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3

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Gabriella Clabot

Cultural and Linguistic Transition explored

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Table of contents

Introduction

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The ATRA WORKSHOP on linguistic, anthropological, archaeological, historical and philological issues related to areas or times in Africa characterized by phenomena of transition was held in Trieste (Italy) on May 24-26, 2016.

The workshop represented the closing event of the three years interdisciplinary ATrA project (www.africantransitions.it), funded by the Italian Ministry of Universities, Education and Research (MIUR) in the framework of its FIRB 2012 initiative.

Aim of the workshop was the discussion, on an international level, of the major themes treated during these years by the ATrA team, in order to stimulate a fruitful academic debate on the many facets of identity negotiation, ethnicity and cultural affiliation such as contact, creolization, integration, urbanization, climate or cultural change, language and cultural switch, market exchanges, human migration and any other possible related topics.

This edition contains both a collection of the papers actually discussed by the ATrA team with the invited keynote speakers during the workshop, and a selection of other contributions by scholars who answered a specific call launched in the framework of the activities of the project.

The book is divided into three parts, corresponding to the three disciplines involved in the debate: anthropology, archaeology and linguistics.

All papers present context specific, very concrete case studies which bring to light specific aspects of transition in terms of changing systems of values (in an anthropological perspective), language shifts (starting from a descriptive dimension) and linguistic and cultural exchanges (through the analysis of written texts and artifacts).

Mechanisms of resilience and adaptation to new situations and contexts are described through an investigation which in many cases has the flavor of an intimate research, aimed above all at finding out the very essence of "being human", be it in ancient or modern contexts and in small scale or large scale societies.

All the papers have been written by specialists of a determined discipline with the true aim to address scholars who could be expert in a different domain of the human sciences with respect to their own, in order to encourage eccentric reflections and stimulate a true multi-level and multi-disciplinary dialogue.

Therefore, this edition is not aimed at proposing solutions, but rather at putting on the table new hints and traces that each reader, according to her/his specific interests, can synthesize in a "viable toolbox" allowing her/him to orient her/himself in any other contexts in transition.

Due to the miscellaneous nature of the book and in order to facilitate its reading, each paper is introduced by an abstract and accompanied by a set of keywords.

Part I

Anthropology / Culture Studies

Cause: a category of the human mind?[*]

Some social consequences of Chewong (Malaysian rainforest hunter-gatherers) ontological understanding

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ABSTRACT

In the absence of concepts that correspond to those of chance, luck, or fortune, how do people account for why seemingly random desirable or undesirable events occur? Based on long-term fieldwork with the Chewong, a small hunting-gathering and shifting-cultivating group of people who live in the Malaysian rain-forest, I study their theory of causality. It is argued that cause is a universal category of the human mind, but that an understanding of cause cannot be separated from an examination of the ontology and epistemology in each case.

KEYWORDS

Causality, Ontology, Epistemology, Misfortune, Chewong

Shortly before my arrival in 1977 to the Chewong – a small group of hunter-gatherers and shifting cultivators who live in the rain forest of Peninsular Malaysia – a terrible event took place[1]. The incident – a disastrous thunderstorm – was still at the forefront of people's mind and I was repeatedly told about it. Several families were spending the night in temporary shelters in the forest when a heavy storm blew up, accompanied by rain, thunder and lightning A very large tree was uprooted and fell on top of the shelters. Three people were killed outright and two severely injured. Others received minor injuries. It was a frightful calamity, especially in such a small and fragile society where everyone has some kind of kinship relationship with everyone else. When I was first told about it, my reaction was that it was shockingly bad luck for the tree to fall precisely on the sleeping. However, people dismissed the notion of luck or chance. They had an explanation for why it had happened and, as I learnt their ontological and metaphysical principles, I became able to account for the happening in their terms. The identified cause fits into Chewong notions of causality more generally, and I came to understand that there is no conceptual space for what I would recognize as luck or fortune. To explicate Chewong notions of causality will be the topic of this paper. From a methodological point of view, I shall be using the incident as a springboard for general methodological, theoretical and analytical speculations.

Everyone I asked about the fallen tree gave me the same explanation for why it had happened there and then. It was directly linked to an event earlier the same evening. A few people had teased and laughed at some millipedes that had entered the lean-to. To laugh at or near all kinds of insects, worms, moths and butterflies is a heavily sanctioned act called *talaiden*. *Talaiden* is one of a number of named prescriptions and proscriptions that I call cosmo-rules and that constitute Chewong semantic and moral universe. Cosmo-rules provide the parameters for meaningful action. There is a direct and specified causal relationship between the infringement of one such rule and the occurrence of an undesirable event. To perform *talaiden* automatically arouses the anger of the thunder spirit, Tanko, who lives above in the sky, as well as the Original Snake, who lives in the primordial sea below the earth. Whenever humans break the *talaiden* rule, these two beings make thunder storms, heavy rain and land slides. On this occasion, the *talaiden* offence of teasing millipedes was the direct cause of the storm and the fallen tree.

Far from expressing the disaster as a misfortune – bad luck for those killed and injured to be just where the tree fell – the Chewong asserted that the transgression had caused the event to happen. Although some of those killed or injured had not participated in the breach of *talaiden*, this was irrelevant

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[1]   Fieldwork with the Chewong was undertaken for 18 months during 1977-1979 with a 4-month follow-up in 1981. Since then, shorter visits have been made in 1990, 1991, 1997, 2001, 2006, 2008, and 2010.

for the two spirit beings, a fact that implies that the rule has wide moral implications. To laugh at animals places the whole community, not just the transgressors, at risk.

1. SOME POINTS OF METHODOLOGY

The main source for Chewong ontological knowledge is the large body of myths that every individual knows and which, apart from providing entertainment, provides by example insight into the principles of the world in which they live, and their theory of epistemology (Howell 1984). The myths are endless confirmations about cause and effect of the various cosmo-rules. The myths are also constitutive of practical knowledge, demonstrating how all people – including sentient animals, plants, and 'things' – emerge as conscious and knowledgeable actors. The rules are not only good to think, they are also good to act (viz. Mosko 2009). As such, myths are an important source for understating Chewong ontological schema. Other sources are shamanistic songs performed as the shaman sends his *ruwai*[2] into space and meets non-human conscious beings (see Howell 1986 for a discussion of the various Chewong formal speech acts).

Concepts that are comparable with Western understanding of 'fortune', 'luck', 'fate' or 'chance' are not found in Chewong vocabulary and are no part of their understanding of how the world works. Rather than trying to explain why they do *not* have such notions, I shall show how they conceptualize the occurrence of desirable or undesirable events, as these affect both individuals and the collectivity. My focus is on the metaphysical construction of interaction between humans and non-humans (animated natural world, deities) and I will argue that this is integral to ensuring the 'good life' for oneself and others. When certain things go wrong – occurrences that the outsider may think of as bad fortune, they are not characterized by the Chewong in such terms. Rather, Chewong ontology and epistemology emphasize how the application of 'correct knowledge' enables humans to control their environment and influence the course of events. Correct knowledge in this case consists in adhering to the cosmo-rules; a direct causal relationship exists between behavior and event. Unanticipated happenings can always be diagnosed afterwards by reference to preceding behaviour which is characterized as transgressive according to the cosmological schema. This does not necessarily mean that a perpetrator knows about his or her transgression. After an accident or the onset of an illness the cause emerges only through diagnostic sequences per-

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[2]   *Ruwai* is a complex concept that covers several aspects of the spiritual side of humans and other conscious beings, as well as being the term for a shaman's spirit guide (Howell 1984)

formed by someone with shamanistic ability. I learnt about the significance of cosmo-rules by hanging around. No-one told me about them, they are embodied knowledge and become operative on the relevant occasion.

2. ALTERNATIVE CAUSAL SEQUENCES

Cause is one of the Aristotelian categories of human understanding, but one that has received relatively little anthropological investigation[3]. Durkheim was critical of Aristotle's and Kant's *a priorism* and argued that explanation was to be grounded in sociological terms[4]. I salute Durkheim's project to submit the categories of mind to comparative sociological analysis, but I agree with Steven Lukes who refutes Durkheim's claim that the categories were derived from the social, asserting rather that they are manifestations of "what thinking *is*" (Lukes 1973: 447, original emphasis[1]).

To explicate indigenous understandings of causality – that is how an event (a cause) leads to another (an effect) is, I suggest, a highly pertinent pursuit. But in doing this one should not, as has been a tendency in anthropology, concentrate upon 'strange' connections of magical thinking in specific religious 'world view' contexts (cf. Boyer 1992). Boyer has argued that theories of causality must be viewed in their totality – in both religious and mundane contexts (ibid.: 188). I agree with this. Indeed, in my investigation of Chewong causality, I argue against a separation between 'magical' and 'mundane' causation, a separation that has been – at least until recently – an anthropological tradition. As will become clear, there is no meaningful separation in Chewong understanding between what one may term nature and culture – or, indeed, between society and cosmos, (Howell 1984, 1996). This became clear to me during my first fieldwork when I began to grasp the constitutive significance of cosmo-rules.

From a comparative ethnographic point of view, my argument is that theories of cause are best interpreted when grounded within local ontology and epistemology. In an examination of headhunting in Borneo – one of the few studies that addresses cause as a category of the human mind – Needham (1976) asserts that there need not be any mystical force – "spirit" – to serve as an intermediary between an object and the effect that it produces. He ar-

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[3]   Causality has been central to medical anthropology, but as an instrumental, not a cognitive, category.

[4]   Other sociological terms include ideas of time, space, number, self, and class. For a detailed discussion of Durkheim's sociology of knowledge, see Lukes (1973: chap. 22). Citing a translation of Durkheim's 1912 *Les formes élémentaires de la vie religieuse*, Lukes (1973: 436) further notes that "the categories could be considered as 'essentially collective *représentations*', which 'depend upon the way in which [the group] is founded and organized, upon its morphology, upon its religious, moral and economic intuitions, etc.'."

gues that this interpretation is the result of Western predilection for mystical thinking. In Borneo, he claims, the possession of skulls *in itself* causes well-being. This is contrary to much anthropological writing that seeks to identify an intermediary agent that produces well-being from the possession of skulls. His is a cautionary tale, one that echoes the famous statement by Hocart when he asks, '[h]ow can we make any progress in the understanding of cultures, ancient or modern, if we persist in dividing what the people join and in joining what they keep apart?' (1970: 23). In line with that, I would claim that unlike the causal sequence case of Borneo headhunters, Chewong understanding of cause and effect *does* posit an intermediary mystical link between rule and event, namely the non-human beings whose agency is activated in the wake of a human transgression.

In a relentlessly rational system, such as that of the Azande – and, I would argue, the Chewong – there is no room for chance as an explanatory concept; and this, of course, was Evans-Pritchard's great problem in his study of Azande witchcraft beliefs (1937), or rather, the problem for him was that Azande did not operate with a concept of bad luck. Instead, when something adverse occurred that, under normal circumstances, ought not to have happened, they insisted on witchcraft as the cause. Chewong explanation for undesirable events hinges on the possession and application of relevant knowledge, i.e. knowledge that is integral to their metaphysics: what is the nature of reality; and to their ontology: what types of things exist in the world and how they relate to each other. Such knowledge is constitutive of daily behaviour, and is predicated upon elaborations on the concept of personhood (human nature) and upon the personhoods of the many non-human conscious beings that inhabit their cosmos. To live with the cosmo-rules as guides for daily action is a kind of ritual act. It brings the humans and non-human conscious beings into a continuous, but prescribed, relationship of mutuality, rendering the rules 'techniques for life-saving' (cf. Hocart 1970 [1936]: 33, 34) – not in a utilitarian sense, but as providing security about how the world works and their own place in it. For these claims to make much sense I need to elaborate upon the principles and values that constitute the Chewong social world – a social world that is co-existent with their cosmos

3. CHEWONG; SOME SOCIO-COSMOLOGICAL FEATURES

Chewong live in an inclusive, but bounded, animated environment in which humans, and many sentient animals, plants and spirits constitute a single moral universe. Existentially, humans are not set apart from the other sentient beings. They all interact according to principles that form the basis for correct behaviour and maintenance of order and which are expressed as named cosmo-rules. Knowledge of these codes for conduct is essential for individual

and social survival in the forest. Every Chewong – man and woman – has free access to this knowledge and everyone knows enough to perform their daily tasks with confidence. Those who seek to know more and who wish to establish relationships with conscious beings of other species, may do so and, as a result, they are more effective in their dealings with the animate environment in which they live; primarily as diviners of cause on particular inexplicable occasions and as shamanistic healers.

Chewong symbolic classification is constructed upon a principle of enumeration rather than on hierarchical ordering (Howell 1995). This is also the organizing principle of their social organization which is thoroughly egalitarian and peaceful. Ontological principles and socio-cultural practice thus co-constitute each other.

4. WHO AND WHAT IS A 'PERSON'?

Existentially speaking, all Chewong persons – including the many species of non-human beings mentioned above characterized as 'people' (*beri*) – are equal, with identical person attributes and qualities. The acid-test for people status is the possession of consciousness *(ruwai)*. I have argued that Chewong understanding of the animated world in which they live may be thought of as anthropomorphic, or more precisely, Chewongmorphic. While each species of sentient being not only has a distinctive body (see below), they also live according to the specificity of their own cultural/nature specific interpretation of the world. Chewong adhere to a psychic and cognitive unity of all species of 'people', at the same time as they are species relativists. They know that the 'natives' points of view' differ somewhat from each other; that this is due to the special quality of the eye-*ruwai*-body assemblage in each case. Arguably, the animated world around them consists of many natures, but only one culture (Descola 1996). This composite world of many natures, may further be described as one in which the common reference point is not humanity as a species, but the human (the Chewong) as a condition. This form of cultural (species) relativism bears many similarities to what others more recently have called perspectivism (cf. Århem 1996, Descola 1996, Viveiro de Castro e.g.1998).

Chewong conceptions of being and consciousness are thus central to an interpretation of their social world and events within it. As stated, in theory everything in the forest may reveal itself to be sentient beings with person qualities, needs and aspirations identical to those of the Chewong. This is why I characterize Chewong animistic world as Chewongmorphic. It is on the basis of this premise that interaction between all sentient species is non-hierarchical, demonstrating the profoundly egalitarian basis for all relationships. Such sentient, conscious, beings must possess *ruwai* – consciousness,

rationality. Empirically (in nature) they are distinguished as species through their bodies – the 'cloak' as Chewong terms the body. Each species has its own special body by which it may be recognized. Cloaks may be put on and off, and those individuals in each species who have shamanic abilities may in certain circumstances take off their cloaks and put on that of another species. This deception is not apparent and they are accepted as a *bona fide* by those whose cloak they have donned. The myths contain many examples of this. Further, the eyes are profoundly important in distinguishing one species from another. Indeed, perception is relativistic and species-bound. In one sense all species see the same world, and have the same needs; only what makes up the material objects in each world differs. For example, human eyes see the body of a wild pig as potential meat; as pork. A gibbon sees certain leaves as pork. A *bas* (group of potentially harmful spirits that are activated to perform a harmful act upon humans following a breach of a cosmo-rule) sees human *ruwai* as pork. In the forest there are a number of invisible villages and houses that belong to the different species of conscious beings. To ordinary ('hot', see below) human eyes they are just clusters of trees or leaves; to the species themselves they are houses and fields just like human houses and fields. While they are in 'their own land', their wellbeing is dependent upon the observation of the same prescriptions and proscriptions as those of the Chewong; the causal chain is identical, but again, what actually constitutes the offence – and the effect – is species dependent.

Importantly, those with shamanic abilities who have established a permanent relationship with a spirit guide (also called *ruwai*) have cool eyes – as opposed to the ordinary hot eyes. Cool eyes can see through all deceptions of borrowed cloaks and apparent trees and boulders which actually are houses and villages of specific species. They can also send their own *ruwai* into space during a healing seance. On such journeys they meet the various immortal spirits as well as the shamans of other species. This experience provides both a continuous source of new ontological knowledge and a confirmation of the old. Their animated universe is thus static only in principle, not in actuality. The law of causality, however, is the same for every species. Retribution for acts of omission or commission is not exercised by fellow humans, but by whichever spirit or non-human personage that is activated through a particular disregard of a rule. This was the case when the thunder deity and Original Snake caused the deadly thunderstorm mentioned at the outset of this chapter.

5. OTHER MISHAPS

Apart from 'natural' catastrophes, another type of undesirable event that requires explanation in the Chewong world is illness. The fear of illness is

constantly present, and there are numerous cosmo-rules that help individuals from succumbing to it. Illness does not happen by chance, but is always the result of some infraction which may have been committed by self or by others. For cure to be effected, the cause must be identified. For example, to the question of why x became ill, several answers are possible, and the shamanistic interpretations of the sick persons activities previous to the illness leads to the identification of the cause. One possible explanation is the breach of the numerous rules for food preparations and eating. For example, x may have eaten fruit shortly after eating monkey meat (the *chicka* proscription). This enabled a certain spirit to enter her body and eat at her innards. This is a well-known causal sequence that people are at pains to avoid. In this case, breach affects the transgressor only; and spells and invocations are usually sufficient to remedy the complaint.

Or, x may have become ill because y failed to observe the *punén* rule that prescribes that all food brought to the settlement from the forest must be shared with everyone who is present at any time. If someone knows that food has been brought back and he or she is not given a share, this will give rise to an emotional state of unfulfilled desire. Such an emotion places the person in a state of danger, vulnerable to attack by the tiger spirit (*ruwai*). The *punén* rule is one of the most important ones among the Chewong. Arguably, society itself is predicated upon it. It has clear moral connotations (Howell 2011b). *Punén* transgressions are potentially fatal. A shamanistic séance may enable a person with much knowledge, first to diagnose the cause and then to retrieve the soul (*ruwai*). This requires extensive negotiations and exchanges. In some cases the shaman's knowledge is not sufficient and the person dies.

Theirs is a fragile community, so these cosmo-rules which carry heavy moral injunctions are a major factor in the constitution and maintenance of social order. Practice is never neutral but embedded in, and constituted, upon cosmological knowledge.

6. RISK AND FORTUNE

Risk perception, that is how people conceptualize, experience and respond to risk in daily life, and to potential future risk, varies considerably between societies and are closely linked to a theory of causality. The degree to which people have tools – practical or magical – at their disposal to control risk will, of course, also vary. Sociologically speaking, risk factors are not natural facts, but social ones, part of the ontology in each case; and, according to Mary Douglas (1992:50), '[w]e need a way of putting the isolated risk issue into the context of the larger system'. Broadly speaking, risk factors are concerned with how undesired evens are categorized and handled. In the Chewong case, risk factors are many and affect the pursuit of livelihood. I have tried to place

them in the context of the larger cosmological system in which their theory of knowledge and causality is embedded.

Just as Chewong are affected detrimentally when they infringe some prescribed mode of behaviour, so also will failure to observe an analogous rule within the world of non-Chewong sentient beings. For examples transgressions by wild pigs activate humans who then may hunt and kill them. There is a kind of double-loop that folds in and out of itself between humans and the many species of conscious personages. Chewong risk is thus very different from that of the Azande whose epistemology and concept of personhood are such that any individual may be a witch, even without knowing it themselves. Azande witches operate in secret – even unconsciously – against anyone they feel a grudge against. Azande do not have at their disposal tools to prevent witchcraft attack – only tools to identify a witch after the event.

7. IN CONCLUSION

Undoubtedly human beings everywhere try to protect themselves against undesirable occurrences. The Chewong are no different in this respect. But there are major socio-cultural differences in how the explanations of why and how undesirable events occur. I have argued that Chewong understanding of causality in human existence has no conceptual room for luck or fortune. Metaphysically constituted knowledge is applied in daily and ritual practice, ensuring a life that, ideally, is prosperous and devoid of unwanted or dangerous events. In egalitarian Chewong society every person is responsible for the correct application of this knowledge for the benefit of self and others. The premises for well-being are dependent upon the relationship between every individual Chewong man and woman and the numerous anthropomorphized beings that populate their environment. Sociality can only be understood from this perspective.

Cause is a universal category of human understanding in the Aristotelian sense. How causality is conceptualized varies from one society to another and it should be the task of anthropologists to unravel its ontological conceptualization in each case. It is widely assumed that such a conceptualization will include the notion of luck, fortune and chance. Like the Azande, but with important sociological and epistemological differences, the Chewong offer an interesting empirical counter-example.

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Women's lives: childhood, adolescence, marriage and motherhood among the Ogiek of Mariashoni (Kenya) and the Kulango of Nassian (Ivory Coast)

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ABSTRACT

In traditional rural Africa, women are usually subjected to the males of their families, both in patrilineal and in matrilineal contexts. However, their self-determination and the level of independence they can attain is undoubtedly different in the two types of society, above all due to the different solidarity networks they can either keep alive with their original kinship, or develop in their new reality once they get married. Schooling and education are clearly elements which can help the women's empowerment, but they are not the only one. This paper presents an ethno-linguistic and anthropological analysis of the conditions of women in their childhood, adolescence, marriage and motherhood among the Ogiek of Kenya (patrilineal, Kalenjin) and the Kulango of Ivory Coast (matrilineal, Gur). In the last paragraphs, special attention will be reserved to those resilience strategies against the males' supremacy, which the women in the two contexts have developed in ages of practice and which are, nevertheless, considered acceptable within their traditions and culture.

Keywords

Ivory Coast, Kenya, Motherhood, Rural Africa, Ogiek, Kulango

1. INTRODUCTION

When people think about the condition of women in traditional rural Africa, the picture that comes to their mind is usually one of submission, hard work and insecurity. Despite this corresponds to truth in general terms, it is incorrect to say that there is no possibilities for them to ameliorate their situation and emancipate themselves, remaining, however, inside their original cultures.

Aim of this paper is to investigate and bring to light those resilience strategies African women can live out in order to make themselves a little more independent from their male closest relatives without being banned from their society.

In order to demonstrate that resilience is always possible, even though with different results, no matter how bad the starting condition is, two very different case studies will be taken into consideration, the one referring to a patrilineal society of hunters and gatherers (the Ogiek of Kenya) and the other to a matrilineal agricultural society (the Kulango of Ivory Coast).

Three are the starting research questions:

1) What is the position of women in traditional rural Africa?
2) Does the type of descent affect this position?
3) Is it possible for women in rural Africa to rise up against the constraints of their traditional cultures? How?

Since the life of African women is based on their being mothers, it is impossible to think of them without considering their children and all those elements which can affect the wellbeing, the health and the safety of both. For this reason, in order to answer at best to the research questions identified, this paper will focus on all the following aspects: life stages, education, pregnancy, delivery, babies' weaning and nutrition.

2. THE OGIEK OF MARIASHONI (KENYA) AND THE KULANGO OF NASSIAN (IVORY COAST): WHO ARE THEY?

The Ogiek of Mariashoni (Kenya) are a group of patrilineal, semi-nomad hunters and gatherers[1], who speak a Kalenjin (Nilo-Saharan, Satellite-core, Core, Eastern Sudanic, Southern, Nilotic, Southern) language very close to Nandi. According to Ethnologue[2], the Ogiek population of Kenya and Tanzania is made of 79.000 people and their literacy rate is attested at 20% circa[3]. They

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[1]   Nowadays they are becoming more and more sedentary due to the reduction of their original habitat, which is bringing them to switch to agriculture.

[2]   https://www.ethnologue.com/language/oki

[3]   UN data 2005 and cf Micheli 2014 IncLing37, p.155 for a detailed description of the

live in the Southwestern escarpment of the Mau forest, in a region which is comprised between the highlands close to Molo and the lowlands close to Lake Nakuru.

Their habitat is the forest, where they live in single households, hosting generally twenty to thirty people, which are placed at some distance from each other (in some cases some hundreds meters, but usually even two or three kilometers).

The Ogiek residence is typically virilocal and usually the old father and his wife (or wives, since the Ogiek admit polygamy) live together in the same household with their sons and, eventually, their sons' spouses with their children until they get old and strong enough to open their own household and move a bit farther. A common Ogiek household does not admit more than twenty/thirty people.

Even though their subsistence is typically based on hunting and gathering, they also practice traditional beekeeping and, according to their oral history, the first Ogiek appeared at the beginning of times in the Mau forest with their dogs and their bees.

As we will see in a while, honey is the source of the most energetic food in the Ogiek nutrition, and it is fundamental above all in the children's diet.

Nowadays, they also elevate cows, goats, sheep and, sometimes, hens, but they usually do not kill their animals for meat, except for the hens.

The Ogiek social structure is very simple. They have strong clan affiliations, which correspond to territorial delimitations and, in case of quarrels between two or more different households or families, or in emergency cases, it is up to the elders, organized in an egalitarian council, to decide what to do and how to proceed.

When the Ogiek migrate, they usually migrate in groups of maximum 50 peoples (two big households). When the elders are too old to move, they are left behind and, their lives are consequently at stake.

The Kulango of Nassian (Ivory Coast) are a group of matrilineal, sedentary horticulturalists who speak a Gur (Niger-Congo, Atlantic-Congo, Volta-Congo, North) language very close to Lohron. According to Ethnologue, the Kulango population of Ivory Coast, considering the two dialects in which they divide the language[4], is made of circa 90.000 people and the literacy rate in L2 is attested around 15-25%[5].

They live in the North-Eastern territories of the country, on the border with Ghana, in a region which stretches between the towns of Bondoukou and Bouna. Their habitat (the region of Zanzan) is characterized by a green,

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literacy rate divided by sex and age in the region of Mariashoni.

[4]   Contrary to this opinion, Micheli 2007:11 speaks of a unique language, with two inter-comprehensible local varieties.

[5]   There is a lack of recent data, and the last estimate dates back to 1995.

hilly and wooded savannah and their typical settlement is the village. A common Kulango village can host between 2 or 3 hundreds and 2 or 3 thousands people. In particular, the village of Nassian, where the data for this research were collected, hosted at that time (2006) a population of about 1500 people.

The Kulango residence is typically uxorilocal, but in the villages at the Northern- and Westernmost borders, where they are in contact with Senoufo, Mande (Dyula) or Gur patrilineal societies, both matrilinearity and uxorilocality are often abandoned for the adoption of patrilineal descent and virilocal residence.

The Kulango are agriculturalists who grow yam, manioc, mais, millet, sorghum, plantains, coffee (where possible), rice (where possible) and all kinds of garden products, comprising tubers (carrots and potatoes), onions and vegetables. In the Zanzan region they also grow cashew trees.

Moreover, the region, above all in its Southern territories, is rich in fruit (sweet bananas, avocados, mangos, papayas, ananas, guava and any other kinds of exotic fruits are usually easily found on the market).

Besides farming, the Kulango also elevate goats, sheep and chicken and both meat and fish are common in their diet.

In the Kulango tradition there was also a hunters' association, called *sawalɛgɛ*, which is now unfortunately disappearing[6].

The Kulango village is ruled by the elders' council, among which an *aŋɔ ̣ɩsɛ* (the village chief) is usually elected, whose role is that of peace-keeper inside the village. The *aŋɔ ̣ɩse* is flanked by the *saakɔ tɛsɛ*, the earth priest, who must be a descendant of the village founder[7].

Both the Ogiek and the Kulango practice clanic and ethnic exogamy.

3. LIFE STAGES ACCORDING TO THE OGIEK AND THE KULANGO CULTURES AND THEIR IMPLICATIONS IN A WOMAN'S LIFE

In an ethno-linguistic perspective, the analysis of taxonomy is pivotal as a basis for the understanding of a people's system of thought. The idea is that, where there is a multiplication of taxa, there is also an evident specific interest of the speakers in that semantic field. Any new taxa indicate new points of interests and, in the specific case of life-stages, each consequent taxon determines a new set of expectations about the behavior, the tasks, the possibilities of social (inter)action and inclusion and the role and place of a person in his/her society as years go by. The presence or absence of a specific taxon in a specific moment in life, teaches unconsciously to the

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[6]   For a detailed description of the Kulango *sawalɛgɛ*, see Micheli 2011.

[7]   For a detailed description of the Kulango social structure and its terminology, see Micheli 2009.

speaker how to interpret that specific/non specific phase and, eventually, it marks a meaningful passage. Besides the existence/non existence of the taxon, it is interesting also to understand how long in terms of months or years a specific taxon can be used to describe a person. A major length in time corresponds to a more stable role in society (childhood and mature age for example), while a very short length in time usually indicates an abrupt, but very incisive change in this role, and is mainly characteristic of moments like adolescence (if taxonomically expressed) or youth. Table 1 reports the life stages taxa recognized by the Ogiek.

The * indicates the presence of points of interest and, as it is predictable in any natural societies, it is to be found in correspondence to the most delicate passage between adolescence and maturity.

Table 1

	FEMALE	MALE
Baby-hood	ngatɛt (0-5 days)	ngatɛt (0-3 days)
childhood	laakwɛt (0-8 y.)	laakwɛt (0-8 y.)
adolescence/youth	tjebto (8-12* murɛrɛt)	wero (8-20*)
maturity	tjebioso (12*-40)	muren (20*-60)
old age	ndasat (40-…)	ngɛtat (60-…)

If, according to the UNICEF Convention on the Rights of the Child, Art.1, a child is defined as "a person below the age of 18, unless the laws of a particular country set the legal age for adulthood younger", an Ogiek female, who has attained the age of 12 and has done the ritual excision, is possibly a bride (*murɛrɛt*) and can start her life as an adult member of her society becoming a *tjebioso*, a married woman.

Until the age of 8 (circa) Ogiek male and female children live together and are free to do what they like, while, as soon as they start being interested in their parents' occupations, their education implies a physical separation of their worlds and their society's expectations starts to impose on them a clearer set of acceptable/unacceptable behaviours. In this reality, adolescence merges with youth and is already the period in life where both male and female subjects learn how to become adults.

It is important, however, to note that this stage lasts much longer if the person is a man (*wero*) and is much shorter if the subject is a female (*tjebto*). This means two things:

1) The evolution from girl (*tjebto*) to woman (*tjebioso*), around the age of 12, corresponds to a mere biological fact (the first menstruation), which is marked by a true rite of passage (excision). The evolution from boy/young male (*wero*) to man (*muren*), instead, around the age of 20, clearly requires something else than a biological passage, in order to be complete. The boys' evolution envisages a specific training both in the most common male production activities (hunting and beekeeping) and in social interaction (learning how to behave during the adult men's meeting and at the presence of the elders);
2) Concerning the women, the Ogiek case offers a clear example of what UNICEF would consider child-marriage.

Some considerations are to be made also about the passage from adult to old age. In this case, there is again a discrepancy in the length of what is considered mature age in men and women and, also in this case, the evolution of women is bound to a chiefly biological factor (menopause), while the evolution of men is bound to a social one (the mental impossibility to remain active in the elders' council).

Table 2 reports the life stages taxa recognized by the Kulango. In this case the length in the period of childhood is extremely different between boys and girls, being much shorter (surprisingly) for male (8 years) than for female (14 years circa). This means that again, concerning the girls, biology, in the form of menstruation, is the only important factor, while concerning the boys, what marks their classificatory passage from childhood (*bĩĩ*) to adolescence/youth (*ibʋm*), is something which has to do with the boys' changes in behavior and activities. It is around the age of 8/10, in fact, that they start following their fathers in the fields and in other male activities, rather than remaining in their households with their mothers and sisters.

Table 2

	FEMALE	MALE
Baby-hood	bĩĩ (0-14)	bĩĩ (0-8)
childhood	bĩĩ (0-14)	ibʋm (8-16)
adolescence/youth	yereyo (14-18*)	heenio (16-24*)
maturity	yɛrɛ (18*-40)	hɛɛn (24*-65)
old age	yɛgbadio (40-…)	hɛɛgbadio (65-…)

The fact that for baby girls and child-girls there is no taxonomic difference (baby girls are always sexless *bĩĩ* until their first menstruation), means that until their biological maturity they are both biologically and socially considered non-important / non-complete.

In the Kulango tradition girls are not excised and the passage from adolescence/youth to maturity is marked only by their marriage, which takes place some years later with respect to the Ogiek one (around 18) and is, therefore, not to be considered a child-marriage at all.

Concerning the passage from adult to old age, the same observations made in the Ogiek case remain true, i.e., the women's passage is marked by the biological event of menopause, while the men's one is marked by their mental impossibility to go on attending the elders' gathering with proficiency.

What emerges from the comparison of the two taxonomies is thus a major degree of maturity, both in biological and mental terms for the kulango girls at the moment of their marriage, which brings, as a consequence, to their major degree of maturity and consciousness at the moment of their first pregnancy, delivery and newborn assistance. This is a fundamental point to keep in mind in the following pages.

4. THE WOMEN'S POSITION IN MARRIAGE IN THE OGIEK AND IN THE KULANGO CONTEXTS

Despite the difference in their type of descent and the fact that Ogiek girls are excised, while Kulango ones are not, the women's position in marriage in the two cultures does not really differ too much.

In this paragraph, anyway, we will try to go through a detailed comparison of the two situations, focussing on the following points:

a) ethnic exogamy;

b) possibility for a woman to choose her partner;

c) possibility for a woman not to get married;

d) bride-wealth;

e) infertility;

f) education.

Referring to point a), even though ethnic exogamy is admitted in both societies, the Ogiek consider it the best option, because they usually give out their girls to richer groups (Nandi or Maasai) and the marriage of one's daughter represents just a good way for a man to establish solid political and commercial networks with more powerful neighbors.

In the Kulango case, on the contrary, an inter-ethnic marriage with neighboring people is not so common, first of all due to the fact that the Kulango usually do not need powerful commercial partners, and, moreover, many of their neighbors are patrilineal and a mixing in the type of descent is a delicate issue, which sometimes can bring to tense relationships, even though a solution is always possible (and traces of the mechanisms enacted are to be found in the kinship terminology of the language[8]).

Marriage is in the Ogiek tradition a powerful tool to grant a clan political and commercial strong partners. Due to this reason, the Ogiek girls cannot either refuse a partner, once the pact for the marriage has been sealed by her father, or decide not to get married and remain in her original clan. Moreover, she is usually married far away from her natal household and, therefore, her ties with her original family get loose.

On the contrary, Kulango girls can either refuse a partner they do not like and decide not to get married and remain in their original family. This is possible, as it happens in many matrilineal society, because in the Kulango tradition a girl who gets pregnant before marriage is not blamed, but appreciated (in this way she demonstrates, in fact, to be fertile), being her own brother *de facto* her children's social father. For the same reason, the option of divorce, which would be inconceivable in the Ogiek, patrilineal society, is always possible in the Kulango context.

Giving out a daughter for marriage, both in the Ogiek and in the Kulango traditions, is not that expensive. Even though in the Ogiek society the bride's dowry represents a must, it implies a relatively small expense for the few cooking pots and kitchen tools needed to start a new house, together with the girl's personal belongings (goat skins to be used as blankets, clothes, jewelry etc.). The house is built by the couple, once the bride joins her husband's compound. The man's task in house building is only the cutting and placing of the hut's sustaining posts, while the straw coverage is all made by the woman.

In the Kulango tradition, where the preferred place of residence is uxorilocal, the bride remains usually to live next to her original family. It is very common that, once a girl has been promised to a man, the couple live together for some years before the marriage ceremony is really performed. During these years the couple can have children and the husband has to work in his *fiancée*'s family fields in order to put aside the bride-wealth he has to give her family in order to "buy" her. The total amount of the bride-wealth is decided at the moment of the promise by the elder women of the two families.

If infertility is usually a stigma in all African societies, it is surprisingly lesser so in the Ogiek tradition. In case of infertility, the Ogiek have in fact a custom which provides for a marriage between women. If a married *tiebjoso* is

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8   For more information about this point see Micheli 2009.

barren, she can ritually "marry" a girl who eventually has got pregnant before her excision. In this way, both the barren old woman and the young outcast girl find a new place and a new role in their society. Once the marriage between the two women has been celebrated, the barren woman can choose a young man inside her husband's lineage, who will be allowed to have sex with the girl. All the children generated by the young couple will be classificatorily considered as the true children of the older couple, and their social mother will thus be the barren woman[9].

In both the Ogiek and the Kulango contexts the education of children is always up to the mother until their curiosity begins to attract them towards the adults' activities (around 5 or 6 years old). From that moment on, the boys start to follow their fathers and uncles either in the forest for hunting in the Ogiek case, or in the field for farming in in the Kulango one, while the girls remain at home and start doing the same things their mothers do: fetching water, collecting wood for the kitchen, doing a little gardening and taking care of their younger brothers.

Concerning the level of autonomy a woman can have once married, two indicators have been considered as meaningful:

a) possibility to manage money for one's own purposes without asking the male permission;

b) possibility to refuse sex to the husband.

The situation is very different in the two contexts. While the Ogiek woman do not have any possibilities to manage even a little pocket money for their own purposes, and are not allowed to refuse sex to their husbands, the Kulango women are in a much better condition.

Thanks to the fact that the Kulango live in a very fertile land and their mode of production allows them to yield a reasonable surplus, one of their women's task is selling this surplus on the market. The money they earn from the selling of yam, manioc, plantain or cereals, which are fruit of the men's work, is reserved to the men, but what the women can earn selling the products of their gardens (tomatoes, potatoes, onions etc.) remains in their own pocket and they can use it as they like.

This, together with the indisputable force which derives from the fact that the Kulango are matrilineal and the married couple live close to the woman's relatives, which brings to a strong network of female kinship solidarity, leads to a very high degree of independence and autonomy in the Kulango women's world, where all the women met during the field-research (in August 2006)

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[9]   This information has been collected by the author among the Ogiek of Mariashoni during her field research in January-February 2014. It is to be noticed that, concerning this kind of marriage between women had not been documented for the Ogiek in any other articles before.

affirm to have also the very rare possibility to refuse sex to their partners whenever they are not in the mood to have it.

5. PREGNANCY AND DELIVERY IN THE OGIEK AND IN THE KULANGO TRADITIONS

All the issues related to pregnancy and delivery (average age of the women at their first delivery, special care or reduction of the women's tasks during pregnancy, place and modalities of the women's delivery, assistance during delivery etc.) are synthesized in Tables 3, 4 and 5.

Also in this case, the * indicates the points of interest which will be consequently discussed.

Pregnancy

Table 3

	OGIEK	KULANGO
Average age at first pregnancy*	14 -*	16 +
Attitude towards the father	Father immediately informed – sex avoided	Father immediately informed – sex allowed
Women's tasks reduced	Never	Never
Special care in women's diet*	Only rarely admitted*	Only rarely admitted
Medical assistance	Tjemosiànik*	No special word (yɛrɛ)

The average age at first pregnancy is very low in both the Ogiek and the Kulango traditions. It is to be noticed that the WHO considers as "adolescent pregnancy" a pregnancy in which the mother is between 15 and 20. In the Ogiek case, where girls can get married and have their first baby before 14, we should thus speak of "child pregnancy". This is undoubtedly a very dangerous and risky situation both for the mothers and their babies.

According to the WHO in fact: "Early childbearing increases the risks for both mothers and their newborns. In low- and middle-income countries, babies born to mothers under 20 years of age face a 50% higher risk of being still born or dying in the first few weeks versus those born to mothers aged 20-29. The younger the mother, the greater the risk to the baby. Newborns

born to adolescent mothers are also more likely to have low birth weight, with the risk of long-term effects"[10].

Another negative element is that in both traditions special care in pregnant women's diet is only rarely admitted and in both cases it is reserved to the mother's craving in late pregnancy. Also concerning this point the situation is worst in the Ogiek context, because the Ogiek diet, as we will see in paragraph 7, is generally much poorer than the Kulango one and, therefore, during pregnancy the need for a mother's diet improvement would be higher.

Concerning the medical assistance for pregnant mothers, in both traditions the option of professional nurses or midwives is not contemplated. The fact that in the Ogiek language there is a special word for the Traditional Birth Attendant indicates at the same time two things: 1) the Ogiek recognize the necessity of assist their women during delivery, and this is good; 2) the presence of a specific person appointed to perform this role could indicate either that in the Ogiek society the natural solidarity networks among women of the kinship are not sufficiently strong to grant for the presence of the woman's closest female relatives at the moment of delivery, or that the type of residence (single households placed at quite a distance from each other) do not allow these networks to develop in a meaningful way.

Delivery

Table 4

	OGIEK	KULANGO
Location	in the couple's hut	in the woman's matrilienage
Assistance	tjemosiànik	old women of the matrilineage
Father is…	outside, not necessarily present	outside, not necessarily present
In case of problems who can decide?*	the tjemosiànik / the father*	the women
Ritual performance	Yes	Yes

What is important to underline here is that in the two traditions, the social capital on which women can trust in that very awkward moment in life which

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is delivery, is very different, being much richer in the Kulango (matrilineal) case, and much poorer in the Ogiek (patrilineal) context. Being surrounded by the solidarity and affection of all the women of the family and being sure that, in case of need, these women can decide what to do in order to make things evolve in a good way, put the mothers in a better temperament and make them feel more at ease and protected.

In the Ogiek case, on the contrary, the women are left alone in the hands of the specialist, the *tjemosiànik*, who, despite her recognized role as TBA, cannot eventually take a decision, like, for example, referring the woman to the HC in case of need, if the husband is not around, and this is a true problem, given that, according to the Ogiek tradition, the father cannot be present at his child's birth.

First hours after delivery

Table 5

	OGIEK	KULANGO
The baby is breastfed	immediately	immediately
Cordon is cut…*	with a not sterilized blade (róotwet)*	with a sterilized blade
Placenta is…	ritually buried	ritually buried
The mother is…	ritually washed	initially left at her ease
The baby is…*	ritually washed*	ritually washed

Concerning what is done in the first hours after delivery, the two traditions seem to be rather similar. However, two observations have to be made referring to a couple of details which are very important for the health and safety of the newborn babies.

First of all, due principally to the different economic conditions of people in the two contexts and to the difficulty to find the right tools easily on the market, it is not a surprise that in the Ogiek context the umbilical cord is cut with a common knife (*róotwet*), while the Kulango use always a new, sealed razor blade for this purpose. The risk does not lay, of course, in the fact that the blade used by the Ogiek is not a new one, but rather in that is is not sterilized in any ways, either with boiled water, disinfectant agents, or with fire.

The second very risky practice in the Ogiek tradition is that the ritual washing of the baby does not provide only for the baby's body washing, but also for his stomach cleansing. The Ogiek think, indeed, that when a baby is

born, his stomach is still full of a dangerous liquid, and that he/she must get rid of it as soon as possible because otherwise he/she can smother. Therefore, immediately after birth and before breastfeeding, the *tjemosiànik* makes the baby ingest some (not previously boiled) water. According to the *tjemosiànik* this makes him/her defecate and "free" her/himself from the dangerous liquid, but they do not recognize that it can also bring dangerous bacteria or even worms in his/her still very delicate body, which he/she cannot reasonably endure with his/her still inexistent immune system[11].

6. NEWBORN CARE

Table 6 reports some indicators about the practices bound to the care of newborn babies, which can affect their well-being, both in terms of health and sociality, and are, therefore, of the outmost importance.

Table 6

	OGIEK	KULANGO
First time out of the hut	at least one week	3 / 4 days according to gender
The father meets the baby*	1 / 3 months after birth*	few hours after birth
The baby is given a name*	when the father meets him/her*	when he/she first gets out of the hut*
Breastfeeding lasts	even more than 2 years	up to 2 years
Medical assistance	Tjemosiànik*	No special word (yɛrɛ)

Of the four indicators considered, three refer to facts which tell us much about the process of socialization of the babies. The data collected show without any doubt that the slower the process, the higher the recognized risk of infant mortality. It is not a surprise, in fact, that in a richer and socially stronger society, as, in our case, the Kulango one, the process lasts just three or four days, after which the baby is given a name and is officially introduced

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[11]   This practice is very common in all pastoralist tribes for example in the region of South Omo (Ethiopia), where both Hamar and Daasanach do a similar ritual cleansing of the newborn babies's stomach with coffee or liquified butter – from the author's still unpublished field-notes (August 2016).

to his/her village community, while in a poorer and more unstable society, like the Ogiek one, the process can last even three months, during which not even the father can see his child.

The idea, in both cultures, is that until the baby gets out of the hut and the ceremony of the name-giving has taken place, the baby is not yet to be considered as a "true" human being. He/she is still something in-between this world and the otherworld, and has not yet decided if to remain and live in this world or if to go back from where he/she comes from.

Usually, this period has the same length of the average period in which the infant mortality rate is higher, and, therefore, it is not surprising that it is longer in the Ogiek context than in the Kulango one.

What is, however, quite worrying in the Ogiek case, is the quasi complete absence of the father in the first month(s)[12] of his child's life. This brings not only to looser affection ties between the baby and his/her father, but also puts the baby in a more risky condition. The more the father thinks of it as a not yet "true" human being, the lesser he will eventually decide to spend his money to bring him/her to the hospital or to the HC if needed, and, therefore, given that the mother cannot autonomously make this kind of decision, the more he/she risks not to be promptly treated in case of emergency.

What is extremely positive in both cultures, as it is very common in Africa, is instead the fact that breastfeeding is practiced until the mother gets pregnant again, what usually happens at least two years later with respect to the birth of the last baby.

This is central, above all in contexts in which education and environmental conditions do not grant a balanced nutritional practice and/or food is poor or not sufficient.

Also from this point of view, the Kulango are placed in a better position with respect to the Ogiek. Even though both environments are relatively more fertile than many others in Africa, and could therefore offer good conditions both for farming and herding, the mode of production of the two people considered influences very much their real possibilities in terms of ingredients used in the preparation of their food.

The first observation is that until very few years ago, the Ogiek of the Mau forest did not have clay pots and used just vegetal containers which could not be used for cooking. Therefore, they were used only to have raw or smoked food. Moreover, they have just started to introduce a bit of horticulture in their practices and therefore, the introduction in their diet of vegetables and cereals is quite new.

Table 7 resumes the most common food eaten in the two contexts.

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[12]   According to the women met during the field-research, today this period usually lasts only one month, while in ancient times it could last 3 or even four months.

Table 7

	OGIEK	KULANGO
Honey	Yes, always	Very rare, beekeeping is not practiced
Fruit and vegetables	Fruit + tubers and roots	Vegetables and tubers only
Cereals	Rarely*	Yes
Meat and fish	Rarely*	Yes

Even though many Ogiek in the last century have started herding cows and sheep[13], they use their animals just as a good to be exchanged with neighboring peoples or to buy their brides. Very rarely they use them as a source of meat and only on very important or ritual occasions. On the contrary, they used to eat the meat of the game they could hunt, but, due to the reduction of the forest cover, it is getting more and more difficult for the Ogiek to have good hunts and get enough meat from their hunting.

On the contrary, the Kulango use to elevate mostly hens and goats and these, together with small rats, bats, rabbits, snakes and monkeys are very commonly found in their dishes.

The Mau forest represents the major water castle of Kenya. This is a very positive factor for the Ogiek nutrition. This means, indeed, that their territory is rich in clean water coming from the many springs diffused all around the forest, while the Kulango have usually to walk some km before reaching a good (and clean) river, above all during the dry season.

In both cultures, the kitchen represents the place in which the women are more free to express themselves and make autonomous decisions. Therefore, where good projects on malnutrition are conducted, women are principally involved in education programs aimed at teaching them how to use at best all the ingredients their environment is rich in, even though these are not traditionally eaten.

One example for all is based on the author's experience among the Kulango of the Ivory Coast[14], where in the last 30 years many plantations of acajou to be sold on the French market were opened. The Kulango, who did not know that the apple of acajou is an edible fruit, used to throw the apples away without considering that an apple of acajou has a concentration of vitamin C ten times superior than that of an orange.

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[13] Huntingford 1927 and 1931.

[14] Experience witnessed during the field-research in July-August 2002.

Therefore, the sisters of the catholic mission of Nassian decided to promote a very practical educative intervention with the aim of teaching to the women how to use the apples in their food preparations. The Sisters, thus, took three months' time in order to visit all the villages of the region doing a two or three days cooking course in each location and, as a result, the malnutrition rates in the children population diminished quite evidently[15.]

7. SUMMING UP THE CONDITION OF WOMEN IN A MATRILINEAL AGRICULTURAL AND IN A PATRILINEAL HUNTING AND GATHERING SOCIETY IN AFRICA

Summing up, from the comparison of the two traditions, it results clear that, despite the similarities in the women's tasks and roles, always relegated to the private, household dimension, the condition of women in a matrilineal agricultural society are significantly better than that of women in a patrilineal hunting and gathering one.

The most important factors, which influence the women's condition in natural societies are, in fact, strictly connected with the solidarity networks internal and external to the women's nuclear family and to the social capital on which they can trust.

In the Ogiek patrilineal, hunting and gathering society, due both to the marriage preferences, which bring the girls, once married, to break the ties with their original family, and to the type of residence, the single household, which oblige them to live in a very poor network of mutual assistance with their neighbors, the women can rely on a semi-inexistent social capital. Moreover, in this kind of society, the women represent a good to be exchanged on the market, and for the families, the earlier a daughter gets married, the earlier the family can earn money or seal an important political pact with richer and more powerful neighbors (Maasai or Nandi), who, in case of emergency, can lend a helping hand. For this reason, the girls very often get married in a very young age and the risks bound to adolescent pregnancies are much higher in this kind of situations than in the other context analyzed for this study.

