in terms of a “nativist counterattack” (Webster 2001: 212-213). In classical archaeology, Marcel Bénabou’s attempts to ‘decolonise’ the historical writings of the Roman period, provoked a heated debate (Bénabou 1976; Bénabou 1978; Bénabou 1981). Bénabou was criticised for simply ‘reversing the perspectives’, from a focus on the Romans to a focus on the indigenous population of

North Africa, and in doing so reinforcing the dualist view on the colonial situation in the Roman province (Thébert 1978). Other scholars, such as the Moroccan historian Abdallah Laroui, pointed out the unverified grounds on which most archaeological remains had been assigned to the Romans by French colonial historians and archaeologists (Laroui 1977 (1970):28). Although I am not aware of any other study of water management that so clearly expresses the ‘nativist’ ideals as the historical works of Laroui and Bénabou, internal historical perspectives definitely came into focus in the rural archaeology of the Maghreb during the 1970s and 1980s. This is evident from the archaeological studies carried out by Philippe Leveau around Cherchell (ancient *Caesarea*) in northern Algeria (Leveau and Paillet 1976; Leveau 1986) and in the publications of the Unesco Libyan valleys survey (see below).

3) *Reconciling the two: interaction and response*

“The people farming the pre-desert so successfully in the Romano-Libyan period (as before and afterwards) were predominantly indigenous Libyans. However, whilst they were responsible for initiating the system in the first place, the investment by the local Libyan elites in agricultural intensification took place within the process of Roman administrative control, the opportunities it created for new systems of land ownership, and the new markets represented by the coastal cities and pre-desert garrisons” (Barker 1996:363).

In the 1980s and 1990s, several scholars suggested that the water collection structures were developed in a process of interaction between the indigenous and the Roman society. As an example, water structures recorded by the Kasserine archaeological survey in central Tunisia in the 1980s, were interpreted in the context of the agricultural intensification that took place during the late Roman period. According to Bruce Hitchner, the director of the Kasserine survey, Rome’s growing demand for olive oil and the availability of indigenous labour were the main factors underlying agricultural intensification in the region, including irrigation (Hitchner 1995a). On the basis of the survey material, Hitchner distinguished between two systems of land use, one romanised and one indigenous. The romanised system, he argued, was based on a typical Roman model of land division (centuriation), in which irrigation played only a complementary role. In the Kasserine area, this romanised land use system was primarily found in the lowland areas, in association with aqueducts, cisterns and wells. The catchment walls and terraces located in the upland areas around Kasserine, on the other hand, were interpreted as belonging to an indigenous farming system, based on rainwater harvesting. Importantly, Hitchner underlined that the romanised and the indigenous system should not be understood as opposites, but as two complementary systems (Hitchner 1995b:156-157).

Hitchner’s interpretation of the Kasserine survey material is largely in accordance with the view presented by Maurice Euzennat in 1988. Like Hitchner, Euzennat divided the water structures into two main groups, each representing a

different type of farming system. Catchment walls, terraces and dams and other type of structures intended for the collection of rainwater, were interpreted as belonging to an indigenous farming system. According to Euzennat, the construction technique of most wells, cisterns, aqueducts, and large barrages, however, spoke in favour of a Roman origin (Euzennat 1992:79).

An elaborate model of interaction between the Romans and the indigenous people has recently been presented by the UNESCO Libyan valleys survey. As already mentioned, Barker and the British-Libyan team suggested in the beginning of the project that the runoff farming systems had developed as an indigenous response to the particular economic conditions that were created by the Roman colonisers (Barker and Jones 1980-81:22; Barker and Jones 1982:12). The interaction model has been further developed in recent publications of the Libyan valleys survey (see citation above). According to the model, the local indigenous elite played a key role in the interaction process with the Romans. Further, the consistent usage of the term Romano-Libyan as a chronological and cultural marker in the publications of the Libyan valleys survey, suggests the idea of interaction between the groups.

Consequently, in both the Kasserine and the Libyan valleys survey, rural water management in the Roman period is interpreted as a response to economic and political conditions created by Roman colonialism in the Maghreb.

HYBRID HYDRAULICS - WATER MANAGEMENT IN A POSTCOLONIAL PERSPECTIVE

If we consider some of the issues that have been advanced in postcolonial studies, what conclusions can be drawn from these attitudes? Is there a postcolonial way of looking at past water management?

Firstly, I conclude that there is a strong relationship between modern colonialism (including the process of decolonisation) and the way ancient colonialism is represented in the archaeological writings. The first attitude, that of the 'Roman genius', illustrates how archaeological discourse served to conceptualise the Romans as the self-evident constructors of the water management systems, and hence provided historical legitimacy for modern French colonial development and appropriation of the systems. In the decades following political independence in the Maghreb, the indigenous people were represented in archaeological writings as a strong alternative to the Roman and other foreign colonisers. By 'reclaiming the indigenous', pre-Roman origin of the waterworks, the idea of long-term persistence of local culture was advanced. The third 'reconciling' attitude, stressing interaction between the indigenous and the Roman culture, may be understood as an expression of a 'mature' postcolonial attitude. In this respect the study of rural water management, from a colonialist perspective to a postcolonial reaction and, later, a 'reconciling' attitude, fits in well with the development of archaeological discourse largely in the Maghreb during the time of investigation (see e.g., Mattingly 1996).

Certainly, the reassessment of ancient colonialism that has taken place during the decades following political independence is not only a reinterpretative fiction, but is supported by new field data. Nevertheless, to my mind these data are not of the type that can alone explain the reassessment of past farming and irrigation practices that have taken place in Maghreb archaeology in the 1980s and 1990s. As I see it, the timing of this reassessment of the archaeological material must be understood within the context of decolonisation, which included both the breaking up of the European research privilege in the Maghreb and a profound questioning of colonial historical writing.

A second observation that stands out from my reading of the archaeological writings, is the dominant representation of coloniser and colonised as cultural entities. In the majority of archaeological writings, the representation of coloniser and colonised follows a dualist set-up. The Romans and the indigenous people play alternative roles at each end of the colonial relationship spectrum. One interpretation, which questions colonial duality, is provided by the UNESCO Libyan valleys survey. By stressing the role of an indigenous, local elite in the development of the extensive farming systems in Tripolitania, the cultural group homogeneity among the colonised is broken up. In the Libyan valleys survey hypothesis, the way the local elite is thought to have responded to the economic and social conditions created by Roman rule comes close to the way romanisation has been described as an elite-driven acculturation process in other Roman provinces. As demonstrated by Webster, however, the focus on the local elite in the study of material culture in the Roman provinces has its shortcomings. As in the case of the religious iconography of Roman Gaul, creolisation would probably be a more rewarding framework for our understanding of rural water management in the Roman provinces of North Africa.

Nowhere is the cultural unity of the colonising Romans questioned in the studies. Who were these Romans that we hear colonised the interior of North Africa? Interestingly enough, the information we possess on ethnicity in North Africa during the Roman period, suggests that the majority of the 'Roman' population was of North African origin (Mattingly 1996:59 with references). To take the example of the Roman army, a key group of colonisers, epigraphic evidence proves a large ethnic and cultural diversity among the soldiers. Soldiers were recruited widely across the Mediterranean region, for example from Syria, Italy and Gaul, to serve in the North African provinces. Moreover, the ethnic composition of the army was never fixed, but changed over time through the Roman period. In the late Roman period, most soldiers were recruited from within the region, some being the first generation of sons of immigrant military veterans that had settled in the province (Février 1989:155). This is particularly interesting, as the late Roman period is currently agreed upon as a period of agricultural intensification and extension of water management systems in the drylands of the Maghreb. Therefore, what we conventionally speak of as Romans in this context is a constantly changing group of people with extremely mixed ethnic background,

made up of people from outside the region, as well as displaced individuals from within the North African region.