What represents the true key element which places the Kulango women in a much more favorable position is thus their social capital. In the Kulango matrilineal society, in fact, the solidarity network between a married woman and her original family/female relatives are never broken. Most of the times, for example, at the moment of delivery, a Kulango woman goes back to her mother's house and there she gives birth to her child, surrounded by the love and affection of her own kin. In case of emergency during delivery, the

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15   Unfortunately I do not have true statistics.

women of the family can take decision on what to do, be it simply calling a TBA or even referring the mother to the nearest health facility, no matter the money needed: if the husband does not have the possibility to pay, the costs will be covered by the women's matrilineage.

Thanks to the kind of residence (the village) also the social capital a woman can build during her life with her husband is much higher and, in this dimension, the rule of diffuse reciprocity among neighbors is something very much practiced, which represents an additional positive point.

Last but not least, in the village dimension also the possibility to invest in associative projects dedicated to women and find a fertile ground is much higher than in a region where women's associations are not the rule and the kind of residence invalidates any attempts made both by the official institutions (schools and governmental health facilities for example) and the local or foreign NGOs dedicated to the women's empowerment on the field.

8. CONCLUSIONS: IS RESILIENCE REALLY ALWAYS POSSIBLE WITHOUT BEING OUTCAST FROM ONE'S TRADITIONAL SOCIETY?

Even though education is always the best and most incisive way to empower women in traditional societies, because schooling and education are the most complete tools to improve not only the women's self-consciousness, but also their possibility of self-determination, the two case-studies analyzed for this paper demonstrate that resilience is a phenomenon which can also grow internally to a specific tradition and in harmony with its core values.

Generally speaking, the most effective solution for a woman who wants to emancipate herself from the males of her kin, both in a matrilineal society, like the Kulango of Ivory Coast, and in a patrilineal context, as the Ogiek of Kenya, is finding a way not to get married and at the same time a way to earn a living by herself.

In order to attain both things, a great deal of courage is necessary, because a single woman in a traditional world is always something odd, but this does not mean that she is automatically excluded from her society.

In each one of the two cultures examined in this paper, the author could find at least one effective resilience strategy for women's emancipation, which allow them to obtain a reasonable degree of independence and to remain, at the same time, inside their culture.

Again, things seem to be easier in the Kulango matrilineal context, than in the Ogiek patrilineal one. In the Kulango tradition, indeed, thanks to the fact that children always belong to their mother's lineage and will inherit from their maternal uncle, the social role of the children's biological fathers is in fact non existent and, therefore, pregnancies outside or before marriage are neither stigmatized nor blamed. Fertility is always a value in itself and a

woman who demonstrates to be fertile before being married gains prestige. In this kind of situation, above all in those regions where the Kulango matrilineal culture borders the Senoufo or Djimini patrilineal one, women often choose not to get married at all, going on having children, which increase their maternal lineage number, and they spend their life in a reasonable peace, surrounded by the love and affection of their original kin and avoiding the possible jealousy and misunderstandings which could characterize their life in another village, where they would possibly be obliged to live with their husbands and co-wives. Moreover, it must be said that in a matrilineal society the respect a man has for her mother and sisters is much higher than that he has for his wife or wives.

If in the Kulango society agamy can thus be an easy personal choice on the part of the girl, in the Ogiek society the girl must in a way "arrange" things with her original family in order to have the possibility to follow this path.

As we have seen in paragraph 3, the Ogiek girls must be excised before getting married and a girl who has not undergone excision is destined to become the wife of a barren older woman, because no man would agree on marrying her. Anyway, during the field research in Mariashoni in January-February 2013 and 2014, some of the younger girls, and specifically those who had studied and attained a college degree, explained to me that, in order to let them study in peace, avoiding the social pressure of getting married as soon as possible, their parents decided not to let them be excised until the end of their education.

Even though finally, after the school, most of these girls had come back to their traditional role of wives and mothers, some of them could autonomously decide to abandon their traditional world, the forest, and move to town, where they could either find a job and live their life as single career women (just one case), or being excised later and get married to an educated man in town, in order to ameliorate their conditions and, in perspective, the conditions of their offsprings.

In conclusion, the two case studies presented in this paper demonstrate two very concrete things:

1) the condition of women in matrilineal, agricultural societies in Africa is usually better that that of women in patrilineal Hunting and gathering societies, above all thanks to much richer and more stable solidarity networks with their original kin and the village dimension they are integrated in;

2) resilience is, however, always possible and, in both traditions the best choice for a woman who wants to get really emancipated from her male relatives seems to be agamy.

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Continuity and Innovation in the Ethiopian illustrated manuscripts: the case of Geometric Art

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ABSTRACT

In the history of the traditional Ethiopian art one recognizes a process of "transition" of formal elements from the African substrate into the Christian imagery. Through the different stylistic phases and schools a geometric solution recurs as the result of a formal abstraction process, through which the art moves towards the archetypal to express the divine in its powerful distance from reality.

KEYWORDS

Iilluminated Manuscripts, Ethiopian Art, African Art, Ethiopian Christianity, Aesthetics

The concept of substrate derives strictly from historical linguistic studies and indicates the action "from below" exercised by the oldest languages over others that have got the better within a given territory. In particular, the more recent languages show in the vocabulary, grammar and syntax, "innovative" elements referable to the influence exercised by the substrate, as in the case of the Agaw languages that have modified the Ethiopian Semitic (Moreno 1948).

Similarly, the Christian art of Ethiopia has fed on influences of "substrate", coming from that "African" land on which the "Mediterranean" models have been grafted. Though responding fully to specific doctrinal and liturgical needs imposed by the belief and the worship centered on Jesus and the Gospel, the Christian art of Ethiopia shows – through its various phases – to have received and incorporated into its repertoire of forms also elements that belong to the land on which the new religious message has taken root. Also in the historical-artistic field, therefore, we can speak of cultural "transition" with reference to "transition" of African elements into the Christian creativity of Ethiopia and to their "transition" through the centuries within Ethiopian art.

Particularly in the case of manuscript illuminations, the stylization process operated on the human figure and its attributes seems to characterize, more or less, all forms of representation that appeared in time. Like all religious art in general, traditional Ethiopian art feeds on repeated contaminations with external experiences, but the trend towards a geometric solution seems to be a constant that recurs with variable evidence. In this sense, Ethiopian painting appears to be the bearer of its own "originality", which sinks its roots even deeper, in the continent of which Ethiopia, despite the singularity of its history, is an integral part. From the earliest medieval manuscripts we observe the emergence of an aesthetic instance that tends to reduce the figures to more or less elaborate geometric shapes.

1.   13th -14th CENT. – THE "GEOMETRIC STYLE"

The predominant stylistic trend in the 13th and 14th centuries, and for much of the 15th c., is to translate the drawing of the human figure in a system of lines and geometric shapes. The expression "geometric style" coined by European scholars is obviously a simplification but it is indicative of this mode of representation which presents many variations. The general trend is to reduce the narrative scenes to a few key figures and objects whose symmetrical composition tends to create a balanced and totally static equilibrium, where nothing is granted to naturalism or spatial illusion. The human figure, reduced to geometric shapes, presents a high level of abstraction and is strongly two-dimensional. The figures are portrayed frontally and often placed in the centre of large backgrounds characterized by geometric decorative patterns, as in the paradigmatic illustrations of a 14th cent. *Gospel* book coming from Däbrä

Qʷəsqʷam, Ahəyya Fäǧǧ, Wällo (Spencer 1993; Barbieri, Fiaccadori 2009: 121, reprod. *ibid.*: 118, fig. 7). Probably the same scriptorium has produced also the miniatures of the *Gospel* book haused in the library of Maryam Ṣəyon church at Lake Zʷay (IES no. 2475; Chojnacki 1983: 490-91, reprod. *ibid.*: 520, fig. 233; Heldman, Munro-Hay 1993: 130-31, cat. no. 55, reprod. *ibid.*: 122-23, 131; Balicka-Witakowska 1997: 127, pl. V). According to the dedicatory note this manuscript appears to come from northern Ethiopia, and it seems likely that it was one of the many objects carried to Lake Zʷay for safekeeping during the Adalite invasion of the Christian highlands in the early 16th cent. The images of evangelists introduced the corresponding Gospel. Their stiff hieratic pose on a saturated background of repeated geometric patterns is characteristic of this style.

2. LATE 14th CENT. – THE "EVOLVED GEOMETRIC STYLE"

A variant of the "geometric style" established itself in northern Ethiopian scriptoria. The illustrations of a manuscript of the late 14th cent. (ab. 1382-1413), a *Gädlä Sämaʿətat* (*Acts of Martyrs*) preserved in the Maryam Ṣəyon church on the island of Tulluu Guddoo, at Lake Zʷay, represent the most significant example of this "evolved geometric style" (EMML no. 7602; Chojnacki 1983: 490, reprod. *ibid.*: 519, fig. 232a-b; Heldman, Munro-Hay 1993: 179-80, cat. no. 70, reprod. *ibid.*: 150-51). In these illustrations the representation of the human figure reaches a very high level of stylization. A distinctly geometric intent involves the drawing of the figure and clothes. The volumes are the result of a strict game of vertical, diagonal and parallel lines that fill the wide chromatic backgrounds of the tunics. Typical is the frontal position and the elongated forms. A special feature of this style, which allows its immediate recognition, is given by the enlarged hands with long curved thumbs. In this collection, portraits serve as frontespiece miniatures introducing each biography (*gädl*) of a monastic saint. Elongated forms, enlarged hands and geometricized webs of drapery characterize these impressive portraits. The particular style of illustrations places the manuscript within a small group that includes also a liturgical *Psalter* of the second half of 15th cent. (IES no. 74; Heldman, Munro-Hay 1993: 180, cat. no. 71, reprod. *ibid.*: 152-53). The manuscript comprises the *Psalms of David*, the *Song of Songs*, introduced by its purported author, King Salomon, and *Night-Prayers*, introduced by Saint Anthony, the founder of Christian monasticism. Also these portraits are typical of a highly abstracted figure style. The apparent simplicity is the result of a complex process of stylization from a more naturalistic style. Although strictly two-dimensional, the illustration through the net of parallel and diagonal lines makes the complex movement of garments and drapery folds.

3. 15th -16th CENT. – THE "HOUSES" OF EWOSṬATEWOS AND *ƎSṬIFANOS*

A sophisticated geometric mannerism characterizes aesthetically two styles that flourished in Eritrea and in Tigray (northern Ethiopia), between the late 15th and the beginnings of the 16th cent., around two schismatic ecclesiastical orders, named, after their founders, the "House" of Ewosṭatewos (born 1273 in eastern Tigray, died 1352 in exile, in north-eastern Anatolia) and the "House" of *Ǝsṭifanos*" (born 1397/98 in central Tigray, died 1444 in prison). The activity of illuminators at two main monastic centres explains the simultaneous development of different styles of illustrations (Heldman 1989).

The first Ewosṭatewosite workshop was located at the monastery of Däbrä Maryam of Qoḥayn in the Eritrean region of Sära'e. The *scriptorium* was active from the foundation of the order, but the illuminated manuscripts date to the middle of the 15th cent. It is a particularly refined style that testifies to the high technical and artistic level reached by the copyists. The richly decorated *Psalter* housed in the Bibliothèque Nationale in Paris (Abb. 105 = C.R. 19; fully reproduced in Balicka-Witakowska 1983) is a magnificent example of the style developed at the Ewosṭatewosite monastery. The elegance of the stretch depicting scenes and characters joins to the elaborate design that precisely reproduces the fabrics, the decorations and the garments of the nobles of the time, as well as the draperies obtained with the copious use of parallel lines and geometric decorations. In this style the option for the figurative solution has a clear geometric layout. This is particularly evident in the more purely decorative parts like the crowns and the peculiar stools, that are stylized shapes of elaborated interlaces.

The Ǝsṭifanosite workshop gave rise to a style that, in the late 15th and the first half of the 16th c., was developed primarily in the *scriptorium* of Däbrä Gärzen or Gundä Gunde ('Agame, Tigray). The illustrations of Ǝsṭifanosite manuscripts show greater stylization compared to the Ewosṭatewosite style. The geometrical tendency is further accentuated and the use of broken lines becomes exasperated by involving the entire scene. The illustration of the *Madonna and Child* (*sə'əlä əgzə'ətənä maryam məslä fəqur wälda*, "Portrait of Our Lady Mary with Her Beloved Son") in the *Gospel* book from Gəšän Maryam (Wällo) is a beautiful example of the style associated with the Ǝsṭifanosite monastery (Barbieri, Fiaccadori 2009: 121, reprod. *ibid*.: 122, fig. 12). The narrative scenes and the individual figures are the result of elaborate geometric drawing, which manifests itself mainly in the decoration of garments, with intricate patterns of dots and broken lines. These characteristics that distinguish the style are the most evident aspects of a geometrical instance that reveals itself above all in the decorative aspects.

4. 16ᵗʰ-17ᵗʰ CENT. – THE "PARALLEL LINES STYLE"

The geometric instance is aesthetically expressed in particularly sophisticated forms in the "parallel lines style". Already introduced in the 16ᵗʰ cent., this style reached the peak of its evolution in the early decades of the 17ᵗʰ cent. It is characterized by the extensive use of parallel lines in a highly stylized form in which the rigid schematization of the lines is balanced by a sophisticated drawing rich in imagination. The original levels of formal elaboration reached by this style involves even iconographic models coming from abroad. A triptych dated 17ᵗʰ cent., haused in the Institute of Ethiopian Studies in Addis Ababa (IES Mus. 4128; Chojnacki 2000: 380, cat. no. 135, reprod. *ibid.*: 158; Heldman, Munro-Hay 1993: 245, cat. no. 105, reprod. *ibid.*: 213), is a magnificent exemple of the advanced stage of the geometric style. The "Portrait of Our Lady Mary with Her Beloved Son", in the central panel of the triptych, represents a western derivation model. Her crossed hands, the left one carrying a *mappula*, fall in the characteristic gesture of the holy icon of the Madonna of Santa Maria Maggiore in Rome (also called *Salus populi Romani*), the likeness of which was widely disseminated by Jesuit missionaries in authorized prints (Heldman 2010). Even in this example of contamination with models coming from abroad we can see this original tendency towards geometrization that seems to cross deeply Ethiopian art like an underground vein that feeds on absolutely indigenous experience.

5. 17ᵗʰ CENT. – ART OF LASTA

An evident geometric intent seems to drive a style that emerged in the 17ᵗʰ cent. in the Lasta region. Beautiful examples of this style are the miniatures of some manuscripts from the monastery of Ǝšätän Maryam (Henze 2005), attributed to Basǝlyos, the so-called "Ground Hornbill artist" in reference to the stylized animal – a typical bird of Ethiopian fauna – that frequently appears in his paintings (Fletcher 2005: 92-93, pl. 37). The striking feature of these illustrations is the absolute simplification of the scene through a process of complete geometrization that makes them more like graphic works than paintings. The human figures, represented rigidly frontal with the emphasis put on eyes, consist of a patchwork of geometric ornaments. A few basic colours are applied as a flat wash. The palette is dominated by red, black and yellow ochre. The geometrization of the shapes is part of a process of elaboration through which an image acquires an apotropaic value. In fact, Geometric Art is typical of the images of magic scrolls that have a declared apotropaic value. It is plausible to hypothesize that through the geometric instance the apotropaic intention enters in religious art.

6. 18th-19th CENT. – ART OF ŠÄWA

The sacred and the magical interact each other in the illustrations of a manuscript coming from Kärän in Eritrea and currently housed in the Archivio Provinciale dei Capuccini Lombardi of Milano (APCL E 191 004). This manuscript, dated to the first half of the 19th cent., contains a *Dərsanä Mika'el*

Figure 1 APCL 191 E 004, f.2v – Image of Mika'el

that includes two full-page illustrations. The first is the image of Mika'el (Figure 1). The other one shows the images of Mika'el and Gäbrə'el (Figure 2). All the figures are portrayed in a strict frontality, with the sword in his right hand and the sheath in the left one. They are absolutely expressionless with wide square faces where stand out two huge astonished eyes with large rectangular pupils. Nothing in the drawing is realistic and the image is reduced to

Figure 2 APCL 191 E 004, f.102v – Images of Mika'el and Gäbrə'el

horizontal and vertical, curved and broken lines that draw the physiognomy and the clothes of figures. Stylistically these illustrations are closely related to the characteristic figurative forms of the "art of Šäwa" of 18th-19th cent.

The scholar who first approached this repertoire was Stanislaw Chojnacki (1983: 469-97; 2002) who coined the label of the "art of Šäwa" from the region in which this style initially manifested itself. Examples of this style are the illustrations in the manuscript of *Dərsanä Mika'el* from the Gubarya Giyorgis church (Yäǧǧu, Wällo; Chojnacki 1983: 480, reprod. *ibid.*: 508-09, figg. 221a-e). In these miniatures the realistic intention is completely abandoned. The painted characters have heads like circles covered with red wash. The faces recall the anthropomorphous representations of the sun and the moon in early Ethiopian art as exemplified by church murals in Lalibäla, Mäkinä Mädhane 'Aläm and Gännätä Maryam in Lasta (Chojnacki 1983: 480). The wide open eyes under heavy curve of the eyebrows suggest hallucination. The insignificant flat nose and the lacking mouth are symptomatic of Šäwan painting. The human figure, conceived as a geometric drawing of patterns of lines, undergoes powerful distortions that remind on one hand the formal solutions of other artistic phases, eg the "geometric style" of Tulluu Guddoo or the "parallel lines style" of 17th cent. manuscripts, and, on the other, the painting on scrolls. Indeed the production of the so called magic painting on scrolls (*kətab*, *ṭälsäm*) was an important feature of life in traditional Ethiopia and the Šäwan manuscripts illustrations show remarkable stylistic similarity to scroll paintings.

7.   MAGIC SCROLLS

The scroll illustrations are the most powerful expression of geometric art where the intensive use of lines and geometric shapes in a strict rhythm is essential in the process of stylization. Each figure becomes nothing else than a spontaneous expression of this rhythm. Such inner rhythm also pervaded early Ethiopian painting. In this kind of painting the impact of the African roots of the Ethiopians is all the more perceptible: the abundance of geometric motifs and the spontaneous rhythm of lines rather than the well-organized reflection of the visual world seem to recall the phantasmagoria of African art.

Created by *däbtära*, non-ordained priests that accompany the liturgy and practise religious medicine, magic scrolls are an example of religious syncretism. It is likely that the same cultural context produced both the sacred books and the scrolls and that in many cases the artists were the same, although in the scrolls the emphasis on the process of abstraction and stylization is greater in order to increase the magical efficiency. Typical of the scroll images is the inversion of the usual order of perception, from the general to the particular and from dark to light, in order to produce the experience of

hallucination. The effect is achieved primarily by distorting the proportions. The largest part of the figure appears to be the head where stand out for size and importance, the eyes. In a magic-ritual sense, the meaning of the eyes is crucial as they have the power to capture the "evil presence" and direct the "magic forces" (Mercier 1997). The other details that are not involved in the process of visual hallucination are neglected to the point that they can be reduced in size or completely eliminated. Thus the body, less important for the direct magic involvement, retreats from the visual field and defines a gesture or movement of the pictorial narration. The eyes are the essence of magic drawing and indeed they are found everywhere, even outside their natural anatomical context, inserted into crosses or in geometrical repetitive patterns. The emphasis on the eyes in Ethiopian scroll painting is a sign of the hallucinating intent, but is not correct to attribute to them the same "evil" significance as in the Mediterranean world. The eyes in scrolls as well as in Šäwan paintings belong to beneficial action and figures, including those of the angels (see APCL E 191 004, Figg. 1-2). This action is based on the recognition of the power of the sacred image. There is a rich literature about the miraculous power of sacred images in Ethiopia. In this sense the sacred images of the icons or the manuscript illustrations or the mural paintings do not differ from the illustrations of the magic scrolls. The difference from a traditional painting is that a magic scroll presents characters of individuality: it is made for the one to whom it is addressed, specifically created to treat someone suffering from physical and mental illnesses and virtually it functions as a talisman.

Ethiopia is the same cultural milieu in which the ornamentation of the scrolls and religious books flourished side by side. The geometric solution creates a strong link between magic scrolls and illustrations of sacred books and seems deeply rooted in Ethiopia culture feeding on the old background of the native forms of expression. Now it appears even more evident that more than a direct influence between different styles, it is plausible to suppose that these artistic expressions belong to a wider cultural context involving Ethiopian creativity in its entirety and which are expressed artistically through a spontaneous tendency to a geometric solution. The geometrization of the figure express the will to render visually the supernatural through a process of abstraction from reality. This hypothesis could find confirmation in the concept of spiritual beauty. This aesthetic-religious concept can be represented in painting through the process of geometric stylization of the human figure so as to reduce its earthly characteristics as much is possible. This formal process finds correspondence also in other African cultures.

8.   SPIRITUAL BEAUTY

The canon of spiritual beauty is defined by the Ethiopian ecclesiastical authorities with the term *mänfäsawi*, that is 'that which is like the spirit'. This concept is defined in opposition to that of *səgawi*, which means 'that which is like the flesh'. A painting considered too naturalistic can be judged not suitable to cover the walls of a *mäqdäs* of a church. The choice of a non-naturalistic representation is a constant feature of religious Ethiopian art. The subjects to be represented do not belong to the world, therefore to be inspired by real models could betray the wording that wants the sacred image to keep its spiritual character. Based on this assumption the abstraction of the figures, the lack of expressiveness, the rigid frontal position, far from being the result of a technical failure, has to be considered rather as a precise stylistic choice that intends to make the invisible visible.

9.   ETHIOPIAN AFRICAN ART

Ethiopia shared with Christian Nubia as well as Coptic Egypt the Judaic prohibition of carving three-dimensional figures. The lack of Ethiopian statuary has posed a dividing line between Ethiopian and African art. Ethiopia, a country with an ancient written tradition, chose an artistic idiom that is expressed in colour and lines on a flat surface through the medium of wall painting, illustration of books and icons. Africa traditionally expressed itself in the tridimentional forms of sculpture. The conventional general characteristics of African art as exemplified in representations of human forms are: 1. an absence of realistic bodily proportions; 2. an exaggeration of the size of the head; 3. frontality and vertical symmetry and 4. static poses. These are considered the fundamental macroscopic differences between West African and Ethiopian art. But to a more detailed analysis the differences between the two representative idioms are less marked than the macroscopic examination suggests. African statuary in fact equally rejects realistic representation.

Although the previous rough technical definition does not outline all features of African art is however indicative of a similarity between the two aesthetic conceptions that in no case can be explained by anything like an actual influence, but rather by the action of kindred aesthetic inspiration expressed in similar but independently evolved techniques. Robert Farris Thompson, Yoruba art scholar, notes that in the depictions of idols the Yoruba's *mimesis* is intended as a relative similarity, since it must be close to the human figure without becoming a concrete and specific copy (Thompson 1980). The referent of the similarity is a human being but an indeterminate human, not identified or identifiable. The representation is inspired by an archetypal im-

age of the human being that is not that of any man in particular. Likewise the Dagara's *betib*, despite its human form, does not look like a particular person. It must be like a man, but like a man in general. This kind of art, that is a sensitive form of spiritual entities, cannot be considered an imitation art as it doesn't represent but makes present. The Ethiopian modalities of representation of the sacred presupposes a similar distance from the reproduction of reality. In this sense Ethiopian painting can be considered also an art of making-present: the painting makes present what is depicted in it. The painter must therefore signify its model and not represent it, because it is a model that is inaccessible in reality. The referent is not human: the deities are not "persons" but "powers" and therefore the intention cannot be imitative. They are actually spiritual entities within human shapes. The human image makes them approachable, visible; the distance from natural proportions preserves the substantial difference.

In this deliberate mix of recognition and estrangement is represented the supernatural. The geometric solution, that informs different artistic expressions such as an almost imperceptible but powerful underground transition surfacing in seemingly distant cultural contexts, is the result of a formal abstraction process through which the art moves towards the archetypal to express the divine in its powerful distance from reality.

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The Documentation of the Pilgrimage Arts in Upper Egypt

A comparative Study between Ancient and Islamic Egypt

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ABSTRACT

Pilgrimage was the most sacred trip for the Egyptian. One of the aspects of its celebration was depicting pilgrimage scenes, which represent a tradition of recording the most important moment in one's life. A tradition, which is very old in the Nile Valley, as Ancient Egyptians were keen to depict scenes of their pilgrimage to Abydos on their tombs. In spite of the complete diversity belief and pilgrimage rituals in Islamic times from that of Ancient Egypt, this aspect continued in Islamic Egypt. The purpose of Hajj (pilgrimage) paintings is to commemorate this sacred trip to Mecca.
Unfortunately, this kind of intangible heritage (pilgrimage paintings on houses) is going to vanish, due to lack of awareness. So, this paper attempts to focus on the pilgrimage scenes as to draw the attention to its importance.

KEYWORDS

Osiris, Abydos, Hajj, Paintings, Traditions

1. IMPORTANCE OF PILGRIMAGE IN ANCIENT AND ISLAMIC EGYPT

Since ancient times, the pilgrimage trip, known as Hajj, to Ka'baa was considered the most important trip in the life. After Islam, it became the 5th mandatory duty of this religion, thus the importance of the trip increased, especially after its association with different Islamic mahmals[1] (El Kabbani, Sh. 2005) of which the Egyptian mahmal was the most significant (Figure 1). We can't actually trace the beginning of the Egyptian mahmal and obtaining its unique position. Its first indications date back to the Ikhshidi era, which witnessed the growth of the Egyptian pilgrimage caravan, and its power upon the other Islamic caravans (Ibn Taghri Bardi, Y. 1982; Ibn Iyaas, M. 1982). The importance of the Egyptian mahmal with its great celebrations, in addition to its significant and important political role, started from the Mamluk era. It continued during the Ottoman era and totally stopped in 1962. The phenomena of Hajj to holy Islamic places is similar in a way or other with pilgrimage in ancient Egypt, although its concept is totally different, as the ancient Egyptian fulfilled his pilgrimage to deities, while in Islam, Hajj is one of the main principals of the religion.

Figure 1
The Egyptian Mahmal preserved
in the Egyptian Geographic Society
Photograph of the researcher

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[1]   The Mahmal was the vehicle which was used to carry and transport the cover of the Ka'ba as well as the gifts of the Caliph, Sultan, or Ruler of Egypt to Hejaz during the previous eras. It takes the form of a square wooden frame, hollow from the inside, topped with a pyramidal wooden frame, which ends with a cone topped with a copper crescent with a copper star inside it. The four corners of the square frame were also topped by copper crescents with a copper star inside each. The Mahmal was covered with a red cover decorated in Serma- style with golden and silver yarn. These decorations were so rich that the cover itself was almost invisible. It was also decorated with an inscription band of some Koranic verses in Thuluth script stretching over the four facades of the Kiswa.

2. HAJJ PAINTINGS

In Pharaonic Egypt the pilgrimage phenomenon was closely associated with the belief of resurrection and immortality. Osiris, the god of the underworld, was the god to whom the Egyptians travelled for pilgrimage. They believed that the tomb of Osiris was at Abydos and therefore kings and individuals were keen to travel to Abydos, which became a holy place (Mahran, M. 1989). Although there is no precise word to describe pilgrimage in pharaonic Egypt, but its manifestations are plentiful (Yoyotte, J. 1960).

So, some of the pilgrimage manifestations in Islamic Egypt have ancient Egyptian origins, based on some social traditions and rituals, for example drawings on tombs' walls depicting pilgrimage to Osiris' tomb in Abydos, or prayers to him as the god of the otherworld, in addition to various rites with pharaonic origins (Yoyotte, J. 1960), even if they continued in the same trend or differed in a way or other (Frazer, J. 1981) as mummies as well as living humans participated in the pilgrimage to Abydos in the pharaonic era, a matter that gave sadness and grief effect (Issa, A. 1986) – unlike the Egyptian Mahmal in the Islamic era. Abydos pilgrimage trip was illustrated on the individual and royal tombs' walls showing the man with his wife, and highlighting their customs, as this holy trip was linked by the ancient Egyptian to strict roles in the customs and manners, as well as the hymns and songs (Altenmüller, A. 1975).

As for the Islamic hajj, the social influence plays a crucial role in the mahmal and the pilgrimage caravan, as this annual trip was connected to a number of rituals, rites and traditions, which are still living in the folk conscience. It is remarkable that some of the social impacts are still vivid in the minds of the social strata of Egyptian society, especially the popular classes.

One of the folk arts, that flourished and was linked to hajj and mahmal, was hajj paintings drawn on the houses of the pilgrimages. Also folk songs, traditions and rites flourished in turn (El Kabbani, Sh. 2005), and it is believed that all of them have pharaonic origins.

Hajj paintings are primarily a rural art tradition. However they might show up occasionally on city buildings as country people move to urban areas, but these paintings are unrecognized and unnoticed by most city dwellers (Parker, A. & Neal, A. 2009). The purpose of Hajj paintings is to commemorate the Hajj, or the pilgrimage to Mecca. They reflect this important experience in the life of a Muslim building on an ancient tradition thousands of years old (El Kabbani, Sh. 2005). They are also considered as an announcement that the owner of this house or a member of his family has fulfilled this sacred trip (Hamed, W. 1987).

No one can precisely determine how or when this custom first started. Certainly the idea caught on and has developed in a relatively short time into a flourishing folk art form. This folk art attracted the attention of many historians and European travelers. The scientists accompanying the French

campaign in their work "Description de l'Egypt" gave us a detailed description of the Egyptian celebration accompanying the departure and arrival of the Mahmal, and other Egyptian folk customs concerning the Hajj. They didn't mention anything concerning the Hajj paintings, although they observed that the Egyptians painted their houses for the departure and arrival of the Mahmal[2].

Then in the 19th century Edward William Lane gave us a detailed description of the Hajj celebration. He also noted that the Egyptians painted their houses and shops three days before the departure of the pilgrimage caravan accompanying the Mahmal (Lane, E. 1963). The traveler Girard De Nerval, who visited Egypt in the 19th Century, as well as Joseph Petts or Hajj Youssef and Sophia Lane Paul, described the departure of the Mahmal and the great celebration which was held on that occasion. They also mentioned that the houses and shops were painted (De Nerval, G. 1960; Petz, J. 1995; Lane Paul, S. 2000) which could be interpreted as the very primitive beginnings of this folk art.

These paintings are brightly colored, reflecting the joy for the safe return of the Hajji or Hajja[3], especially in past decades when the Hajj was done with great difficulty (El Kabbani, Sh. 2005). They contain a combination of many elements.

The elements of the drawings consist of:

2.1 COLORS

The folk artist used a number of colors which have certain meanings in his paintings. So he used:

- **White color** as a symbol of light, highness and purity. In addition to these symbols, this color had a political significant during the pharaonic era, as it was closely linked to the divine and royal symbols. It was also the symbolic color of Upper Egypt in contrast to the red color signifying Lower Egypt (Ahmed, T. 2004).
- **Red color** to symbolize the joy, happiness and power. While in the pharaonic era it had positive and negative symbolism (Griffiths, J. 1972). On one hand, it symbolized the sun set reflecting the ancient Egyptian belief in life and death. It also indicated the color of the blood, the main origin of life. One the other hand, red signified the color of the sun god and his victory upon his enemies, thus, it reflected the idea of victory (Ahmed, T. 2004).

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[2] For the details of the celebration: French Campain Researchers, Kitab Wasf Misr – Al Misreyoun Al Mohdathoun (Description d'Egypte – Modern Egyptians), translated by El Shayeb, Z, Cairo, 1992, p. 205-210.

[3] Hajji is a male title given to the one who has performed the pilgrimage trip, while Hajja is the female title.

- **Green color** as a symbol of heaven, fertility and growth. It was for the ancient Egyptian artist one of the most important colors that expressed the idea of the resurrection and renewal, which was a main element of the ancient Egyptian belief. It also was linked with fertility, wealth and growth, therefore it was related to the mother deity (Lucas, A.& Harris, J.R. 1992; Ahmed, T. 2004).
- **Blue** was not widely used as it is a dark color. But only the light blue was used to reflect the sky, the water or the wide horizon. While in the pharaonic era, blue was the color of sky and earth. Thus, it is related to fertility reflecting the color of the Nile and the related crops. Also various fertility manifestations were colored with blue (Ahmed, T. 2004).
- **Black color** was not a preferred color in Hajj paintings as it reflects the darkness and evil. So, it was only used as outer outlines of the figures (Aref, I. 2002). In the pharaonic era, the artist regarded black as a manifestation of resurrection from death, as well as fertility; and hence it meant life itself (Ahmed, T. 2004).

2.2 INSCRIPTIONS AND WRITINGS

The inscriptions and writings accompanying the wall paintings contain the following:

2.2.1 **Certain Quranic verses**, (Figure 2)

– Related directly to the Hajj, such as:
  • "Pilgrimage to the House is a duty to Allah for all who can make the journey" (Quran: Surra 3, Verse 97).
  • "Proclaim the pilgrimage to the people. They will come to you on foot and on every lean camel, they shall come from every deep ravine" (Quran: Surra22, Verse 27).
– Related indirectly to this occasion:
  • "Your Lord has said: 'Call on Me and I will answer you'" (Quran: Surra 40, Verse 60).
  • "Whatever favor you have is from Allah" (Surra 16, Verse 53).
  • "Indeed, We have opened for you (Prophet Muhammad) a clear opening" (Quran: Surra 48, Verse 1).

2.2.2 **Some of the Hadith of Prophet Mohamed**, (Figure 3) for instance:

– "Who visited my grave must be assured of my intercession".
– "Between my house and my Minbar is a garden of Paradise".
– "Accepted Hajj has no reward but Paradise".

**Figure 2 – Hajj painting from Naj Saad, Al- Hamidat Village, Menia.
Photograph of the researcher**

**Figure 3 – Hajj painting from Naj Saad, Al- Hamidat Village, Menia.
Photograph of the researcher**

2.2.3 **Religious prayers**, for example:

- "I testify that there is no God but Allah and that Mohammad is His Messenger".
- "Here I am at Thy service O Lord, here I am".
- "Allah is Greatest".

2.2.4 **Some phrases related to Prophet Mohamed:**

- "Blessings on Prophet Muhammad (Peace Be Upon Him".
- "Oh Holy Prophet".
- "Flowers flourish for the grace of Prophet Muhammad".

2.3 TEXT RECORDING THAT THE OWNER OF THE HOUSE HAS UNDERTAKEN THE PILGRIMAGE TO MECCA, (FIGURE 2) SUCH AS:

- Made his pilgrimage to the god's house and visited the prophet's tomb the Hajj…
- Made his pilgrimage to the god's house and visited the prophet's tomb the Hajj… (then his name).
- "Accepted Hajj and Forgiven sins".
- "Congratulations Hajja[4]… (then her name)".

2.4 DRAWINGS (FIGURE 4):

1. The Kaaba and the Great Mosque in Mecca and the Prophet's Mosque in Madina.
2. Two pigeons and the Cave of Hira, which are a symbol of the great role the two pigeons had, when they hided Prophet Mohamed and Abou Bakr Al Sedik in cave Thour, and they are also an indication to the pigeons in Ka'ba.
3. A man or a woman praying, as an indication of their prayer in the Great Mosque in Mecca or the Prophet's Mosque in Madina.
4. Transportation:
   - The Egyptian Mahmal. In spite the fact that it stopped completely during the time of Former President Gamal Abd El Nasser, it still alive in the popular consciousness.

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[4] The feminine title given to the woman who performed the pilgrimage to Mecca.

**Figure 4 – Hajj painting from Western Bank of Thebes.
Photograph of the researcher**

– Camel, which was the main mean of transportation in ancient times.
  • As the folk art is considered a mirror of the society, the development of the transportation means was reflected in the Hajj paintings, so the artist illustrated:
  • Train
  • Bus
  • Ship
  • Airplane.

5 Some animals:

  • The lion can be interpreted as a symbol of courage (Aref, I. 2002; El Kabbani, Sh. 2005). When a lion is drawn holding a sword in its hand,

it is a sign of a man's courage, so it is popularly used not only in Hajj wall paintings, but also as a tattoo (Al Gohari, M. n.d). It could also symbolize the intention of the Hajji or the Hajja to face their sins, because after they fulfill the Hajj they return without any sin (Ameen, A. 1999; El Kabbani, Sh. 2005).

• The camel symbolizes the patience that the Hajji or Hajja must have in order to fulfill this hard trip, especially in the old times.

• One or two horses, which had a special position in the ancient Egyptian, Coptic and Islamic art in general and the folk art in particular. The horse is a symbol of courage and the ability of facing danger without any fear.

• Pigeons, which are the symbol of mercy and piece as well as the rapidity.

3. SOME TRADITION AND RITES LINKED TO THE EGYPTIAN MAHMAL:

Some traditions and rites were linked to the departure and arrival of the mahmal. In spite of their simplicity, these traditions show how the phenomenon of mahmal was deep in Egyptian conscience and express their high respect. Its camel travels to the most holy places, Mecca and Madinah, holding the cover of Ka'ba, has ancient origins in the ancient Egyptian depiction of the caravan holding Amon's statue in his journey from Karnak Temple to Luxor Temple (Mahran, M. 1989). Perhaps the most important of these habits are:

– Taking blessings by touching the mahmal or just by seeing it, and the ones couldn't, threw their napkins to the servants of the mahmal after putting some coins or meat, as to get blessings. The reason for that action is that the mahmal, without the camel, was located during the pilgrimage time in the Great Mosque of Mecca as well as inside the copper shrine of the prophet's masoleum[5]. This could be compared with the action of trying to reach the deity shrine in the pharaonic era, as to get the god's blessings and gain the personnel inner peace that he will live in heaven during his other life (Barta, Y. 2013).

– Kissing the camel's pad to get blessings, a tradition mentioned by the Mamluk historian, Ibn Taghri Bardi, who said that in 788 AH/1386AD, 2 commandos attacked the Sharif of Mecca while kissing the camel's pad screaming that his is the sultan's enemy (Ibn Taghri Bardi,Y. 1982; Ibn Iyas, M. 1982).

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[5]   Refaat, I., Mera't Al Harameen (The Mirror of the 2 Sacred Mosques), Cairo, n.d., vol.1, p.13.

- Kissing the leash of the camel by the governor, for example in 1901 the Khedive of Egypt kissed the camel's leash and was followed by the Chief Judge and some of the attendees (Refaat, I. n.d; Ameen, A. 1999; Helmi, I. 1988).

- The habit of smoking while the mahmal was passing, a habit which caused various confrontations between the Egyptians and the Marrocan pilgrimages, who considered this habit against the Islamic duties.

- The most interesting and weird tradition associated with the Mahmal is employing a man or a woman named "the father/ mother of cats" to travel with the caravan (El Batanoni, M. 1995; Helmi, I. 1988). The reason for this is really mysterious and unknown! Could it be possible to eat the food remains? On the other hand, it could have a pharaonic origin related with the cat goddess Bastet, whose worship place was Tell Basta and her worshippers came from all over Egypt to celebrate in her temple (Mahran, M. 1999; Omar, M. 1989). So, the important and unique significance of cats in the ancient Egyptian heritage can't just be ignored, and this could explain why modern historian couldn't understand the role of cats in the caravan.

4. CONCLUSION

Since ancient times, the Egyptian considered the pilgrimage trip as the most precious trip. Although the Egyptian travelled to Abydos for his pilgrimage, a matter which is completely different than pilgrimage in the Islamic era, however, various rites and rituals are still vivid in the Egyptian conscious. This is reflected in the hajj paintings on the houses' walls, which have a pharaonic origin.

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Part II

Archaeology

People, Pots, Words and Genes

Multiple sources and reconstructions of the transition to food production in eastern Africa

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ABSTRACT

This chapter provides a review of the currently available archaeological evidence relating to the transition to food production in eastern Africa, and some of the supporting linguistic and genetic evidence. In broad terms, livestock herding preceded crop cultivation in the region, with an initial emphasis on sheep and goats, commencing around 4500 to 5000 years ago. By around 3000 years ago, full-blown pastoralist societies with an emphasis on cattle herding occupied much of the savannah areas. From ca. 2500 years ago, metal using farming communities, practicing hoe cultivation of roots crops and cereals were also present, interacting with both pastoralist and autochthonous hunting-gathering-fishing communities. These interactions gave rise to diverse ethnic mosaics, alongside extensive genetic and linguistic exchanges.

KEYWORDS

Early Farming and Herding, East Africa, Archaeology, Historical Linguistics, Population Genetics

1.   INTRODUCTION

The development and spread of farming and herding in sub-Saharan Africa was a long, drawn-out and uneven process spanning many millennia with many stops and starts. It entailed the local domestication of different plant species, and the introduction and adoption of domesticated animals and plants from other continents (Fuller and Hildebrand 2013; Gifford-Gonzalez and Hanotte 2011). The timing of these introductions and the rates of their adoption and direction of spread varied widely. Knowledge transfer, innovation, demographic expansion and migration all likely contributed but in varying degrees depending on local and regional contexts. Climatic factors, along with variations in soils, vegetation and surface water availability undoubtedly both enabled and shaped these responses. The distribution in human- and animal- diseases and their vectors also potentially influenced the direction and rate of spread, especially among herding communities (Gifford-Gonzalez 2000). Consequently, the manner in which different domesticated plants and animals were combined as part of a farming system, the degree of continuing reliance on gathered and hunted wild species of plants and animals, and the relative dietary contributions of marine and lacustrine foods, all varied widely (Marshall and Hildebrand 2002). This chapter explores some of the evidence for these processes currently available from eastern Africa, here defined as encompassing the modern nation states of Kenya, Uganda, Tanzania, Rwanda and Burundi, and immediately adjacent parts of Somalia, Ethiopia and South Sudan.

The essay begins with a review of the archaeological evidence concerning eastern Africa's pre-farming, Late Stone Age (LSA), hunting-gathering-fishing populations (hereafter HGFs, or 'foragers'), before turning to consider the material record of the early, Pastoral Neolithic (PN) herding populations and Early Iron Age (EIA) societies (also referred to as Early Farming Communities, or EFCs). Having reviewed the archaeological evidence, the correlation of these datasets with the evidence of regional historical linguistic data and population genetics is discussed with reference to relevant palaeoecological data.

Overall, three broad points will be made. First, no single model of the transition to food production can account for either the observed variability in these records or in the timing and rate of adoption of domesticated plants and animals. Secondly, the currently available data are spatially and temporally unevenly distributed and key lines of evidence, especially relating to crop cultivation, are often lacking and so weaken interpretive arguments regarding the degree of correlation between archaeological, linguistic and genetic evidence. And finally, the influence of pre-farming HGFs on the direction and rates of spread of food production in the region, and their subsequent contributions to regional economies has been insufficiently studied.

The overall conclusion to be drawn from these arguments, therefore, is the need for much more coordinated and targeted cross-disciplinary, collaborative research on the topic.

2. PRE-FOOD PRODUCING SOCIETIES

During the terminal Pleistocene, eastern Africa was characterised by cold, dry conditions between ca. 12,700 and 11,800 years Before Present (BP) (Timm et al. 2010). At the start of the Holocene, roughly 11,700 years ago, regional temperatures and rainfall rose quite rapidly, with a corresponding increase in lake levels, expansion of montane forests into lower altitudes, and a reduction of savannah grasslands in favour of bush and woodland habitats, lasting to ca. 5000 BP (Kiage and Liu 2006). This period is often referred to as the African Humid Period. Regionally, the shift toward more mesic habitats seems to have stimulated demographic and geographical expansion of different groups of LSA hunting-gathering-fishing populations, who exploited a variety of different ecological niches, including the coastal plains, savannah grasslands, and tropical and montane forests (Kusimba 2013).

More arid conditions returned after the mid-Holocene starting ca. 4500 BP, with gradual or more punctuated regional drying until ca. 2700 BP, when the climate became more variable. For the Late Holocene, significant alternating fluctuations between wetter and drier conditions occurred, broadly relating to global trends but with regionally specific characteristics. Overall, the trend appears to have been toward wetter conditions for much of inland East Africa after peak drought conditions ca. 2050-1800 BP (Battistel et al. 2016). There was a further phase of aridity ca. 950-680 BP, roughly corresponding to the northern hemisphere Medieval Climate Anomaly, followed by wetter conditions from ca. 680 to 200 BP, with localised variations and anomalies (Gelorini and Verschuren 2013).

Archaeological research on the region's Holocene LSA foragers, although uneven, indicates considerable variation in their food procurement strategies, prey choices and settlement dynamics. Lacustrine and riverine settings were rich in food resources, and as a consequence were a focus of HGF activities and settlement. Ecotones, the boundaries between different habitats, were also favoured locations, especially the boundary between montane forests and savanna. Coastal locations were also exploited, although significant sea level rise since the height of the Last Glacial Maximum between ca. 23,000-18,000 BP, when global sea levels were ca. 120 m lower than currently, has submerged much of the early to mid-Holocene coastline. The surviving sample of coastal LSA sites, therefore, may not be entirely representative.

In terms of stone tool technologies, LSA assemblages from different sites exhibit differences across several variables, including ratios of local versus

non-local raw material, flaking technique, typological composition, tool-to-waste/debitage ratios, artefact morphometric characteristics, and tool use/curation. Most LSA lithic assemblages exhibit Mode 5 technological characteristics as defined by Clark (1961), and a preference for blade or bladelet production, geometric microliths (especially crescent and segment forms), backed tools and convex scrapers. However, none of these are universally diagnostic and researchers have identified several later LSA stone tool industries with variable temporal and spatial ranges (Wilshaw 2016; Ménard and Bon 2015). These include the Kiteko, Lemuta, Silale, Olmoti, Eburran, and Wilton industries, among others. Of these, the best known are the Eburran (formerly encompassed within the Kenyan Capsian) and Wilton industries (Leakey 1931; Barham and Mitchell 2008).

The Eburran comprises five phases (Eburran I-V) dated to between ~12,700 B.P. to ~1800 BP (Ambrose 1998), and is associated with forager sites in the Central Rift Valley, typically those located along the montane forest–savanna grassland ecotone (Ambrose 1985). Detailed morphometric and typological studies indicate that the technology was oriented toward the production of fairly standardized, replaceable and disposable tools which suggests planned tool-production and use, rather than more a more opportunistic technology (Slater 2016). Faunal assemblages from Eburran V sites such as Enkapune ya Muto and Maasai Gorge indicate a preference for small- and medium-sized bovids and other forest and forest-savanna game, possibly more frequently caught by trapping and snaring (Ambrose 1984; Marean 1992). Honey collecting may have also been a significant component of annual subsistence strategies. The division between Eburran IV and V, the final phase, is dated to around 4,500 BP. This broadly coincides with the appearance of domestic livestock in central and western Kenya, and Eburran V lithic material is often found in association with ceramics. Whether these ceramics were produced by Eburran foragers, or were obtained through exchange with early pastoralists is uncertain, however.

Further west, around Lake Victoria but with a distribution that includes sites in the Eyasi basin, northern Tanzania, another distinctive, pottery-using, HGF tradition emerged around 8300 BP and ending ca. 2600 BP. Known as Kansyore (also Oltome) after the type site on the Kagera River (which forms the boundary between modern-day Uganda and Tanzania), Kansyore sites include relatively large open-air settlements, commonly located near fast-flowing rapids (e.g. Kansyore Island, Uganda; Gogo Falls and Wadh Lang'o, Kenya), lake-edge shell-middens (Pundo, Usenge 1, Kanem and White Rock, Kenya) and rock-shelters (e.g. Mumba Cave, Tanzania; Rangong, Kenya). The main concentration of Kansyore sites is around the eastern sides of Lake Victoria. Sites here indicate a distinctive focus on lacustrine and riverine resources, with fish (and shellfish at lake-edge sites) dominating faunal assemblages. Early Kansyore HGFs were probably quite residentially mobile,

shifting toward a semi-sedentary settlement and food procurement system overtime, with seasonal use of lakeshore settlements during the dry season (Dale et al. 2004; Prendergast 2010). As on Eburran V sites, domestic caprines appear on Kansyore sites in low numbers after ca. 4400 BP (Lane et al. 2007). Diachronic shifts in ceramic style and production are loosely correlated with some of these changes (Ashley and Dale 2010).

Early to mid-Holocene (c. 9000-4500 BP) HGFs are also well attested in the north of the region around Lake Turkana at sites such as Lothagam and Lowasera. Key material characteristics of these sites, aside from an emphasis on fishing and exploitation of other aquatic resources such as hippopotamus and crocodile, include the presence of a distinctive style of wavy line and dotted wavy line pottery, and numerous bone harpoons (Angel et al. 1980; Barthelme 1985). Analyses of faunal remains from such sites indicate an initial focus on Nile perch and cichlids, probably exploited on a seasonal basis by small hunting parties visiting the lake shore (Stewart 1989). As the lake level fell with the onset of drier conditions in the mid-Holocene (Wright et al. 2015), these HGFs expanded the range of species they exploited.

The wavy-line pottery associated with these sites is stylistically similar to ceramics from Khartoum Mesolithic sites along the Nile and on early Holocene HGF sites in the eastern Sahara (Hoelzmann et al. 2001), leading some to suggest possible cultural affiliations between the different groups, as most notably suggested by Sutton (1974) in his proposition for the existence of an Early Holocene 'aquatic civilization' spanning much of what is now the southern Sahara. While Sutton's concept was subsequently fiercely criticised, the existence of a common adaptive strategy and supra-regional similarities in material culture traditions is now generally accepted even if some of the original correlations made between the distribution of these sites and linguistic groupings now seem less tenable.

3.   BEGINNINGS OF FOOD PRODUCTION IN EASTERN AFRICA

The earliest form of food-production in eastern Africa was pastoralism (Marshall and Hildebrand 2002), attested first around 5000-4500 BP by the presence of remains of domestic cattle, sheep and goats at open-air sites such as Dongodien, Ilert and North Horr, located along the shores of Lake Turkana and Lake Chalbi, northern Kenya (Wright et al. 2015). These domesticates were introduced by mobile pastoralist communities that had occupied areas further north during the early to mid-Holocene while rainfall across the Sahara was significantly higher than it is today, creating numerous lakes, swamps, and permanent and seasonal rivers (Kuper and Kröpelin 2006). The latter areas were exceptionally resource rich, and attractive centres of HGF settlement during the Mid Holocene Climatic Optimum. These 'complex HGF'

societies produced pottery, were semi-sedentary, had delayed return subsistence economies, and relied extensively on the wide range of wild plant foods available. Many eventually integrated domestic livestock into their pre-existing broad spectrum, riparian subsistence economies, and were accustomed to manipulating their immediate environment to enhance its productivity (Smith 1992; Haaland 1995). As climate changed and conditions in the Sahara moved towards the hyper-aridity the region experiences today, these communities would have been displaced. Some groups moved south, bringing with them knowledge of livestock herding, while others possibly moved east into the Ethiopian highlands and beyond.

In regional archaeological terminology, the arrival of early herding groups around Lake Turkana marks the start of the Pastoral Neolithic (PN). As well as being the first groups in the region to integrate domestic livestock into a broad spectrum, riparian economy, PN communities used pottery (although, as noted above, they were not the first to do so in the region), and employed typical LSA technologies for the manufacture of edged tools, often with a preference for obsidian as the main raw material (Wright et al. 2015). Although shown by chemical analysis to be obtained from local sources also exploited by Lake Turkana's mid-Holocene HGF populations, early PN groups used different stone tool manufacturing techniques (Ndiema et al. 2011). This period also witnessed the first appearance of stone bowls made from lava, pumice, and similar 'soft' rocks. These changes in material practices all lend support to the hypothesis of population migration into the Lake Turkana Basin and the case for these newcomers bringing domesticated livestock with them and new ways of exploiting the landscape. It is notable also that new forms of inhumation burial marked by large stone monoliths, as at Jarigole and Lokori, also appear between ca. 5000 and 4000 BP (Grillo and Hildebrand 2012). Although none of the known examples are directly associated with settlements, one possible interpretation of these sites is that they functioned as 'gathering places' for various ritual practices aimed at reinforcing social networks between different mobile and possibly widely dispersed communities.

Further south in the central Rift Valley and eastern highlands of Kenya, as noted above, the earliest traces of domestic livestock typically first occur in rock-shelters associated with LSA hunter-gatherers around ca. 4000–3500 BP (Marean 1982; Ambrose 1998) and at some Kansyore sites around Lake Victoria (Robertshaw 1990; Karega-Mũnene 2002; Prendergast 2010). South and east of these localities, evidence for the presence of specialised pastoralist economies is documented at several sites in the Tsavo and middle Sabaki River areas of southeast Kenya by ca. 3800–3700 BP; the Maasai Mara, southwestern Kenya by ca. 3200–2100 BP; and in the open woodlands and grasslands of the Serengeti Plains, the western slopes of Mt. Kilimanjaro, and around the Lake Eyasi basin, Tanzania by mid- to late first millennium BC (Prendergast 2011).

This geographical patterning has generally been considered to indicate the formation of a pastoralism-HGF 'frontier' south of the Serengeti/Lake Eyasi areas, that was only breached after the consolidation of pastoralist economies and land-management strategies further north (Gifford-Gonzalez 2000; Marshal et al. 2010; Lane 2013). New research in northern Tanzania challenges this hypothesis, particularly with the discovery of occurrences of domestic taxa and associated PN material culture dating to ca. 4000-2900 BP at the site of Luxmanda (Prendergast et al. 2013). The results of isotopic analyses on fauna from PN sites in central and southern Kenya (Chritz et al. 2015) add further insights. Specifically, in the absence of detailed palaeoecological data, it has been generally assumed that extensive areas of woody bush and scrub ideally suited for hosting tsetse fly (*Glossina* sp.), the primary biological vector for human sleeping sickness and animal trypanosomiasis, created a barrier to the southward expansion of PN herding communities. The new isotopic data, however, indicates that some of the areas previously thought to have been woody, were dominated instead by C4 grasslands well suited to a pastoralist economy.

Further research is nonetheless needed to refine current understanding of the rate, direction and drivers of the spread of livestock herding into southeastern Africa. As Gifford-Gonzalez (2000; 2015) has noted, the majority of faunal assemblages from early PN sites in the Central Rift, the Lake Victoria Basin and adjacent localities indicate that wild fauna provided a significant contribution to annual diets, and an overall predominance of caprines over cattle on early PN sites. Moreover, it is only really after ca. 3000 BP that sites become significantly larger and more obviously associated with cattle herding, Luxmanda being an important exception. The geographical distribution of various disease vectors, especially tsetse fly, would certainly have constrained initial settlement to certain areas and restricted expansion until the development of more disease resistant herds and/or new strategies had been adopted for manipulating habitats so as to limit infection (Gifford-Gonzalez 2000). In this regard, ecological processes of landscape domestication arising directly from recurrent abandonment of pastoralist encampments with dense concentrations of animal dung (Boles and Lane 2016), may have played a critical role.

It is clear, also, that pioneer PN communities interacted with autochthonous LSA foragers (Lane 2004; Prendergast 2011), and the nature of these relationships may well have either hindered or facilitated the development of full-blown herding economies in different areas (Kusimba and Kusimba 2005; Wright 2007). It is important to stress, also, that the term 'Pastoral Neolithic' masks considerable diversity regarding not just the relative importance of livestock in subsistence strategies but also preferred ceramic styles; the range of formal stone tools, flaking techniques and debris; site distributions and placement within the landscape; and associated burial practices and forms (Marshall et al. 2011; Lane 2013). In some areas, such as around Lake

Turkana and south-eastern Lake Victoria, PN communities clearly included fishing as part of their subsistence strategies (Marshall and Stewart 1994), and as more research is undertaken evidence for additional adaptive strategies may yet emerge.

From ca. 3000 BP, two broad cultural traditions, known as the Savanna Pastoral Neolithic (SPN) and Elmenteitan, can be discerned across much of the eastern Lake Victoria basin, the Central Rift Valley and adjacent highlands, the Serengeti Plain, and the foothills of Kilimanjaro, partly in terms of material culture differences, settlement locations, and herd management strategies (Marshall et al. 2011; Lane 2013). In general terms, faunal assemblages from both Elmenteitan and SPN sites tend to indicate a commitment to cattle- and sheep/goat pastoralism among both societies. There is, nonetheless, some internal diversity and differing degrees of dependence upon domestic herds, ranging from a generalized pattern of hunting, fishing, gathering, and herding to specialized livestock production in both traditions. For example, the remains from Gogo Falls (Elmenteitan) include a significant wild component and evidence for extensive exploitation of fish, while the faunal assemblage from Prolonged Drift (an SPN site) in central Kenya also has a significant wild component. This site may even represent evidence of former foragers in the process of acquiring stock and 'becoming' herders. However, it is also clear that at least some herding communities, as at Ngamuriak and Sugenya in the Maasai Mara (Kenya), were able to sustain a subsistence pattern dependent almost exclusively upon domestic stock, which may have been facilitated in part by the emergence of a bimodal rainfall regime around this time (Marshall et al. 2011).

4. EARLY FARMING COMMUNITIES

Sometime around ca. 2500 BP, new ceramic traditions begin to appear in the in the west of the region. These belong to what is known in archaeological terminology as the Chifumbaze Complex, and date to between ca. 2500 BP and 1000 BP (Phillipson 1977). The appearance of this new ceramic tradition is commonly believed to be associated with the introduction of crop agriculture linked to the arrival of Early Farming Communities (EFCs) and the first speakers of Eastern Bantu languages (also referred to as 'Mashariki') in the region, having migrated from a proto-Bantu 'homeland' in northern Cameroon – southern Nigeria (Ehret 1998). EFC sites are also associated with material evidence for the first use of metals in the region (Mapunda 2013), hence the older designation of these sites as part of the Early Iron Age (EIA). Archaeologists have sought to classify EFC ceramics principally in terms of formal and stylistic variations.

The earliest dated sites are those on which Urewe ware occurs, initially to the west of Lake Victoria, concentrated around Buhaya, Tanzania, and the Kivu-Rusizi River region in Rwanda/Burundi (Van Grunderbeek and Roche 2007). From the distribution of Urewe ceramics and iron smelting remains, by ca. 1800 BP EFC communities were present east of Lake Victoria in areas of modern-day western, central and coastal Kenya, and northern and coastal Tanzania. The spread of EFC communities along the coast was by no means uniform, however. The presence of Kwale ware (a typological development from Urewe ware) in the Rufijii River delta region dates to ca. 2200 BP (Chami 1998), for example, and similar dates have been obtained in association with Kwale/Matola ware from southern Mozambique (Ekblom et al. 2014). These comparatively early dates suggest that the spread of new innovations on the southern coast was remarkably rapid. In contrast, systematic survey work further north has yielded limited evidence for LSA material on the coastal lowlands, and on current evidence, no EFC sites are known on the coastal littoral of Kenya prior to ca. 1300 BP (Helm et al. 2012), and EFC occupation of the nearshore islands may have been even later.

It is generally assumed that EFC populations were mixed farmers, who placed rather more emphasis on crop cultivation than on herding. This is suggested by a preference for settlement locations close to better watered areas along the intersection between sub-montane forest and woody savanna (MacLean 1994/5). Actual evidence for subsistence strategies from Urewe sites is quite rare, however. Regarding faunal assemblages, important exceptions include the sites of Gogo Falls and Wadh Lang'o and Usenge 3 (Nyanza Province, Kenya), from which evidence for the exploitation of both cattle and small-stock has been recovered, and a number of recently excavated sites on the East African coast. These include the open air site of Mgombani (dated to ca.1290–1060 BP), southern Kenya and Panga ya Saidi, a large limestone cave in the nearby Dzitsoni Uplands likely occupied by terminal LSA hunter-gatherers (Helm et al. 2012). These latter sites provide some of the best evidence, also, for the range of cultivated crops. Grains of domesticated sorghum, pearl millet and finger millet and baobab seeds were recovered from both sites, and legume seeds are known from Mgombani. In Rwanda, the remains of pearl millet, sorghum and legumes (most probably cowpea) have been found at Kabusanze, an EIA settlement dated to ca. 1550 BP associated with classic Urewe ceramics (Giblin and Fuller 2011). Additionally, historical linguistic data attest to a knowledge and practice of yam cultivation among EFC societies (Philippson and Bahuchet 1994/5), although recovery of direct archaeological evidence for their presence has been elusive.

The mechanisms, timing and routes by which knowledge of farming and metalworking spread have also been much debated (de Maret 2013; Ricquier 2014; Russell et al. 2014). Whereas older models tended to imply quite signif-

icant and large scale population migration, the processes involved were likely highly varied. It is, nonetheless, clear from palaeoecological research that the arrival of early farming and metal-using communities roughly coincided with the onset of drier conditions across the African Great Lakes region between ca. 2050 and 1800 BP (Battistel et al. 2016). This may have facilitated the establishment of farming settlements by opening up areas of previously forested land, while the increased demand for timber for house construction, cooking and charcoal production for iron smelting may have further transformed the landscape. This moving agricultural frontier was possibly facilitated by a preference for swidden (slash-and-burn) agriculture. Whether increased demand for wood coupled with swidden agriculture triggered extensive deforestation and soil erosion, as some have hypothesised, needs further co-ordinated research. Geoarchaeological studies, nonetheless, do suggest that in upland areas such as the Pare Mountains, northern Tanzania (Heckmann 2014), vegetation clearance and the inception of hoe cultivation created conditions of incremental soil erosion that ultimately had long-term ecological consequences.

5. CORRELATIONS WITH LINGUISTIC AND GENETIC DATA

The linguistic complexity of East Africa and the extended history of gene flow between Afro-Asiatic, Niger-Kordofan, Nilo-Saharan and autochthonous speakers of East African click-languages (Hadzabe, Sandawe), indicates considerable interaction. Two distinct linguistic clusters seem to have been involved in the initial spread of livestock herding, with perhaps speakers of proto-Southern Cushitic languages (which fall within the larger Afro-Asiatic language family) from the Horn of Africa (parts of modern-day Ethiopia, Somalia and Sudan), being the first to penetrate the region from around 5000 years ago (Ehret 1998), superseded by groups of proto-Nilotic languages moving into the region from the Sudanic zone between 3000 and 2500 BP (Ehret 2003). Over subsequent millennia additional population movements seem to have occurred, as is well attested in the oral histories of most East African pastoralist societies. These later population migrations also exhibited a general southward trend, although because each incursion of new migrants potentially displaced elements of the pre-existing populations of the newly settled area these groups often moved in other directions (Ehret 1998).

The appearance of Pastoral Neolithic material traditions and livelihoods, and their variants, have been linked by some archaeologists to the arrival in the region of these early Cushitic- and Nilotic-language speakers (e.g. Ambrose 1984). The apparent independent evolution in eastern Africa of the allele associated with lactase persistence some 7000–3000 years ago likewise lends support to such arguments, especially as its very rapid spread is con-

sistent with genetic models of population migration (Ranciaro et al. 2014). The distribution of Y-chromosome haplotypes as recorded among different East African Cushitic-, Nilotic- and Bantu-language speakers is also consistent with a southward movement of pastoralist populations ultimately into southern Africa (Henn et al. 2008), as does the east African genetic ancestry of southern African fat-tailed sheep (Gifford-Gonzalez and Hanotte 2011). Judging from the material record, with perhaps some exceptions, this southward expansion still seems to have been more of a 'trickle' than a full-blown 'wave' (Bower 1991).

As they expanded their geographical range early farming communities would have also encountered both vibrant HFG (associated with LSA material traditions) and early PN herding societies. The influence of Central Sudanic and Eastern Sahelian speakers on the EFC Mashariki populations during the last millennium BCE, for instance, is particularly clearly demonstrated by the range of Sudanic (Sog) and Cushitic (Tale) loanwords in Eastern Bantu languages for livestock, cereals, various economic practices and certain items of material culture (Ehret 1998: 47–53). Exchange and interaction between EFC, LSA, and PN 'groups' has also been documented archaeologically at several sites (Lane 2004). New research has also highlighted that both female (mitochondrial DNA - mtDNA) and male (Male-Specific Y-chromosome - MSY) genetic markers point to considerable population admixture (Henn et al. 2008; Batai et al. 2013). This is especially clear among modern-day populations of Uganda, who exhibit very high mtDNA diversity both within and between different linguistic groups (Gomes et al. 2015). The genetic histories of Nilotic-speaking groups, for example, suggest possible population dispersals from the Horn and Sudan, along with extensive incorporation of autochthonous HGF lineages, while Bantu-language speakers also exhibit genetic admixture with Western Nilotic and autochthonous groups.

Historical linguistic reconstructions provide further insights into the complexity of the processes involved. It is uncertain, for example, whether knowledge of African cereals such as sorghum and millet was introduced by Bantu-language speaking EFCs, or was in fact adopted by these groups from neighbouring Nilo-Saharan and/or Afroasiatic speakers, especially as combined biomolecular and archaeological evidence indicate there were multiple centres of localised domestication of sorghum and other African cereals (Fuller and Hildebrand 2013). Previous studies pointed to Nilo-Saharan associations consistent with inferences drawn from genetic reconstructions concerning the likely locations of sorghum domestication events (Stemler et al. 1975). Conversely, Ehret (2006) has argued on the basis of lexical analyses and linguistic reconstructions that sorghum can be traced to proto-Chadic, an Afroasiatic language.

More recent research adds to this debate. Specifically, three major populations (Northern, Central and Southern) of sorghum have been defined using

Bayesian modelling of recorded genetic diversity. The distribution of these is strongly correlated with the distribution of different language families (Westengen et al. 2014). The Central sorghum population, for example, is concentrated in the region between River Nile and River Chari, where Nilo-Saharan languages dominate. The adoption of sorghum from Nilo-Saharan speakers by early Bantu-language speakers, and its subsequent southward spread as a result of the expansion of EFCs, is also suggested by the co-distribution of the Southern sorghum population and Eastern Bantu languages. The adoption of pearl millet (likely domesticated in the Western Sahel zone) by Bantu-language speakers may have been equally complex. Based on lexical reconstructions, for example, Bostoen (2006/7) has suggested this may have happened twice – first among early Bantu-language speakers in the savannah – rain forest ecotone in West Africa, and subsequently among EFC migrants in eastern Africa, probably as a result of borrowing from neighbouring Nilotic-language speakers. Bayesian clustering analysis of the genetic diversity exhibited by pearl millet landraces in the Lake Chad Basin, on the other hand, found no correspondence between their distribution and that of regional language families, possibly owing to the complexity of later population movement and interaction (Jika et al. 2017).

6. CONCLUSION

In summary, the transition to food production in eastern Africa was a very uneven process, often characterized by quite localized uptake stretching over several millennia, and involving alternating moving and static 'frontiers' between farmers, herders and foragers. Collectively, the ethnic and social mosaics and relational networks that evolved were critical to both the form and direction of landscape domestication across the region. Current archaeological, genetic and linguistic research is rapidly expanding knowledge of the timing, extent and nature of these interactions and their wider consequences. In some cases, this research is also overturning older assumptions about the origins of different innovations and adaptations, while also adding new substantive information. Two encouraging trends are an increasing recognition of the complexity of the processes, agents, and networks involved, and a growing trend toward inter-disciplinary research aimed at answering old questions and addressing new ones. There are still many gaps in the archaeological record, both in terms of the types of data that need to be collected and also geographical areas that that remain under investigated despite having likely been important centres of early food production and/or corridors through which domestic crops and animals were spread. As ever, much more integrated research is called for.

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The analysis of determinatives of Egyptian words for aromatic products

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ABSTRACT

Preliminary results of the analysis of determinatives of Egyptian terms used to identify aromatic products deriving from southern countries, which have shown the complexity of the ancient writing system and the importance of determinatives to represent the perceived world. The general aim to clarify the botanic interpretation of Aromata *has been partially achieved adding new elements for a better understanding of the nature and origin of those raw materials.*

KEYWORDS

Aromatics, determinatives, Egyptian writing system, sign meaning

The final phase of the *Aromata* project[1] has been focused on the study of the Egyptian words describing some products deriving from trade with Nubia, Punt and other southern political entities.

The terms used to identify five aromatic products object of the current research have been extracted from the complete database of all the occurrences (Fig. 1), which cover an average chronological range set from the XII Dynasty to the Ptolemaic period (1985-30 BC).

The aim was to find new evidence to support some botanic interpretations of those materials through the study of the determinative signs (used to express the semantic group related to those words) and the references and textual context of all the documented variants.
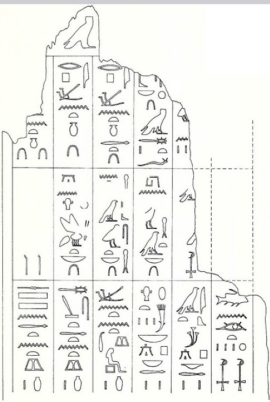
HS - 1	Context	Datation	Bibliography	Image
(var.) (det. N33)	Serenput Tomb Qubbet el Hawa N. 36 Entrance hall, northern pillar	XXII Dynasty	Deines Grapow 1959 pp.50-53 Charpentier 1989 pp.245-46 Germer 1985 pp. 78-80	

FIGURE 1 – Database example sheet with occurrence of the word 'hesayt'

The analysis has been focused on particular problematic words[2], whose determinatives and variants have been studied and compared to clear their pos-

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1   This research is part of a wider project about the linguistic and cultural areas of transitions in Africa, funded by the Italian Ministry of University and Research (FIRB 2012). See: www.africantransitions.it for more general information and regarding the *Aromata* project: I. Incordino, Foreign aromatic products in the cultural and religious identity of ancient Egypt, in: I. Micheli (Ed.) *Materiality and Identity. Selected papers from the proceedings of the ATrA conferences of Naples and Turin 2015*, Torino, EUT, 2016, pp. 149-156.

2   For the suggested interpretation of those words see: Incordino I., African Aromata in Egypt: the 'ti-shepes', in: I.Incordino and P.P.Creasman (eds.), Flora trade between Egypt and Africa in antiquity. Procedings of the Conference held in Naples, Italy, 13 April 2015, Oxford, Oxbow Books, 2017 forthcoming.

sible meaning and origin. As example, the following list includes all the occurrences and variants of the word 'ti-shepes', with relative chronological and provenance data:
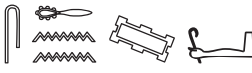
'ti-shepes' variant	Provenance and datation
	Serenput tomb, Qubbet el Hawa (XII Dynasty 1985-1779 BC)
	Tale of the Shipwrecked Sailor (XII Dynasty 1985-1779 BC)
	Hatshepsut Temple, Deir el-Bahari XVIII Dynasty 1550-1295 BC
	Private Tomb near TT71, Qurna Hatshepsut reign 1473-1458 BC
	Rock relief, Gebel Tingar (Elephantine) XVIII Dynasty (?)
	Tomb of Kenamun, Qurna (TT93) XVIII Dynasty 1550-1295 BC
	Tomb of Rekhmira, Qurna TT100 XVIII Dynasty 1550-1295 BC
	Rock inscription, Tombos XVIII Dynasty, Tuthmosis III
	Stela, Serabit el-Khadim XVIII Dynasty 1550-1295 BC
	Ostrakon, Deir el-Medina XIX-XX Dynasty (1295-1069 BC)
	Temple relief, Karnak XIX Dynasty, Sethi I
	Papyrus Harris I XX Dynasty (1186-1069 BC)

	Papyrus Turin B vs 1,8 XX Dynasty (1186-1069 BC)
	Edfu temple inscription Ptolemaic Period (332-30 BC)
	Phylae Temple inscription Ptolemaic Period (332-30 BC)

According to Goldwasser[3], there were two different kind of determinative signs in the Egyptian writing system: the horizontal one, which is 'iconic'

and translates an immediate meaning (es. *ꜣnkh*, 'goat') and the vertical one, which is actually a meaning 'prototype' and refers to a symbolic

meaning (es. *Bin* 'bad'). The combination of both types through the presence of two determinatives often offers a complete view of the word and its 'landscape' in a tridimensional sense (es. *šhnn* 'destroy'

). In general, the choice of a particular sign to determine the word was based on the ancient model of representation of the perceived world.

Following those assumpions, the analysis of the ti-shepes determinatives has begun with the identification of six signs used in the registered references:

'ti-shepes' variant	Determinative sign (Gardiner code)
	N33
	M3

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[3]   Goldwasser O., pp. 56-58.

	W22/23
	M2
	M1
	A50

Five of them seem to be related to the horizontal dimension, representing simply the plant (or a part of it) or the product deriving from its processing (M1, M2, M3, W22/23 and N33). Only one instance can be identified as a vertical dimension (A50), which relates the raw material with its principal characteristic: its rarity and exclusivity ('precious, noble').

Notwithstanding the many different contexts of the references, it seems that the choice of one of those sing to determine the word 'ti-shepes' is not depending on the textual typology. For instance, the ti-shepes determinative of the tree or just brunch (Gardiner sign list M1/M3) can be found in both commercial/official texts (Hatshepsut reliefs, Serabit el-Khadim stela, Tombos inscription) and in temple laboratories list (Edfu, Philae) and in private contexts (Deir el-Medina ostracon). In the same way, the determinative for the unguent vessel (W22/W23) can be found in both private funerary texts (tomb of Sarenput) and in official inscriptions (Seti I, Karnak).

To summarize, the study of those selected groups of signs chosen to represent the semantic world related to this material has shown that the determinatives used are actually composed by the picture of the material together with its most important element: the exceptionality of the derived products created with it, surely connected with the effort necessary to get it from the trade networks and the religious and mythic meaning associated[4].

For this material, moreover, there could be also an important connection with the word 'ti', first of the two terms used to describe it, meaning 'stick, chiesel'[5], quoted since the Old Kingdom (for an example dated to the XIII Dynasty see Fig. 2). The most relevant element seems then to be the 'stick' which should be 'fine, precious', probably because of a scented fragrance di-

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[4]   Regarding the connection between aromatic materials and the divine-mythic world see: Aufrere S. Egyptian Myths and Trade of Perfume and Spices from Punt and Africa, in: I.Incordino and P.P.Creasman (eds.) forthcoming 2017.

[5]   I'm very grateful to Prof. Franco Crevatin for this interesting suggestion.

**Figure 2 – Statue of Khnumhotep, scribe of Elephantine temple
(XIII Dynasty 1786-1650 BC, Louvre AF9916)**

rectly connected to the Gods. Other similar references come to mind related to another foreign product, likewise imported in Egypt from south: ebony (hebeny). An ebony stick is in fact used to evoke the gods, the Books of Thoth were kept into two boxes of ebony and ivory, the magician Webainer of Westcar Papyrus kept his magic tools inside an ebony box, the goddess Sekhmet ('The Great of Magic") has an ebony scepter[6].

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[6]   See: Aufrere S. *L'ébène, l'ivoire et la magie en Egypte ancienne*, in: Encyclopedie religieuse de l'Univers vegetal II, 2001, pp.321-329

**Figure 3 – Incense burner
(Qustul, cemetery L, Tomb 24, A group, 3000-3200 BC)**

All those elements clearly relate this material and the use of a stick with the gods and their evocation. Moreover, also ebony has many medical properties listed in the Ebers Papyrus (Eb 345, 404, 415) specially to cure eye illness (cataract, iris problems, infections, weak sight). In this regard too, the use of an ebony powder or stick can be linked with the idea of improving sight, giving an 'extra'-sensivity, or a double sight.

The Ebers Papyrus lists also many medical properties fot ti-shepes too, in order to heal headache, wounds (burn), and to reactivate/stimulate blood circulation through the preparation of recipes no to ingest. According to the most quoted botanic interpretation of ti-shepes as an African species of camphor tree[7], those properties find full evidence in the modern use of camphor (light anaesthetic and sedative, heal for minor heart diseases and weariness), which is recognized as toxic if ingested a quantity more than 2 gr.

Perhaps unsurprisingly, the mention of ti-shepes in religious/literary texts covers almost the half of the documented references to this item, while the rest derive mostly from private tombs inscriptions or official tribute lists.

At present, it appears that there was not a univocal relationship between the chosen determinative and the phase of production/part of the aromatic products. In other words, there is no decisive evidence to support the choice of the sign for tree to determine the word referring to the plant (or its parts)

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[7]   See: Luchtracht A., 1988, pp.43-48.

or the presence of the balsam vessel to determine a word for derived products, such as balsam or aromatic oil. It seems more likely that as the millennia passed words such as ti-shepes or hesayt can refer to both the raw material and the derivate product without any differentiation, and these terms can signify one or more species of foreign vegetals. Therefore, while it is worth suggesting interpretations for those products from the Egyptological point of view, this direction of research might be most promising if amended. Whatever vegetal species these words could actually represent (if it is logical and reasonable to assume that we have to search for only one species referred by each word), the fundamental aspect of investigation should be oriented more to the *use* to which the Egyptians put those products.

Similarly, it would be of much use to focus additional attention on tracing the origin of some similar species that can be identified with those words. More importantly, the uses and values that they had in the culture(s) from which they derived should be evaluated. To clarify the process of transition of elements from a culture to another, it is necessary to know the "original" meaning or value of an item prior to its transformation or adaption into the "new" culture. In this respect, object as the Qustul incense burner (Fig. 3), could be useful to connect the building of a ruler image and propaganda with aromatic products and their ideological and religious value.

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Bi3w Pwnt
in the archaeological record
Preliminary results and perspective of research

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ABSTRACT

This paper is devoted to the study of occurrence of the bi3w, the products from Punt, in the archaeological record and, more generally, to the contribution archaeology can provide to the study of the Egypt-Punt trade. In particular, special emphasis is given to the reconstruction of aspects of this trade which can be only partially studied through texts and iconographic evidence, such as trade organization, the management of commodities, and the trade routes. Ebony, obsidian, baboons and dogs are discussed as study cases. Finds from Mersa/Wadi Gawasis, the Middle Kingdom harbor on the Egyptian Red Sea coast from where the maritime expeditions to the land of Punt were launched, as well as from Eastern Sudan, a region which may have been part of Punt, are discussed. Finally, the potential of the contribution archaeometry can provide to the study of the Egypt-Punt trade is emphasized and an agenda is suggested.

1. THE *BI3W*, SOME PRELIMINARY REMARKS

The term *bi3* in the ancient Egyptian language can be translated as marvel and wonder (Erman and Grapow 1971, vol. 1, pp. 439-440). This term does not seem to be related to aesthetic appeal or value, but certainly had a strong religious connotation, as it is often used to qualify prodigious events (Erman and Grapow 1971, vol. 1, pp. 440-442) and tangible signs showing the presence or the legitimating favour of the deity towards the king (see also Gozzoli 2009, pp. 242-243, 248). It is somehow unexpected that such a specific term is used for qualifying products of the region of Punt not only in the New Kingdom, as e.g. in the well-known case of the Annals of Thutmosis III (Sethe ed. 1961, IV, p. 720, 5; see also Beaux 1990, pp. 296-297), but even much earlier, as made evident by a painted inscription dating to the reign of Amenemhat IV on a wooden box likely to have been used for the storage of such products during the navigation on the Red Sea from Punt to Egypt and found at Mersa/Wadi Gawasis (Mahfouz, Manzo and Pirelli 2007, p. 238) (Fig. 1), in a site identified with the harbor from where the maritime expedi-

Figure 1 – Wooden box of the reign of Amenemhat IV
with a painted inscription mentioning the *bi3w* of Punt
found at Mersa/Wadi Gawasis, on the Red sea coast of Egypt
(courtesy of the Joint Archaeological Expedition at Mersa/Wadi Gawasis
of the Università degli studi di Napoli "L'Orientale" and Boston University)

tions to the land of Punt and to Bia Punt, the "Mine of Punt", were launched in the Middle Kingdom (Bard and Fattovich 2007, pp. 239-253). Indeed, the latter may also represent the first occurrence of the term with reference to the commodities imported from Punt (Espinel 2011, p. 274).

The use of the term *bi3* certainly highlights the ideological relevance the Pharaonic ideology attributed to products arriving from Punt. They were ivory, ebony, aromatic resins, animal skins, and live animals (Herzog 1968, pp. 23-49 *passim*, 63-68; Espinel 2011, p. 42-49; Manzo 1999, pp. 6-9), however some of these products were not exclusively arriving from Punt but were also explicitly said to be brought from other southern regions possibly located in Nubia, at least from the 6th Dynasty (see Espinel 2011, p. 162; Manzo 1999, pp. 7-9). Notably, those products when arrived from regions different from Punt were not labeled in the texts as *bi3w*.

If in general the availability of goods arriving from far away could be regarded as a tangible demonstration of the power of the Egyptian king, i.e. as a demonstration of his efficiency in his first duty of controlling the potentially chaotic forces represented by the foreign lands (see Beaux 1990, p. 293), perhaps only some of those products, the more typical and characteristic of Punt, i.e. the aromatic resins, might have been considered as signs of favour of the gods towards the king (Pirelli 1993, p. 385). Actually, the availability of those specific commodities could be regarded as a *bi3*, a miracle, a truly appropriate term as aromatic resins represented an essential requirement for ensuring the manifestation of the god through the cult, a crucial one among the duties of the Egyptian king for maintaining order of the world, the Maat (Manzo 2012 a, p. 94 see also Pirelli 1993, p. 385).

For this reason, Punt, from where the aromatic resins arrived, became a region with a specific divine character. And this certainly justify the use of the term *bi3* for all its products (Pirelli 1993, p. 387; see also Espinel 2011, p. 356), to whom the term may have been extended from the aromatic resins, probably the only ones with a real miraculous connotation that justified such a high ideological appreciation. Moreover, without excluding the sacred connotation related to the divine region from where they were brought, all the other products may have been regarded by the Egyptians as true "miracles of exoticism" for their rarity and exceptionality (Beaux 1990, p. 309).

This article will be precisely devoted to some specific aspects of the occurrence of the *bi3w Pwnt* in the archaeological record and, more generally, to some aspects of the contribution archaeology can provide for the study of the Egypt - Punt trade. Of course, an archaeological approach was introduced into the study of the location of this region since the last decades of the 20th century (Espinel 2011, pp. 102-107), and at present the archaeological investigations can be certainly regarded as the more promising in the study of Punt, and potentially the only ones able to provide a decisive final solution to the problem of the location of the sacred region. However, despite the fact

that this specific field of study was characterized by intense activity in the last years, strangely enough, the identification and the study of the occurrence of the products of Punt in the archaeological contexts specifically related to the trade with Punt in Egypt and outside of Egypt were so far conducted only sporadically.

Although in this article a special emphasis will be laid on the reconstruction of aspects of the Punt-Egypt trade which can only be partially studied through texts and iconographic evidence, it should be stressed from the beginning that the archaeological evidence is also affected by some specific problems. In this respect, the critical issues faced in the study of the distribution of the products of Punt are not very different from those more generally encountered in the study of ancient trade, like the archaeological visibility of some specific commodities. Perishable materials survive very rarely, like e.g. in the well-known case of the Uluburun shipwreck (Pulak 2008), in an anaerobic context, or like in Nubian funerary assemblages, in very dry contexts, as it happened in the Lower Nubian A-Group cemetery V investigated by the Oriental Institute of Chicago (Williams 1989, p. 93, Fig. 54 c, Pl. 40). Other information may arrive from objects replicating the appearance of some perishable raw materials, like the possible clay models of resin lumps from an A-Group funerary assemblage in cemetery W (Williams 1989, p. 48, Pl. 43, d), in the meantime showing the appreciation for the reproduced commodities, too rare to be buried in a tomb. In other cases, additional information may arrive from the identification and the study of the distribution of tools related to the use of perishable commodities, such as e.g. the incense-burners from A-Group Nubian assemblages (Williams 1986, pp. 138-139, 145), whose real function was however disputed (see e.g. Wenig 1978, p. 117, no. 4), until the recent discovery of a typologically similar ivory incense-burner in clear association with grains of aromatic resin in a Pre-Kerma grave (Honegger 2014, pp. 96-97). Nevertheless, on the other hand too, the approach of identifying very specialized tools related to the use of specific commodities is not always satisfactory, as it cannot account for the more opportunistic use of very common objects, such as small bowls used for purposes different from the consumption of food and drinks, including the fumigation of aromatic substances, made evident e.g. by the discovery of bowls containing remains of ashy material from a Kerma cemetery in the Fourth Cataract region (Emberling et al. 2014, p. 330). Such kinds of limitations to the archaeological study of ancient trade are also very evident in the case of metals, for which the main problem is represented by the fact that they are very easily re-smelted and re-used. Therefore, given all these limits, the effective crossing of archaeological, epigraphic and iconographic data should be regarded as an essential point of departure of this paper, and not only because the different classes of evidence may complement each other, but also because it is only through the texts and the representations that we get the perception of what was arriving from Punt.

2. SOME *BI3W* IN THEIR ARCHAEOLOGICAL CONTEXT

As stressed above, it is clear from the textual and iconographic evidence that some of the products arriving from Punt were sometimes also imported from other regions such as Kush, therefore, the discovery of ebony, gold or ivory in an archaeological context is not enough to consider them a trace of the relationship of a specific site with Punt. For this reason, it will be safer to move from sites whose ties with Punt have been proven by archaeological and textual evidence. This is the case of Mersa/Wadi Gawasis, a site, located ca. 20 km South of Safaja and 60 km North of Qosseir, identified with the harbor from where the Middle Kingdom expeditions to the land of Punt and to Bia Punt, the "Mine of Punt" were launched and where several texts referring to the expeditions and their management as well as a large amount of archaeological data on the organization of the expeditions were collected (see again Bard and Fattovich 2007, pp. 239-253). Therefore, fragments of charred wood found at Mersa/Wadi Gawasis and identified by Rainer Gerisch as *Diospyros sp.*, a hard dark wood from tropical Africa, were very likely imported from Punt (Gerisch 2007, pp. 183-184). They not only clarify that, at least in the Middle Kingdom *Diospyros* sp., or possibly, also *Diospyros* sp. and not only *Dalbergia melanoxopylon* (*contra* Gale, Gasson, Hepper and Killen 2000, pp. 338-340), is likely to correspond to the Egyptian term *hbny*, but also contribute to the identification of the areas which were part of the Punt network at that time, involving regions of tropical Africa such as the northwestern slopes of the Ethio-Eritrean highlands (see Manzo 1999, p. 8).

Interestingly, the finds from Mersa/Wadi Gawasis may also give information on the management of this commodity.

The discovery of several fragments of four *Dyospiros* sp. rods (width/thickness: 1.3-1.9 cm/1.0-1.2 cm; 1.8-2.5 cm/0.7-1.1 cm; 1.3-1.9 cm/0.9-1.4 cm; 1.2-1.7 cm/0.8-1.0 cm) in excavation unit WG 55, C2, SU2 (Gerisch 2010, pp. 51-52, 56) is very meaningful from this point of view (Fig. 2). The fact that the rods were found charred may be explained either by a specific ritual related to the availability of materials imported from Punt, as suggested by their association with a small shrine, or by an opportunistic reuse as fuel of damaged and thus already unusable materials. This may certainly explain the fact that such a prized Puntite commodity was left on the site and not transported to the Nile valley to be used. Moreover, the fact that these fragments of ebony were shaped as rods, suggests that at least in the Middle Kingdom times ebony reached Egypt half-processed, already partially shaped. This may also have been the case in the New Kingdom times, as suggested by the fragments of African *Dyospiros* sp. from the Uluburun shipwreck (Pulak 2008, pp. 293-294). Interestingly, there is ethnographic evidence of the trade of ebony rods ca. 30 cm in length being sold at Shendi, near the Fifth Cataract, in present Sudan, to the early 19th century AD (Gale, Gasson, Hepper and Killen 2000,

**Figure 2 – Fragments of four *Dyospiros* sp. rods from Mersa/Wadi Gawasis,
on the Red Sea coast of Egypt
(courtesy of the Joint Archaeological Expedition at Mersa/Wadi Gawasis
of the Università degli studi di Napoli "L'Orientale" and Boston University)**

p. 339), and this may also have been the case in ancient times. Although the hypothesis of trade in semi-finished materials had already been suggested on the basis of the fact that part of the gold from Punt in the Deir el Bahari reliefs is shown as ring-shaped ingots, similar to the type of ingots still recently used in Ethiopia (see Ogden 2000, p. 162; see also Fattovich 1991, p. 258), and of the aspect of the pieces of ebony in some New Kingdom reliefs (Manzo 1999, p. 8), it should be stressed that the ebony rods from Mersa/Wadi Gawasis represent the first real evidence of this practice.

Also obsidian is a raw material collected at Mersa/Wadi Gawasis and should be considered a commodity imported from the southern Red Sea and certainly somehow related to the Punt trade system (Lucarini 2007, p. 208) (Fig. 3). This commodity was imported to Egypt since Predynastic times (Aston, Harrell and Shaw 2000, pp. 46-47; Zarins 1996). It is well known that several obsidian sources were located in the southern Red Sea, both on the African and on the Arabian side. Analysis conducted in recent years

**Figure 3 – Obsidian blade from Mersa/Wadi Gawasis,
on the Red Sea coast of Egypt
(courtesy of the Joint Archaeological Expedition at Mersa/Wadi Gawasis
of the Università degli studi di Napoli "L'Orientale" and Boston University)**

have shown that the obsidian objects found in Egypt were largely made from obsidian from the sources located in the regions of the southern Red Sea (see e.g. Bavay, De Putter, Adams, Navez and André 2000, pp. 13-16), as was also demonstrated for samples collected at Mersa/Wadi Gawasis, whose analysis is in progress.[1] Apparently, obsidian used in Egypt originated from sources on both sides of the southern Red Sea, as it was perhaps already in Predynastic times (Zarins 1996, pp. 92, 95). Nevertheless, a more specific origin from some obsidian sources on the African side of the southern Red Sea was also recently proposed (Aston, Harrell and Shaw 2000, pp. 46-47; Giménez, Sánchez and Solano 2015, pp. 356-357).

It should also be stressed that the case of obsidian is a special one because, for some reason, this commodity arriving from the southern Red Sea is not explicitly listed among the products of Punt and even its ancient Egyptian name is admittedly unknown (see also Espinel 2011, pp. 151-152). An identification of obsidian with the *mnw km* (Andrews 1990, p. 49; De Putter and Karlshausen 1992, p. 111; Harris 1961, pp. 111, 229 see also Helck and Otto eds. 1982, p. 550) of the Egyptian texts was proposed, and also other possible identifications with terms such as *k3f* (Harris 1961, pp. 111, 229), *tihnt*

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[1]   The analysis of the samples of obsidian from Mersa/Wadi Gawasis is being conducted by Giulio Lucarini, Cambridge University (UK) and Donatella Barca, Università della Calabria, who already presented some preliminary results on the way to be published, as part of the joint research project at Mersa/Wadi Gawasis of "L'Orientale" and Boston University. I would like to thank them for making their preliminary results available to me.
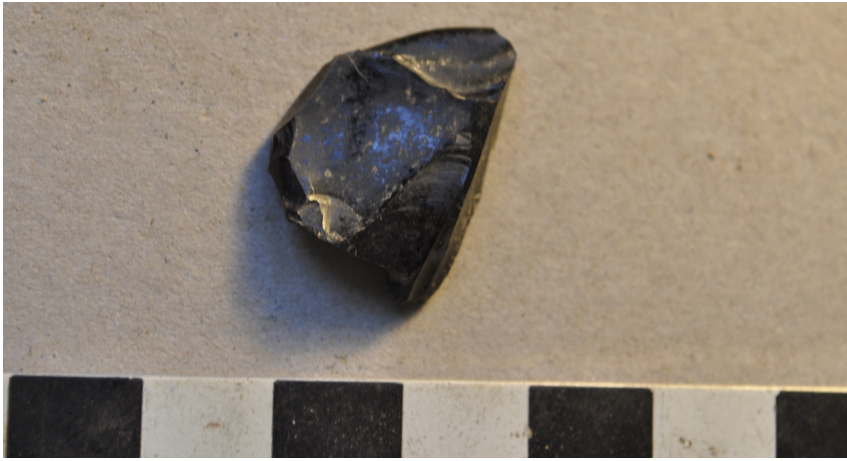
Figure 4 – Obsidian flake from Mahal Teglinos, in Eastern Sudan (courtesy of the Italian archaeological Expedition to the Eastern Sudan of the Università degli studi di Napoli "L'Orientale")

(Budge 1920, p. 842 a) and *'3t* , generically used for "costly stone" (Faulkner 1962, p. 38, see also Budge 1920, p. 110 a) were suggested. Whatever it is, strangely enough, these terms are not mentioned in the lists of products of Punt. Perhaps, this may be explained by the fact that this commodity was not considered as originating from Punt proper, but obtained somewhere else, perhaps on the way to or from Punt or in Bia Pwnt, as suggested by its occurrence at Mersa/Wadi Gawasis.

Given its extreme rarity in the Midldle Nile Valley, i.e. in the archaeological record from the Nubian sites (see Bavay, De Putter, Adams, Navez and André 2000, pp. 17-18; Giménez, Sánchez and Solano 2015, p. 358), obsidian may have reached Egypt through the Eastern Desert and the Red Sea and perhaps through patterns of trade different from those involving the Nile valley South of Egypt (see also Zarins 1996, p. 95). Recently the land route was regarded as more likely, at least for the Pre/Proto-Dynastic phase, in light of the fact that the Egyptian obsidian artefacts going back to those periods have a chemical composition apparently more similar to that of the Ethiopian inland sources than to that of the Eritrean sources, located in closer proximity to the sea (Giménez, Sánchez and Solano 2015, p. 357).

As regards the study of the routes followed by obsidian from its sources to Egypt, it is worth noting that, although in rare instances, obsidian occurs in Eastern Sudan, where few flakes of obsidian were collected at Mahal Teglinos, not far from the modern town of Kassala (Manzo 2015, p. 232; Usai 1997, p. 93, Table 1, 2, 2002, p. 187, Table 2), in early 2nd millennium

BC assemblages of a site which otherwise gave several elements suggesting its involvement in the Red Sea and possibly Punt trade system (Fattovich 1991 a, 1996) (Fig. 4). Actually, this site and the whole region around it are being investigated by an archaeological expedition of the University of Naples "L'Orientale" since 1980, when the research project in Eastern Sudan was launched. And also after the resumption of the fieldwork in 2010 new recent finds such as Egyptian imported pottery and objects, Nubian, Eastern Desert and Yemeni Bronze Age pottery, as well as personal ornaments made from Red Sea shells confirmed its involvement in long distance trade networks (see Fattovich 1991 b; Manzo 1993, 1997, 2012 b, pp. 77-78, 2014, pp. 1150-1152, 2015, pp. 231-233, 2016, pp. 191-194; Manzo et al. 2012, p. 60). This may support the hypothesis that those were the networks along which obsidian was also exchanged, although, as previously mentioned, for a still unspecified reason, apparently avoiding the Nubian Nile valley and moving along the tracks of the Eastern Desert and perhaps through the Red Sea coast.

In this perspective it may be interesting to remark that apparently at Mahal Teglinos the obsidian represents ca. 0.51% of the lithic assemblages in the late 3rd-early 2nd millennium BC and ca. 0.64% in the first half of the 2nd millennium BC,[2] while a concentration of obsidian flakes was remarked at Erkowit, in the Sudanese Eastern Desert, less than 40 km from the Red Sea coast as the crow flies, where obsidian represented ca. 5% of the used raw materials (Callow and Wahida 1981, p. 36). At Erkowit obsidian flakes were apparently associated with archaeological materials dating to the 3rd-2nd millennium BC and related to the cultures of Eastern Sudan (Callow and Wahida 1981, p. 36; Wahida and Khabir 2003, p. 65). A further concentration of obsidian, ca. 6.7% of the assemblage, was remarked at Agordat, a late 3rd-1st millennium BC site in the Eritrean-Sudanese lowlands, east of Mahal Teglinos (Arkell 1954, p. 51; Brandt, Manzo and Perlingieri 2007, p. 36-41).

All these finds may suggest that the "route of the obsidian" may have been located east of the region which has so far been intensively investigated in Eastern Sudan, and that obsidian may have been made available to the Egyptians somewhere on the Sudanese Red Sea coast, perhaps near Erkowit or in the Aqiq region, east of Agordat (Fig. 5). This point certainly deserves further investigation and the "route of the obsidian" needs to be followed from Eastern Sudan to the Eastern Desert, and to the Red Sea coast. Something the Italian Archaeological Expedition to the Eastern Sudan intends to do in the coming years. This may also benefit our understanding of the more general system of circulation of obsidian in the Red Sea regions and, in particular, of the issue of the availability of African obsidian in the Arabian Tiahama, on the opposite side of the Red Sea, since prehistoric times

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[2]   The study of the lithic from those assemblages is presently conducted by Mr. Pietro Fusco, I thank him for these preliminary quantitative data.

Figure 5 – Map showing a tentative reconstruction of the "route of the obsidian" from the obsidian sources in the Danakil depression, to the Eritrean-Sudanese lowlands and the coastal regions

(see Khalidi, Oppenheimer, Gratuze, Boucetta, Sanabani and al-Mosabi 2010, pp. 2334, 2339). In particular, the archaeometric analysis of flakes of obsidian from Mahal Teglinos, Erkowit and Agordat to be compared both with samples from Egyptian assemblages and from the obsidian sources in the southern Red Sea will be crucial in this perspective.[3]

In the field of the archaeometric applications, other possible and very promising developments may result from the advances in the chemistry of resins (see Serpico 2000, pp. 443-451), especially when applied to the identification and analysis of the residues on objects from sites and/or specific assemblages related to the Punt trade. A first attempt was conducted on some jars from the foundation deposits of the temple of Hatshepsut at Deir el Bahari. Disappointingly from the perspective of the study of the Punt trade, they were proven to contain resins imported from the Eastern Mediterranean (Serpico 2001, pp. 863-864). Nevertheless, this methodology seems viable, and will shortly be experimentally adopted on some fragments of containers from sites in Eastern Sudan, to try to understand if resins were processed there and possibly which ones.