Viewed in this perspective, the colonial meeting appears quite different. Firstly, there is very little room for direct transfer of Roman know-how, in the sense of technological import from the colonial metropolis, or even the Italian peninsula. Secondly, the changes in material culture that were taking place during Roman rule in North Africa, can not be understood in the simple terms of indigenous or Roman, simply because these groups did not exist as cultural entities. Hence, the colonial meeting stands out more as an intra-regional meeting between different local traditions. Such intra-regional meetings on a local level were part of the process in which new identities were defined during Roman rule in North Africa. These local colonial meetings could well be described as technological and cultural hybrids, which represent a multitude of cross-overs between coloniser and colonised.

In terms of postcolonial theory, the ancient systems for water control in the Maghreb may be understood as the product of creolisation. As already mentioned, the concept of creolisation has been widely used in postcolonial studies to describe processes of cultural intermixing and cultural change. It has recently been applied as a useful framework for the study of cultural contact in the Roman provinces. As pointed out by Jane Webster, the advantage of creolisation, compared to for example the usually applied concept of romanisation, is that it shifts focus away from the elite to groups of people that are normally not included in the discussion of ancient colonialism, such as the urban poor or the rural population. Further, the concept of creolisation allows for negotiations and contradictions in the colonial process, such as partial resistance and partial reception among colonisers *and* colonised. Creole processes are therefore bound to produce mixed, local variations, but may still result in an overall regional similarity, for example, through the movement of people within the region, as well as similarities in response to colonial authority. To my mind, this applies well to the ancient water management systems of the Maghreb.

A POSTCOLONIAL ARCHAEOLOGICAL REGION?

In the mid 1990s, David Mattingly resumed the 'state of affairs' in classical archaeology in the Maghreb. The balance was a rather gloomy one. According to Mattingly, there had been no real break with the colonial scholarly tradition, and nationalist ideologies were favouring Islamic archaeology to Roman studies in particularly Algeria and Libya. Mattingly did, however, see some future openings in the perspectives offered by postcolonial theory. He found it desirable to arrive at "a single post-colonial perspective on Roman Africa" (Mattingly 1996:64). Although I do not believe in the possibility, or even desirability, of arriving at a single postcolonial perspective, I believe that postcolonial thinking has something to contribute to the archaeological study of the region; and further, that the concept of the region is crucial in this process. The attractiveness of a regional approach

is evident from recent studies in the modern history of the Maghreb (Rollman 1997:72). If we leave aside the region as a Western 19th-century construct, we find a region with a shared political and cultural history that goes well beyond the colonial (Chater 1983). Just as the region has come to play an important role for today's historians, in the process towards recognition and self-determination, the region as an analytical concept may fill the same purpose for archaeologists. This implies a renegotiation of the colonially loaded regional concept of *Afrique du Nord* into a concept of the Maghreb, one that feels adequate for people working in the region today.

Within the Maghreb region, however, I believe that we need to seek the locally specific. Instead of rationalising the differences in the archaeological material of the Maghreb into simple 'local variations', I believe that we should look further into these differences. Possibly, much of the locally specific in the material culture of the Maghreb may be understood as expressions of different colonial encounters in antiquity. I suggest, therefore, that while postcolonialism has greatly contributed to the advancement of local specific histories, regional approaches should not be dismissed as simplified or too general. Rather, regional *and* local approaches are necessary for our understanding of cultural contact in the Roman provinces. Therefore, to arrive at a postcolonial perspective of the region, the region needs to be reconceptualised. Only then can postcolonial thinking act as an impetus to new directions in the classical archaeology of the Maghreb. It might be that all history is local history, but without a regional context the locality sways alone.

English revised by Laura Wrang.

ACKNOWLEDGEMENTS

The ideas expressed in this paper were presented at a seminar on postcolonial theory and archaeological practice, 'Placing the past in the postcolonial present', at the Department of Archaeology and Ancient History, Uppsala University, October 2001. The seminar was organised by Anna Källén and the author, and was hosted by the Division of African and Comparative Archaeology. I would like to express my warm gratitude to Anna for being such a light, bright and inspiring conversation partner on postcolonial matters, and to Professor Paul Sinclair for hosting the seminar. I sincerely thank Johannes Siapkas for reading and providing insightful comments on this paper (of which I took in a few!). Finally, I would like to thank Professor Barbro Santillo Frizell for suggesting that I write this paper and for valuable help along the way.