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[3]   A systematic program of analysis is being conducted in the framework of the Italian Expedition by G. Lucarini and D. Barca.

3. LIVE *BI3W* IN AN ARCHAEOMETRIC PERSPECTIVE

The ongoing investigation on the distribution and origin of obsidian sketched above shows the utility of an archaeometric approach to the study of the commodities imported in Egypt from the southern Red Sea. This is certainly also true for other types of commodities.

As previously mentioned, also live animals were listed among the *bi3w Pwnt*, and among them were baboons (Manzo 1999, pp. 7-8, see also Osborn and Osbornová 1998, pp. 32-39), often represented in the scenes depicting the transportation or the delivery of commodities from Punt (Figg. 5, 6). Although not conducted on remains collected on sites specifically related to the expeditions to the land of Punt, isotopic analysis of the bones of baboons from archaeological assemblages in Egypt, recently allowed the identification of baboons (*Papio hamadryas*) arriving from regions whose identification with Punt or parts of it is very likely (Dominy, Ikram, Moritz, Christensen, Wheatley, and Chipman 2015, 2016). In particular, several samples taken from remains of baboons from assemblages dating to the New Kingdom times seem to point to an origin of those animals in the Ethio-Eritrean corridor and in eastern Somalia. The identification of osteological remains of baboons at Mersa/Wadi Gawasis and/or at sites in Eastern Sudan directly related to the Punt trade network, whose archaeozoological remains are currently about to be studied,[4] and the adoption in the analysis of those remains of the same methodology used for the samples of baboons from Egypt will certainly add relevant data to the study of the circulation, if not of the origin, of those live animals, that may have been regarded as *bi3w Pwnt* too.

Interestingly, the application of a similar analytical approach may also be envisaged for other animals imported from Punt. For example, this may be employed in the case of dogs, as the importation of dogs from Punt has been mentioned in the Egyptian sources since the earliest records of contacts with Punt (see Espinel 2011, p. 188; Manzo 1999, p. 8). In particular, a specific type of dog with pointed ears, slim body and short curled tail, is represented alongside baboons and other apes on the Egyptian ships arriving from Punt in the recently published reliefs going back to the reign of Sahure from the royal funerary complex at Abusir (El Awady 2009, p. 156-160, Fig. 81, a-b, Pl. 5) (Fig. 5). They can be identified with the "tesem" dogs mentioned in the Egyptian texts (Osborn and Osbornová 1998, p. 60), and the term *ṯsm* also occurs to qualify the dogs imported from Punt in the Deir el Bahari texts dating to the reign of Hatshepsut (Sethe 1961, p. 321, 11).

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[4]   The remains from Eastern Sudan will be studied by Helina Woldekiros, George Washington University, St. Louis (USA), while those from Mersa/Wadi Gawasis will be examined by Alfredo Carannante, Naples, Italy.
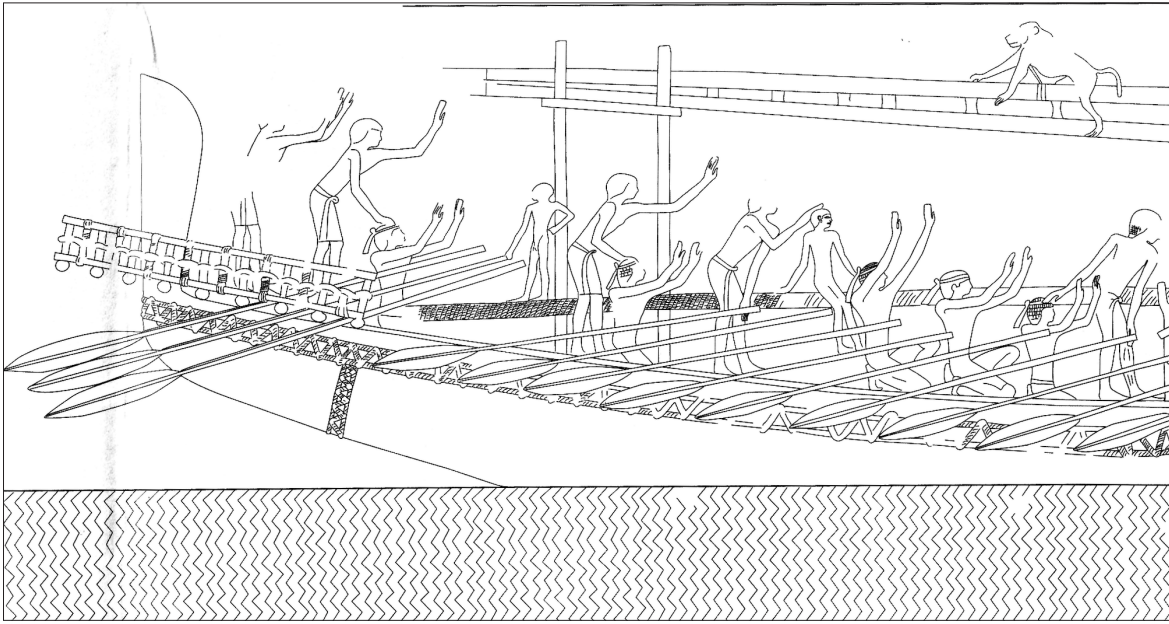
Therefore, the systematic sampling of zooarchaeological remains in Egyptian assemblages dating to different historical phases, as well as the extension of the sampling to osteological remains from archaeological sites on the Egyptian Red Sea coast such as Mersa/Wadi Gawasis, and from sites located in Nubia and in Eastern Sudan will certainly help to understand not only the origin of specific animals, but also if and when the regions from where those animals were taken changed through time and how these live *bi3w* reached Egypt.

In the present lack of archaeometric evidence informing us on the dogs occurring in the sites more directly related to the Punt trade network, it may be interesting to remark that a dog with pointed ears, slim body and curved -but not curled- tail was sketched on a sherd found at Mersa/Wadi Gawasis (Manzo and Perlingieri 2007, p. 107, Fig. 51) (Fig. 7). The general aspect of this dog may suggest its identification with a *ṯsm* of the variant greyhound (Osborn and Osbornová 1998, p. 64).
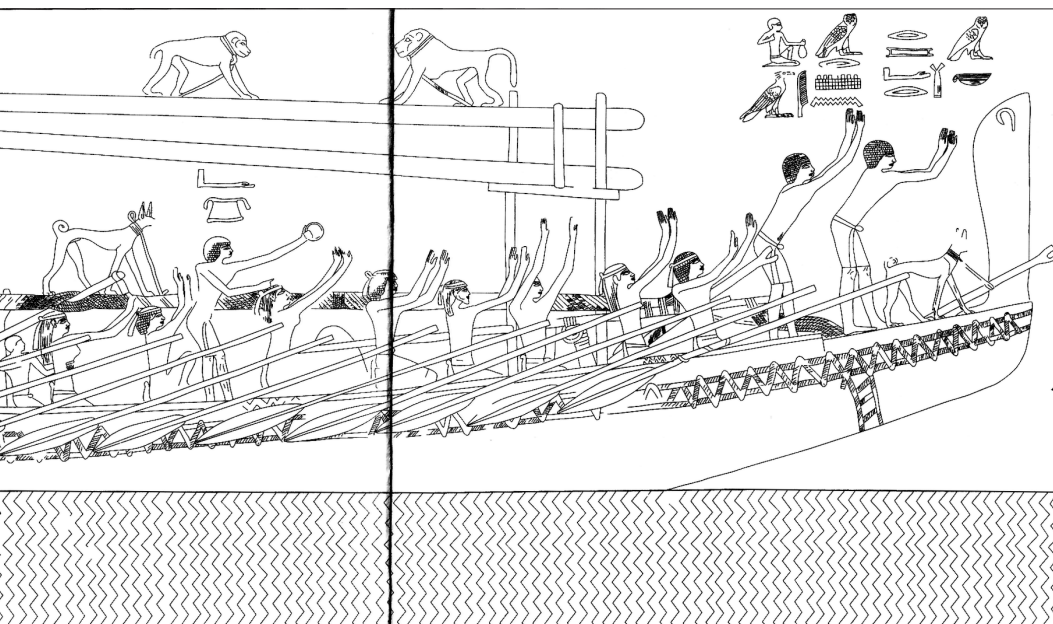
Figure 6 – Representation of an Egyptian ship arriving from Punt in the reliefs
of the royal funerary complex of Sahure at Abusir (from El Awady 2009)

Perhaps this representation depicts an animal imported from Punt, and it may have been sketched by a member of a Middle Kingdom maritime expedition to the land of Punt. Actually, the fact that imported commodities, the exotic landscape and the people encountered in Punt and on the way to Punt, and perhaps the different phases of the expeditions were somehow recorded, described and depicted by some members of the expeditions is highly possible (Espinel 2011, p. 333; see also Beaux 1990, p. 60). These records may also have provided raw material for the elaboration of artistic "official" representations of those exploits, like those recently recovered in the funerary complex of Shaure (see again El Awady 2009, pp. 155-160), and the very well-known reliefs of Punt in the temple of Hatshepsut at Deir el Bahari (Naville 1898, pp. 11-16). Although so far unknown, such a kind of representation may have also existed in the Middle Kingdom times, and the sketch of the dog on the *ostrakon* from Mersa/Gawasis may have been intended as a contribution to the realization of such representations.
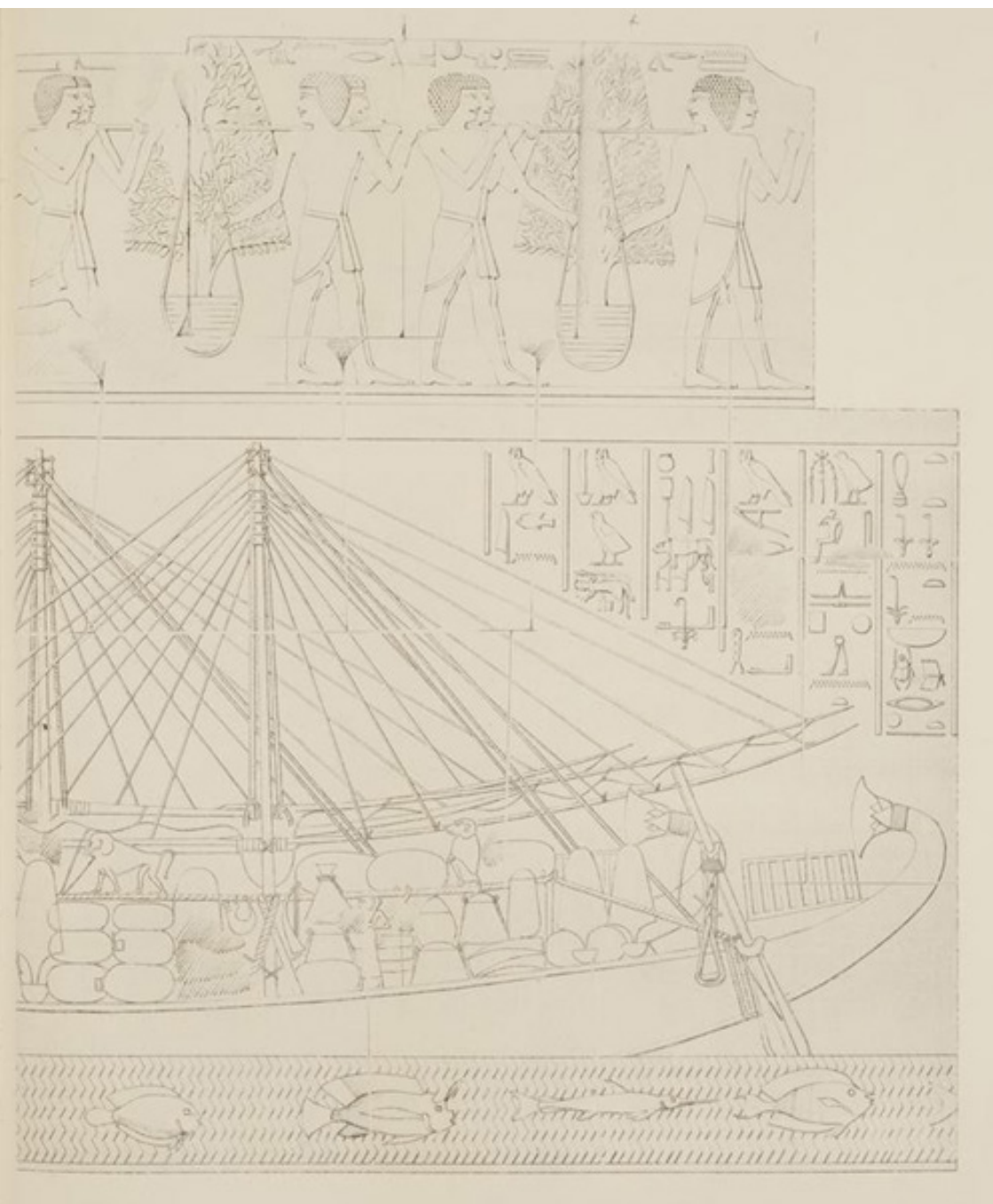
**Figure 7 – Representation of an Egyptian ship arriving from Punt in the reliefs
of the temple of Hatshepsut at Deir el Bahari (from Naville 1898)**

Figure 8 – Representation of a dog sketched on a sherd
found at Mersa/Wadi Gawasis, on the Red Sea coast of Egypt
(courtesy of the Joint Archaeological Expedition at Mersa/Wadi Gawasis
of the Università degli studi di Napoli "L'Orientale" and Boston University)

4. FINAL REMARKS

All the cases mentioned above illustrating ongoing research on commodities likely to have been imported from Punt certainly demonstrate how the study of their origin and distribution as well as their characterization by means of an archaeometric approach may provide some crucial answers in the coming future on the issue of the location of Punt and on the routes followed to get there as well as information on the management of the exchanged materials and on the general organization and pattern of trade. Particularly, the comparison of the different origins, patterns of transformation and exchange, and the networks and systems of transportation identified for each commodity, promises to add crucial data not only to the debate on the Punt trade, but more in general to the study of the social structure and economy of the groups inhabiting the regions south of Egypt and along the shores of the Red Sea.

Interestingly, in addition to that, the systematic and extensive application of these methodologies to the identification and characterization of imported commodities occurring in sites in Eastern Sudan and other regions, possibly part of the land of Punt, will also complement the evidence provided by the discovery of Egyptian objects there (see e.g. Manzo 1993, 1997, p. 79, 2012b, p. 77, 2014, p. 378, 2015, p. 233, 2016, p. 192) and will certainly help to clarify the issue of the materials that were exported from Egypt in exchange for the *bi3w Pwnt*, an aspect generally overlooked in the Egyptian textual and iconographic sources. In the lack of available textual and iconographic sources, this represents the only viable approach to try to figure out how the Egyptian commodities circulated in the southern regions and perhaps even their meaning there. Were they considered as almost sacred, regarded as miracles and given a high ideological value comparable to that of the *bi3w Pwnt* in Eygpt?

The investigation of these issues may certainly represent a further stimulating perspective for the next years.

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Roman attempts
to control Eastern Africa

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ABSTRACT

The Roman Empire showed a very distinct interest for the Red Sea area along all its history. This was due to the crucial role played by such region in both military and commercial Roman plans to expand its own influence in the East. The first echo of a military attempt to conquer the north eastern shores of Africa beyond Egypt dates back to the age of Augustus, but it is with Trajan that such project seems to reach a new level of coherence and strategic view. Under the latter, in fact, we have evidence for a climax in the Roman control over the area, which had important consequences on the history of the region for decades ahead.

KEYWORDS

Roman History, Roman army, Trajan, Roman Egypt, Papyrology

Africa outside the limits of the Egyptian area has always been an aim of the Roman emperors since the time of Augustus and his attempt to conquer Ethiopia.[1] Nevertheless, such goal was to remain unachieved for many years to come. In fact, it is only with Trajan and his eastern campaigns that we can see the old ambition becoming somehow real. The aim of this paper is to shed some light on how during the second century CE Romans were able to partially control the north eastern coast of Africa, south of Egypt.

Our sources tell us that in the summer of 116 CE, the emperor Trajan completed his Parthian campaign and reached Spasinou Charax on the shores of the Persian Gulf; when he arrived, he complained that he was not young enough to attempt the conquest of India, as Alexander the Great had done.

> Κἀντεῦθεν ἐπ' αὐτὸν τὸν ὠκεανὸν ἐλθών, τήν τε φύσιν αὐτοῦ καταμαθὼν καὶ πλοῖόν τι ἐς Ἰνδίαν πλέον ἰδών, εἶπεν ὅτι 'πάντως ἂν καὶ ἐπὶ τοὺς Ἰνδούς, εἰ νέος ἔτι ἦν, ἐπεραιώθην.' Ἰνδούς τε γὰρ ἐνενόει, καὶ τὰ ἐκείνων πράγματα ἐπολυπραγμόνει, τόν τε Ἀλέξανδρον ἐμακάριζε.[2]

> Then he came to the ocean itself, and when he learned its nature and had seen a ship sailing to India, he said: 'I should certainly have crossed over to the Indians, too, if I were still young.' For he started to think about the Indians and was curious about their affairs, and he counted Alexander a lucky man.

This anecdote can be viewed as nothing more than the usual rhetorical *topos* of Roman emperors wishing to emulate Alexander the Great; Trajan was by no means the first to be fascinated by the charismatic Macedonian king.[3]

On the other hand, an echo of Dio's text might be found in the much later reports of Eutropius, Festus, and Jordanes,[4] who explicitly tell us of a fleet in the Red Sea established by the emperor (*in mari Rubro classem instituit*) in order to 'conquer' India. If we compare the three accounts it is easy to recognise their great similarity, since they use almost the same words to describe what happened and are likely taken from the same sources.

> *[Traianus] usque ad Indiae fines et mare Rubrum accessit atque ibi tres provincias fecit, Armeniam, Assyriam, Mesopotamiam, cum his gentibus, quae Madenam attingunt. Arabiam postea in provinciae formam redegit. In mari Rubro classem instituit, ut per eam Indiae fines vastaret.*[5]

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[1] Augustus, *Res Gestae*, 26. See *infra* for text and comment.

[2] Cassius Dio, 68.29.1. The translation is taken from the Loeb edition of Cassius Dio, by G.P. Goold.

[3] Parker 2008: 223-227.

[4] A comparison recently made by Parker 2008: 222.

[5] Eutropius, *Breviarium*, 8, 3.

[Trajan] advanced as far as the boundaries of India, and the Red Sea, where he formed three provinces, Armenia, Assyria, and Mesopotamia, including the tribes which border on Madena. He afterwards, too, reduced Arabia into the form of a province. He also fitted out a fleet for the Red Sea, that he might use it to lay waste the coasts of India.[6]

Carduenos, Marcomedos obtinuit, Anthemusium, optimam. Persidis regionem, Seleuciam, Ctesiphontem, Babyloniam accepit ac tenuit, usque ad Indiae fines post Alexandrum accessit. In mare rubro classem instituit. Provincias fecit Armeniam, Mesopotamiam, Assyriam quae inter Tigridem atque Euphraten sita inriguis amnibus instar Aegypti fecundatur.[7]

[Trajan] obtained the Carduenians and Marcomedians; received and maintained Anthemusia, Persia's finest region; Seleucia; Ctesiphon; and Babylon; and, after Alexander, even reached the boundaries of India. He established a fleet in the Red Sea. He made Armenia, Assyria, and Mesopotamia into provinces, which, situated between the Tigris and Euphrates, is made equal to Egypt in fecundity by the flooding rivers.[8]

Traianus pene omnium imperatorum potior regnavit an. xviii m. vi. Hic enim de Dacis Scythisque triumphavit Hiberosque et Sauromatas, Osroenos, Arabas, Bosforanos, Colchos edomuit, postquam ad feritatem prorupissent. Seleuciam et Tesifontem Babyloniamque pervasit et tenuit. Nec non et in mari rubro classem, unde Indiae fines vastaret, instituit ibique suam statuam dedicavit.[9]

Trajan, more powerful than almost all emperors, reigned for 18 years and 6 months. For this man triumphed over the Dacians and Scythians and subdued the Iberians and Sauromat, the Osdroni, the Arabs, the Bosphorians, the Colchi after they had erupted into anarchy. He invaded and held Seleucia and Ctesiphon and Babylonia. He also established a fleet in the Red Sea whence he might lay waste to the borderlands of India, and consecrated his own statue there.[10]

These three accounts present what is likely merely imperial propaganda from the time of Trajan, as they try to link the eastern campaigns to the possibility of conquering India, though they *do* provide some concrete evidence for what actually occurred. Together with this information, they all also state as fact the first-time creation of a fleet in the Red Sea,[11] somehow related to a project

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[6]   Trans. by the Rev. John Selby Watson. London: Henry G. Bohn, York Street, Convent Garden (1853).

[7]   Festus, *Rerum gestarum populi romani*, 20.

[8]   Trans. by Thomas M. Banchich and Jennifer A. Meka, Canisius College Translated Texts, Number 2, 2001.

[9]   Jordanes, *Romana*, 267-268.

[10]   Trans. by Brian T. Regan, Ph.D.

[11]   The exact meaning of the sentence *Mare Rubrum* and its Greek equivalent in the ancient sources is not always clear. The phrase can refer to the present day Red Sea, or the Persian Gulf, or even the Indian Ocean. The analysis of the evidence presented in this work would suggest that at least for the sources included here, the *Mare Rubrum* is the Red Sea.

to reach the limits of India. This scenario is contradicted, however, by other strong evidence, which I am going to analyse.

1.   EVIDENCE FOR THE PRESENCE OF A FLEET IN THE RED SEA

The presence of a military fleet in the Red Sea during Roman times has been discussed by a number of scholars, so far without much agreement.[12] In principle, it would seem reasonable to imagine that a regular fleet would be stationed in the Red Sea, in order to protect commerce. This seems even more obvious considering that evidence for such an institution already exists for the Ptolemaic[13] and even for the Pharaonic period.[14] In fact, evidence for the presence of a military fleet in Roman times can be found as early as the Augustan period. Both the emperor himself and his contemporary Greek geographer Strabo tell us the story of a military expedition led by Aelius Gallus, aiming at the conquest of South Arabia. In 25 BCE Gallus set out from Kleopatris (near modern Suez) with an army of ten thousand men, comprising a *legio* plus Nabataean and Jewish *auxiliares*.[15] In his *Res Gestae,* Augustus describes the planning and achievements of the military expedition as follows:

> *Meo iussu et auspicio ducti sunt duo exercitus eodem fere tempore in Aethiopiam et in Arabiam, quae appellatur Eudaemon, maximaeque hostium gentis utriusque copiae caesae sunt in acie et complura oppida capta. In Aethiopiam usque ad oppidum Nabata perventum est, cui proxima est Meroe. In Arabiam usque in fines Sabaeorum processit exercitus ad oppidum Mariba.*[16]

> By my order and auspices two armies were led at about the same time into Ethiopia and into that part of Arabia which is called Felix, and the troops of each nation of enemies were slaughtered in battle and many towns captured. They penetrated into Ethiopia all the way to the town Nabata, which is near to Meroe; and into Arabia all the way to the border of the Sabaei, advancing to the town Mariba.

Despite Augustus' triumphalist words,[17] Strabo's account in fact presents the expedition as a failure.[18] He records how the expedition intended to loot

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[12]   The first to postulate the presence of the Roman fleet was Rostovzev 1931: 25; followed by Koertenbeutel 1931: 70-71. Opposing opinions were expressed by Kienast 1966: 84; Sidebotham 1986a: 67-71.

[13]   OGIS 132 (dated to 130 BCE).

[14]   Bourdon 1925: 51.

[15]   Jameson 1968: 76-80.

[16]   Augustus, *Res Gestae*, 26.

[17]   On the propagandistic relevance of the Arabian expedition, see Jameson 1968; von Wissmann 1978; Sidebotham 1986b; Buschmann 1991; Marek 1993; Potis 1994; Luther 1999.

[18]   Strabo, 16.4.22-24.

Arabia's great treasures and conquer its territory. He then describes the preliminary arrangements for the expedition and explains that a fleet was set up to reach Arabia. It is this part of his account that is the most interesting for the purposes of our analysis:

Ἐπὶ τούτοις μὲν οὖν ἔστειλε τὴν στρατείαν ὁ Γάλλος. ἐξηπάτησε δ᾽ αὐτὸν ὁ τῶν Ναβαταίων ἐπίτροπος Συλλαῖος, ὑποσχόμενος μὲν ἡγήσεσθαι τὴν ὁδὸν καὶ χορηγήσειν ἅπαντα καὶ συμπράξειν, ἅπαντα δ᾽ ἐξ ἐπιβουλῆς πράξας, καὶ οὔτε παράπλουν ἀσφαλῆ μηνύων οὔθ᾽ ὁδόν, ἀλλὰ ἀνοδίαις καὶ κυκλοπορίαις καὶ πάντων ἀπόροις χωρίοις ἢ ῥαχίαις ἀλιμένοις παραβάλλων ἢ χοιράδων ὑφάλων μεσταῖς ἢ τεναγώδεσι· πλεῖστον δὲ αἱ πλημμυρίδες ἐλύπουν ἐν τοιούτοις καὶ ταῦτα χωρίοις καὶ αἱ ἀμπώτεις. πρῶτον μὲν δὴ τοῦθ᾽ ἁμάρτημα συνέβη τὸ μακρὰ κατασκευάσασθαι πλοῖα, μηδενὸς ὄντος μηδ᾽ ἐσομένου κατὰ θάλατταν πολέμου. οὐδὲ γὰρ κατὰ γῆν σφόδρα πολεμισταί εἰσιν ἀλλὰ κάπηλοι μᾶλλον οἱ Ἄραβες καὶ ἐμπορικοί, μήτι γε κατὰ θάλατταν· ὁ δ᾽ οὐκ ἔλαττον ὀγδοήκοντα ἐναυπηγήσατο δίκροτα καὶ τριήρεις καὶ φασήλους κατὰ Κλεοπατρίδα τὴν πρὸς τῇ παλαιᾷ διώρυγι τῇ ἀπὸ τοῦ Νείλου. γνοὺς δὲ διεψευσμένος ἐναυπηγήσατο σκευαγωγὰ ἑκατὸν καὶ τριάκοντα, οἷς ἔπλευσεν ἔχων περὶ μυρίους πεζοὺς τῶν ἐκ τῆς Αἰγύπτου Ῥωμαίων καὶ τῶν συμμάχων, ὧν ἦσαν Ἰουδαῖοι μὲν πεντακόσιοι Ναβαταῖοι δὲ χίλιοι μετὰ τοῦ Συλλαίου.[19]

Upon these considerations, therefore, Gallus set out on the expedition; but he was deceived by the Nabataean administrator, Syllaeus, who, although he had promised to be guide on the march and to supply all needs and to co-operate with him, acted treacherously in all things, and pointed out neither a safe voyage along the coast nor a safe journey by land, misguiding him through places that had no roads and by circuitous routes and through regions destitute of everything, or along rocky shores that had no harbours or through waters that were shallow or full of submarine rocks; and particularly in places of that kind the flood-tides, as also the ebb-tides, caused very great distress. Now this was the first mistake of Gallus, to build long boats, since there was no naval war at hand, or even to be expected; for the Arabians are not very good warriors even on land, rather being hucksters and merchants, to say nothing of fighting at sea. But Gallus built not less than eighty boats, biremes and triremes and light boats, at Cleopatris, which is near the old canal which extends from the Nile. But when he realised that he had been thoroughly deceived, he built one hundred and thirty vessels of burden, on which he set sail with about ten thousand infantry, consisting of Romans in Aegypt, as also of Roman allies, among whom were five hundred Jews and one thousand Nabataeans under Syllaeus.[20]

Then Strabo continues with a description of how Gallus' troops were betrayed by Syllaeus, and the unsuccessful conclusion of the expedition.[21] Above any

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[19]   Strabo, 16.4.23.

[20]   Trans. Vol. VII of the Loeb Classical Library edition, 1932.

[21]   Other less-detailed accounts on Aelius Gallus' expedition are provided by Pliny, *NH,* VI, 32, 160-162; Flav. Jos., *AJ*, XV, 317; Cass. Dio, LIII, 29, 3-8. For more on Syllaeus, see Terpstra, this volume.

consideration of the success or failure of the military campaign,[22] what it is more important here is the fact that Strabo's text is the first account of the presence of a Roman military fleet in the Red Sea, an account dating in fact dating from only a few years after the formal annexation of Egypt to the Roman Empire.

We do not know whether this episode marked the beginning of the regular presence of a military fleet in the Red Sea, or if it was only linked to the military operations in South Arabia, although it has usually been assumed to be the latter. However, a new source of evidence offers proof of the presence of a fleet in the Red Sea soon after the beginning of the following century:[23] two *ostraka* from the archive of Nikanor report that two Roman fleet officers received provisions in ports on the Egyptian side of the Red Sea.[24]

The first one is the O. Petr. 296, dated to 6–50 CE, from either Myos Hormos or Berenike:[25]

> Λούκιος Κλώδιος
> τριηραρχως (τριήραρχος) Νικάνορι
> Πανής. Ἀπέχω τούς γάμου(ς)
> ούς επιθωιμε σοι

> Lucius Clodius / *trierarchos* to Nicanor, / son of Panes. I receive the loads / that we entrusted to you.

The reason scholarly discussion has for so long neglected this document is that the word τριηραρχως was in fact fragmentary and has only recently been properly read by G. Messeri.[26] The *trierarchos* was the captain of a trireme, a warship used by the Roman army that was able to host a crew of two hundred.[27] His presence at either Myos Hormos or Berenike strengthens the

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[22]   See Sidebotham 1986: 127-128 for an interesting alternative assessment of the outcome of the Arabian expedition.

[23]   This hypothesis was put forward for the first time many decades ago by Rostovtzev (1931: 25), on the basis of O.Petr. 279, which I am going to discuss below. See also Daris 1956: 244-6.

[24]   The so-called archive of Nikanor belongs to a firm of transporters active on the routes between Coptos on the Nile and the ports of the Red Sea, namely Myos Hormos and Berenike. This firm operated between 18 BCE and 69 CE at least. Nikanor ran the firm for most of the years it existed, and for this reason the archive is named after him. The documents are published in O.Petr. 220-304, O.Bodl. 1968-1971, and O.Brux. 7. See Rostovtzev 1931: 23-26; Fuks 1951: 207-216; Sidebotham 1986: 83-92; Ruffing 1993: 1-26; Adams 2007: 221-6.

[25]   First edition in Tait 1930: 125, n° 296. The text was recently republished with substantial amendments by Messeri (2004-05: 69-73). It is to her edition that I refer in this work.

[26]   Messeri 2004-05: 69-71

[27]   RE: *trierarchos*; Casson 1971: 141-147.

hypothesis that in the first century CE a military fleet was located in the Red Sea, and that it was connected to international trade.[28]

A second document, from the same dossier as the previous one, adds to this reconstruction. It is O. Petr. 279, from Myos Hormos, safely dated to 52 CE. It reads as follows:[29]

Σατορνῖλος τεσσαράριος λυβέρ-
νου Ἐπωνύχῳ Ἀχιλλέως χαίρειν.
ἀπέχω παρὰ σοῦ ἐπὶ Μυὸς Ὅρμου
πυροῦ ἀρτάβας τρεῖς (γίνονται) γ. (ἔτους) ιγ Τιβερί-
ου Κλαυδίου Καίσαρος Σεβαστοῦ Γερμα-
νικοῦ Αὐτοκράτορος Θὼθ ιθ.

Satornilos *tesserarius liburnae* / to Eponichos, son of Achilleus, greetings. / I receive from you here in Myos Hormos / three artabas of grain. Year 13 of the Caesar / Tiberius Claudius Augustus Germanicus / Imperator, Thoth 19.

Unlike the previous one, this *ostrakon* has already been quoted as possible proof of the existence of a military fleet in the Red Sea, but again, an incorrect reading of the text has affected its interpretation. The original editor has, in fact, read the first line as Σατορνῖλος τεσσαράριος κυβέρνου, i.e., 'Satornilus, tesserarius of helmsman.' The title *tesserarius* can be used either in a military context or in a civilian one.[30] However, the correct restoration of the word λυβέρνου allows us to safely rule out the possibility that he is a civilian. The *liburna* was in fact a kind of warship originally used by pirates in the Adriatic Sea and later adopted by the Roman army. Its manoeuvrability, especially in shallow waters, would have made it suitable for operations in the Red Sea.[31] All of this enables us to affirm the *tesserarius* of O. Petr. 279 as an officer of the Roman army. He was a watch commander, who organised and held command over the nightly guard assigned to keep watch over the fort when in garrison or on campaign. On a normal day he could be found maintaining the duty and supervising work details or checking on the guard posts.[32]

Thus the two *ostraka* appear to prove the existence of an established military fleet in the Red Sea waters. It can be noted that, while Strabo points

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[28]   It is universally accepted by scholars that Myos Hormos and Berenike were, through all of the Roman imperial period, the two most important Roman harbours on the Red Sea, functioning as hubs for trade with India. On Myos Hormos, see Peacock 1993; Cuvigny 2003; on Berenike, see Sidebotham & Wendrich 1995; Sidebotham & Wendrich 1996; Sidebotham & Wendrich 1998; Sidebotham & Wendrich 1999; Sidebotham & Wendrich 2000; Sidebotham & Wendrich 2007; Sidebotham 2002b.

[29]   First edition in Tait 1930: 125, n° 279. See again the comment provided by Messeri 2004-05: 73.

[30]   See the discussion in Sidebotham 1986: 69.

[31]   Casson 1971: 340; Höckmann 1985; Medas 2004: 129-138.

[32]   von Domaszewski 1981; Speidel 2000: 65-96.

to Arsinoe/Clysma as the main hub for the fleet, the two *ostraka* from the archive of Nicanor suggest that the fleet was later moved to either Myos Hormos or Berenike (or possibly divided between the two ports), an arrangement that would allow it to patrol the trading area more efficiently.

From what we have seen so far it should be clear that these documents demonstrate that traces of a Roman fleet in the Red Sea can be found from the very beginnings of Roman rule in the area, and that the Roman interest in military control of this area significantly predates Trajan, actually coinciding, at the very least, with the economic boom created by Roman trade with the East under Augustus and Tiberius.[33]

2. THE ROLE OF TRAJAN IN THE ROMAN RED SEA

It should by now be clear that the interpretation of Trajan as the first ruler to set up a fleet in the Red Sea should not be accepted at face value. Therefore, there can be no doubt that the later Roman historians seem to grant Trajan special merit when defining Rome's military attitude toward the Red Sea area. Although they certainly exaggerate his role, this exaggeration must have been linked to the actual policy of the emperor, a policy that seems to have had such an impact that it was still remembered four centuries after Trajan's death, obliterating the memory of the policies of his predecessors. In fact, as I am going to discuss, there is enough evidence to argue that Trajan's campaigns marked the beginning of a new scenario in the Red Sea, and that the path opened by Trajan was most likely consistently pursued by his successors, at least up to Marcus Aurelius.

In order to understand what happened in the Red Sea at the beginning of the second century CE, it is necessary to quickly examine all of Trajan's enterprises in the area. An obvious starting point is the Roman annexation of the client kingdom of Nabataea, as the *provincia Arabia*.[34] Scholars do not yet agree on what led Trajan to annex the kingdom, though many hypotheses have been put forward. Some scholars have suggested that 'the annexation of the Nabataean kingdom was of an administrative nature more than a military

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[33] See Sidebotham 1986; De Romanis 1996; Young 2001; Tomber 2008.

[34] See Speidel 1977: 688-730; Fiema 1987: 25-35; Freeman 1996: 91-118. Bowersock (1983: 80-1) was the first to suggest that the annexation of Nabatea was achieved without a real military campaign, and that the term 'annexation' would describe what really happened much better than 'conquer'. The main point put forward by the scholar is that Trajan did not take for himself the epithet of *Arabicus Maximus,* as he did after conquering Dacia (when he actually took the epithet of *Dacicus Maximus*). Even more significantly, on the celebrative coins minted after the annexation of Nabatea the legend *Arabia aquisita* appears, instead of *Arabia capta*, which would be the obvious choice in the case of military conquest.

one.'[35] This hypothesis tends to identify the death of the last Nabataean king Rebbel II—and the extinction of his dynasty—as the reason for the annexation of the kingdom. Others have suggested that it stemmed from the need to reorganise the region[36] before the forthcoming war against the Parthians.[37] Lastly, some have preferred to focus on the economic factors that might have pushed Trajan to incorporate the Nabataean region.[38]

This is not the place to dissect the scholarship on the subject,[39] but it is worth pointing out the important role played by the small kingdom in the context of international trade with Arabia. It is safe to assert, I think, that the annexation made a favourable impact on the economy of the empire, fully integrating a key strategic area for long-distance trade. A new road was quickly built connecting Bostra in the far north of the *provincia* with the Red Sea. The work most likely began in 106 CE, ending between 111 and 114.[40]

Trajan's activity in the area was not limited to Arabia; in Egypt, he restored what Romans called 'Trajan's Canal', between the Nile and the Red Sea, near Clysma (modern Suez).[41] The precise date of the inauguration of the canal is unknown, but an *ostrakon* dated to 112 CE provides a *terminus ante quem*.[42] There is no agreement among scholars as to the reasons why Trajan built it, nor as to its utility. Some have postulated that the channel was to be used for the forthcoming war against the Parthians, while others suggest that it was meant to foster trade in the northern Red Sea area.[43] Equally unclear is whether or not the canal was actually navigable, or if it was only meant

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[35] Quotation from Spijkerman 1978: 20, n. 54. Similar opinions were expressed by Raschke 1978: 647-648; Bowersock 1983: 82; Parker 1986: 123; Strobel 1988: 256; Isaac 1992: 119.

[36] Starcky 1955: 103; Graf 1978: 5-6; Parker 1986: 124.

[37] Bowersock 1983: 84; Strobel 1988: 256.

[38] Rey-Coquais 1978: 54; Parker 1986: 123; Eadie (1986), 243-5. Kirkbride (1990: 256) suggested that the real aim was to conquer the port of Aila, because of its importance in international trade. Such a hypothesis does not appear sound, though, when one considers that in this period Aila was not yet a very important port of trade. See Parker 2009: 79-84

[39] Very interesting on this topic is the opinion expressed, very matter-of-factly, by Strabo VI, 4, 2, that client kingdoms are *de facto* part of the empire and the emperor could decide to incorporate them at any time, using any official reason he wanted. See also Brunt 1978: 159-191.

[40] Pekáry 1968: 140-142; Isaac 1992: 120.

[41] Claudius Ptolemaeus, *Geographia*, IV, 5. See Aubert's article in this volume for a complete overview of the history of the previous attempts by pharaohs and Hellenistic rulers to build a channel.

[42] SB VI, 9545 (32).

[43] The scholarship on Trajan's canal is now very vast. See Faville 1902-1903: 66-75; Calderini 1920: 43-44; Bourdon 1925: *passim*; Posener 1938: 25-26; Sijpesteijn 1963: 70-83; Oertel 1964: 18-52; De Romanis 1996: 71-95; Aubert 2004: 219-252; Cooper 2009: 195-209.

for irrigation in north-eastern Egypt.[44] Often quoted against such a reductive interpretation is a passage of Lucianus, who in one of his works tells the story of a young man who sailed from Alexandria to Clysma, and then on from there to India:[45]

τοιοῦτον δέ τι ἐγεγένητο· ἀναπλεύσας ὁ νεανίσκος εἰς Αἴγυπτον ἄχρι τοῦ Κλύσματος, πλοίου ἀναγομένου ἐπείσθη καὶ αὐτὸς εἰς Ἰνδίαν πλεῦσαι

What had happened was this: The lad had sailed up the Nile, gone on to a Red Sea port, found a vessel starting for India, and been persuaded to make the voyage.[46]

Such a text is not enough to prove that the channel was regularly used for trade, but what we can be sure of is that it was in use until the twelfth century,[47] and that it was regularly maintained to avoid its silting up. For this purpose, a λειτουργία was instituted, funded by ἐπιμεληταί. A number of papyri dated between the second and the sixth century CE attest the regular recruitment of seasonal workers to clean the canal.[48] In none of these texts, however, is there any clear reference either to its use for trading purposes, or to a commercial fleet at Clysma ready to set sail to India.

Nevertheless, even if we accept the minimalistic view of a channel open only a few months of the year, and mainly to provide irrigation, we cannot fail to recognise the evident increase in activity at Clysma after the second century.[49] It is safe to assume that the canal played a role in economic development, at least through the provision of drinkable water to an otherwise poorly supplied region, as well as the opening of a channel of communication between the port and the hinterland.[50]

From all we have discussed so far in this section, it should be obvious that Trajan planned to better integrate the Red Sea region into the economic system of the Roman Empire by annexing a key area for trade (Nabatea), later providing it with roads to improve its communication system, and construct-

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[44] Hypothesis put forward by Mayerson 1996: 119-126. Similarly also Aubert 2004: 219-252; Cooper 2009: 195-209.

[45] Lucianus, *Alexander seu Pseudomantis*, 44, 16-18.

[46] Trans. by Cassius Amicus.

[47] Cooper 2009: 198.

[48] SB VI 9545 (32): 112 CE; P.Oxy. LX 4070: ca. 208 CE; P.Bub. IV 1: 221 CE; SB V 7676 (= P.Cair.Isidor. 81): 297 CE; P.Oxy. LV 3814: end of third/beginning of fourth century CE; P.Oxy. XII 1426: 332 CE; SB V 7756 (= P.Lond. inv. 2574): 358/5 CE9; PSI 689: 420/21 CE; PSI 87: 423 CE; P.Wash. 17: fifth or sixth century CE.

[49] The first information on Clysma was available through the reports published by Bruyère 1966, although the quality of the archaeological investigation was very poor. A good analysis of the role of Clysma after the second century CE can be found in Ward 2007: 161-171.

[50] Cooper 2009: 197.

ing a canal in Egypt that ended the isolation of the port of Clysma. These enterprises, along with the Parthian wars, should be enough to explain why the Spanish emperor Trajan was associated with a plan to conquer India. Festus, Eutropius, and Jordanes, however, do not talk only of a vague plan to conquer India—instead, they all precisely point to the establishment of a fleet in the Red Sea, connected to some plan to 'lay waste the coasts of India', though none of them has provided enough detail for us to understand the circumstances involved.

Two recently discovered inscriptions might shed some light on this issue. Beginning in 2003, a team of archaeologists working in the archipelago of Farasan (Saudi Arabia) made two extremely interesting discoveries. The archipelago, which is located close to the southern end of the Red Sea on the Saudi Arabian side, just 500 km north of the Strait of Bâb el-Mandeb, consists of some 200 islands, of which two stand out for their size. The closest part of the Roman Empire to the archipelago was the southern border of the province of Egypt, some 1,000 km distant,[51] which explains why the recent Farasan finds are so astonishing; these two inscriptions, both in Latin, attest for the first time the regular presence of the Roman army in the islands.

The first inscription to be discovered reads as follows:[52]

> *Imp(eratori) Caes(ari) Tito Ael(io) Hadr(iano)*
> *Antonino Aug(usto) Pio Pont(ifici)*
> *Maxim(o) trib(unicia) pot(estate) VII co(n)s(uli) III,*
> *P(atri) P(atriae), vexill(atio) Leg(ionis) II Tr(aianae) Fortis*
> *et auxil(ia) eius castrenses-*
> *q(ue) sub praef(ecto) Ferresani portus*
> *et Pont(i ?) Hercul(is) fec(erunt) et d[ed(icaverunt)]*

The first four lines of the inscription are a dedication to the emperor Antoninus Pius, whose titles allow us to safely date the inscription between 10 December 143 and 9 December 144 CE.[53] The following lines of the inscription list the people engaged in building the statue to which the inscription was linked: a *vexillatio* of the *legio II Traiana Fortis*, its *auxilia*, and finally some other people possibly defined as *castrenses* (the text is not clear at this point). In its final lines, the inscription seems to attest for the first time the existence of an officer named *praefectus Ferresani portus* (?), whose name is not reported. This anonymous officer is *praefectus* of a district called *Ferresani portus*, though it is worth pointing out that only the toponym can safely be read, since only

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[51]   For a complete discussion of the geographical context of the Farasan archipelago, see Villeneuve et al. 2004a: 143-149.

[52]   The text was firstly edited in Villeneuve et al. 2004a: 143-190 and 2004b: 239-250. Later on, the editor suggested some corrections in Villeneuve 2004c: 419-429, and it is to this edition that I refer in this work.

[53]   Villeneuve 2004c: 422.

the *p* of the word *portus* is clearly readable. The word *Ferresani* makes it obvious that the stone was carved locally, and therefore the inscription has been found *in loco*. Finally, the toponym *Pontus Herculis* is, once again, a *hapax*—a previously unknown geographical location, whose interpretation is unclear.[54]

For the purposes of our analysis, the most important information provided by the inscription is the dating to 143–144 CE, under the reign of Antoninus Pius, and the mention of the presence of a *vexillatio* of the *Legio II Traiana Fortis* on the island. This legion was created by Trajan around 100 CE, and was eventually located in Egypt no later than 128 CE. From the reign of Antoninus Pius, it was the only legion located in this province.[55] This implies that the soldiers stationed at the Farasan Islands would necessarily have come from Egypt, and realistically they would have been in touch with the province through Berenike, the Roman Empire's southernmost Egyptian Red Sea port.[56] Despite the fact that the inscription refers only to a *vexillatio* and not to a fleet, it seems plausible that a fleet would have been present in the Red Sea to provide a stable connection between the *vexillatio* and the Empire.

A few years after the discovery of this first inscription, another one was found on the same island. Unfortunately this second inscription is very fragmentary, and it is possible to read only a few letters on its surface, from the lower right corner of the original block. It reads as follows:[57]

…] VIFERR
…] PRPR

Meagre as it is, this second inscription does not offer much for interpretation, nevertheless, the editor has tried. He started from the second fragmentary line of the document, (the abbreviation PR PR), which he interpreted as *pr(o) pr(aetore)*. This interpretation is sound, and it implies that a *legatus Augusti pro praetore* was mentioned in the inscription. Given that the closest provinces to the Farasan archipelago are Arabia and Egypt, this *legatus* who was in some way in charge of the islands should have come from one of them. But in Egypt the officer in charge of the province was a *praefectus*, not a *legatus*, therefore the possibility of connecting this inscription to Egypt is ruled out. The only logical location would then be Arabia, which in fact was administered by a *legatus Augusti pro praetore*. This interpretation led the editor to interpret the abbreviation of the previous line as *[… legio] VI Ferr(ata)*.

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54 See the possible interpretations provided by Villeneuve 2004c: 426-428.

55 Devijver 1974: 452-492; Daris 2000: 359-363.

56 On Berenike and its location, see Sidebotham & Wendrich 1995; Sidebotham & Wendrich 1996; Sidebotham & Wendrich 1998; Sidebotham & Wendrich 1999; Sidebotham & Wendrich 2000; Sidebotham & Wendrich 2007; Sidebotham 2002b.

57 Villeneuve 2007: 13-27.

The history of this legion is rather difficult to trace; it was originally located in Syria, then it took part in Trajan's eastern campaigns, it moved subsequently to Arabia for a short period, and from there it finally moved to Judea.[58] All these movements took place during an undefined time between the reigns of Trajan and Hadrian. Nevertheless, we do have two key dates: the *terminus ante quem* for the movement from Syria to Arabia is 119 CE,[59] while the final move into Judea took place before 139 CE. The final reconstruction suggested by Villeneuve would therefore be:

> [… vexill(atio) leg(ionis)] VI Ferr(atae)
> [sub … … leg(ato) Aug(usti)] pr(o) pr(aetore)

Given the very fragmentary status of the inscription, we must remember that other reconstructions are possible, though the one suggested by Villeneuve seems reasonable.[60]

We can safely assume that a *vexillatio* of the *legio II Traiana Fortis* was operating on the islands in 143–144 CE as a detachment of the main legion, which was based in Egypt. Much less certain is the information we can infer from the second inscription, since it requires corroboration from some more solid evidence. According to Villeneuve's hypothesis (which has necessarily to be taken as a working hypothesis), the second inscription might perhaps attest the presence of a detachment of the *legio VI Ferrata* in the archipelago in a year at some point before 139 CE. The presence of this legion in Arabia is attested with certainty in 119 CE, but it might well have been there earlier, perhaps having been moved by Trajan to defend the recently created province, or by Hadrian when he was reorganizing the whole region. If indeed the second inscription referred to the *legio VI Ferrata*, it would make sense to postulate that the legion in charge of the newly created province was also sent to occupy the far archipelago in the aftermath of Trajan's campaigns, and subsequently a further reorganization of the area made it more convenient to have a *vexillatio* from Egypt rather than from Arabia (since the latter was farther from the Farasan Islands). This would mean that the presence of a Roman military detachment on the Farasan archipelago might stretch from the last years of Trajan (or the first of Hadrian) at least to the reign of Antoninus Pius.

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[58] On the *legio VI Ferrata*, see Kennedy 1980: 283-309; Isaac 1992: 349-352; Keppie 1986; Cotton 2000: 351-357.

[59] Cotton 2000: 354-356.

[60] Other possible reconstructions are also listed by Villeneuve 2007: 24-27, although the one discussed above seems the most convincing.

3. DEFINING THE ROMAN POLICY IN THE RED SEA IN THE SECOND CENTURY CE

The evidence discussed in the previous section grants us a new perspective from which to reconsider the passages in Eutropius, Festus, and Jordanes that mention Trajan's new fleet in the Red Sea. As mentioned before, their manner misleads the reader into assuming that Trajan was the first ruler to station a regular fleet in the Red Sea, but this is definitely not true, as seen above. Nevertheless, there is in their reports an echo of something that actually happened at the beginning of the second century CE.

In order to draw appropriate conclusions, it is necessary to examine all of Trajan's activities in order to provide a context. The annexation of the Nabataean Kingdom and its subsequent connection to the Roman road system, the restoration of the canal on the Nile, and the occupation of the Farasan Islands are not separate actions, but rather distinct components of a larger master plan. All aspects of Trajan's policy in the East make much more sense when considered from this perspective: tighter control of the two ends of the Red Sea was the best way to secure control of the whole region.

If there was a master plan to control the Red Sea, what led Trajan to adopt such a plan? Along with military and administrative considerations, clearly his decision was motivated by the potential for economic gain. The Red Sea was a key area in the international trade route between the Roman Empire and the Far East (generally referred to by the Romans as 'India').[61] The importance of the contribution of eastern trade to the economy of the empire could hardly be overestimated;[62] this would be reason enough for the imperial interest in encouraging it.[63] Control of the Red Sea provided the best possible environment for trade.

This policy was first pursued by Trajan and then carried on by his successors, as demonstrated by some of the evidence presented in this work—most importantly, the permanence of the Roman army on the Farasan Islands at

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[61]   See Mayerson 1993: 169-174; Schneider 2004.

[62]   Although the importance has been played down by some recent works such as Young 2001, most scholars agree. See, for instance, Sidebotham 1986; De Romanis 1998; Tomber 2008.

[63]   On this subject, the most important evidence is still the so-called 'Muziris papyrus', a twofold document containing two incomplete texts, one on its *recto* and the other on its *verso*, written in separate hands, both dateable to the mid-second century CE. On the *recto* is one column, missing its left edge, with the end of a contract relating to a maritime loan for a trading voyage from Alexandria to Muziris. On the *verso* are the end of a line and the last column of an account of the value of a shipload of goods imported from India. It was first edited by Harrauer and Sijpesteijn 1985, 124-155. See also Thür 1987, 229-45; Id. 1988, 229-33; Casson 1986, 73-9; Id. 1990, 195-206; Foraboschi and Gara 1989, 280-2; Purpura 1996, 368-75; De Romanis 1996, 183-96; Id. 1998, 11-60; Rathbone, 2000, 39-50; Id. 2002, 179-98; Morelli 2011, 199-234; De Romanis 2012, 75.101.

least until 144 CE, and possibly even longer. Other hints that commerce with India escalated from the reign of Trajan onwards are provided through a variety of different sources of evidence. Literary sources from the second century CE reveal a very specific interest in the people living beyond the limits of the empire, especially on its eastern side. Works such as Arrian's *Indica, Parthica,* and the *Anabasis Alexandri* testify to the interest of Romans in the East. Authors such as Juvenal and Lucian exhibit considerable knowledge of India, including its products, culture, and religion.

The author who provides the best proof of an increased link between the Mediterranean World and India is Claudius Ptolemy (*fl.* 139–61 CE). In his *Geography*, he exhibits knowledge of the Far East well beyond that of earlier periods. He is not just more precise than his predecessors (Strabo, Pliny, and even sometimes the *Periplus Maris Erythraei*), he also describes regions which these earlier authors never mentioned in their works (e.g., East Asia). Ptolemy clearly obtained part of his information from travellers or merchants with an interest in the East, providing more proof of a strengthening of commercial relations between the Roman Empire and India during this period.[64]

It is within the context of this expansion into the East that we find the first evidence for direct Roman contact with China; in 166 CE a Roman 'embassy' reached China, hoping to open a direct commercial link between the two empires. This is recorded in the *Chronicles of the Han Dynasty*:

> They [*i.e.*, the Romans] traffic by sea with An-hsi [=Parthia] and T'ien-chu [=India], the profit of which trade is ten-fold. They are honest in their transactions, and there are no double prices. Cereals are always cheap. The budget is based on a well-filled treasury. When the embassies of neighbouring countries come to their frontier, they are driven by post to the capital, and, on arrival, are presented with golden money. Their kings always desired to send embassies to China, but the An-hsi [=Parthians] wished to carry on trade with them in Chinese silks, and it is for this reason that they were cut off from communication. This lasted till the ninth year of the Yen-hsi period during the emperor Huan-ti's reign [=A.D. 166] when the king of Ta-ts'in [= 'Big China', *i.e.*, the Roman Empire], An-tun [= Marcus Aurelius Antoninus], sent an embassy who, from the frontier of Jih-nan [=Annam] offered ivory, rhinoceros horns, and tortoise shell. From that time dates the [direct] intercourse with this country. [65]

For the purposes of this work it does not make any difference whether this expedition was an official embassy sent by the emperor Marcus Aurelius himself, or a group of private traders operating on their own.[66] Two important points emerge from this story: first, whether official or private, the embassy certainly benefited from the favourable conditions for eastern trade created

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[64] Sidebotham 1986: 142-3; Sidebotham 2011: 14-16.

[65] Text from Hirth 1975: 41; See also Hill 2009.

[66] Scholars still debate on this topic.

by Trajan's policy; second, the Chinese writer's assertion that the Roman traders wanted to establish a direct commercial connection with China but had always been blocked by the Parthians is significant. It makes perfect sense that the Roman traders would want to establish a direct commercial connection with China in order to increase their profits.

An attempt to cut the Parthians out of the trade would undoubtedly have been noticed by the Parthian rulers. It is perhaps not a mere coincidence that in the troubled-for-centuries relationship between Parthians and Romans the Arsacids attacked the Romans first only once—during the Parthian wars fought by Marcus Aurelius and Lucius Verus between 161–166 CE,[67] precisely during the years for which we have some evidence that Roman presence in the Red Sea and the Indian Ocean had reached its peak.[68] I am not here suggesting that the main reason for this war was commercial (it is well known that the *casus belli* was the situation in Armenia),[69] but I do believe that the trade situation made the Arsacids more aggressive toward the Romans than they had ever been.

4.   CONCLUSIONS

In conclusion, all the evidence collected here should prove that Trajan initiated a period of Roman expansion in the Red Sea that had important commercial consequences. This policy was also consistently pursued by his successors, probably reaching its peak under Marcus Aurelius; it provided the right context for Roman commercial expansion in the East, which culminated with the Roman embassy to China.

If what is proposed in this paper is sound, I believe that it is safe to affirm that the policy inaugurated by Trajan was designed to make the Red Sea a *mare internum* in some way—a sea completely controlled (though not completely ruled) by the Romans. I am aware that the possibility of government interference in the eastern trade, or of commercial considerations determining Roman policy in the east, has been ruled out by several scholars.[70] Still, other scholars have already opened to this possibility,[71] and I believe that the amount of evidence made available by archaeology over the last few years should lead to a reconsideration of the matter.

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[67] *SHA Marcus* 8.6; Birley 2000: 121; for the date: Flinterman 1997: 281.

[68] See note 29 concerning Roman coins in India.

[69] Sicker 2000: 169.

[70] See Isaac 1992: 101-218; Young 2001: 216-217.

[71] Most notably Sidebotham 1986: 48-77.

I also believe that the 'military-economic' approach identified in this paper during the time of Trajan and his successors was far from being a *unicum* in the history of the empire, since parallels in other periods can be found (for example between the reigns of Anastasius and Justinian in the sixth century CE, when the empire again tried to control all of the Red Sea region[72]). I hope that these considerations will encourage a general rethinking of the imperial policy in this region and in particular concerning trade with the East, since they better reveal the real role of the emperor in such matters, and help us to more accurately assess the importance, in terms of international policy, held by this region.[73]

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[72]   Nappo 2009.

[73]   The first example of such an approach can be found in Sidebotham 1986: 48-77.

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Maritime cultural traditions and transitions in the Red Sea

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ABSTRACT

The Red Sea is a very diversified maritime cultural space, main differences are among the northern and the southern part of this sea. Maritime cultural variations are seen particularly in the different systems of adaptation to the various environments: in the type of settlements, boat construction and navigation techniques.
Being located in between two wide and important maritime cultural areas — the Mediterranean and the Indian Ocean — maritime traditions in the Red Sea have been strongly influenced or modified by other maritime cultures. Changes are particularly evident in boat technology: in the transitions from one technique of boat construction to another, from one system of propulsion to another, from the use of certain materials of construction to others, or in the adoption of new hull shapes and new decorative elements.
The identification of elements of continuity and tradition in the various expressions of maritime culture in the Red Sea, and particularly in boat technology, is crucial to understand these transitional elements.

KEYWORDS

Red Sea, Indian Ocean, boats, maritime culture, tradition and transition

1. THE DEVELOPMENT OF MARITIME-ORIENTED RESEARCH IN THE RED SEA

Despite its important role in the world's history as hub of long distance trade, encounter of different cultures and religions, with its lands of myth, fertility and pilgrimage, set of conflicts and conquests — until very recently attempts to write a unique depiction of this sea, such as that of the Mediterranean by Fernand Braudel, were not made (Wick 2016). The effort of scholars to center historical analysis on the Red Sea is very recent, so as the study of Red Sea material culture. In the last forty years, archaeological and ethnographical research in the Red Sea increasingly developed provoking an important change in our perception of interconnectivity and technological development in the ancient and modern world.

Earliest research activities in the area were initiated by western explorers and archaeologists, while the involvement of local archaeologists at the begging was very little, particularly for the lack of such specialisms in the region. According to Seland (2014: 4-5), western scholars started to get interested in the archaeology of the Red Sea as a consequence of earliest archaeological excavations conducted in India in the colonial time, which revealed evidence of long distance trade contacts with the Roman empire. Scholars realised that the investigation of the Indo-Roman trade necessarily had to involve the whole western Indian Ocean area, including adjacent lands, across two continents and stretching from western India to north-eastern Africa through the Arabian Peninsula. Archaeological explorations of the coastal regions on the African side of the Red Sea started at the end of the 19th-early 20th century. An earliest and isolated archaeological excavation on a coastal site, Adulis, took place at the beginning of the 20th century on the Eritrean coast driven by the Italian colonial interests of that time (Paribeni 1907). Other coastal and underwater excavations were conducted only subsequently, in the 1960-70s in Egypt, while systematic ethnographic research (Agius, Cooper and Zazzaro 2014) and archaeological excavations (Seland 2014) initiated mainly at the beginning of the 21st century. The reason for such a delay and exiguity of archaeological research in the area, before this date, was due to both the absence, until recently, of local competences, to the limited access to certain areas, both for political reasons and remoteness, and also for environmental reasons, particularly regarding to the underwater exploration. The constant growth of the coral coastline may cause shipwrecks and their cargoes to be hidden, warm sea water may affect the preservation of organic materials, while better preserved shipwreck sites can be usually found in less accessible depths, in less safer working conditions (Blue 2011).

Archaeological investigations conducted so far in the Red Sea area reflect three main research approaches. The first approach is archaeological and epigraphical, it was developed in Italy by scholars Rodolfo Fattovich, Maurizio

Tosi and Alessandro de Maigret, and had, as aim, that of explaining how circuits of exchange had influenced the development of social complexity in the Red Sea basin. This approach focused mainly on the 7th-2nd millennium BCE (Fattovich 1996). The second approach, which is both archaeological and historical, focuses on the understanding of socio-cultural and economic systems of exchanges in the Red Sea and by extension in the wider Indian Ocean and the Mediterranean mainly through the archaeological evidence. This approach refers in particular to the Hellenistic-Roman period (Sidebotham 2011) and also to the Medieval and early Modern periods (Kawatoko 2005). The third approach is that of maritime archaeology and ethnography which may concern different periods and has, as aim, that of understanding strategies of adaptation to the costal environment, technologies of water transports, use of marine resources, the social sphere, religion and believes connected to the sea (Blue 2011).

2. MARITIME CULTURAL TRADITIONS AND TRANSITIONS IN THE RED SEA

The identification of elements of continuity and tradition in the various expressions of the Red Sea maritime culture, is crucial to understand transitional elements.

Many evidence of maritime material culture are common to both sides of the Red Sea and had a certain geographical and chronological continuity. The author will only mention some, as examples, among those that she could directly verify. Artificial galleries carved in fossil coral terraces near the seashore, used as shelters and for storing materials, are a common feature of all the three Pharaonic harbours on the Red Sea coast of Egypt, Wadi el-Jarf, Ayn Soukhna (Tallet 2015) and Mersa Gawasis (Bard and Fattovich 2007). The majority of the galleries varies in dimensions from 20-34 metres in length to 2-4 metres in width and maximum 2-2.5 metre high. Entrances were often reinforced/marked by stone blocks and locked by one or more large slabs. Only two of the Gawasis galleries are smaller (Cave 1 and 8), some 7 by 4.5 metres, more similar to a rock-cut chambers interpreted as used for the officials and for administrative purpose rather than for storage (Bard and Fattovich 2010: 5-6). An undated rock-cut chamber very similar to the Gawasis type, also carved in the coral terrace facing the sea has been observed also further south, on the Arabian side of the Red Sea, on the main island of the Farasan archipelago during a survey. The chamber entrance was marked by stone blocks. Slabs around the entrance and inside suggest it was originally locked. Pottery finds outside the entrance suggest it was occupied in antiquity (Cooper and Zazzaro 2014: 166). Literary reference to this type of settlement system is further attested in classical sources referring the exis-

tence of cave dwellers in the Red Sea — the Troglodites — people inhabiting the African side of the Red Sea (Tomber 2005).

More elaborated adaptations to the local environment along the Red Sea coast, consist in the use of fossil coral blocks and limestone block. Constructions made with these materials are attested since the Pharaonic period, but are mainly diffused in Roman ports such as at Myos Hormos (Peacock and Blue 2006) and Berenike (Sidebotham 2011: 57), in Egypt. Modern period constructions made with fossil coral ashlar are attested for example at Suakin old city (Greenlaw 1995), on the island of Massawa (old Massawa) and in the merchant houses of Farasan main island (Cooper and Zazzaro 2014: 161-162).

Other material elements of geographical and chronological continuity are seen in the various strategies adopted by people to collect water in the arid coastal environment typical of the Red Sea. These strategies are mainly based on the exploitation of available underwater sources along the Egyptian coast of the Red Sea and, further south, on the collection of raining water in water storage installations along the Sudanese, Eritrean and Djibouti coasts and islands. Characteristic of this area are cisterns carved in the coral bedrock and covered with plaster or mortar; most of them are undated or they are very difficult to date because, presumably, they have been continuously used since earlier navigations in the Red Sea have started (Zazzaro 2013: 26-30).

Elements of continuity may be also seen in the exploitation of natural marine resources and food provision. Pinctada shell, commonly known as pearl oyster, was collected to obtain mother of pearl and pearls in the Red Sea at least since the Roman period, according to recent epigraphic and archaeological evidence (Schörle 2015, Zazzaro in press). Its exploitation continues until the beginning of the 20th century (Agius, Cooper, Semaan, Zazzaro and Carter 2016: 153-162). Archaeological evidence of large concentrations of chicoreus shell from one of the landing places near the ancient port of Adulis, in Eritrea, dating to the 1st century CE, suggests that these shells were collected in order to extract the operculum. In contemporary Eritrea, on the Dahlak islands, and in Sudan the operculum of the chicoreus shell is employed in the production of perfumes and incense. It is therefore suggested that the exploitation of this shells may date back at least to the Roman period, so as the exploitation of oyster shells in the area (Zazzaro et al. 2015).

3. TRADITION AND TRANSITION IN THE NAUTICAL SPHERE

In spite of these examples of continuity and consistency through time and space, Red Sea societies had also experienced important phenomena of transition in several manifestations of their maritime culture, being exposed to interactions with people coming from different regions and cultures outside the

Red Sea, from the Mediterranean and the Indian Ocean. Interesting phenomena of continuity and transition to which we can give a close look, are seen in the development of boat construction techniques and in the various boat typologies. A part the Mediterranean and the Indian Ocean areas of influence, Red Sea boat construction and features have been also strongly influenced, particularly at the beginning, by boatbuilding traditions firstly developed in a fluvial context: the Nile.

The western Indian Ocean, as a whole, is a wide and diversified area in terms of boatbuilding construction techniques. A typical traditional technique of construction which has been common to the whole area in antiquity and has in part been abandoned in the 16th century but still survives until today in India, is the system of sewing planks together (Pomey 2011, see also below). In the Mediterranean, early boatbuilding construction techniques are even more diversificate than in the Indian Ocean, for what we know today, varying particularly from the Western to the Eastern basin. The system of sewing plank seams and the mortise-and-tenon technique of assembling planks together were adopted at the same time in different regions for a certain period, suggesting that some main changes may have occurred simultaneously in different regions (Pomey and Rieth 2005: 159-165). A more unified tradition of construction is attested all along the Nile and particularly in the Nilotic Egypt, which seems to receive very little influence from the outside world from the beginning to the Roman period (Ward 2000).

A coherent and comprehensive analysis of traditions and transitions in boat construction in the Red Sea and in the wider Indian Ocean is unfortunately limited by the unbalanced number of material evidence distributed in time and space. Paradoxically, we have more numerous and precise archaeological evidence from the Pharaonic period than from the Greco-Roman and the Medieval/Modern period.

3.1 THE PHARAONIC PERIOD

In Egypt, unique boatbuilding characteristics developed, such as the technique of sewing planks across and not along their seams, the use of copper lashings, the hogging truss, the bipod mast, and of long tenons. These characteristics which are not seen anywhere else or are seen in very faraway contexts, prove the particularity of technological innovations developed within a unique boatbuilding tradition.

The Old Kingdom technique of sewing planks across, as seen in the famous Khufu boat, recalls very much the technique of lashing papyrus bundles together as in the earliest water transports employed on the Nile, the papyrus rafts (Pomey 2015: 12-14). This suggests that early wooden boatbuilding construction techniques in Egypt were strongly inspired by local traditions and

that technological transitions consisted in adaptations of earlier techniques to new materials, such as longer cedar planks from Lebanon. Further elements of transitions, from this lashing technique to the mortise-and-tenon system, are seen in later Middle Kingdom seagoing boat remains from the Red Sea port of Ayn Soukhna where lashing channels are associated to mortise-and-tenon joints (Pomey 2015: 18-19).

Despite the system of lashing planks across seems to disappear late after, other elements of continuity and unicity in ancient Egyptian boat construction still survives. Herodotus reports that the way Egyptians build their boats was different from that employed by other Mediterranean people. The assemblage of planks is similar to that of alternating bricks one above the other as in the construction of a wall (Belov 2016). This is explained by the fact that the shortage of wood in the area obliged Egyptian carpenters to use short planks alternating and framing them in order to obtain structural consistency. The locally available wood all along the Nile is acacia, from which short planks can be cut still today for the construction of small working boats which recall very much the ancient types,[1] while to obtain longer planks for larger and special boats, ancient Egyptian had to import cedar wood from Lebanon.

The finding of boat remains from the Pharaonic harbour of Mersa Gawasis provided so much information on how seagoing ships were constructed, to allow the reconstruction of a navigating Pharaonic seagoing ship (Ward 2012). Ship timber remains from Gawasis suggests a certain consistency with contemporary boatbuilding tradition in the Nile but with some adaptation to the maritime environment (Ward and Zazzaro 2009). Among those adaptations archaeologists noticed the use, not systematic and limited to the planks below the waterline, of pegs to lock mortise-and-tenon joints. In fact, locked mortise-and-tenon guarantee a better resistance to planks seam rubbing caused by sea waves. The insertion of copper strips in the seam of planks positioned below the waterline, also attested on Gawasis timbers, also seems to be another adaptation to the maritime environment. Copper is in fact an efficace antifouling which guarantees the protection of the wood from shipworms, particularly in sensitive areas such as, indeed, plank seams below the waterline. The use of caulking to waterproof and to protect the hull seems, so far, not attested on Pharaonic boat remains. Instead, a white substance was found in some spots on the surface of planks originally positioned below the waterline, this is likely to be identified with plaster mixed to animal fat (Zazzaro and Calcagno 2012). This same mixture is in use still today to protect the planks below the waterline on traditional dhows in the southern part of the Red Sea (Agius, Cooper and Zazzaro 2014).

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[1]   We refer in particular to the *nuggar* type of boat, still built today in Sudan at Omduram (see Agius 2012: 187).

Iconography shows further specific characteristics of ancient Egyptian boats, such as the bipod mast — in use during the Old Kingdom to distribute the weight of the mast on the two sides of the hull, perhaps also a heritage from the fragile hulls of papyrus rafts — and the use of the hogging truss on large cargo boats or on seagoing ships. The hogging truss is a longitudinal thick rope running from bow to stern keeping in tension the two extremities of the hull to improve longitudinal strength (Wachsmann 1998: 14). The use of the hogging truss testifies the effort of ancient Egyptian carpenters to adapt traditions of construction conceived for a Nilotic environment to the sea. In the Red Sea Pharaonic ships required more structural resistance in the hulls to stand sea waves. The use of the hogging truss is, so far, attested only in Pharaonic Egypt and, once again, represents a technological transition developed within a unique boatbuilding tradition in two very different environments.

3.2 THE GRECO-ROMAN PERIOD

Very little is known, in terms of archaeological evidence, on boat construction in the Greco-Roman period in the Red Sea. Recent finds from Alexandria, at Thonis-Heracleion, dating to the Hellenistic period, revealed some continuity and consistency with the previous Nilotic boatbuilding techniques but with some variations which are, once again, unique in the world (see above, and Belov 2014).

Concerning the Red Sea, material remains of boats dating to this period are insufficient to understand what types of boats were in use at that time. Literary sources and iconography compensate this lack of information. In interpreting these data we have to take into account that iconographic sources are local and made by different people that have likely seen for real the boats they represented which may be local or foreigner boats. On the other side, literary sources reflect a knowledge of the Red Sea nautical sphere as interpreted by Greek and Latin authors which in some cases did not directly observed the boats they described.

On the basis of these sources, Patrice Pomey (2012) suggests that three types of boats navigated in the Red Sea in the Greco-Roman period: Indian, Mediterranean and "primitive" local types of boats. He is guided in his analysis mainly by a written source: the Periplus of the Erythraean Sea, a guide for merchants navigating along the Red Sea and the Indian Ocean (Casson 1989), but he also uses other literary sources, the iconographic evidence of boat graffiti and ethnographic analogies.

One of the most interesting historical source attests that in the Augustan era (Strabo II.5.12) hundred and twenty ships sailed each year from Myos Hormos to India. Scholars suggested that these were most likely Mediterranean

merchant boats with two masts, as represented on ship graffiti found in the Roman ports of Myos Hormos and Berenike. They appear rather different from the Indian cargo boats which may also have reached the western coasts of the Red Sea sailing up to the Egyptian ports. Indian ships, represented in form of graffiti engraved inside a cave on the Island of Socotra — an important stopping point on the Indo-Roman trade route — reflect large ocean-going vessels, round-shaped.

Archaeological excavations at Myos Hormos delivered remains of sails made of Indian textile, plank remains and brailing rings made of Indian teak but using the same technology employed in the Mediterranean. According to Roberta Tomber these finds may suggest not only that Indian ships reached the Egyptian coasts of the Red Sea, they may also suggest that Roman-style ships were built in India, or that Roman ships were repaired in India, or that, more likely, Indian and Roman ships became technologically more similar through time (Tomber 2008: 73).

In the southern part of the Red Sea local boats are described in classical sources as: simple raft, dugout canoes and boat made with animal skins. Ethnographic comparisons provide a further source of information to better understand the aspect of these types of vessels: simple rafts made by lashing together a few mangrove branches and trunks are seen still today in use along the Yemeni coast of the Red Sea for fishing and they are called *ramas* (Agius, Cooper and Zazzaro 2010: 75). These types of rafts are easily made using the mangrove wood available also elsewhere along the Red Sea coast. Dugout canoe are likely to be compared with the modern huri, a type of canoe widespread in the southern Red Sea, East Africa, southern Arabia and India. Huri are carved in a unique long trunk of wood usually produced in East Africa or India where long trees grow.[2]

Vessels made with animal skins are likely to be identified with the type known today as *quffa*, a widespread simple type of vessel in use until the 19th-early 20th century in various regions and made with hides sewn together on a reed or wooden circular frame (McGrail 2004: 66).

The "sewn boats", also described as "Indian boat types", are planked vessels fastened with lashings, as opposed to the mortise-and-tenon system which was more common in the contemporary Mediterranean area (see above). These types of boats were in use in the Red Sea at the time of the Periplus but also at the time of Procopius (I.19.23-26), in the 6th century CE, employed by Aksumites, Arabs and Indians. In identifying those ships as Indian, Procopius suggests that they were not local in origin. Sewn boats were still attested in India (*kettuvalam*) and in arcipelago of Lamu (*mtepe*) and they are rapidly disappearing in Oman (*badan*) and Somalia (*beden*) (Pomey 2012: 18-20).

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[2] For an overview on this type of vessel see Jansen van Rensburg 2010.

It seems that after the Pharaonic period, local, Mediterranean, and Indian Ocean nautical traditional elements coexist in the development of Red Sea boatbuilding techniques, probably with a stronger Indian Ocean influence in the south and a stronger Mediterranean influence in the north as it will also be the case in the subsequent periods and until today (see below).

3.3 THE MEDIEVAL AND MODERN PERIODS

Scattered medieval written sources, iconography and few archaeological finds, suggest that a period of transition from mortise-and-tenon joints to the technique of sewing planks together may perhaps have occurred in large part of the Red Sea. A rare material evidence comes from archaeological excavations conducted at Quseir al Qadim, in Egypt, here, planks made of teak and sewn together using coconut coir, were reused to cover Islamic graves (Blue 2006).

The transition from sewn planks or from the mortise-and-tenon system — if it still survived — to nailed planks may have happened in the 15th century, probably as an effect of the Portuguese and the Mediterranean influence. The passage from lashings to nails is quite significative in the development of the Red Sea maritime culture. In fact, written sources of the Medieval period attests that the nailing technique was certainly known but it was intentionally avoided because the presence of metal elements in the hull would have attracted boats to hit the reefs. Despite it sounds like a superstition, this may also reflect the fact that sewn boats are actually more flexible and therefore more resistant to possible impacts with reefs (Hourani 1995: 87-99).

The earliest material evidence of nailed hull planks in the Red Sea date back to the first half of the 18th century and concerns three shipwrecks of merchantmen carrying products from the Indian Ocean (Raban 1971, Ward 2001, Zazzaro, Loreto and Cocca, in press). Preliminary architectural analysis and wood identification suggests that these ships were built using Mediterranean wood, although it is not excluded that boat builders may have been local or even Indians since very little is known about boat construction from this period. Ottoman archives refer that Indian ships from the port of Suez or Jeddah were preferably to the locally made ships, because more convenient in economic terms, but also more "solid and reliable" (Wick 2012: 411-412). The presence of both local and Indian ships in the Red Sea at this time, is also depicted in the Gujarati map (Sheikh 2009) and in the illustration of the Jeddah coastline in Carsten Niebuhr's book (Niebuhr 1772, 1774).

In the Mediterranean, the transition from lashing or mortise-and-tenon fastening technique to nailing, generates also a transition from the plank-based or mixed construction sequence to a frame-based sequence, starting from the Late Antique period. This is not the case of the southern Red Sea

where mixed sequences of construction were recorded until recently (Agius, Cooper and Zazzaro 2014: 151-156). Today it is evident that the northern part of the Red Sea is clearly influenced by Mediterranean type of construction, with local adaptations — due to the availability of different materials — while the southern part of the Red Sea was until recently included in the western Indian Ocean tradition of construction.

4. OTHER TECHNOLOGICAL TRANSITION

Other technological transitions in the Red Sea nautical sphere are seen in the propulsion systems. The lateen sail seems to have firstly appeared in the Indian Ocean area, then it was subsequently "imported" through the Red Sea and Egypt in the Mediterranean. The earliest attestation of a lateen sail dates back to the 6th century CE, and it is represented on a graffito from the Egyptian monastery of Kellia (Medas 2004: 202). The earliest use of the lateen sail in the Indian Ocean may be explained by the fact that this type of sail was more suitable to face navigations to India, particularly towards the end of the south-west monsoon, when it was wicker and navigation conditions were safer. The transition from square to lateen sail in the Red Sea must also have much facilitated the navigation up to the northern part of the Red Sea (Whitewright 2011: 10-12).

The transition from sail to engine in the Red Sea occurred progressively starting from the first half of the 20th century. At this time the traditional Arab sailing vessels, known with the name of dhows in Europe,[3] were the most common type of boats which were seen sailing in the Red Sea and in the wider western Indian Ocean. They were characterised by elongated hull with upraised steam and stern, sometimes richly decorated by nailed planks and lateen sail. As for the case of the transition to nail fastening, also the richly decorated sterns and bridge-house of the ocean-going dhows seem to have been a heritage of the Portuguese presence in the Red Sea and in the Indian Ocean.

The introduction of the engine in the Red Sea is late and rapid comparing to the Mediterranean, as a result of it, engines were firstly adapted and mounted on existing traditional boats. The only structural variation consisted in the transition from the typical symmetric hull shape to a square stern modified in order to host the outboard engine. Similarly, larger dhows did not change their shape and construction methods much, they were only partially modified to host an inboard engine. It is worth to note also that, in the

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[3] Some types of dhows still survive today, although they are rapidly disappearing, replaced by the modern container ships. See Agius, Cooper, Zazzaro & Jansen van Rensburg 2010.

most recent transition from wood to fiberglass, the general shape of hull did not change (Agius, Cooper and Zazzaro 2014: 146).

5. CONCLUSIONS

Maritime societies are usually conservative, phenomena of transitions in technology may be driven by economic, military or ideological reasons.

In the Pharaonic period, the need to reach the southern regions of the Red Sea to get exotic products, to please gods and to reinforce the display of the royal power, determined innovative technological solutions aimed at adapting systems of construction employed for Nilotic boats on seagoing ships.

The availability of materials and their costs may have also been another reason having determined technological changes: the shifting from the use of mortise-and-tenon system to the use of lashings to join planks in the Medieval period, may have been due to economic constraints. Similarly, the transition from the lashing system of fastening, to nails, was dictated by the need of competing with Portuguese and European ships in the Indian Ocean.The transition in the second half of the 20th century from wood to fiberglass was also dictated by economic reasons.

Ideological reasons may also have lead technical changes: the highly decorated sterns of the large ocean-going dhows may reflect the willing of imitating Portuguese and European ships which were successful in the competitive Indian Ocean trade.

A comparative analysis of conservative and innovative elements in the nautical sphere suggests that, in the processes of technological transitions, some conservative traces are always preserved, in fact boatbuilders in pre-industrial societies adapt to new technologies from the outside word, rather progressively. Therefore, identifying traces of transitional processes in boatbuilding or in certain boat features, can help in better understanding the provenance and the deep significance of innovations.
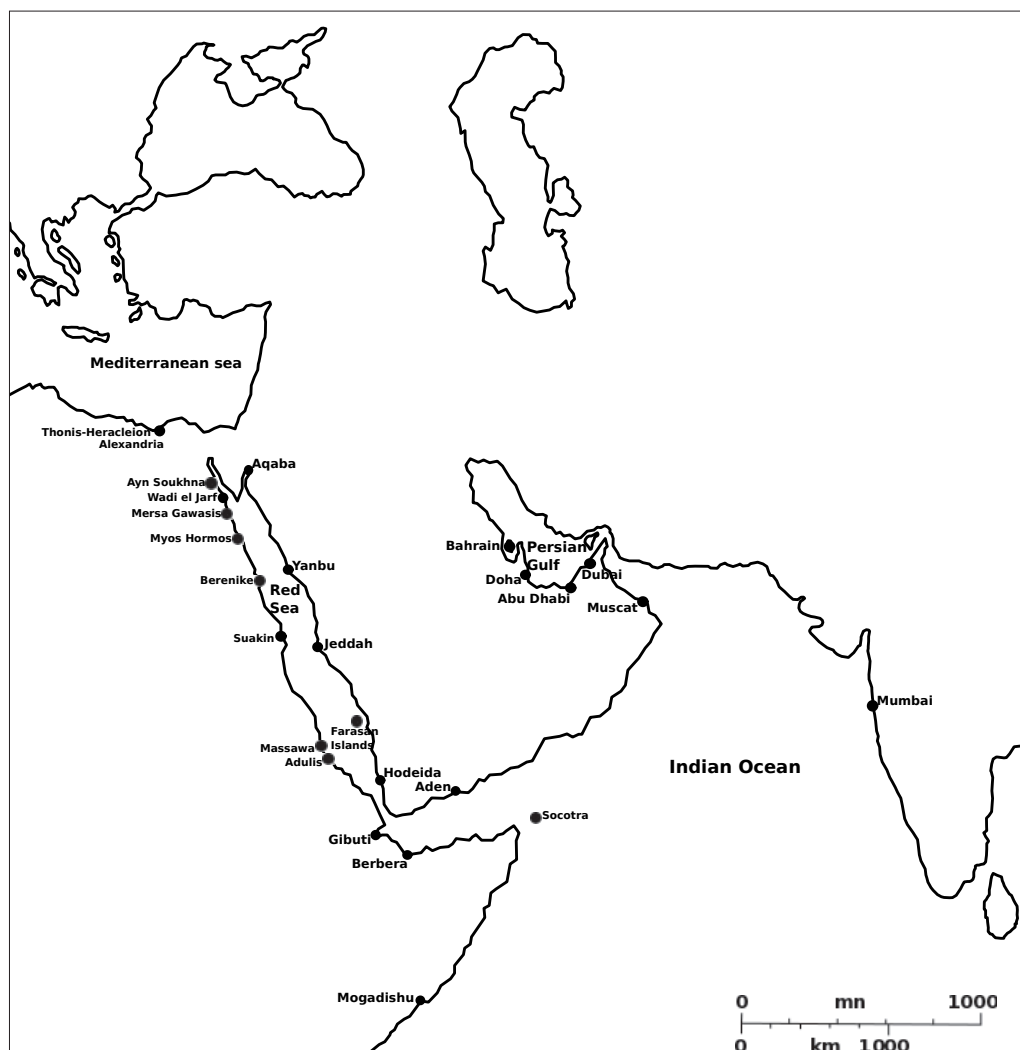
FIGURE 1 – Map of the Red Sea and the western Indian Ocean
showing locations mentioned in the texts
(Drawing by the author)

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The king Amanikhareqerem
and the Meroitic world:
an account after the last discoveries

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ABSTRACT

In the last years archaeological missions working in Sudan have been shining light on the ruling period of the Meroitic king Amanikhareqerem, whose name was only known from few objects until the end of the last century. Recently discovered temples bound to him in Naga and el-Hassa, made from different materials and techniques according to local availability and climate conditions, have improved our knowledge of the Meroitic kingdom. Both buildings highlight the coexistence of strong Egyptian influx and Nubian traditions in plan, artistic and devotional context.

Furthermore, new epigraphic dates, in addition to the iconographical program of the Naga temple, have offered new elements to the controversial dating of Amanikhareqerem and to the Meroitic pantheon, especially regarding the autochtonous god Aritene.

KEYWORDS

Meroitic kingdom, Amanikhareqerem, Aritene, Naga, el-Hassa

Inquiries on the Napatan-Meroitic kingdom, that flourished in ancient Nubia from 8th century BC to 4th century AD, behove us to evaluate its strong multicultural nature, which permeated several aspects of the Nubian society. Rich external influxes, especially coming from Pharaonic and Hellenistic Egypt, had a strong impact on the Kushite kingdoms. Nevertheless, it was not a simple introduction of foreign traditions passively received from culturally poor territories; a broad secular trade network and reciprocal territorial occupations allowed a profitable acquisition of manifold Egyptian customs, that were locally elaborated giving life to original solutions of a polymorphic society.

1. A LITTLE-KNOWN KING

The ruling period of the Meroitic king Amanikhareqerem can be well included in this composite picture, according to recent discoveries that have been throwing light on his figure. Until the end of the last century our knowledge of him was limited to four objects reporting his name[1]: two sandstone ram statues, respectively found by Frederic Cailliaud in 1822 at Soba (REM 0001) and by workers digging an irrigation canal in 1975 at el-Hassa (REM 1151); a stone medallion reemployed in the foundations of a modern enclosure close to the Apedemak temple in Naga; the so-called *Omphalos* of Napata (fig. 1), a miniature dome-shaped sandstone shrine brought to light by George Reisner inside the Amun temple at Jebel Barkal. The king leads two processions introduced by cartouches respectively reporting his Throne name *nb-mȝ' t-R'* in Egyptian hieroglyphs and, more badly preserved, his Son of Rê name Amanikhareqerem in Meroitic hieroglyphs (REM 1004); this peculiar artefact, that has been interpreted in different ways, likely represented a sanctuary in the form of a circular plan reed hut, so-called *gutta*, well-known in Africa[2]. Following these occasional finds, the reign of Amanikhareqerem has been being better known thanks to the archaeological missions working at the Amun temple of el-Hassa and at temple N 200 of Naga.

2. EL-HASSA AND ITS RAMS

The temple of el-Hassa is one of the most interesting complexes brought to light in the territories of ancient Nubia in the last years (fig. 2)[3]. It com-

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[1]   His burial place is not known for certain.

[2]   In confirmation of this, in the Nastasen stela (second half of the 4th century BC; FHN II; 471 ff.) the words *kȝ(r)*, "shrine", and *Npy,* "Napata", are sometimes written with a hut-shaped determinative (Wenig 1978: 209).

[3]   A Sudanese-French mission led by Vincent Rondot has been working at the site: Lenoble and Rondot 2003; Rondot 2010a; 2010b; 2011; 2012.

FIGURE 1
Jebel Barkal, B 500,
Shrine so-called *omphalos*.
Sandstone. 1ˢᵗ century
(Wildung 1997: cat. 288)

0   20 cm

FIGURE 2
El-Hassa, Temple. 1ˢᵗ century
(drawn by Baldi after Rondot 2012: fig. 2)

0   10 m
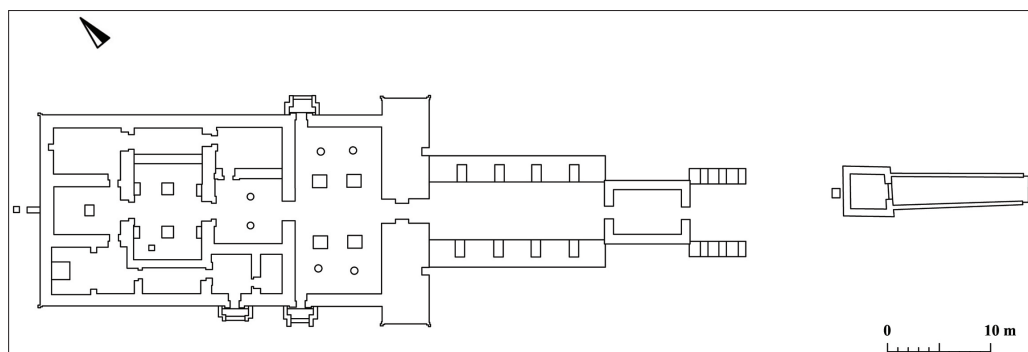
bines typical aspects of the Nubian Amun temples, as the building plan, and more unusual elements, and represents a particularly significant expression of Egyptian-Nubian syncretism, confirming and strengthening the long-lived influx of the Pharaonic tradition on the Kushite culture. The temple is a longitudinal plan multi-roomed structure oriented E-W entering from a pylon, as usual, and from three side entrances. Following an open courtyard and the hypostyle hall, a vestibule leads to the sanctuary, flanked by side rooms. The walls were made from the combination of red and mud bricks laying on red bricks foundations, according to well-known Meroitic customs, whereas sandstone was used for the columns.

A plastered reemployed red bricks processional avenue leads off the building, and is flanked with two groups of different-sized sandstone ram statues (fig. 3); a rectangular plan kiosk made from red bricks separates the two groups. Six statues have been uncovered, nevertheless the finding of fourteen pedestals suggests that the complex originally held seven couples of rams, probably including the two previously known statues. It is unclear when the statue observed by Cailliaud was moved from el-Hassa, but the no finding of Amun temples by Amanikhareqerem at Soba, the correspondence of style and inscription, make likely that it was part of this processional avenue.
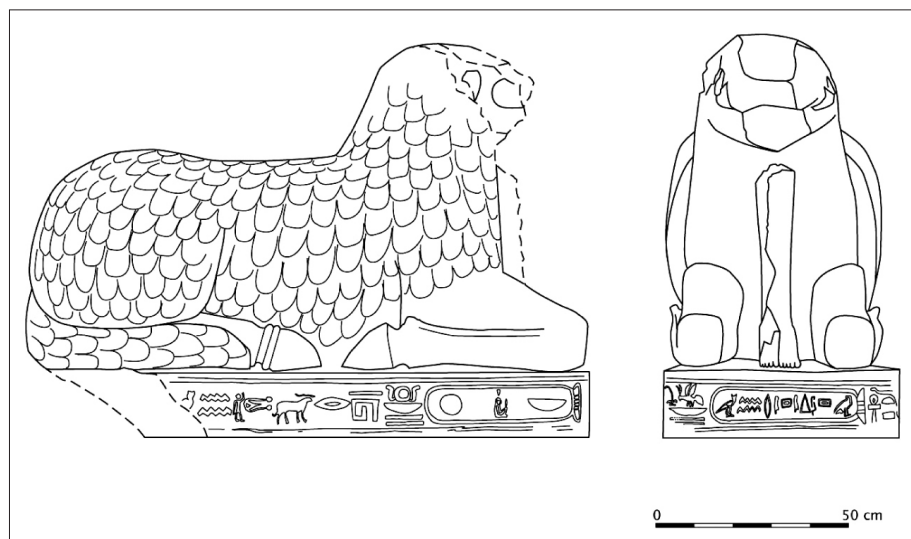
FIGURE 3 – El-Hassa, Temple, Ram. Sandstone. 1st century
(Rondot 2012: fig. 3)

The fleece of these rams is not in spiral curls, as in Meroe and Naga, but in scales, likewise to the ones in the temple of Amenothep III in Soleb[4], which represent the most ancient Nubian large-sized rams. The choice of the same Prenomen of Amenothep III, *nb-mꜣꜥt-Rꜥ*, may confirm the association established by Amanikhareqerem with this pharaoh, considering the great attention paid by the kings choosing their Throne name. Amanikhareqerem was the first Meroitic ruler using this Prenomen, and only one among his successors, Amanitenmomide, made the same choice.

The engraving of inscriptions on bases of rams was unusual enough in Nubia; on the present knowledge the el-Hassa statues represent the only Meroitic case. The inscription, repeated on each ram, was written partly in Egyptian and partly in Meroitic hieroglyphs. Though Egyptian was commonly used on official Meroitic monuments until the fall of the kingdom in the 4th century AD, its joint employ with the local writing finds little evidence. This peculiar choice represents a further evidence of the Kushite archaism, highlighting the very profitable coexistence between the rich Napatan heritage and the coeval indigenous expressions.

The inscription, translated by Claude Rilly (Rondot 2012: 179), reads:

> *Oh, Amun Aritene, Amun of Tabakha,* to the king of Upper and Lower Egypt Neb-Mâat-Ra, to the king of Upper and Lower Egypt, Lord of the Two Lands, *Amanikhareqerem,* given life, *the ruler beloved of Amun, give life!*[5].

Tabakha (𓍁𓂇𓃭𓏤𓃭𓍯) is probably the ancient name of el-Hassa[6]; Amun of Tabakha may therefore indicate a new hypostasis of the god, that has not found other evidences till now. A significant element of this text is the inclusion of the term *aritene* (𓂇𓏤𓂋𓏲𓏲) after the first mention of Amun. Aritene is known in a limited number of Meroitic inscriptions, but its exact meaning is unclear. Scholars working at el-Hassa firstly identified him with Harakthy (Rondot and Török 2010: 227); afterwards they preferred to hold the matter in abeyance (Rondot 2012: 180), although in the meantime the epigraphist of the Sudanese-French mission recognized in Aritene a well-attested hypostasis of Amun reading a text from Naga (Rilly 2011: 192-193).

The suggested reference to Aritene as divine epithet can be excluded after its occurrence in expressions with no gods' names it could be associated to. Its role as attribute of Amun in the meaning of "lord of" or "guest in" before a toponym was first proposed by Fritz Hintze[7], referring to an inscription on

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[4]   Cf. Rondot 2012: 179.

[5]   In cursive characters Meroitic hieroglyphs, in regular Egytian hieroglyphs.

[6]   The term was likely a toponym especially according to locative suffix *–te* (Wenig 1999: 681).

[7]   Reported as oral communication in Wenig 1981: 206. Such idea was later couched by Hofmann (1981: 348).

the entrance lintel of the Amun Temple in Naga reporting *Amni-lḫ-aritñ-tolktt* (REM 0024)[8], translated as "Great Amun, lord of Naga"[9]; nevertheless, the inscription of el-Hassa makes it unlikely, Aritene not being followed by a placename but inserted among two mentions of Amun.

Such construction in Naga justified other theories about *aritene*. According to Kormysheva (2010: 93), it was an epithet translating as "clement"[10], but the recurrent inclusion of the term in sentences with no other divine names does not permit to embrace her idea. Zawadowski and Katznelson (2010: 78) read "worshipped god", resulting from the doubtful translation of *–ne* as "worshipped" linked to *–arit* ("god")[11]. In this context, the root *arit* could have justified the suggested generic reading of *aritene* as "god" (Priese 1968: 175; FHN III: 840).

Cartouches of Aritene on a fragmented faience round-shaped medallion, found at the royal cemetery of Meroe and hypothetically symbolizing Sun, led Karl-Heinz Priese to identify him as Sun god (1984)[12]. Nevertheless, a number of iconographical evidences, supported by philological comparisons, suggest that Sun was worshipped as god Mash (Griffith 1911: *passim*; FHN III: 954-955; Kormysheva 2010: 317-318)[13]; his association with Amun, giving life to the form Mash-Amani, would have represented the Meroitic version of Amun-Ra (FHN III: 955)[14]. In this sense, the proposed correspondence of Aritene to Ra (Zach and Tomandl 2000: 139), under the epigraphic evidence of Aritene both as independent deity[15] and as figure linked to Amun[16], cannot be confirmed.

In the light of what expounded, Aritene did not indicate a divine epithet or attribute, but can be considered a divine name identifying an autochthonous god, who was sometimes associated with Amun in a still unclear way. The

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[8]   The same expression is in REM 0035 and 0037, both coming from Naga.

[9]   For the translation of *lḫ* as "great" see Griffith 1911: 10, 23, 96.

[10]   In her opinion this translation is strengthened by the expression *Amni-aritñ-tolktt* (REM 0027 and 0034, both from Naga).

[11]   In the Meroitic writing *–ne* was a nominal derivational suffix (Rowan 2006: note 21). Nevertheless, the volume of Isidor S. Katznelson was a posthumous edition of a Zawadowski's work, therefore it includes anachronistic theses.

[12]   Afterwards he translated *aritene* as "heavenly" from the root *ari–* ("heaven) (Priese 1998)

[13]   The present Nubian term indicating Sun, *mashil*, could be derived from the ancient divine name, confirming the association with the star (Griffith 1911: 56). Sun worship finds evidence in a heterogeneous iconography (Kormysheva 2010: 315-317), often showing an anthropomorphic deity wearing a radiate crown: for Naga see Gamer-Wallert 1983: bl. 11a; for Gebel Qeili see Welsby 1996: fig. 68

[14]   See esp. REM 0430, reporting the invocation *Wosi Msmni* ("Oh Iside, oh Mash-Amon").

[15]   See for example REM 0084, 0094, 1293.

[16]   See for example REM 0024, 0027, 0034, 0035, 0037.

cult of him, hypothetically known under Napatan rulers[17], spread in Nubia during the Meroitic period. He was often named, as well as other gods, in inscriptions honouring kings, and was included in Napatan and Meroitic royal names[18]. In royal texts by Amanishakete (1st century BC), Amanitore (1st century BC - 1st century AD) and Kharamadoye (5th century AD), kings and queens are heirs and descendants of Aritene[19], strengthening his strong tie with the royal family, as confirmed by the association with the dynastic god Amun in the el-Hassa inscription. Though the deification of the living sovereigns is not certain, it confirms that the royal cult exalted their divine descent.