REFERENCES

- Arnfred, S. (Ed). 1995. *Issues of methodology and epistemology in postcolonial studies*. Roskilde: Roskilde University, International Development Studies.
- Barker, G. (Ed). 1996. *Farming the desert. The UNESCO Libyan valleys archaeological survey*. Paris: UNESCO. Tripoli: Department of Antiquities. London: Society for Libyan studies.
- Barker, G. W. W. and Jones, G. D. B. 1980-81. The UNESCO Libyan valleys survey 1980. *Libyan Studies* 12. Pp. 9-48.
- Barker, G. W. W. and Jones, G. D. B. 1982. The UNESCO Libyan valleys survey 1979-1981: palaeoeconomy and environmental archaeology in the pre-desert. *Libyan Studies* 13. Pp. 1-34.
- Bénabou, M. 1976. *La résistance africaine à la romanisation*. Paris: François Maspero.
- Bénabou, M. 1978. Les romains ont-ils conquis l'Afrique? *Annales, Économies, Sociétés, Civilisations* 33^e année (1). Pp. 83-88.
- Bénabou, M. 1981. L'Afrique et la culture romaine : le problème des survivances. *Les cahiers de Tunisie* 29 (117/118). Pp. 9-21.
- Bhabha, H. K. 1996. Unpacking my library...again. In: I. Chambers & L. Curti (Eds). *The post-colonial question. Common skies, divided horizons*. Pp. 199-211. London and New York: Routledge.
- Birebent, J. 1962. *Aquae romanae. Recherches d'hydraulique romaine dans l'Est algérien*. Algiers: Université d'Alger, Faculté des lettres et sciences humaines.
- Brown, L. C. 1997. Maghrib historiography: the unit of analysis problem. In: M. L. Gall & K. Perkins (Eds). *The Maghrib in question. Essays in history and historiography*. Pp. 4-16. Austin: University of Texas Press.
- Cagnat, R. and Merlin, A. 1893-1913. *Atlas archéologique de la Tunisie*. Paris: Éditions Ernest Leroux.
- Carton, L. 1909/10. Travaux antiques d'irrigation et de culture dans la région du Djebel-Onk. *Recueil des notices et mémoires de la société archéologique du département de Constantine* 12^e vol. 4^{ème} série, 43^e vol de la collection. Pp. 193-224.
- Carton, L. 1912. L'Hydraulique dans l'Antiquité en Barbarie. *Revue Tunisienne* 1912 (Institut de Carthage). Pp. 221-230.
- Chakrabarty, D. 1992. Postcoloniality and the artifice of history, Who speaks for the "Indian" pasts? *Representations* 37 (Winter). Pp. 1-24.
- Chater, K. 1983. La construction du Maghreb : les données de l'histoire. In: *La construction du Maghreb. Actes du colloque, Tunis Octobre 1981*. Série sociologique 9. Pp. 19-21. Tunis: Université de Tunis, Centre d'études et de recherches économiques et sociales (CERES).
- van Dommelen, P. 1997. Colonial constructs: colonialism and archaeology in the Mediterranean. *World Archaeology* 28 (3). Pp. 305-323.
- van Dommelen, P. 1998a. Punic persistence: colonialism and cultural identities in Roman Sardinia. *Cultural identity in the Roman empire*. In: Laurence, R. & Berry, J. (Eds). Pp. 25-48. London and New York: Routledge.
- van Dommelen, P. 1998b. *On colonial grounds: a comparative study of colonialism and rural settlement in the first millennium BC west central Sardinia*. Leiden: Leiden University, Faculty of Archaeology.
- Du Coudray La Blanchère, M.-R. 1897 (1894). L'aménagement de l'eau et l'installation rurale dans l'Afrique ancienne, *Nouvelles archives des missions scientifiques* tome 7. Pp. 1-108. Paris: Ministère de l'instruction publique et des beaux-arts.
- Dyson, S. L. (Ed). 1985. *Comparative studies in the archaeology of colonialism*. BAR International series 233. Oxford: British Archaeological Reports.
- Dyson, S. L. 1998. *Ancient marbles to American shores: classical archaeology in the United States*. Philadelphia: University of Pennsylvania Press.
- Euzennat, M. 1992. Grande et petite hydraulique dans l'Afrique romaine. In: Argoud, G., Marangou, L., Panayotopoulos, V. & Villain-Gandossi, C. (Eds). *L'eau et les hommes en Méditerranée et en Mer Noire dans l'Antiquité. De l'époque mycénienne au règne de Justinien. Actes du congrès international Athènes, 20-24 mai 1988*. Pp. 75-94. Vienna: European Coordination Center for Research and

- Documentation in Social Sciences. Athens: Centre National de Recherches Sociales (EKKE) and Centre de Recherches Néo-Helléniques/Fondation Nationale de la Recherche Scientifique de Grèce (KNE/EIE).
- Février, P.-A. 1989. *Approches du Maghreb romain*. Aix-en-Provence: Édisud.
- Gauckler, P. 1897-1912. *Enquête sur les installations romaines en Tunisie*. Regence de Tunis, Protectorat français, Direction des antiquités et beaux-arts. Paris: Ernest Leroux. Tunis: Imprimerie Rapide (vols I and V).
- Gsell, S. 1902. *Enquête administrative sur les travaux hydrauliques anciens en Algérie*. Bibliothèque d'archéologie africaine 7, Ministère de l'Instruction publique et des beaux-arts. Paris: Imprimerie nationale, Ernest Leroux.
- Gsell, S. 1911. *Atlas archéologique de l'Algérie*. Paris.
- Hingley, R. 1996. The 'legacy' of Rome: the rise, decline, and fall of the theory of Romanization. In: Webster, J. and Cooper, N. J. *Roman imperialism: post-colonial perspectives*. Leicester Archaeology Monographs 3. Pp. 35-48. Leicester: University of Leicester, School of Archaeological studies.
- Hingley, R. 2000. *Roman officers and English gentlemen. The imperial origins of Roman archaeology*. London and New York: Routledge.
- Hitchner, R. B. 1995a. Historical text and archaeological context in Roman North Africa: The Albertini tablets and the Kasserine survey. In: Small, D. B. (Ed). *Methods in the Mediterranean. Historical and archaeological views on texts and archaeology*. Pp. 124-142. Leiden, New York and Köln: Brill.
- Hitchner, R. B. 1995b. Irrigation, terraces, dams and aqueducts in the region of Cillium (mod. Kasserine). The role of water works in the development of a Roman-African town and its countryside. In: Troussset, P. (Ed). *L'Afrique du Nord antique et médiévale. Productions et exportations africaines. Actualités archéologiques*, 1. Pp. 143-157. Paris: CHTS.
- Johansson de Château, L. 2002 (forthcoming). *From Roman to indigenous. Colonialism and the archaeology of rural water management in the Maghreb*. Ph.D. thesis, Uppsala University, Department of Archaeology and Ancient history.
- Khanoussi, M., Ruggeri, P. and Vismara, C. 2000. *L'Africa Romana. Geografi, viaggiatori, militari nel Maghreb: alle origini dell'archeologia nel Nord Africa* (Atti del XIII convegno di studio Djerba, 10-13 dicembre 1998), 2 vols. Sassari: Università degli Studi di Sassari, Centro di Studi Interdisciplinari sulle Province Romane.
- Lacoste, C. and Lacoste, Y. (Eds). 1995. *Maghreb. Peuples et civilisations*. La Découverte. Les dossiers de l'état du monde. Paris: La Découverte.
- Laroui, A. 1977 (1970). *The history of the Maghrib: an interpretive essay*. Princeton: Princeton University Press.
- Leveau, P. 1977. L'opposition de la montagne et de la plaine dans l'historiographie de l'Afrique du Nord antique. *Annales de Géographie* 474. Pp. 201-205.
- Leveau, P. 1986. Occupation du sol, géosystèmes et systèmes sociaux. Rome et ses ennemis des montagnes et du désert dans le Maghreb antique. *Annales, Économies. Sociétés, Civilisations* 41^e année (6) Pp. 1345-1358.
- Leveau, P. and Paillet, J.-L. 1976. *L'alimentation en eau de Caesarea de Maurétanie et l'aqueduc de Cherchel*. Paris: Harmattan.
- Loomba, A. 1998. *Colonialism/Postcolonialism*. London and New York: Routledge.
- Mahjoubi, A. 1997. Reflections on the historiography of the ancient Maghrib. In: Gall, M. L. & Perkins, K. J. (Eds) *The Maghrib in question: essays in history and historiography*. Pp. 17-34. Austin: University of Texas Press.
- Marchand, S. 1996. *Down from Olympus*. Princeton: Princeton University Press.
- Mattingly, D. J. 1996. From one colonialism to another: imperialism and the Maghreb. In: Webster, J. & Cooper, N.J. (Eds). *Roman imperialism: post-colonial perspectives*. Leicester Archaeology Monographs 3. Pp. 49-69. Leicester: University of Leicester, School of Archaeological studies.
- Morris, I. 1994. Archaeologies of Greece. In: I. Morris (Ed). *Classical Greece: ancient histories and modern archaeologies*. Pp. 8-47. Cambridge: Cambridge University Press.