3.   THE EXPRESSIONS OF POPULAR RELIGIOSITY

In el-Hassa, another ram on a pedestal turned its back to the windowless and doorless rear building wall (Rondot 2012: 174). An altar was before the statue, that was destined to the popular devotion according to a solution which has the only known comparison in the Amun temple at Naga, built by Natakamani some decades before (Wildung *et alii* 2011: 91-92, abb. 106). So far, fieldwork in the Kushite territories has not brought to light in fact contra-temples comparable to Egyptian ones, as real architectural structures reserved to popular devotion; the intermediation between gods and people was accomplished through cult images that were easily visible, in the form of royal or divine statues, in addition to external reliefs on temple walls. Such reliefs reported the principles of the official cults, as well as the god-king relationship, in a simple form that could be intelligible for the population, assuring the divine legitimation to the ruler in the eyes of his subjects.

The offering of natural curiosities, as oddly shaped quartzite and sandstone formations (Rondot 2012: 178), confirms the occurrence of popular cults in el-Hassa. In Nubia, such a custom is known in temple complexes in Jebel Barkal (Kendall 2009: 11), Kawa (Macadam 1955: 26), Naga and

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[17]   This can be suggested from the personal names of some kings, as Akh-Aritene, ruling in the 4th century BC (see Edwards 2004: 115) and Piankharitene, dated to the 7th century BC (see Porter and Moss 1975: 230).

[18]   For example Ariteñyesebokhe, ruling between late 2nd and early 3rd century AD (see Welsby 1996: 209; Török 1997b: 206); for an interpretation of the suffix –*yesebokhe* see Rilly 2001b: esp. 366-368.

[19]   In Naga, a stele reads *amnisḫeto-ariteñ-qrne* ("Amanishakete heir of Aritene") (REM 1293; Rilly 2011: fig. 219), and the same relation with the god is reported in texts linked to Amanitore (REM 0034), as well as in Amara in the expression *amnitore-aritñl-mdsl* ("Amanitore, the heir from Aritene") (REM 0084; Griffith 1917: 25; Macadam 1950: 45. The suffix -*l*, usually employed as definite article, is however unusual for a divine name). In post-Meroitic times, during the 5th century, the inscription by king Kharamadoye on the Mandulis temple at Kalabsha reads *hrmdoye-qore-aritñl-mds* ("King Kharamadoye, heir of Aritene") (REM 0094; FHN III: 1103 ss.; Millet 2003).

Soniyat (Zurawski 2005: 296), as well as in a funerary context (Kendall 1981: 28-29), and spread in many other cultures. The exact meaning assigned to these objects is unclear, nevertheless their placing in an offering area in Naga, that was devoted to the popular worship, seems to indicate their votive nature (Kröper 2014). So humble offerings were sometimes accompanied or replaced by more elaborate votive objects, usually works of local sandstone producing geometrical, animal and rarely human figures. The high stylization of these goods probably makes them donations by common people.

Furthermore, votive character can be likely recognized for Neolithic objects, especially weapons, noticed in the temple of el-Hassa as well as in the offering area of the Apedemak temple in Naga. The Kushite offerers could not know the age of these goods, probably coming from a funerary context; the donation of them was not aware of their antiquity but rather justified from the admiration for objects outside of the own culture and believed worthy of a consecration to the gods.

4. N 200: KING AS HORUS

The visible complex of el-Hassa was the result of two building phases. According to the excavators, some rams were already part of the processional avenue in the first phase of the temple: this would explain the different dimensions of the statues belonging to the two groups and would allow to attribute the building to Amun since its erection. Its original structure shared the plan of the other known sacral building of Amanikhareqerem, the temple N 200 at Naga (Kuckertz 2011) (fig. 4)[20].

It is a little sandstone structure oriented N-S, placed along the street leading to the great Amun temple. Its consecration is unclear notwithstanding the rich parietal decorative program, that was partly reconstructed by excavators from walls and fallen blocks[21]. In an unusual way Amanikhareqerem is the only royal figure, always shown alone before the gods, first of all on the pylon; on both towers he grasps a group of prisoners by a tuft of hair in order to smite them with a mace-axe, according to the traditional theme of the ruler triumphing over his enemies. The scenes are dominated by the subject of the divine family: divine couples and triads appear on the outer long sides of the temple, whereas the middle scene of the rear wall shows enthroned Isis in a papyrus thicket before a praying king. Though Horus at breast of Isis is missing, the parallels allowed to the excavators to hypothesize his presence.

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[20]   A German mission led by Dietrich Wildung and Karla Kröper has been working at the site.

[21]   This building has been being relevant for improving our knowledge of Meroitic temple iconography, it representing one of few sacral structures of Egyptian influence whose decoration has survived or could be partially reconstructed.
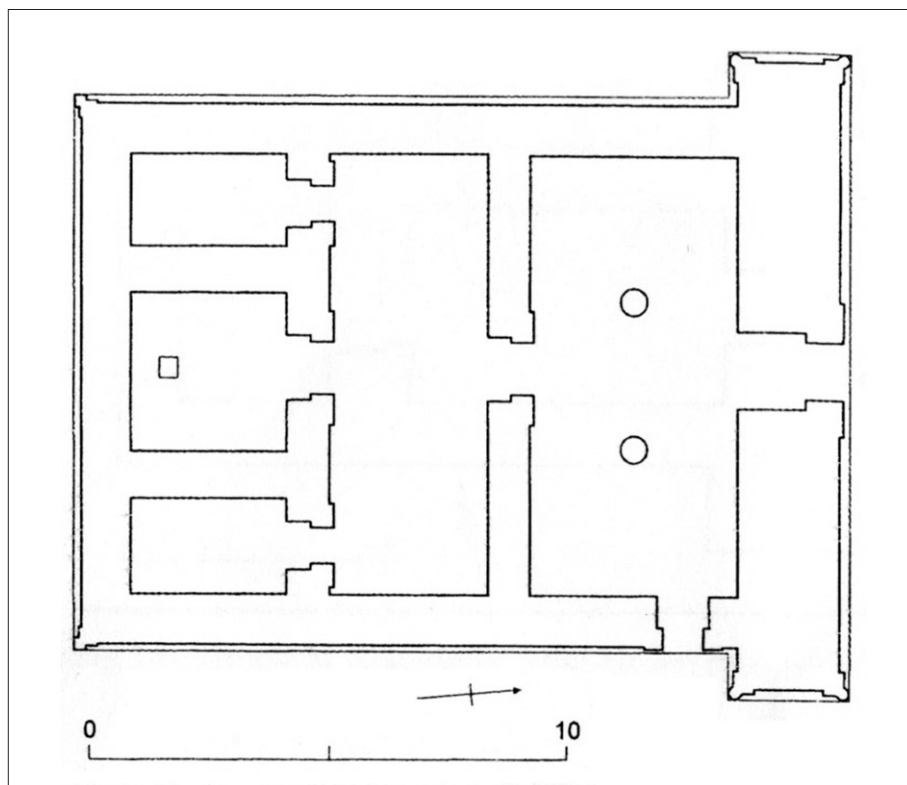
FIGURE 4 – Naga, N 200. 1st century
(Hinkel 1997: fig. 55)

Horus was the symbol of the king, and the descent of the sovereigns from Isis was one of the cornerstones of the Napatan-Meroitic royal ideology[22]. In this sense, the main message transmitted by the reliefs of the temple seems to be the divine descent of the king and the legitimacy of his claim to rule. The goddess, referred to as "Mother of the God", had in fact a primary role in the divine legitimation of the ruler, through the association of her and her son Horus with the Queen Mother and the king[23].

The association between the two deities was a common theme in Kushite inscriptions and artistic media, and had the emblematic very recurrent expression in the intimate and strongly symbolic act of nursing. A serpentinite statuette of suckling Isis, stylistically dated to the 3rd century BC, was brought

[22]   On this topic see Baldi 2016; id. forthcoming.

[23]   In a stela from File Isis, presented as mother of *qore* Adikhalamani (ca. 207-186 BC), sais: "(I) have granted you power (just) as (I once did to my) son [Horus]! (FHN III: n. 132 l. 1 of the scene in front of Isis' legs).

FIGURE 5
El-Hassa, Temple,
Statuette representing
***Isis lactans*. Serpentinite.**
3rd century BC
(Rondot 2010a: cat. 313)

to light in the temple of Amanikhareqerem at el-Hassa (fig. 5): head is preserved in addition to part of bust and arms. It shows well-defined long shaped eyes, flattened nose, prominent cheek-bones and plaits hairstyle. The goddess wears a skullcap and a wide necklace made from decorated bands and strings in relief. The right hand gives her left breast to the breast-fed. Her forehead presents a hole that likely held an uraeus, a diadem or a crown. In addition to a little statue of Osiris (Rondot 2010a: cat. 309), it could link also this temple to the divine descent of the king, but the disappearance of the decorative program, at least at the actual knowledge, does not allow to confirm it.

5.   THE OCCURRENCE OF OUTER ALTARS

Each of the two known complexes of Amanikhareqerem was completed by an outer high altar oriented towards the sacral building and made from a square-plan filled structure whose top was reachable by a ramp (fig. 6)[24]. The occurrence of such altars in two temples of the same king is potentially

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[24]   For the el-Hassa temple see Rondot 2012: 172; for N 200 in Naga see Kuckertz 2011: abb. 78.
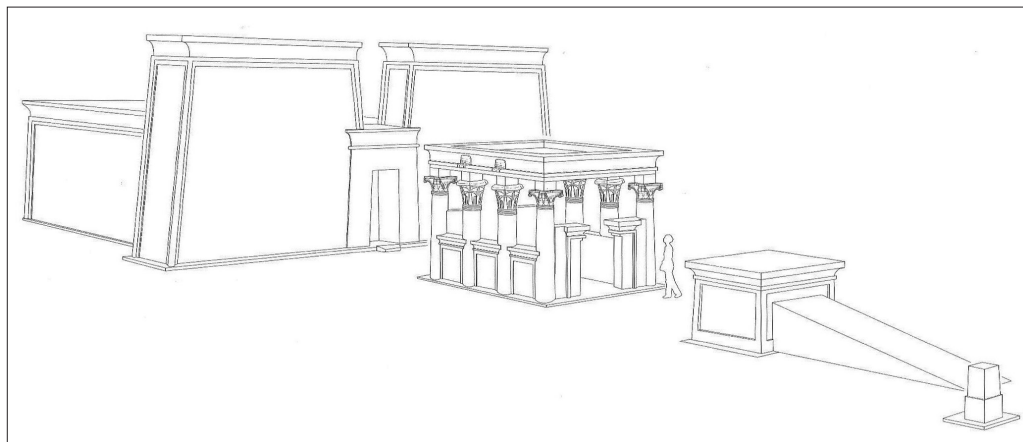
FIGURE 6 – Naga, N 200, Reconstruction. North-east view. 1st century (Wildung 2011: abb. 78)

very significant considering the rarity of this architectural type in Meroitic Nubia. It is in fact attested only in the Sun temple in Meroe (Török 1997a: 111-12, fig. 13a) and in the Amun temples in Naga (Kröper and Krzyzaniak 1998: 205-206, figg. 2-3, pl. VIII), Awlib (Borcowski and Paner 2005: 56) and Hamadab (Wolf 2015: 115-117, pls. 1-2), all of them within the Butana boundaries. Further Kushite comparisons can be found in the Napatan Amun temples of Nubian pharaoh Taharqo (690-664 BC) in Kawa (Macadam 1955: 57-58, pls. 6, 10-11, XLIV/a-e) and Sanam (Török 2002: 133), close to the Fourth Cataract. These suggest an ancient tradition which was forgotten for centuries, at the actual knowledge, and was rediscovered by Meroitic kings.

These outer altars were clearly integral part of the religious complexes, but their exact role is still under discussion. In Kawa, according to the excavators' suggestion, the altar had a role in the coronation rituals (Macadam 1955: 57)[25]; nevertheless, the idea cannot be for sure embraced because of the lack of a similar structure in the other two Amun temples, in Napata and Pnubs[26], which held certainly the coronation rituals in Napatan times.

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[25]   Epigraphic sources justified the suggestion (see esp. FHN II: n. 84 ll. 24 ff.). Cf. Török 1997a: 112.

[26]   See Török 1997b: 215 ff.
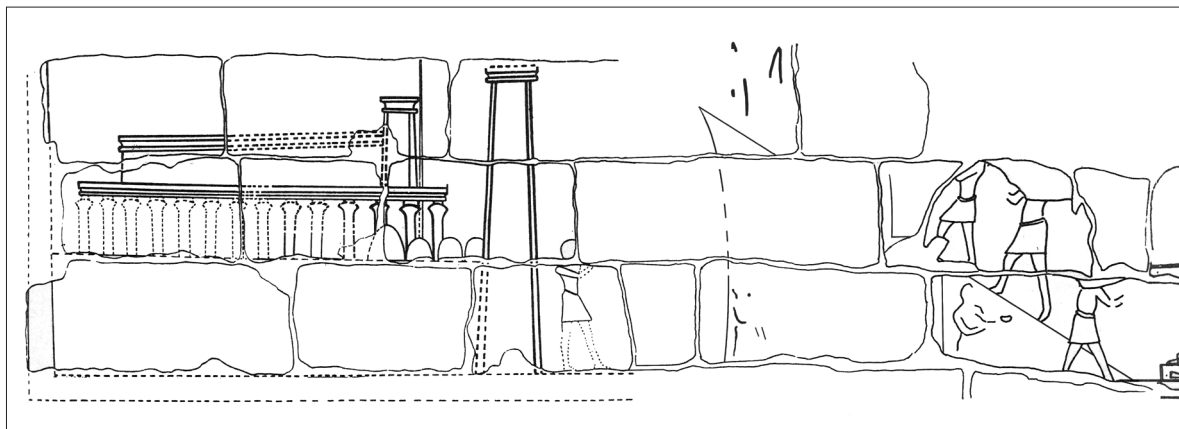
Furthemore, although the coronation ceremonies of the Meroitic kings are not fully known, such a hypothesis is not acceptable for the Meroitic period. In Meroe, an altar linked to coronation rituals would have been likely erected in the close Amun temple, that was indissolubly bound to the ruling dynasty and had a proper throne room, rather than in the Sun temple. Moreover, it would be inexplicable the erection at Naga of two twin altars referred to two temples very close each other and probably functioning at the same time. It is unlikely that these structures had a role when the king visited the temple as well[27].

A badly preserved relief on the western side of the lower podium of the Sun temple may offer an interpretation about the function of these structures (fig. 7)[28]. In a background reproducing the real architecture of the complex, a ritual act is performed on the altar; it is reachable by a ramp, walked up by a prisoner followed by a guard (Garstang and Sayce 1912: 48; Hinkel 1985: 224). Above the altar, the relief would preserve remains of a sacrificial fire; the relief was probably the visible part of a wider scene on the other sides of the podium, and it would have represented the rite of the destruction of the enemy; the supposed human sacrifice would have been the climax (Garstang

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[27] For this suggestion see Kröper and Krzyzaniak 1998: 206.

[28] See Török 1997a: pls. 77-81; id. 2002: fig. 39.
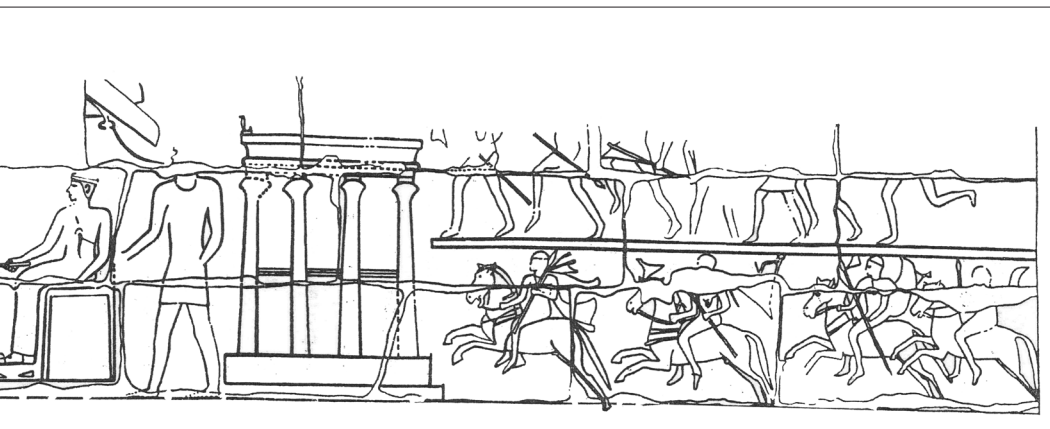
**FIGURE 7 – Meroe, Sun temple, Relief on lower podium, Western side.
Third quarter of the 1st century BC
(drawn by Baldi after Khidir 1988: figs. 24, 27, 29)**

and Sayce 1912: 48; Török 1997a: 109, note 338; id. 2002: 223). The occurrence of a human sacrifice cannot be proved, and according to our actual knowledge appear unlikely[29]. Nevertheless, apart from its specific character, a man seated on a throne watches the ritual and seems be the receiver of it. His attributes and the overall iconographical context would identify him as a deified non-ruling royal person. According to Török (2002: 222-225), this suggests a close connection between the altar and the kiosk, from where the god watched the rituals.

It is unclear if every outer altar shared such a role, moreover it cannot exclude that its function had changed when it was reintroduced by Meroitic kings after a secular gap. At the same time, due to the interaction between the different elements of the sacral complex, the role of the altar could be different according to its specific position: in Kawa and Meroe it was set between the building and the kiosk, whereas in el-Hassa and in the two Naga samples the altar was located behind the kiosk[30].

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[29]   The possible making of human sacrifices in Meroitic temples was dealt with by Michael Zach (2010), who, with all uncertainty of sources, offered but evidences of impalement deaths.

[30]   For the specific case of Awlib altar, which acted probably as terrace cult, see Baldi 2014.

6. THE DATING OF THE KING

The recent discoveries and the re-analysis of past ones in the light of the new data have suggested a more precise dating of Amanikhareqerem, whose ruling period had been dated in uncertain way according to the few available elements. Fritz Hintze had dated his reign to the 2nd century AD under the paleographic study of the inscription on the Soba ram (1959: 33, 68 note 1); Inge Hofmann and Herbert Tomandl proposed a dating on the half of the same century basing on the finding of an Alexandrian drachma of Antoninus Pius (138-161), bearing a ram whose fleece is in scales as well as the el-Hassa rams (1986: 71-72).

Claude Rilly recently offered a more convincing dating after the epigraphic study of the inscription on the medallion found at Naga. It represents the only text reporting the name of the king in Meroitic cursive script (REM 1282; Hallof e Hallof 2000; Carrier 2000: 2, figg. 4-5; Rilly 2011: 199-201, abb. 229):

1) *mnḫe*

2) *reqere*

3) *m: wtemro*

4) *so*[31].

The cursive writing had a greater evolution than the hieroglyphic writing and is more suitable for a paleographic comparison. The four lines of the brief inscription, that seems to be preserved in its entirety, report the name of Amanikhareqerem and a word, *wtemroso*, that was probably an expression of the royal protocol[32], but whose meaning is unclear. Rilly compared this text with other Meroitic inscriptions in cursive script, seventeen especially, ascribed to Natakamani's successors (2001a)[33]. The resulting dating of Amanikhareqerem to the 1st century AD can be certainly shared. Furthermore, the attribution of the king to the late phase of the century is confirmed by seven fragments of decorated sandstone plaques brought to light at Dukki-gel, bearing a cartouche including the Throne name *nb-mȝ‘t-R‘* and stratigraphically dated by Dominique Valbelle in a range between AD 70 and 80 (Valbelle 2011). As said before, in addition to Amanikhareqerem only Amanitenmomide chose this Throne name in the Meroitic period, and the attribution of this king to the 2nd century AD assigns the fragments from Dukki-gel to Amanikhareqerem confirming his dating to the late 1st century.

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[31]   Hallof and Hallof 2000: 169.

[32]   In a bronze conical-shaped object found at Kawa this word is significantly included in a cartouche bearing the name of king Amanikhabale (REM 1026; Rilly 2011: 199-200).

[33]   See also Rilly 2011: 200-201.

7. CONCLUSION

The several international archaeological missions working in Sudan from the beginning of the 21st century, have been improving our knowledge of the ancient Nubian history revealing its protagonists. Occasional findings throughout the territory of the Meroitic kingdom, and excavation work within temples of Naga and el-Hassa, have been especially throwing light on the figure of Amanikhareqerem, ruling in the late 1st century.

The two sacral complexes, which represent the only buildings that can be attributed with certainty to this king, offered significant elements to a better comprehension of the Meroitic world. Their architectural nature can be included in a well-known Kushite background, confirming the heterogeneity of the practices in the encounter between local heritage and Egyptian influx. Artistic and material culture, as well as the epigraphic sources, have been at the same time specifying and enriching our knowledge of the still unclear Meroitic kingdom.

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A Comparative Study of Modified Animal Horns in Ancient Egypt & Modern African Tribes

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ABSTRACT

The phenomenon of modifying an animal's horn was widespread in ancient and modern cultures, especially in African tribes. The modification was typically to one horn whilst the second was allowed to grow naturally, but occasionally both horns were adapted.
The Ancient Egyptian undertook the modification to distinguish the animal intended for similarly, modern African tribes follow this tradition and their cattle selected for horn modification have a very important role in both religious and economic lives of north and north- eastern African citizens. Their economic dependency is a result of the religious and symbolic importance of the cattle. Such African communities are not breeding cattle for the benefit of their milk, but to increase the length of their horns, which represents a special religious significance. The important religious and symbolic role of modified horns can be clarified by observing the traditions of contemporary African tribes who still worship cattle; a tradition that has a close similarity with that of a similar practice by the Ancient Egyptians. This Ancient Egyptian phenomenon, and its continuity in some African areas, is described by Anthropologists as "Cultural Survival", and its study is the aim of this paper.

KEYWORDS

African Tribes, Ancient Egypt, Bull, Horn, Modification

INTRODUCTION

Cattle breeding played an important role in the economic and religious life of ancient Egyptian and modern African communities. Indeed, Economic dependency on these animals had both religious and symbolic importance. Some African tribes not only bred cattle for milk and meat consumption, but also for their longer horns which had a special importance when modified. The religious and symbolic role of cattle's modified horns can be illustrated through the modern African tribal traditions; which are still sanctified. These customs are very similar to the practices of the ancient Egyptian's (Chaix 2004, p. 335). Frankfort (1948, p. 163), describes the cultural traces of the past being transferred into modern times, where the modification of animal horns by human intervention was adopted on wide scale in ancient and modern civilizations. This study is devoted to the existence of this phenomenon in ancient Egypt and modern African tribes.

1. THE EMERGENCE AND SPREAD OF MODIFYING ANIMAL HORNS

This phenomenon appeared and spread during the Predynastic Period in ancient Egypt. Amongst the rock engravings found in the eastern desert at Upper Egypt; there is a remarkable scene depicting three bulls; two of which had modified horns. The significance demonstrates the different modification techniques which were adopted. One bull depicts one horn bent towards the inside whilst its second horn is un-modified and normal. The second bull depicts one horn bent downwards resting on his cheeks, while the other horn is growing normally. The significance in this engraving is the accuracy of the bull's illustration in comparison to that of the poorly engraved man and this may indicate the importance of animals to the artist (Winkler 1938, pl. XVII, 2) (Plate 1).

Amulets in the shape of oxen and cows' heads, each depicting modified horns downwards were found in the Predynastic Egypt. Some of them were worn as necklaces (Hendrickx 2002, p. 285, fig. 16, 4) and found in many sites such as Abu-Sir el Malaq, Abydos, Hou, Abadiya, Tarkhan, Nekhen, Matamir, Badary, Monshat Omar, dating from Naqqada I and Naqqada II periods to the early dynasties. The amulets were made from varying materials but principally ivory, bones, flint, and red garnet.[1] The Brooklyn Museum- New York houses an ivory animal head amulet with hollowed out eyes (Figure 1). Needler (1984, pp. 317-18, pl. 56) believes that this amulet was worn as a necklace for both adornment and protection. She adds that

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[1]   Further reference: Petrie 1920, p. 11, pl. IX, 1-5; Needler 1984, p. 318, pl. 56; Lepp 1999, p. 101.

the downward modified horns were not unique, as they had been observed in a scene engraved on a tusk depicting heads of bulls and their horns modified downwards, dating to Dynasty Zero, found in Hierakonpolis (currently El-kom El-ahmar), housed in the Egyptian Museum- Cairo (Quibell & Green 1900, p. 7, pl. XIV) (Figure 2).

An Ox headed amulet with one modified horn, was found in Naqqada, dating to the Predynastic Period, and depicting a modified horn downwards beside the ox head. Although the second horn is missing (Figure 3), we can conclude that the missing horn was modified up and downwards; which means it was a normal unmodified horn (Schäfer 1896, s. 160, abb. 6; Lepp 1999, p. 103; fig. 6 a).

This trend appeared in scenes throughout the earlier dynasties:

From Old Kingdom tombs:

1. Tomb of Ankh-Ir-s, chief of all royal work, number 15, Saqqara necropolis, fourth dynasty or afterwards (PM III/ 2, p. 452; Seligman 1932, pl. 74a) (Figure 4).

2. User Neteru tomb, Chief of all royal work, number 78, Saqqara necropolis, Fifth dynasty (PM III/ 2, p. 485; Murray 1905, pl. XXII) (Figure 5).

3. Ma-Nefer tomb in Saqqara necropolis, fifth dynasty (Seligman 1932, pl. 74e) (Figure 6).

4. Ty tomb in Saqqara necropolis, old kingdom (Steindorff 1913, tafel 128) (Plate 2).

5. Petah- Hotep tomb in Saqqara necropolis, fifth dynasty (Davies 1900, pls. III, XXI) (Figure 7a and 7b).

6. Vizier Mereruka tomb in Saqqara, dates back to reign of king Tity, sixth dynasty, (Kanawati 2011, pl. 77) (Figure 8).

From the Middle Kingdom:

1. Akh- hotep tomb, chief of stamps, tomb A3, Mir necropolis, dates back to the reign of king Senusret I till King Amenemhat II's reign (PM IV, p. 249; Blackman 1914, pls. IX- XI) (Figure 9a- 9b).

2. Amenemhat tomb, the general chief of ibex Nome, tomb number 2, Beni Hassan necropolis, King Sensurt I reign (PM IV, p. 141; Newberry 1893 pl. XIII) (Figure 10).

3. Khnom-Hotep III tomb, Chief of western tribes, 12th dynasty, tomb number 3 in Beni Hassan necropolis (PM IV, p. 144; Newberry 1893, pl. XXXV; Prisse d'Avennes 2000, p. 112) (Plate 3).

From the New Kingdom:

1. Ken-Amon Tomb, the grain warehouseman, number 162, Deraa Abo-Elnaga necropolis, Amenhotep III reign (PM I/1, p. 275; Davies & Faulkner 1947, pl. VIII). (Figure 11).

2. Kheper-Ra- Senb, Amon high priest, Tutmosis III reign, Number 86, Sheikh Abdel qurna necropolis (PM I/ 1, p. 175; Davies & Davies, 1933, pl. XIV) (Figure 12).

3. On a wall of Ramses II's temple in Abydos (Mariette 1880, pl. 7; Tonic 2010, pp. 178- 79) (Figure 13).

4. Scene of Ramses II's procession, in south western side in the first court in Luxor temple (Leclant 1956, pp. 133- 34; Capart 1925, pp. 279- 80; fig. 193) (Plate 4).

The modification of animals remained a tradition in the late 20ᵗʰ century common among many African tribes (Figure 14 and 15). The procedure was undertaken by vets who were more usually responsible for cows in calf, barren bulls, fractures and wounds (Schwabe 1984, p. 141).

2. METHODS OF HORN MODIFICATION

2.1. HORN MODIFICATION IN ANCIENT EGYPT

The Ancient Egyptians operated on animals' horns; in order to modify their shape and to differentiate the bull or cow destined for sacrifice at a later date. This modification was not only physical in appearance but also resulted in functional change, preventing these animals from bullfighting during the mating period.

The process of modification began when the calves small, and during active growth of the horns. This ensured that one horn would grow horizontally then downward onto the cheek, while the other horn is allowed to grow normally, upwards and backward. These calves grew in stature and importance as they were destined for slaughter and for religious ritual (Schwabe 1984, p. 138; Seligman 1932, pp. 460-61). A scene engraved on a princess stone sarcophagus, represents a cow with only one modified horn, being sacrificed, and dates to the 11ᵗʰ dynasty (Kees 1926, s. 96) (Plate 5).

It was also practice for the ancient Egyptians to modify both horns, equally, to grow up forward downward (Figure 2). This is evidenced a scene carved on a huge hippopotamus tusk found in Hierakonpolis, and dates to Dynasty Zero. It shows a tall façade of a building depicting skulls of bulls with their horns modified downwards, beside their cheeks, in an abnormal way. The

tusk is now preserved in the Egyptian Museum – Cairo (Quibell & Green 1900, pl. XIV; Van Dijk 2013, p. 458).

Murray (1944) commented that many African tribes contemporary at the time modified their animals' horns. As in ancient Egypt, the operation was undertaken on calves at the onset of horn growth. The vet made a vertical cut with a saw to split the horn into two parts, forcing it to grow backwards. This procedure would have been painless. The operation is also of ancient origin depicted in the ancient Paleolithic caves in France (Murray 1944, p. 87). Murray noted that this operation might succeed in calves only when it was done repeatedly on successive stages, and the animal should be domesticated to facilitate this operation (Murray 1944, p. 89).

2.2. HORN MODIFICATION IN MODERN AFRICAN TRIBES

There were various ways of modification, but it was essentially similar to the process in ancient Egypt. The Dinka and Nuer tribes (Figure 16a), typically modified one horn forward and downward, while the other was left to grow normally backward and upward or both horns equally modified, reversing the normal. Such bulls were called "front horns bulls" both horns growing upwards and towards inside (Chaix 2006, pp. 50- 51; figs. 1 & 3; Chaix 1996, pp. 95-97 (Figure 16b).

Each tribe had a distinctive method. The Dinka tribe modified only one horn of the animal forward and the other backwards (Figure 14), whilst the Nuer Tribe modified one horn upward and little to the back, the other horn being bent forward across the animal's forehead (Seligman 1932, p. 461). (Plate 6 & Figure 15). The Dinka and Nuer tribes acquired their knowledge from South of Sudan but it is possible that it was from an earlier knowledge in ancient Egypt. The operation of modified animal horns was described as *nagat* in Neur and Murle tribes. (Chaix 2006, p. 50; Evans-Pritchard 1953, p. 187; Evans-Pritchard 1962, p. 256).

The Longarim tribe of Sudan used a different method. The young calves were chosen, castrated to calm them and only then were their horns modified as desired. The calf then named *Nyamenat*, was then raised, slaughtered and eaten after a ritual service. Whilst it was possible to have more than one *Nyamenat* in the Longarim tribe, it was only possible to have one unmodified bull. (Kronenberg 1961, p. 260). There were four methods of horn modification characteristic to the tribe:

1. The *okodo*, where both horns were modified towards each other and upwards and occasionally connected together like *nakamer* animal (Figure 16b).

2. The *otodo*, where both horns were modified together upwards, with their tips away from each other (Figure 16c).

3. The *ngelec*, where one horn grows downwards, while the other is left to grow normally upwards, some modify the horns leftwards, while others prefer the right (Figure 16a).

4. The *nyelu*, where both horns grow downwards. (Kronenberg 1961, p. 272).

In addition to these Sudanese tribes, some other tribes in Cameroon adopt the same tradition modifying the two horns downward and hanging on the cheek of the animal (Kyselý 2010, p. 1242) (Plate 7). In Modern Ethiopia however, they modified their animal's horns to grow together upwards and inside by fracturing the base of the horn-sheath with a stone weight, Afterwards, the forehead of the animal was cut and stick inserted in to maintain the tension on the rope attached to the horn (Chaix, Dubosson, Honegger 2012, pp. 202-204) (Plate 8a & 8b & Figure 16c).

3. THE IMPORTANCE OF MODIFIED ANIMAL HORNS AND ITS AIMS

There is a great social and religious importance of cattle with modified horns. In Ancient Egypt, the animals with modified horns had a symbolic importance in their owner life (Seligman 1932, p. 460; Chaix 2006, p. 50). In African tribes, the importance is attested by the animals being given special names such as *muor cien* or *macien*. Schwabe (1984, p. 142) reported male bulls which had been castrated distinguished by their red color and white belly (Murray 1944, p. 87), those names are better understood by the Dinka who also have some special color expressions; such as *malwal* for red animal, *majok* for white and valuable ones. Dinka and Nuers' men formed their hands like *muor cien* or *macien* horns while dancing (Lienhardt 1961, p. 16). The *muor cien* or *macien* was an animal with modified horns with a bell in his neck as cattle's leader. In some formal celebrations in the Neur tribe they make a hole at the end of the horn and thread through horse hair and a bell (Seligman 1932, pp. 460- 61). The ancient Egyptians also adorned their animal horns with feathers observed in Amarna period scenes (Davies 1903, pl. XIV). Seligman reported that bulls' colors also were very important in Ancient Egypt as well as in modern African tribes (Seligman 1932, p. 462).

The bull's horns of the Suk tribe in Kenya are modified in various ways. A *kamar* bull has one horn forward and the other backwards. He would be well cared for, and was adorned with ostrich feathers, taken to the river where soldiers danced around it on their knees holding their armor in a defense position, waving with their spears bragging about their courage. The bull was subsequently slaughtered and eaten in this ceremony (Beech 1911,

pp. 8-9; Frankfort 1948, p. 165). It was little different in ancient Egyptian where owners would decorate and pamper those animals destined for sacrifice. This ritual is that all was depicted on walls of tombs and temples, where animal processions were depicted in a beautiful and realistic way. Animal horns were very important that they were adorned differently (Leclant 1956, pp. 128-45).

The shape of animal's horns was very important and symbolic to Longarim tribe who ritualistically brought the cattle together in a field before going to war. [2] The bull with natural horns which called "*arimor edicay*" was slaughtered and eaten, and that was considered as special feast which signify and strengthen the relationship with the dead people, Longarim believed that their enemies would defeat them in the next battle if the bull was not with natural horns. In other ceremonies cattle with modified horns were seen as a connection between the living and dead. If one member of the tribe died then his ox should be slaughtered and eaten before his tomb. (Kronenberg 1961, p. 264).

4. CONCLUSION

1. The phenomenon of horn modification spread in ancient Egypt from the Prehistoric Period until the end of the pharaonic age and is still takes place in some modern African tribes.

2. There is a significant similarity between the phenomenon of modification of animals' horns in ancient Egypt and modern African tribes.

3. The aim of this modification was largely symbolic and ritual ending in the animal's sacrifice.

4. The long-horned animal is the most preferred for the procedure, although the ancient Egyptians sometimes chose the short horned animal for sacrifice.

5. There is no evidence that any horned animal other than cows and bulls was used in the operations of horn modification.

6. The methods of modification varied from the number of horns adapted and the direction of the horn, but the young age of the calf at onset of the procedure was common in all, cultures, tribes and times.

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[2]   To know how animals were chosen to everyone and the importance of using these animals in many celebrations (Kronenberg 1961, pp. 259- 60).

PLATES

PLATE 1
Scene of modified animal horns, rocks of the south
of upper Egypt, Predynastic Period
Winkler 1938, pl. XVII (2)

PLATE 2
Cow with a modified horn, Ty tomb, Saqqara necropolis, old kingdom
Steindorff 1913, tafel 128
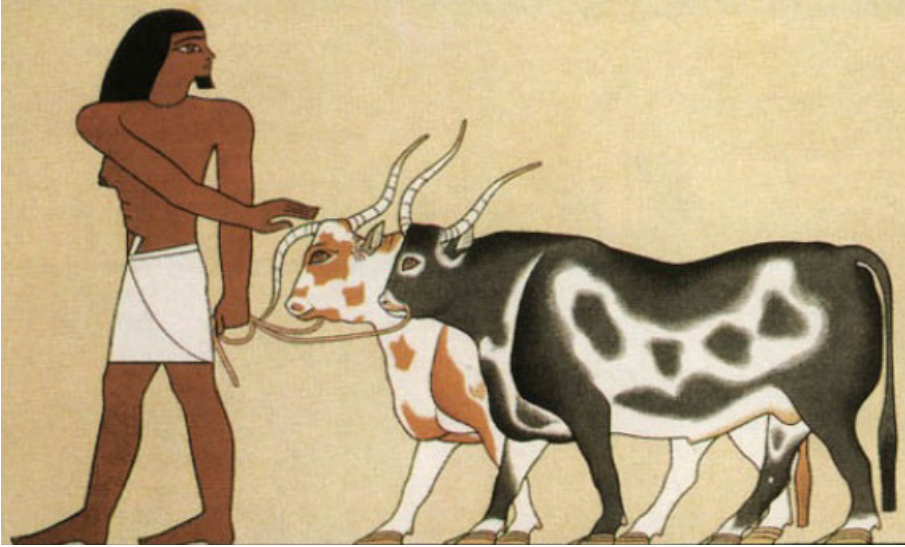
PLATE 3
Colored cow with modified horn,
Khnom-Hotep III tomb, no. 3, Beni Hassan necropolis, 12th dynasty
Prisse d'Avennes 2000, p. 11 = LD IV, bl. 129
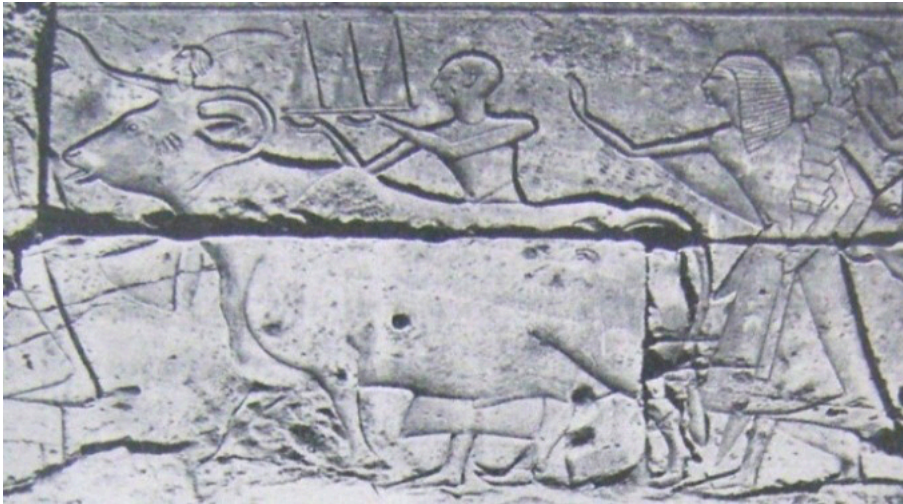
PLATE 4
A Nubian head between a modified horned of a bull, Scene of Ramses II's
procession, south western side in the first court in Luxor temple
Arkell 1955, pl. 8 (a)

PLATE 5
Slaughtering of a modified horned cow for present the foreleg in a special rite,
stone coffin of a princess from 11th dynasty
Kees 1926, s. 96

PLATE 6
Bull with modified horn of Nuer tribe, Modern Sudan
Evans-Pritchard 1962, pl. XIII

PLATE 7
Cattle with hanging horn, Modern Kamerun

Kyselý 2010, fig. 5

PLATE 8a
Fracturing the base of the horn with a stone

Chaix, Dubosson, Honegger 2012, fig. 13

PLATE 8b
Stick inserted in the animal forehead to maintain the tension on the rope attached to the horn

Chaix, Dubosson, Honegger 2012, fig. 14

FIGURES

FIGURE 1
Detailed figure of amulets for a bull's head with two horns modified
Hendricks 2002, fig. 16.4

FIGURE 2
Painting of bulls' skulls on a knapp of hippopotamus, Hierakonpolis,
Dynasty Zero, Egyptian Museum- Cairo
Quibell & Green 1900, pl. XIV

FIGURE 3
Amulet of bull head with one horn modified, Predynastic Period
Lepp 1999, fig. 6 a
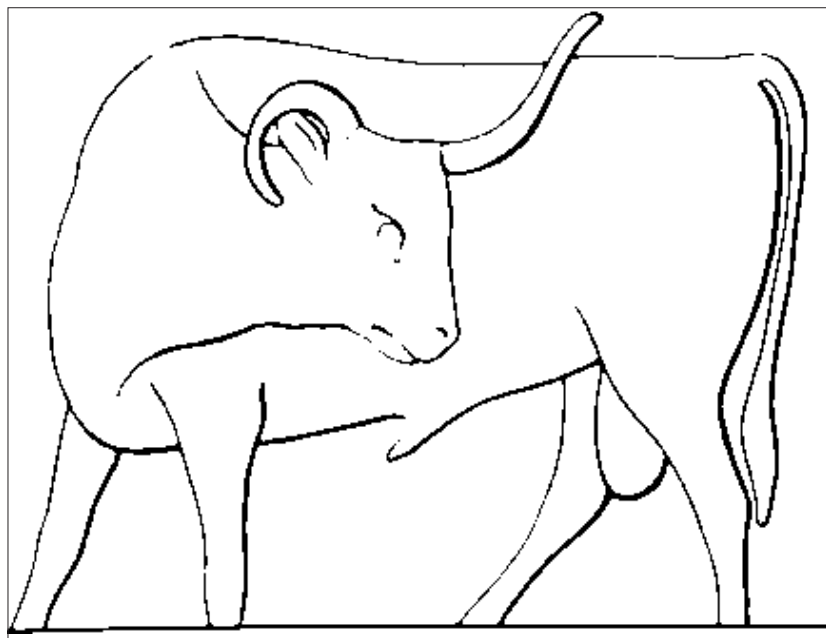
FIGURE 4
Bull with modified horn, Ankh-Ir-s tomb, no. 15, Saqqara necropolis,
Fourth Dynasty or later
Seligman 1932, pl. 74a
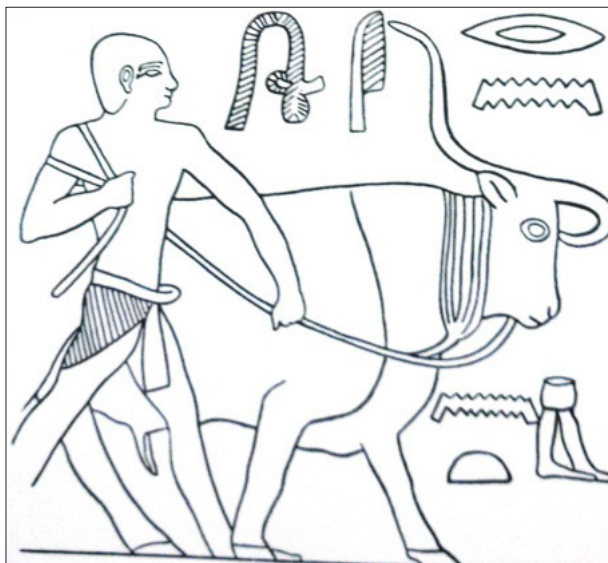
FIGURE 5
Bull with modified horn, User Neteru tomb, no. 78, Saqqara necropolis,
Fifth Dynasty
Murray 1905, pl. XXII
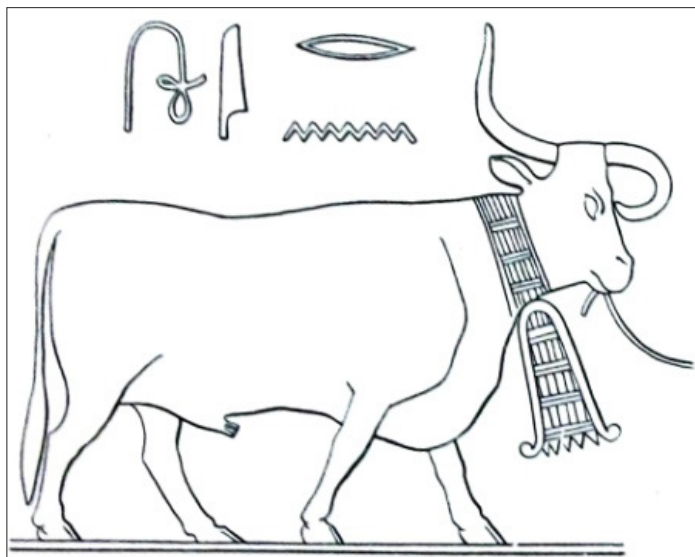
FIGURE 6
Cow with a modified horn, Ma-Nefer tomb, Saqqara necropolis, Fifth Dynasty
Seligman 1932, pl. 74e
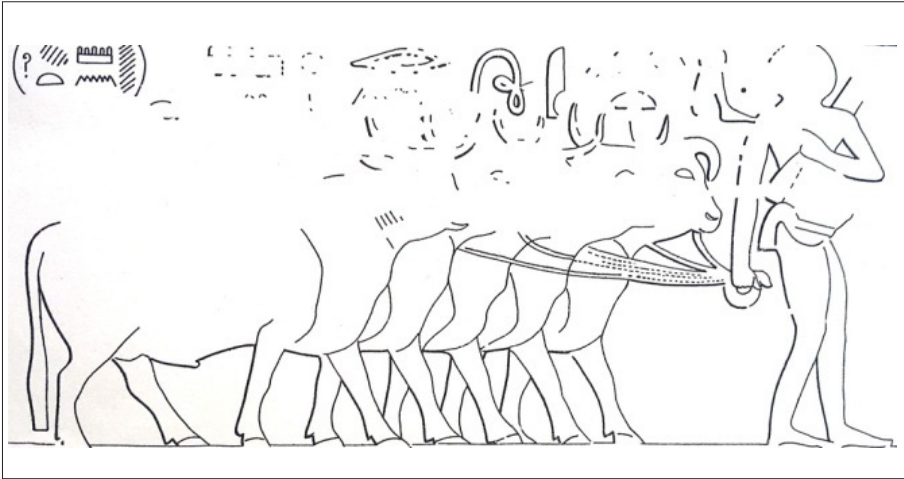
FIGURE 7a
Scene of short horned cattle, one of them has a modified horn,
Petah-Hotep tomb, Saqqara necropolis, Fifth Dynasty
Davies 1900, pl. III
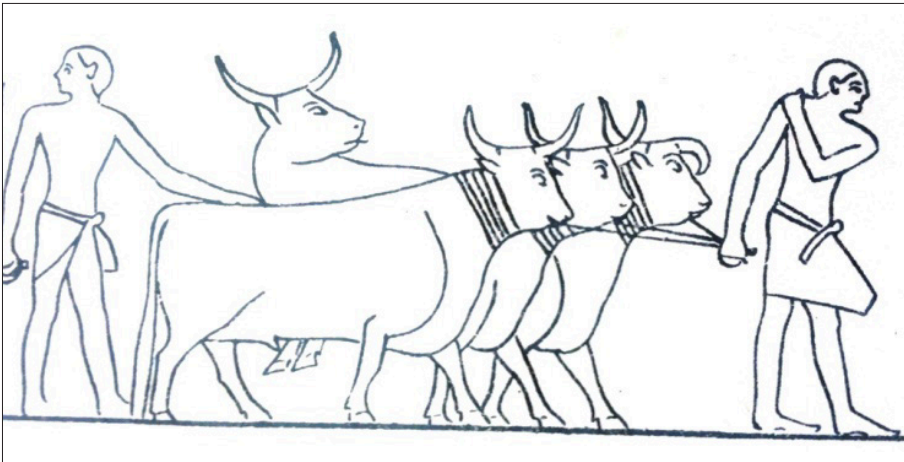
FIGURE 7b
Another scene of short horned cattle, one of them has a modified horn,
Petah-Hotep tomb, Saqqara necropolis, Fifth Dynasty
Davies 1900, pl. XXI
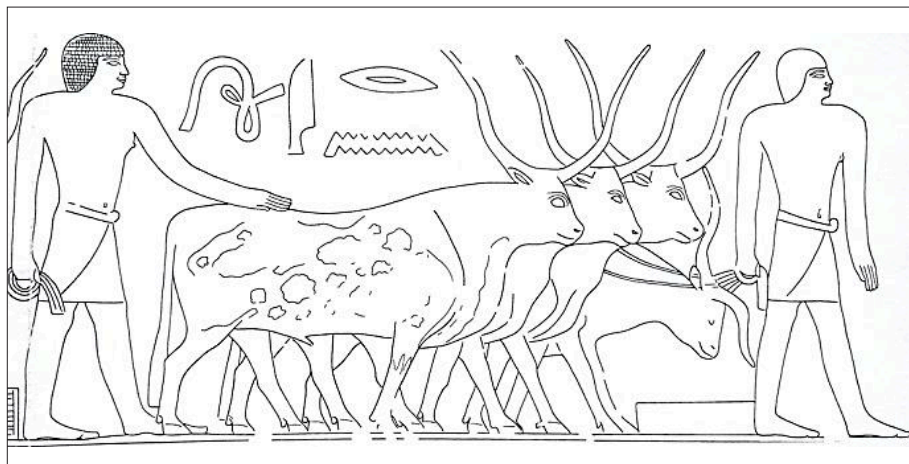
FIGURE 8
Scene of long horned cattle, one of them has a modified horn, Mereruka tomb,
Saqqara necropolis, reign of king Tity, sixth dynasty
Kanawati 2011, pl. 77

FIGURE 9a
White cow with modified horn, Akh-hotep tomb, no. A3 in Mir,
reign of king Senusret I till King Amenemhat II's reign
Blackman 1914, pl. X
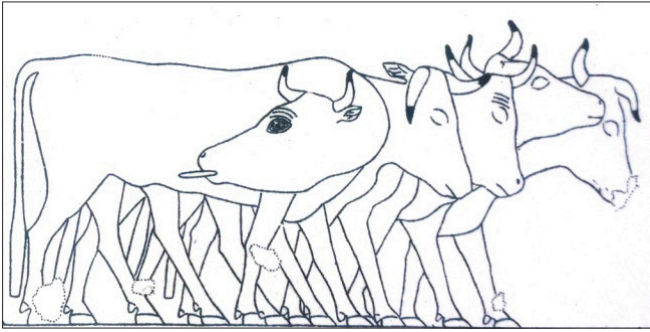
FIGURE 9b
Another scene of short horned cattle, one of them had a modified horn,
Akh-hotep tomb no. A3, Mir necropolis
Blackman 1914, pl. XI
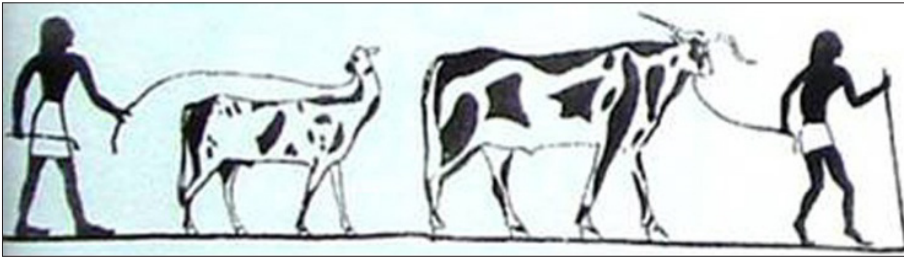
FIGURE 10
Colored cow with modified horn,
Amenemhat tomb, no. 2, Beni Hassan necropolis, reign of king Sensurt I
Newberry 1893 pl. XIII

FIGURE 11
Short horned cattle presented as trading venture from Syrian to Egypt,
Ken-Amon tomb, no. 162, Deraa Abo-Elnaga necropolis, Amenhotep II's reign
Davies & Faulkner 1947, pl. VIII
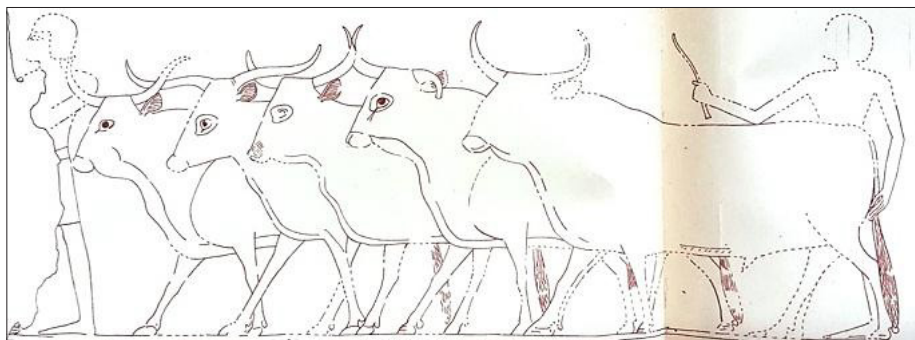
FIGURE 12
Different cattle, among them a modified horned cow, Kheper-Ra-Senb tomb,
no. 86, Sheikh Abdel qurna necropolis
Davies & Davies, 1933, pl. XIV

FIGURE 13
Different modifications of horned cattle,
wall from Ramses II's temple in Abydos
Mariette 1880, pl. 7
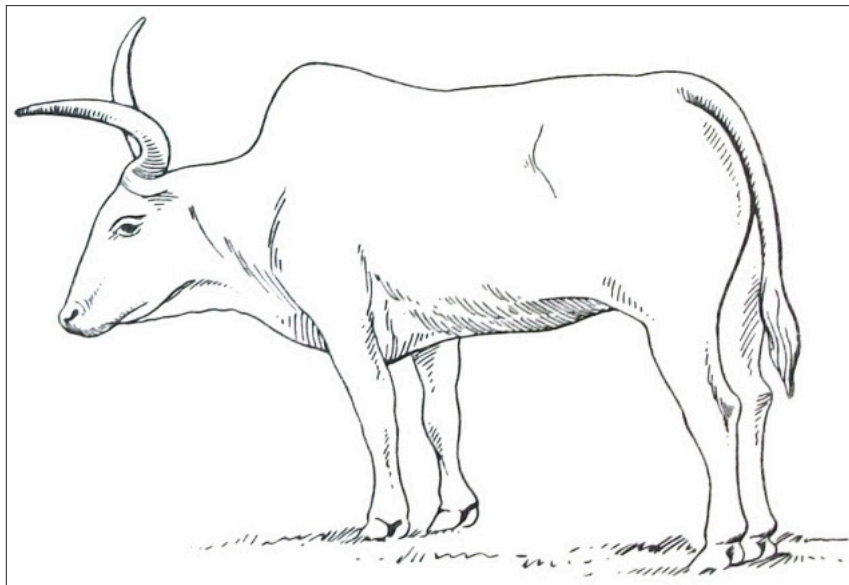
FIGURE 14
A figure of a modified horned bull of Dinka tribe, Modern Sudan
Seligman 1932, p. 74d
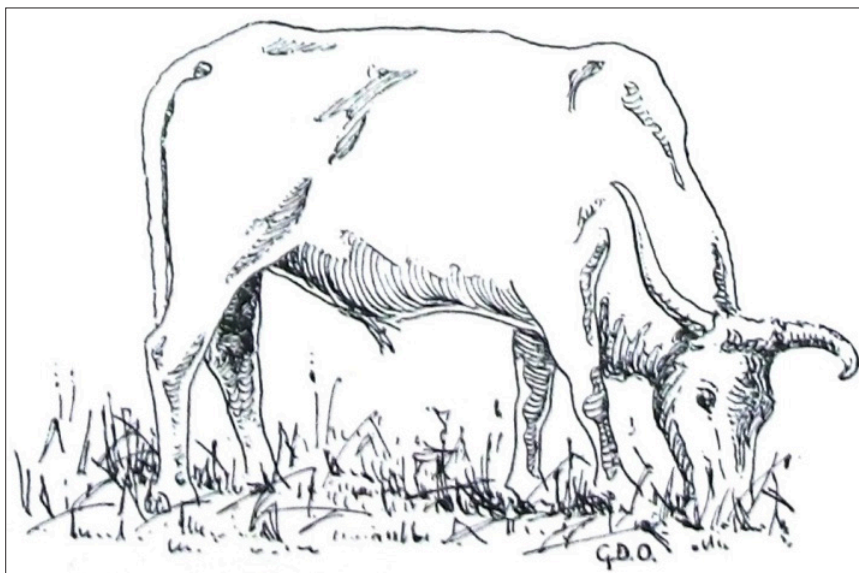
Fig. 15
A figure of a modified horned bull of Nuer tribe, Modern Sudan
Seligman 1932, p. 74g
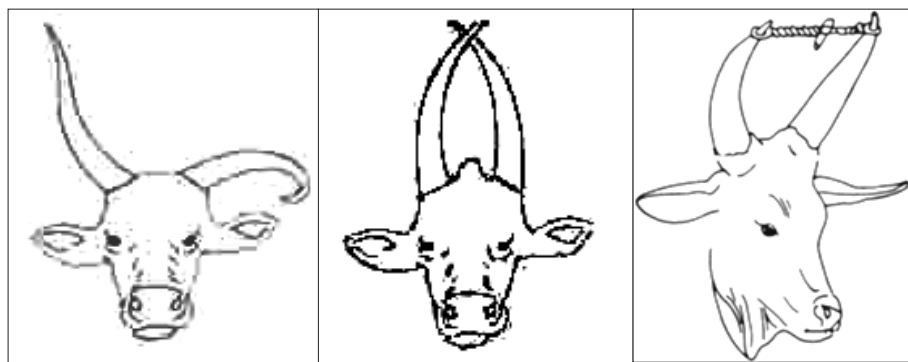
a   b   c

Fig. 16
Supposes of ways of horns modification
Chaix, Dubosson, Honegger 2012, figs. 7, 9 & 10

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The Archaeology and Heritage of the Sudanese Red Sea Region: Importance, Findings, and Challenges

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ABSTRACT

This paper seeks to shed a high light on the archaeological sites discovered in the area of Suakin, Arkaweet, and Sinkat as a part of the project of the department of Archaeology ß university of Khartoum, so, the archaeological sites discovered in this region belong to different periods such as Pre-Historic, Medieval, Islamic, and others are unknown, which means that the region used to link the Red Sea Cultures with those on the central Sudan and Egypt far north and Eretria in the east.
Through this study I am also seeking to evaluate the field work (Archaeological and Ethnographic) conducted in the area of Arkaweet and Sinkat town, and Suakin port, then to put a plan for the managing and protecting the archaeological sites and ethnographic materials. Therefore I will follow or apply a number of approaches in this study such as description, survey analysis of the sites and its contents as well a comparison will be made between the results of the present study with the results of the previous studies in the field of archeology and ethnography conducted on other sites in the Sudanese Red Sea Region. The historical sources will also be compared with the study findings.

KEYWORDS

Red Sea, Archaeology, Heritage, Sudan, Survey, Suakin

1. INTRODUCTION

The Red Sea lies in an ideal geographical location between eastern and western seas in general, and between the Mediterranean Sea and the Indian Ocean in particular. It is a bar-shaped rectangular basin, which narrows towards the north and south.

On the western side of the Red Sea extend the Nile River and its tributaries, which constitute the main water bodies of Sudan; that is in addition to many valleys, creeks and seasonal rivers. The extent of the Red Sea coastline and its unique nature led to the creation of many anchorage sites and natural harbors since ancient times, bringing together culture and commerce to the interior of Africa.

Thus, the Red Sea region also formed the link between the civilizations in eastern, southern, northern and western Sudan on the one hand, and the civilizations of the Levant, Mesopotamia, Egypt and the Arabian Peninsula on the other hand. Hence, the Red Sea has been an important trade route throughout recorded human history, bringing goods of India and the Far East to the markets of Egypt, the Classical World and Europe, and now the Red Sea is one of the most important shipping routes in the world (Zahran. 2010: 104-110).

The geographical location of the Red Sea has a vital role in the history of the countries overlooking the shorelines of the Red Sea in Africa and Asia.

The location of the area of this study is about 400 km from Kassala town in the south and Port Sudan town in the north. It is one of the most important regions in the whole area between the Red Sea and the river Nile, and Atbara River.

The study seeks to shed light on the archaeological sites discovered in the region last season in which were around 83 archaeological sites especially the graves called Roman grave according to the local resources (Adam. 2016: 12).

The archaeological sites discovered in the area extend from Prehistory, to modern times. These will be discussed in detail later.

2. THE HISTORY OF THE RED SEA

The Red Sea was among the first regions of the Middle East to be studied and explored by Europeans as early as 1766 by Jean Baptiste Bourguignon Danville, the French geographer and cartographer (d.1782). Shortly thereafter the publication of the Royal Danish expedition to Arabia provided the first detailed account of the Hijaz and Yemen. However, the publication of the work of James Bruce, a Scottish traveler and travel writer (d.1794) was seminal since his account of his travels in Ethiopia and Nubia could be regarded as the beginning of the historical and archaeological study of the Red Sea region. That is in addition to a number of studies that were conducted on

the left and right shores of the Red Sea during different times and until today (Power. 2012: 6).

The ancient written records on the Red Sea are redolent with references to Suakin, including in the works of Ptolemy, Mas'udi, Maqrizi, Ibn Said, Abulfeda, Ibn Fadllalalh Al-Umari, Ibn Battuta, Ibn Khaldun, Francesco Suriano, Zorzi, Alvarez, Joam de Castro, Almeida, Lobo, Dapper, Danville, Lapanouse, Seetzen, Bruce, Burckhardt and Valentia (Hinkel: 1992: 216). And many songs and other oral traditions of the Beja people. It was the focus of the historic struggles between the Sudanese people and the Ottoman Empire in the 19th century CE, and is considered by most Sudanese, and many other North African people, as a symbol of their link to Islam and their personal pilgrimage to Mecca. The biological diversity of the Suakin reefs and the lagoon around.

Many Roman port identified in the Red Sea such as Suakin, Badi, Aydhab, as Evangeline Portus by Ptolemy, which maintained links with the Nile Valley, Ethiopia and Arabia Felix. In the 9th century CE, a small gold rush resulted in waves of immigration from the Arabian Peninsula.

The new population needed a port for access to their homelands. This early role of Suakin was shared with Aydhab farther north and Badi to the south (Crowfoot: 1911, Kwatoko: 1993). And it suffered with them from occasional invasions from Egypt. Suakin was a prominent city in the 9th centuries CE), when it formed a hub in the Red Sea trade according to Al maqrizi and Ibn Sulaym al-Aswani Suakin as linked to the Nile Valley and also it was an ancient town. At that time, Suakin must have been a small Beja settlement, but it began to expand after the abandonment of the port of Badi to its south, most of its early history, the port was in joint control of both the traders and local Beja tribes.

When John Lewis Burckhardt visited Suakin in 1815 he described a population as emigrated from Hadramout in Yemen. And the Hadareb tribe was in control and Suakin was under the rule of the prince of al-Hadherebe. In the 14th century CE, Suakin was indicated on the map of the many merchants visited the area.

However, one of the most controversial issues with the history of the Red Sea is the uncertainty regarding the location of Punt area in the Red Sea region. From the Old Kingdom onwards, Punt is frequently recorded in Egyptian royal, private, religious and literary texts as a geographical region from which frankincense and other exotic products were imported as well as a mythical place from which marvelous things came to Egypt. According to textual and iconographic evidence, Punt could be reached by land routes or maritime route. Contact with Punt began in Dynasties 5 and 6 (c. 2494-2181 BC) and was frequent in Dynasty 12 (c. 1985-1773 BC), and after. The location of Punt and its routes from Egypt have been debated for more than a century because the Egyptian textual and representational evidence only provides a

general picture of Punt (Fattovich: 1991:257-272). Most scholars agree that the Egyptians were navigating to Punt along the Red Sea as far as the coasts of present-day eastern Sudan.

3. THE ARCHAEOLOGY AND HERITAGE OF THE RED SEA

The heritage in Sudan exposed to many threats in recent decades caused by the economic, and political changes, such as the construction of dams, mining gold, factories and urban sprawl, agricultural and other. The Red Sea consists of many archaeological sites that suffer from such threats. Other heritage consists of songs and living traditions sepecially in Sinkat and Arkaweet. The later will be recorded too.

The area has not been surveyed in details in the past, and very few reports were published about its archaeological importance. Other studies, including underwater surveys, were focused on Suakin Island which show an evidence of occupation dating back to the 11th century CE. The British Institute of Eastern Africa also investigated many architectural elements In Suakin from 2013-2014.

4. THE ARCHAEOLOGY AND HERITAGE OF THE AREA OF THE STUDY

During the first season in September 2015 and January 2016, the survey was conducted in the area between Sinkat and Arkaweet. Special attention was paid to the later area where many archaeological sites were recorded, including cemeteries and buildings remains dated back to colonial era of the region (Figure 1).
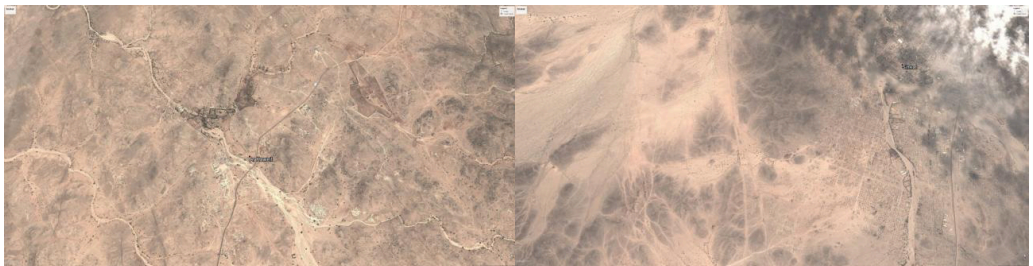
FIGURE 1 – Map of the research area

4.1. SUMMARY OF THE SITES DISCOVERED IN THE AREA

4.1.1. Graves

1. The Acratail grave is a form of the well-known graves in eastern Sudan. Nine graves were discovered in the area. The name is locally means the Roman grave and some researchers have called it (Fishtail) (Figure 2).

2. Shrine of the Mahadia commander Osman Digna. His remains were moved from the town of Wadi Halfa in 1964. He has built a dome slatted for him in Arkaweet.

3. Graves with extension room or buildings and walls.
   Several of the graves has sleeve with a varying size. Among them is a site with a stone fence and grave-rooms. The other types consists of graves with fences, consisting of stones stacked vertically on the edge of the grave, similar to the stone monument (Megalithic) deployed in Europe and North Africa (Figure 3).

4. Cemeteries of Muslims. A large number of Muslim graves with multiple forms, some are elliptical and circular, or surrounded by rocks and other in a *Kom* shape (Figure 4).

5. Cemeteries of pilgrimage route. A large number of circular and oval mounds.

6. Dome Ms. Miriam. A mud and red brick tomb lies in Sinkat built during the Turkish are from red and mud bricks.

7. Dome of Sheikh Ibrahim: it is a high dome in Sinkat town, built in red brick and cement. The dome is surrounded by many graves, some dated back to 12th century.

FIGURE 2 – The type of fish tail grave

FIGURE 3 – Circular grave and the stone monument (Megalithic)

FIGURE 4 – Circular grave and the stone monument (Megalithic)

FIGURE 5 – Khalwa of Majazeeb

1. Khalwa of Majazeeb: Retreat for the memorization of the Quran and the teaching of the doctrine, It receives a young children students and the elderly (Figure 5).

2. The impact of the Prophet (tradition): it is the nature of man on a stone locally called the impact of the Prophet, which is protected by a fence made of stone (Figure 6).

3. Khalawi retreats in the mountains: many types of these khalawi are discovered in the mountains but the information is very limited lack.

FIGURE 6 – The impact of the Prophet (tradition) and ancient Khalwa

FIGURE 7 – Types of the colonial building in the area

4.1.3. Civilian

1. The British Rest House. There are many colonial buildings in the area such as:
   a. the rest houses
   b. the Stable which consists of a number of units and a large swimming pool built of cement and stones, with a number of bathrooms adjacent with each other, in addition to waiting for the platform (Figure 7).
2. Nimeiri Palace. It's built by the previous president of Sudan during the 20th century.
3. Ali Mirghani Palace. It's built during the Turkish era. It consists of many rooms and steps. Many graves were dug nearby dated to the early Muslim era.
4. Dams. There are many dams built in the area. Dams generally serve the primary purpose of which retain water due to the lack and bitter water in the region.

4.2. A PRELIMINARY ANALYSIS OF THE RESULTS OF THE FIELD WORK

1. The fieldwork results in Arkaweet and Sinkat are promising and interesting in many ways such as:
   – First; the discovered sites illustrate the rich of the region in archaeological sites from different periods.
   – Second; the presence of the British colonial sites, which shows the strategic importance of the region during that era.
   – Third: the multiplicity of Islamic sites, which includes cemeteries, shrines, Khalawi and others.

2. Although the current fieldwork was oriented mainly to archaeological data, environmental and topographical elements of the region will present a better scenario of the region in ancient periods. This will be investigated in details in the coming seasons.

5. THE FUTURE PLAN

The project's archaeological investigations have now shown that the Red Sea area is rich with archaeological and cultural remains from different period, extending from prehistory, to modern times. The photographic records from 1888 CE onwards show a constantly evolving architecture in the domestic buildings of Suakin.

Our future research will be based on a number of records from different sources such as archaeology, Local Records, and Ethnographic collections. The personal collections of Jean-Pierre Greenlaw and Greenlaw Archive for example consists of more than 100 drawings of the buildings of Suakin as well as a model of Suakin Island as it was in 1924 CE. Other sources include a series of books and narratives in Arabic, and other different languages, describing the history of Suakin Island and the Red Sea style and the development of European contacts in the region.

It is our duty towards the future generations of this country and global cultural heritage to preserve these crucial landmarks, in Suakin especially the famous towers (Gordon, Kitchener towers), the gateway through which the life-line from the East steadily trickled in and accumulated the pool of our present-day culture and national makeup. These relics cannot be measured in terms of money, and they are invaluable in the development of this young nation, and we still have to consider the great efforts exerted by Turkish government for restoring and preserving the historical building in Suakin.

For the Arkaweet area we are trying to make some excavations, and the proportion of the lack of Arkaweet area before and which represent great importance in the cultural interpretation and early settlement in the east of Sudan, the study seeks to cover the area around the two cities within a reconnaissance exploratory studies and decided that the project Areas that need deeper studies and those that need to rescue excavations.

Through the study, also, the researchers recommended that the revitalization of tourism in the region to achieve sustainable development, and to achieve that it requires fencing some of the archaeological sites and put up signs showing the importance of archaeological sites in the presence of random mining gold campaigns, which represent a major threat to relics due to the tourist activity estimator in Arkaweet, but the visitors are unaware of the importance of archaeological sites because of the lack of information.

6. CONCLUSION

According to the archaeological field work conducted in the area, it should be stressed that the processes of interaction between Central Sudan and Eastern Sudan led not only to the exchange of trade as written in the historical sources but also to the local production in Eastern Sudan of objects in a Nubian and Egyptian style. Most likely, this was the case in several of the cemetery types.

Many of these graves can be related to types of interaction different from the simple exchange of cultures but not alternative to it, as may came from abroad such as horn of Africa or even the Middetrenean Sea. Involving the exchange of ideas and styles, and possibly the movements of small groups of people. Perhaps they were traders or herders, or both, since a pastoral

nomadic component can be envisaged among the inhabitants of the Red Sea.

It appears that these highly shape of the graves from the area do not have the opposed set of carved fields that characterize this type in upper and Lower Nubia and even the close area in Atbara and are more similar to the variant found in the north around port Sudan, the latter of which has a set of grooves in a single direction. These graves are often associated with type recorded in Aroma and Red Sea hill.

In the same assemblage graves of the type of fish tail are always typical of the eastern Sudan. All of these remarks seem to suggest the occurrence of Roman types in north Port Sudan assemblages in these sectors of the area of study.

Therefore, these recent finds seem to support the traditional view relating the culture to the groups inhabiting at the area or at least some parts of it, perhaps to be equated with the Beja tripe

Other interesting assemblages from the area are characterized by Funj elements. These are some graves and roots of the bottle.

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Opium: was it used as a recreational drug in ancient Egypt?

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ABSTRACT

This paper analyzes the existence and use of opium in ancient Egypt, its introduction in the country and references to opium as a medicinal ingredient. Some prescriptions in medical papyri are mentioned as records confirming the application of opium. Objects are mentioned as records of the drug presence in Egypt. Whether it was used only as a medicine but also as a recreational drug is here discussed. The attempt to date the introduction of the Papaver somniferum L. *plant in ancient Egypt is also developed. Scientific data were consulted, but it is needed to note that some authors present different views. Nevertheless, this paper suggests that opium may have been introduced in ancient Egypt in the New Kingdom (c. 1550-1350 BCE), although records for the commerce of the drug may point to the end of the Ptolemaic Period, influencing Greek medicine and expanding its use throughout the Roman Period onwards.*

KEYWORDS

Opium, ancient Egypt, medicine, plant

1. CERTAINTIES ABOUT OPIUM HISTORY IN BRIEF
AND IN ANCIENT EGYPTIAN CONTEXT

The majority of medical prescriptions in ancient Egypt used vegetable ingredients, aside from minerals, human secretions and animal contributions as well. Some of the plants used to extract these prescriptions' ingredients were indigenous to Egypt, others were not. The artifact which began this investigation is a ceramic jug in the shape of a poppy, on display in the Science Museum in London (a Base ring juglet, probably from Cyprus[1], circa 1550 BCE, unknown maker, inventory n. A170473)[2]. Theory stated that opium was dissolved in water or wine and then exported in jars. The opium poppy plant was not indigenous to Egypt[3], so Egyptians presumably began to cultivate the *Papaver Somniferum* plant later on, around Alexandria, in the Ptolemaic Period[4] (a note about *mekonion,* made from the plant leaves and fruits, a less potent drug than opium). From texts and artifacts we have a visual impression of how the ancient Egyptians unconventionally illustrated their plants as compared to modern botanical drawings. However, no use of a drug such as opium for recreational purposes is anywhere suggested in ancient Egyptian literature. We can surmise that the plants' active substance was among important ingredients probably only in medicine and magic in ancient Egypt.

Active substances of plants such as opium were almost for sure discovered by means of experimentation. Their effect on human health either in medical or therapeutic context, as magic, was an important part of medicine, and it is mentioned by classical authors such as Dioscorides[5].

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[1]   In a 2009 conference where Michaelides submitted a paper about Medicine in Ancient Cyprus he stated that neither *Papaver somniferum,* nor opium have been found in archaeological contexts, as belonging to a Cypriot medical tradition, but that it is generally accepted, that in the Late Bronze Age (1600–1050 BCE), Cyprus produced and exported opium. A large number of vessels of Base Ring Ware with the shape of the poppy capsule have been found in the Eastern Mediterranean, Michaelides, 2009: 99, and, for the interest of this paper, in Egypt.

[2]   There is also a base-ring I juglet from Memohis at the Otago Museum in Dunedin, New Zealand, published by Aström and Anson, that can be added to the ones inventoried by Merillees. More imported Cypriote vases such as this registered to have been found in Egyptian territory (Tell el- Dab' a, Memphis, Saqqara, Sedment), Åström, and Anson, 2007: 44.

[3]   Nunn, 1996, 155; Newberry mentions that the poppy 'was already found in the corn fields of the Fayum as early as the XII Dynasty', Newberry, 1900: 145.

[4]   Shah, 2011: 23.

[5]   *De Materia Medica,* being an herbal with many other medicinal materials written in Greek in the first century of the common era; a new indexed version in modern English, 2000, IBIDIS Press, South Africa; Dioscorides called the red poppy 'mekon roias' (from rhoeas which means to fall in Greek, as the latex drops rapidly), Rosso, 2010: 84.

The ancient Egyptians may have known about the plant properties from their neighboring peoples, and may have used it as a sedative, consumed either with beer or wine, as they did with mandrake.

The *Papaver somniferum* is an annual plant[6] of a green-blue color with very showy flowers, red, purple or white colored. The fruit is a capsule, crowned by a disc formed by stigmas. Its latex, the opium, has more than 20 alkaloids, most of those used in medical field, being morphine, papaverine, thebaine and codeine the most frequently used in pharmacy. Just as Dioscorides describes[7], the latex extracted from the unripe fruit of *Papaver somniferum* poppies, produces a resinous substance, the base for analgesic/sedative drugs such as morphine and the ones mentioned above. He also mentions which types of illnesses where treated with the 'medicinal poppy'; such as lack of sleep and erysipela[8]. The use of poppy juice and lettuce latex combined seemed to be another popular remedy for ailments in antiquity[9].

It is a domesticated annual plant, with an unknown wild progenitor, that spread from Asia Minor, perhaps early in the fourth millennium BCE. Botanical studies have confirmed that the original home of the opium poppy was the Anatolian south coast of the Black Sea, rather than the northern eastern Mediterranean coast[10].

The Sumerians, who called it the joy plant[11], grew it by 3400 BCE, probably infusing the capsules, in water, mead, or wine to produce the analgesic tea the ancient Greeks called *mekonion*, already mentioned above[12]. A piece of evidence for the use of opium by the Sumerians is a tablet of medical prescriptions found at Nippur, (2100 B.C.E.) containing a cuneiform ideogram "hul-gil", translated as "joy plant"[13]. The "joy plant" translation is refuted by Krikorian[14].

In La Flore Pharaonique (Loret, 1887 a), both *Papaver* are mentioned as existing in Egypt, *Papaver somniferum* being sustained by Pliny's work[15] that

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[6]   A plant which is native to the Mediterranean Basin, Southeastern Europe, and Western Asia; thriving in sunny, dry areas.

[7]   *Materia Medica*, book IV, 64 in Osbaldeston, 2000: 604.

[8]   Osbaldeston, 2000: 607-8.

[9]   Osbaldeston, 2000: 608.

[10]   Askitopoulou et al, 2002: 29.

[11]   Shah, 2011: 21; Wink, van Wyk, 2008: 20.

[12]   Hobbs, 1998: 65; Osbaldeston, 2000: 608.

[13]   Boekhoud, 2003: 291.

[14]   Krikorian, 1975: 99.

[15]   Historia Naturalis, Book XIX. The Nature and Cultivation of Flax, and an Account of Various Garden Plants, Chapter 1.—The Nature of Flax Marvellous Facts Relative thereto, Chapter 53.—The Poppy, http://www.perseus.tufts.edu/hopper/text?doc=Perseus:abo:phi,0978,001:19#note-link402

indicates opium to be known to the ancient Egyptians, and *Papaver rhoeas L.* confirmed to still exist around Alexandria, that blossoms in March and April each year, having been discovered in mortuary garlands such as the one from princess Nesi-Khonsu (22nd dynasty)[16]. The species of *Papaver* used in gardens, the *Papaver rhoeas L.* (red poppy), was found in a vase that has been discovered at the tomb of Kha at Deir el-Medina in Egypt, c. 1500 BCE[17]. In this one, tests were inconclusive in finding alkaloid presence[18].

2. MEDICINE, POISON, OR DRUG, EGYPTIAN OR GREEK, DID *KYPHI* INCLUDE OPIUM?

The pharmacopoeia of ancient Egypt in Ptolemaic times had for sure novelties brought by Greek physicians, and some of them emphasized plant properties for their medicinal qualities, but also for their magical characteristics, thus giving them superior powers of healing. For instance, Herophilus said that drugs are not anything per se[19]. The word pharmakon could meant medicine, venom or magic, spell or incantation, and also "what casts away disease" as described by Homer. This drug, nēpenthes pharmakon (Greek), mentioned in Homer's Odyssey is something that leads to the forgetfulness of pain and sorrow, referred to as having its' origin in Egypt, and literally meaning 'no more pain' - (ne = no, penthos = pain, sorrow). In the Odyssey, nēpenthes pharmakon is a magic potion given to Helen by an Egyptian queen, Polydamna; would it have opium (poppy juice) as an ingredient?

The composed Kyphi[20] kAp.t nfr-nfr, two times good[21], or in another

version[22], kAp.t nfr-nfr, again, two times good[23] is made with vegetable ingredients; honey, possibly grape wine, attested to be 'oasis' wine[24], then manufactured into pastilles to be burned; but its ingredients in prescriptions

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[16] Loret (a), 1887: 51.

[17] Askitopoulou et al, 2002: 29; Koschel, 1996: 160.

[18] Bisset et al, 1994: 101.

[19] Von Staden, 1989: 400.

[20] kApt according to Helck, LÄ III, 1980: 902; To be burnt in the house for fumigation of textiles and air (pEbers, 98, 12), to wash the mouth (pEbers, 98, 14b), to expel demons that cause disease (pBerlin 3038, 6 ,6), further applications in temple rituals also described summarily in Helck, LÄ III, 1980: 903.

[21] Loret (b), 1887: 14.

[22] Lüchtrath, 1999: 97.

[23] Lüchtrath, 1999: 97.

[24] Lüchtrath, 1999: 104.

vary in authors (sixteen to Egyptians and eleven to Greek), widely used in Greco-Roman times in Egypt[25] as attested by texts in temples. There are only three Egyptian recipes (two at Edfu[26], one at Philae[27]), and, Loret, who studied the transcriptions of the originals[28] made by Dümichen and Champollion, said that none contains poppy juice or opium. Loret also mentions that Galen wrote about kyphi being administered as a beverage to internal organs' ailments (liver and lungs); was it a pain reliever? The probability of it including opium and be used as a recreational drug is uncertain, and probably inexistent, but still worth mentioning.

3. EBERS PAPYRUS' REFERENCES (P.EBERS)

At Sennedjem's tomb (TT1), at the east wall of the chamber, in the 'fields of the netherworld', a lower register divides two margins with an irrigation channel; an upper margin with an orchard shows date palms (*Phoenix dactylifera L.*), doum palms (*Hyphaene thebaica L. Mart.*), and fig sycomores (*Ficus sycomorus L.*) bearing fruit, and a lower margin shows a flower garden with red poppies, (*Papaver rhoeas L.*) blue cornflowers (*Centaurea depressa Bieb.*) and yellow mandrakes (*Madragora officinarum L.*) [29].

Merrilees mentions an opium poppy head found at Deir el-Medina's tomb 1389, as the earliest proof of poppy presence in Egypt, but we must consider the possibility of the tomb having been vandalized, and thus, the specimen being a late inclusion[30]. About 1450 BCE opium is generally considered for its medicinal applications, as stated in pEbers 782, in a prescription for an infant colic (as a pain reliever)[31].

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[25]   Loret wrote about *kyphi* in 1887, in his Le Kyphi, Parfum Sacré des Anciens **Égyptiens**: "Les auteurs classiques nous ont fait connaître l'existence , chez les anciens Egyptiens , d*un parfum sacré dont ils transcrivent le nom kyphi. Je réserverai pour un prochain travail l'étude du kyphi au point de vue de son emploi dans le culte égyptien et de son importation dans le monde gréco-romain. Je ne veux aujourd'hui que comparer, aux trois plus anciennes recettes fournies par les auteurs grecs, trois inscriptions d'époque ptolémaïqiie qui nous en- seignent, en hiéroglyphes, la manière de préparer ce parfum. Les recettes grecques nous ont été transmises par Dioscoride, Plutarque et Galien."

[26]   Chassinat, 1990: 203, 7-204, 8; 139 (135), third register; 211, 5-212, 10; 139 (136), third register.

[27]   Winter, Philae, in Textes et langages de l'Égypte pharaonique, Hommage à Jean-François Champollion III, *Bibliothèque d'Étude* 64, 1974, 229–237.

[28]   Loret (b), 1887: 15-17.

[29]   Shedid, 1995: 80.

[30]   Merrilees, 1968: 155; Hobbs, 1998: 66.
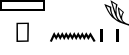
[31]   Bardinet, 1995: 360-361; Nunn, 1996: 153-6.
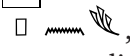
FIGURE 1 – Fragment of tomb wall painting showing red poppies
Shedid, 1995: 80

Not only is the poppy mentioned as a sedative, but the same prescription (pEbers 782)[32] is literally said to be used for stilling the pain 'which is caused by worms in the intestines'.

Both *špn* and *špnn* names appear in medical papyri, notably pEbers[33].

The shepen plant, ⬜ 𓈖 𓏤𓏤𓏤, *špn*, intentionally identified with the poppy, is mentioned in other prescriptions such as pEbers 440, 443 and 445 for hair treatment; pEdwin Smith 41[34] and 46, to treat some kind of chest abscess, fever or burning ache[35]. The word *špn*, ⬜ 𓈖 𓆰, a generic name for both *Papaver Rhoeas L.* and *Papaver Somniferum*, uses a live plant determinative (𓆰 Gardiner M2); we believe this may imply that the Egyptians knew it as a cultivated plant. The word used for the flower, seed or capsule was

špnn, ⬜ 𓈖 𓆰𓏤𓏤𓏤 but the word used for the flowers of the red poppy was

špnn-dSr[36], ⬜ 𓈖 𓏤𓏤𓏤 𓂋 𓏤𓏤𓏤. This explains the different etymologies

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[32]   Nunn, 1996: 153-154.

[33]   Nunn, 1996: 155.

[34]   Breasted, 1930: 378-383; case 41, XIV, 6, a treatment that includes an ingredient translated by Breasted as red *špnn* in page 379, translating as red poppy plant; in page 383 Breasted fails to identify the plant; although he understands that the prescription uses the part of the plant, and that it also occurs in other medical prescriptions (in Ebers and Edwin Smith papyri).

[35]   Bardinet, 1995: 315-6, 360, 514-6.

[36]   Personal communication by Dr. Gabra.

used in medical papyri, all derived from the *špn*. The knowledge of opium as a substance commercialized in jugs from the Mediterranean maybe not be the same of a living, cultivated plant that produces the known substance in jugs. Manniche refers the *špn* as being cultivated in Egypt[37] and Prospero Alpini[38] said "it stimulates men in war and love"[16]. One thing poppy juice cannot do is stimulate as its' alkaloids induce sleep. Germer says that *špn* is not opium: a critical view. Germer stated that a single paragraph in the pEbers 782[39], the prescription for an infant colic mentioned before, shows little knowledge[40] about the applications of opium by the ancient Egyptians. It is not even listed in the Vindob Papyrus (D 6257)[41], a list of Egyptian drugs from the 2nd century, when Greeks[42] and Romans were acquainted with this drug's use[43].

4. BASE RING JUGLETS

Another researcher of opium[44] traces opium original precedence back to Cyprus and its trade, importing the jars into Egypt in the New Kingdom. He compares the opium poppy image to the containers, called Cypriot Base-Ring I juglets or 'bilbils' form, appearing in Egypt in the first half of the 18th Dynasty[45]. More recent scientific tests detected morphine traces in the Cypriot vases, which can substantiate Merrillees' theories based on macro observation of the pottery[46] which were modeled to resemble[47] the opium poppy as to indicate their content[48].

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[37] Manniche, 1989: 130.

[38] An Italian botanist who travelled to Egypt in order to extend his knowledge of exotic plants, (1580). He was a physician to George Emo, Venetian consul in Cairo.

[39] Nunn, 1996: 156.

[40] Germer mentions that without a chemical analysis, only macro-observation is not enough to say opium was present or that the vase contained opium and I agree, Koschel, 1996: 160.

[41] Reymond, E. A. E., *From the Contents of the Libraries of the Suchos Temples in the Fayyum. Part I, A Medical Book from Crocodilopolis. P.Vindob. D*. 6257, Wien, 1976.

[42] A recipe containing opium and found in Egypt is described in Papyrus Oxyrhynchus 234, a fragment of a treatise on medical prescriptions by an unknown author, written in Greek and dated to the second or third century. Currently housed in the library of the University of St Andrews in Fife; published in 1898 by Grenfell (see bibliography below).

[43] Nunn, 1996: 156.

[44] Merrillees, 1968, 287-292; Nunn, 1996: 155.

[45] Allen, 2005: 46.

[46] Emboden, 1995: 93-107.

[47] Boekhoud, 2003: 297.

[48] Most recently there were four Base Ring I juglets found in a Late Bronze IIA (14th century BCE) context at Tel Beth-Shemesh, Israel (2008), and those were submitted for

In prehistoric Greece, no written data exists concerning the use of opium as a recreational drug, but a number of small jars were found in Minoan Crete; probably containing medicinal opium[49].

The definition of these jars as being containers for opium is given only by macro observation of the shape and decoration of the jars, but also by the existence of a 'goddess of poppies' showing hairpins shaped as poppy capsules from *Papaver somniferum* (second half of 14th century BCE). Also in Mycenaean civilization some jewelry pieces show that they must have known the plant and maybe considered it as divine[50]. To the Greeks, the poppy belonged to three gods; Thanos (death), Hypnos (sleep) and his son Morpheus (dreams)[51].

5. OPIUM AS A MEDICINE

The ancient Egyptians probably used the opium poppy latex as medicine only, as both *Papaver somniferum* (poppy, 30% alkaloid) and *rhoeas* (common red poppy, 42% alkaloid) were cited in medical papyri continuing to the Greco-Roman Period[52]. Later on, in Coptic and Arabic writings, opium is used only in medicinal prescriptions. Schweinfurth, more restrained in his opinion, holds that the poppy was introduced into Egypt only shortly before the Roman era[53]. In fact iconographical descriptions such as the imported

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residue analysis at the University of New York at Albany, considering they were already contaminated, degradation suggesting they were used to contain a medicine oil made with other plant ingredients, so, no remnants of opium were found, Chovanec et al, 2015: 175, 180-185. This proves the difficulty to scientifically find residue of opium in such ancient recipients, probably re-used more than once in antiquity (until they broke).

[49] Askitopoulou et al, 2002: 24.

[50] Askitopoulou et al, 2002: 23.

[51] Wink, van Wyck, 2008: 20.

[52] Boekhoud, 2003: 296; at the city of Oxyrrhyncus, in the documents found, there is a papyrus fragment, (Papyrus Oxyrhynchus 234 - P.Oxy. 234 or P.Oxy. II 234) dated to the third century, CE, showing part of a prescription where *mekonion* is referred to be taken in with raisin wine (currently housed in the library of the University of St Andrews in Fife, Scotland, published in Grenfell, B. P.; Hunt, A. S., 1898, Oxyrhynchus Papyri II, London: Egypt Exploration Fund. pp. 134–136. Another fragment, now owned by the Egypt Exploration Society and kept at the Sackler Library at Oxford University, and thought to be a treatment for rheum, a discharge of mucus from the eyes, using several vegetal ingredients, mentions, among those, the, poppy juice: http://www.livescience.com/50544-ancient-hangover-cure-discovered.html

[53] Petrie, 1890: 47; Rohlfs, 1876 : 63; Löw describes the *Papaver Rhoeas* as the field poppy, and says the Arabs call it 'father of the pharaoh', Löw, 1924: 363; Schweinfurt refers the *Papaver somniferum L.* as being represented in images/depictions from ancient Egypt, but stating this plant was known in Egypt from Roman times onwards, Löw, 1924: 528-529. Items found that represent poppy capsules are the earrings of queen Tawseret

FIGURE 2 – Queen Tawseret's earrings
Davis, 1908: plate VII

FIGURE 3 – Karnak's 'botanical garden'
(photo by the author)

plants in the so-called 'botanical garden' of Tutmose III[54] in Karnak do not show *Papaver spp*.

Even so, art depictions that may portray poppies are not indicative of the use of their latex for recreational uses. The knowledge of the existence of opium as a substance inducing sleep or numbness should be considered for medicinal purposes, or we would have references to such 'altered states' in ancient Egyptian literature.

6. GREEK TO COPTIC TO ARABIC

Galen, who spent some years in Alexandria, mentions the 'addiction' of Marcus Aurelius to opium[55] and writes that the preparation of opium had been taught to mortals by the Egyptian god Thoth, who in later years was called Hermes Trismegistos[56]. Galen also mentioned cooling substances, among those was opium (XIII, 155) and poppy (I, 649, XI, 404, 421, 596, 603, 751), used to

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(18th Dynasty), found at king Siptah's tomb (KV47), published by Davis, 1908, The tomb of king Siptah, London; other earrings found at Tell el-Amarna, also show the serrated top of the poppies, Some of the floral collars, from the embalming cache of Tutankhamun's have been identified to include dried poppies, they were gifts of Theodore M. Davis, 1909 (09.184.214), (09.184.215), (09.184.216) to the Metropolitan Museum in New York, http://www.metmuseum.org/toah/works-of-art/09.184.214-.216

[54] Koschel refers that the vessels studied by Merilees dated from the Second Intermediate period and the reign of Thutmose III, Koschel, 1996: 159.

[55] Porter, 1997: 17-23.

[56] Kritikos, 1967: 17-38; Kuhn, C. G., ed., 1821-33, *Claudii Galeni opera omnia*, 20 vols., Leipzig.

induce sleep, but in small doses.[57] As the word for opium is written in Greek, ópion, the use of opium seeds becomes entirely credible, in the Greco-Roman papyri of Oxyrhynchus[58] and Zenon[59]. Petrie[60] refers weed-seeds were found among barley grains, among those some thought to be poppy seeds (*Papaver rhoeas L.*); it is asserted then that the cultivation of the poppy was widespread in Egypt.

According to Gabra[61], the poppy referred to as špn and its description coincides with that of the Coptic medical papyrus, known as the Chassinat papyrus[62], where opium is mentioned twenty-two times as being used mainly for external treatment in the form of eye-drops, ointments, or powders.

In his conclusions, Gabra mentions that the use of the products of the poppy continued throughout the centuries and that the term opium was adopted by the Copts. Opium was a famous drug in Egypt, where many districts were noted for its preparation (in the Coptic Period)[63].

Cultivation of poppy in Egypt developed during the Arab period (7th century), it was cultivated in Alexandria. Wilkinson[64] reports opium in Egypt sown end of November and seeds ripe in April, its name in Arabic being aboonôn (father of sleep). Also according to Gabra, the poppy plant was cultivated in Egypt for medicinal purposes as late as 1914.

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[57]   Rosso, 2010: 85.

[58]   Published by Grenfell, Bernard P. (Bernard Pyne), 1869-1926; Hunt, Arthur S. (Arthur Surridge), 1871-1934, Oxyrhynchus Papyri, London: Egypt Exploration Fund.

[59]   pMichigan 26, 46, I, Zenon Papyri, Edgar, C., C., (ed.), 1931, Ann Arbor, Univ. of Mich. Studies, Humanistic Series 24, University of Michigan Papyrology Collection, n. 26-Letter from Zoilos (?) to Panakestor, concerning some quantity of hay seed, that he has perhaps delivered to Panakestor's agent, and black poppy seed that he will send him if he can find it: http://papyri.info/ddbdp/p.mich;1;26?rows = 3&start = 20&fl = id%2Ctitle&fq = series_led_path%3Ap.mich%3B1%3B*%3B*&sort = series + asc%2Cvolume + asc%2Citem + asc&p = 21&t = 110; n. 46 Letter to Zenon from Pyron, an accountant in his service, requesting an advance of money, to buy **poppy seed** and sell it at a profit, and the loan of a parcel of land, to have wheat of his own: http://papyri.info/ddbdp/p.mich;1;46?rows = 3&start = 39&fl = id%2Ctitle&fq = series_led_path%3Ap.mich%3B1%3B*%3B*&sort = series + asc%2C volume + asc%2Citem + asc&p = 40&t = 110

[60]   Petrie, 1890: 50.

[61]   Dr. Saber Gabra presented a PhD thesis in 1950 about drugs in ancient Egypt, at Cairo University, being himself a pharmacist at Cairo University Hospital; this work is now being revised edited and updated for publication by Dr. Gamal Saber Gabra to whom I owe my thanks for his notes on the therapeutic use of drugs in ancient Egypt, with special reference to the *Papaver* plant, kindly made available to me before publication.

[62]   Chassinat, E., (1921) Le papyrus médical copte N°32, *MIFAO*, Le Caire.

[63]   Gabra, 1956: 40.

[64]   Wilkinson, 1853, Volume II, Chapter VI: 22.

7. SCIENTIFIC ANALYSIS IN ANCIENT EGYPTIAN MATERIALS

The confirmation of the existence of opium in ancient Egypt has to be substantiated by scientific evidences.

Koschel also tested a vase in the Martin von Wagner-Museum from Universität Würzburg (inv. Nr. A39) which contained a resinous substance mixed with quartz and grains. The opium components were degraded and oxidated, but in this case, 0.1% of opium alkaloids were present, the main component being morphine (0.05% in this sample)[65]. More samples are needed to establish a generalized conclusion.

In the work of Counsell several techniques were used to test traces of opium in both material and human remains[66].

Several methods were used; radioimmunoassay[67], gas/liquid chromatography, chemical analysis using chromatography on both *Papaver* samples, as both can produce morphine[68]. They also used mass spectrometry with GC or LC, and human samples that can be assessed to search for opium traces such as tissue, hair, teeth, bone marrow; the closest to a blood sample that can be retrieved from mummified or skeletized human remains, protected from contamination[69]. From this testing done by Counsell[70] that includes previous testing on Cypriot pottery, none of the samples tested positive for any alkaloid that can be traced to the opium poppy[71].

8. CONCLUSIONS. DID OPIUM REALLY EXIST AS A RECREATIONAL DRUG IN ANCIENT EGYPT?

From surviving material remains it is almost certain that opium was not used as a recreational drug. Until now there is no reported existence of opium residue in human mummies (hair, bone tissue), and there are no material specimen, either plant residue or garlands, but there are some pot residues as stated above in which to detect opium traces.

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[65]   Koschel, 1996: 161.

[66]   Counsell, 2006: 87-111.

[67]   Kimball, http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/R/Radioimmunoassay.html

[68]   Farmillo, http://www.unodc.org/unodc/en/data-and-analysis/bulletin/bulletin_1953-01-01_1_page005.html

[69]   Notes taken at Counsell seminars at the University of Manchester, during my MsC, October 2007-July 2008.