- Payen, L. C. 1864. Notice adressée à M. le Général Desvaux, commandant la Division et Président honoraire de la Société Archéologique, sur les travaux hydrauliques anciens dont il existe encore de nombreux vestiges dans la partie du Hodna, dépendant de la Province de Constantine. *Recueil des notices et mémoires de la Société archéologique de la province de Constantine* 8. Pp. 1-14 with 25 Pls.
- Rollman, W. J. 1997. Some reflections on recent trends in the study of modern North African history. In: Gall, M. L. & Perkins, K. (Eds). *The Maghrib in question. Essays in history and historiography*. Pp. 62-79. Austin: University of Texas Press.
- Rowlands, M. 1998. The archaeology of colonialism. In: Kristiansen, K. & Rowlands, M. (Eds). *Social transformations in archaeology. Global and local perspectives*. Pp. 327-333. London and New York: Routledge.
- Said, E. 1978. *Orientalism*. London and New York: Vintage books.
- Shanks, M. 1996. *Classical archaeology of Greece. Experiences of the discipline*. London: Routledge.
- Shaw, B. D. 1984. Water and society in the ancient Maghrib: technology, property and development. *Antiquités Africaines* 20. Pp. 121-173.
- Swearingen, W. 1987. *Moroccan mirages: agrarian dreams and deceptions, 1912-1986*. Princeton: Princeton University Press.
- Swearingen, W. D. & Bencherifa, A. (Eds). 1996. *The North African environment at risk*. Boulder: Westview press.
- Thébert, Y. 1978. Romanisation et déromanisation en Afrique : histoire décolonisée ou histoire inversée? *Annales, Économies, Sociétés, Civilisations* 33^e année (1). Pp. 64-82.
- Trigger, B. 1989. *A history of archaeological thought*. Cambridge: Cambridge University Press.
- Webster, J. 1996. Ethnographic barbarity: colonial discourse and 'Celtic warrior societies'. In: Webster, J. and Cooper, N. J. *Roman imperialism: post-colonial perspectives*. Leicester Archaeology Monographs 3. Pp. 111-123. Leicester: University of Leicester, School of Archaeological studies.
- Webster, J. 1997. Necessary comparisons: a post-colonial approach to religious syncretism in the Roman provinces. *World Archaeology* 28 (3). Pp. 324-338.
- Webster, J. 2001. Creolizing the Roman provinces. *American Journal of Archaeology* 105 (2). Pp. 209-225.
- Wolf, G. 1997. Beyond Romans and natives. *World Archaeology* 28 (3). Pp. 339-350.
- Wolf, G. 1998. *Becoming Roman. The origins of provincial civilization in Gaul*. Cambridge: Cambridge University Press.