[70]   Counsell, 2006: 69-115.

[71]   *Idem*, 112-3.

According to the report done by Muzio in 1925, the oil contained in one[72] of the seven vases found in at Kha's tomb at Deir el-Medina, (an alabaster vase with an oily substance was found in a crystallized state), reacted chemically as if it was iron and opium[73], a dubious scientific reliability since it could not be reproduced in another lab, which is a bit inconclusive[74].

Bisset et al also failed to detect opium with their scientific tests in 1994; it was simple pottery analysis[75] and Counsell also discarded opiates in the tested samples.

Bisset tests were conducted to verify if these results were confirmed as coming from opium poppies. The techniques used were microscopy, thin layer chromatography, immunoassay, and gas-liquid chromatography combined with mass spectrometry. No presence of any alkaloid was detected after the tests[76] which means that modern techniques may help to determine exactly if a drug is present or not in a resinous package or an oily substance.

FIGURE 4
detail of Lady Taperet stela, Louvre E52, showing a possible opium poppy not yet opened, at the bottom left

Courtesy © Musée du Louvre

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[72] Nunn, 1996: 155.

[73] Gabra, 1956, 40; Hall, 1928: 205.

[74] Wax and fatty substances were present, Koschel, 1996: 159-60, which may have been the 'basis' for the medicine transported on the jugs.

[75] Bisset et al, 1994: 100.

[76] Bisset et al, 1994:104.

FIGURE 5 – Three Late Bronze Age base ring juglets, Cyprus

**Courtesy: © Leeds Museums and Art Galleries
(City Museum)/Bridgeman Art Library**

Therefore, there is no assured material botanical support for the view that *Papaver somniferum* was known in Egypt before the 18th dynasty[77], only textual, if we consider pEbers to be a copy from an earlier medical text. Until more material is found, containing detectable traces of plant residue available to be tested, and some characteristics of opium presence is confirmed in those, and the material is identified as non-medical, we cannot say that opium was used as a recreational drug in ancient Egypt.

To date its presence in Egyptian territories we can use the type of Cypriot jars found by Petrie at Gurob in the late 1800's[78]. The Gurob Project from Liverpool records the occupation of that settlement between the end of the Second Intermediate Period and the beginning of the 18th Dynasty[79], with this identification it may be possible to confirm that the use of opium was known to the ancient Egyptians by then. Another note on the use of opium as a recreational drug is that jugs containing poppy latex would not be found in

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[77]   Idem.

[78]   Petrie, 1890 : 47.

[79]   Cypriot jar' sherd identified and dated in the latest field report mentioning the Canaanite jars: http://www.gurob.org.uk/reports/Gurob-SCAPrelimRep-Nov2014-ReducedFileSize.pdf

a funerary context, as they were too expensive to be used for the afterlife. If used in life for a sick person the jugs found in a tomb would be empty. The shape of the majority of these jars' opening, slightly bent, suggests that the ceramic vessel was used to inhale opium, like today's pipes, or it could also be used to drink the crushed poppy seeds with water, wine or beer (such as the mekonion juice), as these were the main liquid vessels to introduce medicinal prescriptions into the body.

To summarize, this overview suggests that opium in a ready-mode formula was imported to Egypt for medical purposes. The imprecise time when Egypt started to cultivate opium may be a bit earlier than previously thought. As a final note, one needs to accept the red flower in bud on lady's Taperet'[80] stela (Louvre E52, Third Intermediate Period) as an opium flower about to open. Opium was therefore not recreational, but maybe a drug producing a religious experience, a subject for another research article.

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[80] Lady Taperet' Stela is not a banquet scene, but a devotional offering scene, as noted by Park in a public lecture "Botanical Drug Use of Ancient Egyptians", Oct 5th, 2012, Calgary, SSEA meeting.

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Part III

Linguistics

Language and Identity among marginal people in East Africa

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ABSTRACT

Language is one of the strongest expressions of group identity. Many communities in East Africa are multilingual and for some of the smaller communities this leads to language loss and for others to language revival. The article shows how different groups in similar circumstances opt for different linguistic behaviour and how these choices can swiftly change in the light of external circumstances including economic need. The article examines the linguistic attitude of groups such as the Yaaku, Aasa, Akiek, Ma'á/Mbugu from East Africa and compares them among each other and with other former hunter-gatherers such as the Bakola/Bagyele pygmies in Cameroon and the agricultural Mbugwe from Tanzania who are equally small in numbers.

1. MARGINAL PEOPLE IN EAST AFRICA

My aim in this article is to provide an overview and an analysis how various smaller communities deal with group identity and how this affects their linguistic ideologies. I use the term "marginal" despite its negative connotations.[1] Many of those small populations have or had their own ethnic identity and language and now either live in symbiosis with and depending on another population (the various so-called dorobo[2] groups) or live (still or until recently) from hunting and gathering. What I am interested in is how such groups find a way out in the current society and a way to survive, how they create a self-image that allows them to have enough self-respect to develop. I am more interested in the social unequal relations and the challenges for identity and pride rather than in the economic activity of hunter-gathering. This category of marginal people who are challenged in their identity and independence contains a variety of (former) hunter-gatherers that live in unequal symbiosis with dominant cattle nomads and farmers such as the various dorobo groups among the Maasai (and other dominant groups), the various Waata groups among the Oromo, and occupational groups at the margins of society. I extend the comparison with marginal groups that have no hunter-gatherer past nor present in order to include more factors for analysis.

I first introduce briefly some of these marginal groups that I know from fieldwork experience and that will figure in the rest of the article. The collection is random in the sense that it is restricted to groups with which I have personal experience and it is deliberately very varied with the aim to come to an insightful comparison.

1. The *Aasa*[3] are a so-called dorobo group among the Maasai in the Maasai plains of Tanzania. They shifted to Maasai a few generations ago and we have a detailed account of that shift (Winter 1979). Despite the inevitable rumours that there are still speakers of their former Cushitic language I am convinced that Christopher Winter indeed spoke to the last speakers of that language and even then they had Maasai as their dominant language. The present-day Aasa consider themselves to be Maasai (and live among them) but are not accepted as such by the Maasai, as is the typical situation for such dorobo groups. They have a recollection of Aasa identity and some remember

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[1]   It is more common to speak of "marginalised people" and that may sound more acceptable but it suggests a historical development that is not central to me.

[2]   I use the term *dorobo* as a general term for any group with a hunter-gatherer past that lives in symbiosis with a more powerful society, mostly once powerful cattle nomads such as the Maasai and Oromo. Since I do not use the term as name for a specific society, as is often done, I do not capitalize it.

[3]   The more common spelling in the literature is Aasáx but nowadays the pronunciation is Aasa.

some words (Petrollino and Mous 2010). The situation during our fieldwork in 2007 was that they hardly own cattle and earn their living in many different ways such as work for mining activities; act as guides for tourist hunters. There are some temporary camps in the plains that are used for hunting. When I first hunted the Aasa in 1989 their social situation seemed harsher as I had the impression that the Aasa harboured criminals on the run; in fact, all mining activity was criminal at that time. Hunting still is a criminal offence and only legal for tourists who pay expensive hunting permits. In sum, the people of Aasa descent have no ambition to re-create or keep an Aasa identity. Marginally they still make use of their hunting and gathering skills but they consider themselves Maasai.

2. The Yaaku are another dorobo group among the Maasai and they live near Mt. Kenya in Doldol and surroundings (Cronk 2004). They shifted to Maasai allegedly by decision in a general assembly (Brenzinger 1992; Heine 1974/75). The last fluent speakers who were mixing Yaaku with Maasai passed away a few years ago since I briefly worked with them in 2005. There are still a few remembers who lack fluency. They live in a few communities and have a sense of forming a group. There is political activism to become Yaaku again (Carrier 2011). They nurture their hunter-gatherer past.

3. The Ma'á/Mbugu are a group among the Shambaa in the Usambara mountains with a Cushitic linguistic past and culturally a cattle keeping past. They have a strong separate identity and a recreated language to show it (Mous 2003). The dominant Shambaa neighbours have an ambivalent attitude towards them with some distrust but also respect; these relationships with their neighbours are not of a dependency nature, different from the dorobo cases and are quite independent.

4. The Mbugwe who live north of Babati is a Bantu agricultural community that is losing its identity due to their small numbers and integration into the nation state of Tanzania. Their language is more and more and deeper and deeper influenced by Swahili. There are many communities in Tanzania that are in a similar situation.

5. I will also refer to the Bakola/Bagyele in Cameroon. They constitute several groups of pygmies in South Cameroun. Even though this a community at the other side of the African continent, I find it instructive to include them in the comparison. Traditionally these forest foragers live in symbiosis with their Bantu masters who are farmers. The relationship is in a way similar to the dependency that the dorobo of East Africa experience as well but in a different economic setting with agricultural rather than cattle keeping masters. The Bakola/Bagyele are defined as having a hunter-gatherer identity.

2. RELATIONS TO THE OUTSIDE WORLD

These marginal groups are connected to their environment, their neighbours and the global world. It would be a mistake to see them as "untouched" remnant populations who do not participate in the world of today. Let me illustrate this with the case of the Yaaku and how I got to into contact with them. One day Jennifer Konainte from the Yaaku People's Organisation came knocking on the door of my office in Leiden University to urge me to come to Kenya in order to prove that the Yaaku language is still alive. This was my first encounter with "contract" research (though no money for research was involved) and with an explicit assignment and formulation of the expected outcome. The ethnologue website had registered Yaaku as dead. I did go to the Yaaku and found that there were still four speakers of the language but hardly a language community as these speakers did not use Yaaku among each other. But there was a Yaaku community that was very keen on having their own Yaaku language while they were mother tongue speakers of Maasai. First there is the remarkable fact that a spokesperson of such a marginal group would know that I could do such a job and manage to travel to see me. This is in a way the outcome of the 1993 UN year of indigenous people which stimulated educated people such as Jennifer Koinante to see their own descent as something of value. And for human rights activists groups such as the Netherlands Centrum voor Inheemse Volkeren (NCIV) to support such a spokesperson of an indigenous group (Blonk e.a. 2015; Wensveen 2007). But the issues that are of interest for this article are why did the Yaaku feel the need for their language and why now?

We have to see this development in the first place in the context of land claims. The Maasai of the area around Mt Kenya had been making claims on the land (Kantai 2007:107-8; Hughes 2005). Their land had been giving out in one hundred year's lease to British settlers which ended in 2004. The Kenyan government rejected the claim as they do not recognize treaties made in the colonial period. This lead to legal claims and protests, some violent. The Yaaku saw the prospect of claiming the state protected forest in the area where they live. A new Kenyan constitution was in the making which was expected to open the opportunity of community owned land. The Yaaku People's Organisation also saw economic opportunities of tourist income in that forest. The wider context is one of a newly found self-respect. The international interest in indigenous people and the global appreciation for cultural diversity have their repercussions on the views by outsiders both in Kenya and the world on marginal people. It has an effect on administration and national politics resulting in the situation that some care in treatment of marginal people is politically wise; and it even leads to subsequent legislation and involvement. The changes in the outsider view effect the insider's self-view too. In the case of the Yaaku we also have to take into account that the

Maasai culture that they looked up to is not viewed with the same admiration by the present-day modern Kenyan citizens and in fact Maasai would also be grouped under that strange label of indigenous people of Kenya. The Yaaku have come to the conclusion that there is little to gain to be Maasai, moreover since they would never be considered to be more than second-class Maasai in their master's eyes. The situation of the Yaaku is in many ways comparable to that of the Elmolo in Kenya (Tosco 2015).

The case of the Yaaku also brings me to three themes that affect such marginal people: modernity, group identity and human rights. Marginal groups are often trapped between different ambitions regarding modernity. They can tap in to certain resources by playing the card of resisting modernity. Both governmental and non-governmental organisations are sometimes ready to help to continue their unsustainable way of life creating new dependency. They can also portray themselves as a tourist attraction. Governments do include their "authentic" marginal peoples in their tourist advertisements as the Ethiopian National Tour Operators does with the Suri (Abbink 2008: 8) and yet initiate disruptive schemes to "develop" them. And national politicians may want to save indigenous people to boost their international profile, or as Hodgson (2009:12) puts it "they hoped to leverage their international visibility and support to achieve recognition and protection of their resources and rights by their nation-states."). The paradoxal attitude towards modernity and resistance to it has complex repercussions for the state of mind of the people concerned, see for example the irritation and resistance in the reaction of the Suri towards companies of tourists (Abbink 2008).

Group identity: The outside world works with a model of an ethnic group and a leader representing them. Not all marginal groups have a strong sense of ethnic identity. The Aasa for example recognize that they have a historical origin of hunting and gathering but do not feel to belong to an ethnic identity other than Maasai and do not have a concept of an Aasa community. This is different for the Yaaku who do seem themselves as a community. The initiative to seek recognition from the outside world in their case was clearly with one individual; a person with the capacity and knowledge to make the necessary contacts. Such a person needs to be able to claim that s/he represents the group. The representative for the outside world is often someone who lives outside the community and is no longer incontestably seen as part of them. These communities harbour various people with authority and the alliances are fluid. Gains are difficult to predict and impossible to control.

Human rights play a role in the discourse among the interested parties around the marginal groups. But rights are luxuries in the harsh world of the powerless. On the one hand the personal contacts with agents form the West often result in dreams of a different world with unrealistic expectations. On the other hand, expansion of the participation of the marginal people with the outside world beyond the common contacts with their immediate neigh-

bours enlarges their options for participation in new activities and makes them less dependent on their powerful neighbours.

3. LANGUAGE AND SAFEGUARD OF ETHNIC IDENTITY

In the following paragraphs, I look into the different attitudes to ethnic identity for the groups introduced in the introduction and I link that to the status of their language and their language attitude.

The Mbugwe have a clear ethnic identity and will readily present themselves as Mbugwe but that identity is not so important for many of them. Living in or near the booming regional centre of Babati they see little need to differentiate from other groups. The area where they reside is characterised by a strong influx from different parts of Tanzania and has been like that for some time, not only because of the growth of the administrative capital of Babati but also due to the large scale rice growing fields which attracted workers from different parts of Tanzania. The Mbugwe language is still spoken, next to Swahili, but Swahili is so dominant in every day conversation that Mbugwe is deeply influenced by Swahili to the extent that many original Mbugwe words have been replaced by Swahili words with a Mbugwe pronunciation when speaking Mbugwe (Mous 2003b). In this way Mbugwe will continue to exist as a language that indicates a separate identity when needed but at minimal extra costs to the preferred language, Swahili. The Mbugwe identity is not central enough for the speakers to develop a purist attitude excluding Swahili words. Their Tanzanian identity is important for them to the extent that they are happy with Swahili intrusion into their language. Boone (2015) shows that the Mbugwe areas Kiru valley and Mamire ward are characterised by high levels of in-immigration, confiscation of land and reallocation of land. She argues that the accepted de-facto control by the state over land in Tanzania has led to a less prominent role of ethnicity in land claims and resulted in national citizenship and nation-building. This is particularly strong in areas like the Mbugwe land north of Babati town where ethnicity plays no role in land distribution.[4]

Despite the close resemblance in names, Mbugu (Ma'á/Mbugu) are a very different people from the Mbugwe. The Mbugu live in the Usambara mountains where the dominant population is Shambaa. They speak Shambaa, and Swahili but they also have their own language which is a variant of the neighbouring Bantu language Pare but with an extensive extra parallel lexicon that

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[4]   Her reference to the Mbugwe as hunter-gatherers is rather puzzling, "Until the 1940s, the Kiru Valley was tse-tse infested and inhabited by a small community of hunter-gatherers (the Mbugwe) in its northernmost reaches." (Boone 2015: 74). Gray (1963:145, 1955) reports for the Mbugwe at the time colonization about six powerful chiefdoms with agriculture and animal husbandry as economic activities.

enables them to speak in a way that is completely different from their Bantu neighbours and totally incomprehensible for these neighbours. I have argued elsewhere (Mous 2003a) that this is at least partly a deliberate creation aiming at expressing their strong sense being different and strong wish to have not only their own ethnic identity but also one that is maximally different from their environment. This extensive extra lexicon provides them with a language of their own that is actually also used daily and intensively at the high costs of maintaining a lexicon that is not needed for communication but only functions to have a language of their own. It is one of the rare examples in the world where the need of a separate identity is so important for the people that they manage to maintain a language just for that purpose.

The Yaaku are comparable to the Mbugu in that they first gave up their original language and then returned back to it because of a renewed interest in their original identity in order to renounce the identity that is associated with the language that they shifted to. For the Yaaku this is the once dominant Maasai; for the Mbugu the agricultural Bantu. For the Yaaku this search for an identity of their own is at the same time a step towards emancipation while the Mbugu do not feel inferior to their Bantu neighbours, just culturally fundamentally different. The Mbugwe do not consider themselves to be in a situation of language shift and do not attach strong feelings of identity to their language. They have a positive attitude towards Swahili and let it intrude to their language. The Aasa are in more or less the same position as the Yaaku in terms of shift to Maasai but do not cling on their Aasa identity and see that as a stain. The Akie that live in more or less the same area as the Aasa are less progressed in their shift to Maasai. They master Maasai and use that now even for their "Akie" rituals that the Maasai request them to perform (Heine & Legère 2015). Their Akie identity is of importance to them as it is linked to the few economic options that they seem to have (rituals, assisting commercial hunting trips) in the harsh environment of the Maasai plains in Tanzania. But their life as Akie is a difficult and unattractive and options to enter another society are attractive. For them a U-turn back to their Akie language and identity as the Mbugu have done (Sasse 1992:23) and the Yaaku crave for (Mous 2005) does not seem to be imminent. The Akie attitude to language and ethnic identity may be similar to many other dorobo groups: Adaptation in language; small communities that have to negotiate their space with powerful masters and that define themselves by their life style but by an ethnic identity that is defined by descent.

Leaving the East African plains for the forests of Central Africa I would like to compare the East African groups to the Bakola/Bagyele pygmies of Cameroon. The Bakola/Bagyele forest foragers are linked to several sedentary agricultural groups that speak various Bantu languages and live in small groups, "camps", but identify themselves as being pygmies. It is very difficult to count how many "languages" should be distinguished among these

Bakola/Bagyele (Ngue Um & Duke 2016). The language of Bakola/Bagyele is like a chameleon; it adapts to the partner in conversation and is always a variant of the language of their masters. Their linguistic adaptation seems to be strategy to keep their identity by avoiding conflict and avoiding conflict by acting adjustment while keeping a sense of self and of being different without a strive of constructing a positively defined identity. The Bakola also perform ritual tasks for their masters. In addition, they are often asked to perform in song and dance and many occasions of their masters. This seems typical for the various pygmy groups but less so for the dorobo groups of East Africa.

Yaaku and Ma'á/Mbugu are identities that are claimed as ethnic identity by the community and crucial for them (see Reid and Chelati Dirar 2007 and the articles in that special issue for reflection on the terms identity and community in the East African context). The Aasa ethnic identity is not positively claimed and of little consequence. The Akie identity is more complex. There are several groups of Akie in the Maasai plains of Tanzania. Their language is similar to that of the Okiek of Kenya of which they have no knowledge and with whom there is no contact. The group and their settlement is the major social factor (Heine & Legère 2015). They know about the other Akie groups, acknowledge that they are similar but have little contact. In fact, the Akie include all the hunter-gatherer bands in the Southern Maasai plains under the label Akie including Aasá and bands with a Southern Nilotic language that is different from Akie.[5] In certain respects this is similar for the Bakola/Bagyele of South Cameroun who also associate primarily with the camp where they live and which usually consists of only a few families (even though that may move to another camp) and at the same time recognise that they are all Bakola or Bagyele. These two terms are in fact etymologically related and go back to outsider (Bantu) terms for pygmies or forest foragers.

Communities: These marginal people vary in terms of settlement. The Yaaku and Ma'á/Mbugu are sedentary. The Yaaku have two settlements that are separate but not too far from each other. Even if they used to consider themselves to be Maasai, quite a few live together in communities separate from the Maasai. Their economy is comparable to that of the Maasai although their cattle herds may be less extensive and their youth does not practice transhumance except when part of a Maasai company. The Ma'á/Mbugu live in three different parts of the Usambara mountains and their settlement can be linked to clan history but these territories are not exclusively Ma'á/Mbugu and some maybe even not even predominantly. The Hadza have their settlements in a large Hadza-only territory and there is some seasonal movement within this area linked to availability of food sources. Contacts with neighbours, Datooga, Iraqw and Nyisanzu are and were superficial, except for the latter.

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[5]   The other way around, the Aasa do not feel any affinity with fellow dorobo such as the various Akie groups in the plains.

Relations to masters: The East African marginal groups are not all in a dependent relation to another ethnic group. For example, this is not the case for the Hadza. But the Yaaku, Aasa, Akie and other dorobo groups are considered to be "servants" of the Maasai and the Ma'á/Mbugu claim to have such a history. This master-servant relation is different from those of the West African pygmies. East African dorobo (including waata) are clients of cattle nomads while the Central African Pygmies are clients of farmers. More importantly, the pygmy servant-master relationship is a detailed one in terms of rights and obligations; it is both valid at a personal/family level and at group level. Such personal/family bonds do not seem to define dorobo relations with the cattle nomads. It is unclear to me whether this difference is related to sedentary or nomadic masters or to other factors. Hunter-gatherer groups that have a client relation to farmers are currently less common in East Africa. One candidate of such a relation is that of the Okiek and the Nandi (mixed economy). And the same time another Okiek group relates to the Maasai. More such cases must have existed in the past. Wambua (2012) reports on the Athi among the Gikuyu. The name Athi is from the Bantu root *asi* which means something like 'original inhabitant' (Nurse 1979:390-392)) and can be found in various places in East Africa (such as the Wasi or Alagwa of Kondoa Irangi) and many farmer ethnic groups have origin stories that speak of original inhabitants that are related to hunter-gatherers. One such story is that of *Seuta* among the Shambaa, Zigua, Bondei, and others, (Kiro 1953-55, Thompson 1999) *uta* in *Seuta* being the Bantu root for 'bow', and *se-* a name giving clitic.

In order to get a deeper understanding of the social mechanisms behind the language contact it would be instructive to have a comparative study of the what this symbiosis and servant status entails in practical terms across the various dorobo groups: (unfair) exchange of meat; ceremonial tasks, ritual (cleansing) tasks; healing and honey; herding sheep and goats; other herding tasks; marriage (women from marginal group to the dominant group). There seems to be little admixture of the dominant group to marginal group despite the fact that temporal shelter of masters among dorobo in times of duress has been reported (e.g. Winter 1979).

4. MODELS OF LANGUAGE ECOLOGIES

There are a number of different language ecologies for these various dorobo groups in East Africa. Here I present an overview.

1. Argot: a special lexicon that renders the speakers as different from the group speaking the language within which the argot is defined. The argot is used for internal communication while the base language is used for external communication. Argot can only exist if the need is felt to maintain ethnic dis-

tinction. Many argots are reported for specialised occupational groups such as hippo hunters or blacksmiths but the deviant lexicon of the argot allows them to talk in the argot about daily activities and not only on matters related to the occupation. Banti (1997) contains a long list of such groups in the horn of Africa alone that are reported in the literature. Sometimes claims are made that the lexicon of these argots contains the remnants of a former language but that is difficult to prove. The ideology behind this ecology of argot is that of a linguistic association with occupation: Your occupation defines what kind of person you are. This is principle appears in many different situations. For example, the once so powerful Datooga cattle nomads feel a strong pressure towards a sedentary lifestyle and depending more on agriculture; for many that is logically accompanied with a shift to Iraqw. (Kießling 1998)

2. Mixed language: Ma'á is structurally not different from these argots but ideologically different in that Ma'á is viewed as a complete language different from the others even though the unmixed base can be seen as a dialect of Pare. Ma'á are not hunter-gatherers, nor a marginal group like the others; they practice mixed farming and are considered "cattle people" but they once were clients of the Maasai according to their own oral traditions (Mous 2003a) and impoverished cattle owners before that if we attach some credibility to these oral histories. The creation of a mixed language like the Ma'á did is quite extreme and a huge investment in memory capacity for the lexicon. Such mixed languages are extremely rare and some the circumstances under which they come about are those of systematic mixed marriages (like Michif in Canada) or iterant occupational groups (Romani), see Bakker (1997).

3. Multilingualism: Akie speak four languages (Heine, König, & Legère 2015): Akie, Maasai, Swahili, Nguu. They speak Maasai among each other because they find that easier than Akie. They do not consider speaking Akie as crucial for being Akie (some of the ritual experts can do the rituals only in Maasai) and in fact consider other hunter-gatherers in the area also to be Akie.[6] The lack of a link between language and ethnicity is not unheard of in East Africa. For example, Rendille who speak Samburu are considered Rendille (Ngure 2016). The four languages that the Akie speak are quite distinct. The Akiek conform linguistically to their neighbours by learning their languages and being ready to speak them. The ecology is slightly different from the adaptation strategy of the Bakola because for the Bakola the languages concerned are fairly closely related and the shifting is more sliding and partly adaptation.

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[6]   This does not include the Burunge even if the Akiek claim a common origin with them (Heine & Legère 2015). The Burunge speak a Southern Cushitic language and are capable producers of bee hives, the type consisting of two halve wooden tubes from a tree trunk. Bee keeping is central in Burunge culture (Östberg 1995).

Table 1 – Categorization of Hunter Gatherer societies (Stiles 2001) and linguistic ecology

STILES' CHARACTERISATION	STILES' EA EXAMPLES	STILES ON LANGUAGE	MY REMARKS
Traditional society with first superficial contact with others.	Hadza in their contact with Datooga cattle nomads	-	The Iraqw are and were not immediate neighbours but there must have been contact with them predating the contact with the Datooga judging on some linguistic influence both ways.
Contact including sporadic exchange with neighbours that are perceived as more powerful. HG desire for valuable goods; territorial integrity still exists.	Most Hadza in their contact with agriculturalists	Maintenance of original language (no major language change)	
Accommodation: Regularization of exchange relations. Regular visits to agricultural settlement without aggression. Agriculturalist use HG resources. Mutual characterisation in oppositions. Development of patron-client relation.	Aweer, some Waata, Degere. *Dahalo*	The HGs learn the language of the patrons.	This unbalanced bilingualism is potentially stable.
Acculturation: HG are low caste. They perform roles in ceremonies and services. In case sufficient land resources the HG trade goods; otherwise they work for the agriculturalists. They become at least partly sedentary and may have leaders.	Okiek, Dorobo, Midgan, some Waata *Aasá after the rinderpest*; *Akie*	Language shift to the dominant (agricultural) language.	The language shift is a slow and gradual process. Many groups in this situation will still have their original language in a reduced functionality.
Assimilation, annihilation: There is no longer a distinct ethnic entity. Social problems and often dependency on aid. Often settled on missions or reserves.	*Current Aasá, Qwadza*; many groups have been assimilated within other communities with only a memory of a HG past.	-	

4. Adapt, but remain separate because of that: This is the model of the Bakola/Bagyele in Cameroun. They are separate in everybody's eyes due to their recognisability as pygmies and because of their occupation and way of life. The various Bakola groups have a slightly different language ecology that is determined by their geography and the languages used by their neighbours and within their repertoire they can adjust to the communicative circumstances and that ability with some unique features makes them stand out as being different from the others linguistically as well (Ngue Um & Duke 2016).

This overview is not meant to be comprehensive but only illustrative for the variation in language ecologies for the dorobo groups in East Africa. Many other ecologies do occur in situations of language contact. One example is that of community translators: The community is mainly monolingual but there are a few individuals that are multilingual and that are used by the community as translators whenever the occasion arises. This has been reported for the Trio and other Amerindian groups in Southern Surinam (Carlin 1998). In East Africa, this must have been the situation for the Iraqw society in the early days of colonialization and communication in Swahili.

Stiles (2001) used the Woodburn (1982) division into Immediate Return versus Delayed Return[7] type of hunter-gatherers and proposed a classification of hunter-gatherers in different stages and included remarks on language use. The five stages are based on 11 general observations, propositions, on IR and 15 on DR type of hunter-gatherer societies. Some of these propositions and characterisations pertain to contact and relations with other societies and in the following table I summarise Stiles distinctions and examples of societies in East Africa and his remarks on language expanded by my own observations. Stiles' differentiation incorporates the following factor: Subsistence technology, settlement pattern, social organisation, social obligations, property sharing, and territoriality. I do not refer to these distinctions as stages since I doubt the validity of a chronological order among them.

5. CONCLUSIONS AND DISCUSSION

There is wide variety of constellations of ethnic identity and language ecology among the marginal peoples of East Africa. The forces that trigger changes in linguistic ideologies and ethnic identity stance come from external circumstances and can bring about drastic changes. The options and outcomes also depend largely on the circumstances. Ethnic group identity is a versatile multidimensional concept and its importance and role can vary in context

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[7] Immediate Return refers to a type of society that consumes the results of the hunting and gathering immediately, while Delayed Return refers to those where such food is stored.

and time depending on what gain can be achieved. We have seen that for the Yaaku a separate ethnic identity became important again when it provided a prospect on land and with that better life and emancipation. With the quest for ethnic identity comes that for the lost language. While the Ma'á/Mbugu in an earlier period dealt with a similar desire for their lost identity they were able to recreate a language as a strong flag for their identity because they had the circumstances that enabled them to recreate their language in a more or less natural way: they had a model of lexicon creation in the long period of initiation that existed in Vudee, their reputed centre of dispersal; moreover due to their movements they had the means to create a parallel lexicon with a non-Bantu twist in the words from Maasai and Gorwaa that they had access too. These factors are not available to the Yaaku and it is a major challenge to them to keep or create a semblance of their own languages even symbolically. The fact that the Ma'á/Mbugu manage to keep their own "language" that is a luxury in terms of communicative needs is linked to the fact that although the function of that language is symbolic, in its use it is complete, fully functional and hence easier to maintain. It is challenging to keep a language alive that is only marginal in functionality and symbolic function. The linguistic situations of the Aasa and the Yaaku are very similar but completely different in attitude to ethnic identity. The Aasa have given up Aasa identity, they renounce it and see no use for it. The Mbugwe have no outspoken negative attitude to their ethnic identity; to them it is simply not central and not really profitable. There are no strong forces for them to keep their language and hence there seem to be no strive to keep their language pure, without external (Swahili) admixture. On the other hand, there is also no competing ethnic identity on a comparable level that they aspire nor another ethnic language that is attractive to them. Their language will slowly dissolve, unless a there is major change in the external political and economic situation. For the Bakola/Bagyele ethnicity works differently. They do consider themselves different from their surroundings as pygmies but cannot define that identity as linked to geographical area and adhere to other forms of social organisation such as their camps and their relations or alliances with their masters. Their solution for survival is one of invisibility and continuous half-adaptation to their environment. A people's attitude towards their ethnic identity and to a language of their own and strongly linked but not in predictable ways as the political and economic context as well as the accidental linguistic surroundings are major factors in the outcome in terms of the resultant language ecology.

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On counting languages, diversity-wise

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ABSTRACT

The article discusses the problem of counting languages with an eye to assessing the loss of language diversity. It opposes internal and external definitions of language. The article rejects current literature which rests on sociological definitions of language, based upon the conventional wisdom of the speakers and the use of languages in order to flag identities, and pleads for the necessity to embrace an internal definition based upon intelligibility and structual differences. In so doing, it harks back to a time-honored quest for a strictly structural definition of language (vs. dialect). In such a view, neither the speakers' attitudes to their or other languages nor recognition on the part of official bodies play no role, while the task of defining language is therefore handed back squarely from social studies and social-oriented analyses of language to linguistics.

KEYWORDS

Dialect; language diversity; counting languages; intellegibility; Ausbau; Abstand

1. COUNTING LANGUAGES: WHY?

This article is borne out of a long-standing interest in what constitutes a language and a nagging feeling that a discipline which cannot even define its subject matters is not much of a science.

What is a language (as opposed to capitalized Language as a human capacity)? And what is a dialect, if such a thing exists? What about "accents," "varieties," etc.? As linguists, we often shy away from such questions, preferring to resort to the old quip on a language being a dialect with an army and a navy (where the absence of an air force points at least to the relative antiquity of the quip itself),[1] or expressing more articulate opinions to the effect that everything boils down to matters of prestige, officialdom, a graphic norm, or still appealing to matters of "identity" and the like.

And yet, as linguists we are still eager to point out that we care about language diversity, language shift, and even language death.

Hagège (2000) calculates that, out of 5,000 existing languages, 25 die out every year. Ranka Bjeljac-Babic (quoted by Calvet 2002: 116) assumes the death of only 10 languages pro year, and a total number of 6,000 languages. Crystal (2000: 4), too, starts with 6,000 languages, but calculates that the mortality rate is one language every 15 days (Crystal 2000: 19), which makes for 24 languages a year — close to Hagège's figure. Even worse is Krauss's calculation: 'between *'safe'* and *extinct* is the entire spectrum of *endangered* languages, probably 95% of the 6,000' (Krauss 2007: 3; emphasis in the original).

Against this flood of widely divergent figures, Calvet (2002: 116) rightly points out that such divergent estimates simply emphasize the total lack of scientific accuracy in them.

Linguists should definitely strive to come up with better measures of language death. The obvious parallel with the (much more talked-about) issue of the decrease in biological diversity does not help much: first, many measure of biological diversity do not stand up to scientific scrutiny (as evidenced by the heated debates which accompanied Lomborg 2001). Second, counting biological species is not without its problems. For both species and languages, the problems arise out of the very definition of the entities to be counted: what counts as a species in biology? And what as a language? If, following Mayr's (1942: 120) famous definition, 'species are groups of actually or potentially interbreeding natural populations, which are reproductively isolated from other such groups,' what about partial interbreeding and the "incipient species," as in the famous case of the herring gulls? Moving westwards from Northern Europe along an imaginary ring around the North Pole, one finds

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[1]   Max Weinreich is often credited with having heard it between 1943 and 1944 and having first popularized it in an article in Yiddish in 1945. Other possible authors include Antoine Meillet, Viktor Shklovsky and the French general Hubert Lyautey.

herring gulls which look less and less "prototypical" herring gulls and more and more lesser black-backed gulls until one finds in Europe two species: the herring gull and the lesser black-backed gull, whose aspect is clearly different and do not interbreed (Dennett 1995: 45)? Then there is species merging, which gives rise to hybrid species stemming from two ancestral species: 'In plants, pollen from one species commonly fertilizes ova from another species,' and, occasionally, hybrid species result which stem from two ancestral species. Now, '[E]stimates of the proportion of plant species in general that are of hybrid origin run as high as 30 or 40 percent.' (Hull 1988: 103). Finally, there is the problem of asexual organisms.

That linguists tend to avoid such messy problems is therefore understandable, even if not laudable. The results tend to be scientifically untenable, as the next section will try to prove.

2. AGAINST EXTERNAL DEFINITIONS OF LANGUAGENESS[2]

I share with much sociologically-oriented literature the assumption that language entities are social constructs; they are constructs because they are mental artefacts of members of Homo Sapiens Sapiens, and they are social because members of this species live in social groups.

Still, the result of these social constructs is so diverse across members of the species that it is scientifically suitable to consider them different entities. In other words, I consider it possible to count languages on the basis of strictly internal criteria. We may want to count languages, inter alia, in order to measure their degree of diversity, and the interaction of the latter with time and space.

Further, we can adopt either an *internal* or an *external* definition of language: by the former I mean a definition based upon characters and features of the languages themselves and upon mutual comprehensibility — to a great extent a consequence of the characteristics themselves. By *external* definition of language I mean a social one, which takes into account the speakers' perception and judgements. External definitions of language are of concern to sociolinguists but also to general linguists; e.g., Croft (2000), following Hull's (1988) work in biology, has proposed a definition of language as 'the population of utterances in a speech community' (Croft 2000: 26). "Population" is used here in its biological meaning as a spatiotemporally bounded set of actual individuals, such 'that every speaker perceives every other speaker as someone he or she should be able to communicate with by using what they *perceive* as the same language' (Croft 2000: 18; emphasis mine).

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[2]   This section expands on ideas originally put forward in Tosco (2011).

As Croft's definition is meant to be evolutionary and not static, structural features, genetic relationship, or intelligibility play no role in it. It is essentially a social definition of language, based upon one population's (here in its common-sensical meaning, i.e., the speakers) *view* of its language(s) ('what they *perceive* as the same language') rather than of the language itself. This seems highlighted by Croft himself when he defines as *sibling languages* 'two linguistic varieties that are structurally so similar that they are considered to be "dialects of the same language", yet are perceived by the speakers — *or at least by one group of speakers* — as distinct languages.' Examples of sibling languages would be, among others, Macedonian and Bulgarian, Serbian and Croatian, Hindi and Urdu, etc. Immediately afterwards, Croft is forced to notice that opinion must not be unanimous across the speaking community: e.g., 'many Bulgarians tend to see Macedonian as a dialect of Bulgarian, but the reverse does not hold. Of course, this reflects different perceptions about the social and political separateness of the communities that speak these linguistic varieties' (Croft 2000: 16). Again, this is not a statement about languages, but about the communities speaking them. How much powerful, influential, and vociferous must an opinion be in order for *siblingness* to be established?

As variation is continuous and not discrete, within an internal definition we may want to define a minimum threshold which may distinguish what counts as a different language from what will be regarded as separate instances of one and the same entity.

But is there a *minimum* threshold of diversity which a linguistic object must cross in order to be perceived by its speakers as *different enough*? Apparently not: a modicum of lexicon variation seems sometimes to be sufficient to mark identity. The point can be illustrated by Francanglais (or Camfranglais), a French-based variety spoken in particular by the urban youth in Cameroun. As convincingly shown by Féral (2009b), it is entirely French in grammar and in the great majority of its lexicon. Its Cameroonian "flavor" is given by 1. a limited number of loans from African languages and the English-based Cameroonian Pidgin, and/or just "plain" English, 2. the use of many French colloquialisms (some of them obsolete in France), and 3. a number of semantic shifts and phonological and morphological manipulations, such as truncations and metatheses. All this is sufficient for Francanglais to be *perceived* by at least a subset of the speakers as a separate entity.

Finally, what about the well known cases when attitudes change and two varieties which were considered by the speakers (even *all* of them) as dialects of the same language come to be considered (even by *all*) as two separate languages? Is this a statement about the linguistic objects (dialects, languages), or about the *perception* of such objects? What about the whole problem of *naming* an object (in our case, a *linguistic* object) as an essential element of its perceived existence (on which cf. Féral 2009a and the articles in the volume)? The very denomination Camfranglais/Francanglais (very possibly originally

exogenous, but soon adopted by the speakers) transformed what had until then been called *français makro* ("roughneck French" – obviously another external denomination) into something else: a language, which moreover, by its very name, well accords to the official Cameroonian ideal (actually: *ideology*) of French-English bilingualism (*Cam-Fr-Anglais*). A variety of French could then become an identity marker (cf. Féral 2009b: 144 and Féral 2011).

In Croft's view, the mirror case of the sibling languages is provided by the *polytypic languages*, i.e., 'linguistic varieties that are structurally so diverse that linguists would characterize them as different languages, yet their speakers perceive them as dialects of the same language' (Croft 2000: 16): examples are the Chinese "dialects", the speech of diglossic communities (as in the Arab world), and the postcreole continua. Also the 'traditional dialects of English, German, Italian and other western European languages may be instances of a lower degree of polytypy, depending on the degree to which their speakers identify themselves as speakers of English, German, etc., albeit non-standard speakers.' (Croft 2000: 17). Let us imagine a particularly "aggressive" and demographically powerful community of X-speakers which, any linguistic (structural) difference notwithstanding, considers the neighboring, demographically weaker variety Y as a "dialect of the same language" (X, obviously). Would we still have polytypic languages? Probably yes. Would as a consequence linguistic research be led astray in its quest for linguistic diversity across the globe? Certainly yes.

In short, there seems to be a gross oversimplification here: speakers may still identify themselves as speakers of X while being well aware that communication between theirs and another, "standard" variety not only practically does *not* occur for social reasons (because certain topics or speech contexts ban the use of one of the varieties), but it is also *impossible* for strictly linguistic (structural) reasons, because there is no mutual intelligibility. All this of course has not even addressed the quite common case in which speakers simply cannot or do not want to make up their mind about what is what, a dialect, a language, or whatever.

Croft's definition of language closely resembles Connor's (1978) classical definition of a nation: while an ethnic group can be objectively defined from the outside by an external observer, a nation, Connor argues, is nothing more than an ethnic group which "has discovered itself" and defines as such. In short, it amounts to "seeing oneself as X." Both Croft's definition of language and Connor's view of nation cannot escape an obvious paradox: while biological populations are defined externally (by the biologist), for linguistic/national populations the observer should be content with registering the — often volatile, always inconsistent — opinion of the community itself, i.e., the mutually contradictory opinions of its members. What counts as a language becomes then a *statistical* truth.

Let us go back to the case of Camfranglais: we could of course list Camfranglais among the languages of Cameroon, on the basis of its role as an identity marker, and at the same time *not* list other varieties of French which are at least as different from "normal" French as Camfranglais but which do not mark an identity. Maybe they even do act as identity markers (whatever this means) and we do not know. Maybe they will, in due time social scientists will take duly note and this knowledge will trickle down to sociolinguistics. We can even describe this process in its unfolding, and the difficult, painful and always contested ways through which a language is socially construed as part of a new identity (another case from Africa being Juba Arabic, an Arabic-based pidgincreole of South Sudan, which is gradually evolving as an identity marker, as studied by Manfredi forth. and Manfredi and Tosco forth.). We can do all these things and much else, but I doubt this will help us much if our task is to identify languages, rather than identities and social groups.

To list languages which are used as identity markers would probably be Croft's solution (although he wisely sticks to "easy" cases such as Macedonian and Bulgarian, Urdu and Hindi, etc.), and seems to be a very widespread choice. Certainly, this solution means to give up any serious attempt at defining, naming and counting languages: identities only will be counted (and the problems in defining them left to specialists in the field).

We could also list as separate languages Camfranglais as well as any other French (or French-based) variety: this would certainly make for a nice catalogue of language variation across the globe. But where to stop? In principle, we should count any register of any language, and maybe even single idiolects. Maybe we should even make ones step further and take into account the fact that everyone's idiolect constantly changes (even dramatically) during one's life. Certainly, reference to the individual's language (the idiolect) would at least give away with the problem of defining languages on the basis of the intuitions and feelings of an ill-defined community.

It is not accidental that external views of what counts as a language often end up belittling the whole problem of language diversity and its loss. If everything can count as a language, then the concept of language loses any interest: there are no longer languages, nor, *a fortiori*, language shift and language death.

3. LANGUAGE DIVERSITY UNDER THE CARPET

Croft's (2000) evolutionary view of language as 'the population of utterances in a speech community' is the language-external solution devised by a great typologist in order to get rid of the problem of defining languages. But his polytypic languages are nothing more than a sophisticated way to say that

whatever traditional wisdom – backed up by modern governments – calls "a dialect of X" (be X Chinese, English, or whatever) is just a variant of X. End of the story. But linguistically it is not, because the members of a polytypic language rarely bear the same structural relationship with each others. On their part, polytypic languages are rather the linguistic expression of cultural areas, and can be likened to the concept of "macrolanguage" introduced in the most recent editions of *Ethnologue.*

The same, sad fate of the perception of language death around the world can be seen in sociolinguistic literature, too, and nurtured again by an external view of what count as a language. Joseph notes that, while business people and anthropologists are likely to have a more balanced view of identity loss, '[L]inguists, on the other hand, tend toward more extreme negative reactions' (Joseph 2004: 182). He goes on criticizing (rightly, in my opinion) much current views against globalization, and claiming that the loss of language diversity in the contemporary world (although 'real and lamentable;' Joseph 2004: 186) is not at all unprecedented. Joseph prefers instead to stress the rise of new dialects (possibly tomorrow's separate languages) as a result of the spread of international languages, and asks:

> 'Was Europe more linguistically diverse before the spread of Latin and the retreat of various pre-Indo-European and Indo-European languages than it was after the break-up of Latin into Romance dialects which in part reflected the structure of those earlier substratum languages? The linguist is inclined to say as a knee-jerk reaction that the prior situation was one of more diversity because the languages involved showed a larger typological difference from one another. Yet degree of typological difference does not really mean much to ordinary speakers of the language' (Joseph 2004: 187).

Calvet (2002) likewise notes that, while much talk is made about the death of languages, nothing is heard about the *birth* of them. Now, if we examine which languages are born, we note that they are often the new Englishes and Frenchs in, e.g., Africa: one could make a good case of these new languages as being genetically less diverse than the dead languages they come, so to speak, to replace, and, therefore, the net result of language shift being an impoverishment.

An external view of what counts as a language, and a cautious, if not overtly hostile attitude toward language loss are probably logically and inescapably linked: if speakers only are to be the judges of what counts for a language and what does not, language loss can no longer be assessed (and measured) objectively. Maybe, it does not even exist anymore: we will be faced instead with *identity* loss – something very different and certainly even more problematic to pinpoint.

In this perspective, linguistics is reduced to (or transformed into) sociolinguistics – a move Joseph seems to explicitly advocate when he stresses the

need for *rehumanising* linguistics (probably to be understood as *resocializing* linguistics).

Joseph (2004) is also definitely right on one point: speakers could not care less for typological difference. Linguists, instead, do.

It is with an eye to this crucial difference that we move to the *pars construens* in our argument, sketchy and tentative as it may be.

4. A PLEA FOR INTERNAL DEFINITIONS

Linguists have not used armies and navies to speak of languages and dialects all the time, and the quest for strictly structural definitions of language is of course far from new. As aptly reminded in the very first lines of Tamburelli (2014) '[D]uring the twentieth century, many linguists were preoccupied with identifying the criteria that would allow for a structural (i.e. purely linguistic) definition of 'language' and how this related to its 'dialects' [...] This preoccupation faded, however, as consensus grew that 'languages' and 'dialects' are social constructs definable only in terms of sociolinguistic status and breadth of use and are thus not independently identifiable structural entities' (Tamburelli 2014: 252). In a way, out of the classical Klossian dichotomy of Ausbau vs. Abstand languages (Kloss 1967), it is the former which, after attracting the most interest, definitely got the upper hand. Abstand languages – languages which can be defined as such on the basis of their inherent linguistic features – seemed not only to be a rarity (and they were usually mentioned only in the relatively rare cases of linguistic isolates), but also to be scarcely interesting to the linguist. "Ausbau-centrism," as Tamburelli calls it, implied that to measure intellegibility came to be considered impossible or leading to contradictory results. Dialect chains have often been mentioned as a litmus test proving the futility of measuring intellegibility (although Hammarström 2008 has, convincingly in my view, demonstrated the mathematical possibility of counting languages even in this case). I cannot even approach here the complex question of how intelligibility can and is actually measured. In his pioneering study of Lombard and Italian,[3] Tamburelli (2014) has not only laid bare the logical pitfalls and paradoxes of "Ausbau-centrism," but has also shown how intelligibility (and the lack thereof) may be tested and measured (in his case, using a version of the "Speech Perception in Noise," or SPIN, test).

In short, language diversity may only be vindicated if we stick to an internal definition of language, essentially resting upon the criterium of intelligibility. Intelligibility – all the well-known problems in defining and measuring it notwithstanding – will of course be tested on speakers, but it will be

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[3]   Cf. also Grimes (1988) for an early defense of intelligibility as a valid criterium for counting languages.

defined by the observer only, and will not be based for our purposes on the sociolinguistic status of the linguistic objects under examination. As a result, the only ones *not* entitled to have a say in matters of what counts and what does not as a language are the speakers.

Such an approach will probably reduce the total number of languages in the world as given, e.g., by *Ethnologue* (which often lists what are socio-linguistic languages but linguistic dialects – a subset of Croft's "sibling languages"). On the other hand, it will exclude mere accents and registers of languages: no confusing and unnecessary blow-up of the number of languages will be engendered. Much else will be gained: notwithstanding their social (and political) status as *sociolinguistic* dialects, many varieties will be defined as *linguistic* languages. It is these sociolinguistic-dialects-plus-linguistic-languages which make up much of the language diversity across the globe and it is them, and their fate, which we address when we speak of language diversity and its reduction.

5. UNINTENDED CONSEQUENCES: TURNING A BLIND EYE TO REALITY

Quite paradoxically, much discussion on minority languages, language rights and language death, is not really concerned with the problem of defining what counts as a language, nor, actually, of what is a minority, what are linguistic rights and who or what are the linguistic-right holders. Many social studies are content with what legislatures define (legitimately for their purposes) as languages, and reflect on the implementation of these choices and their (often negative) results.

We live in a "legislating world," where laws are continuously enacted in all fields of human activity and are widely presumed to be the solution to most if not all problems. In so doing, law must define its object matters for its purposes.

Being concerned with the allocation of finite resources, legislatures will always de facto select a convenient number of languages and groups to which special consideration will be granted. This fact alone encourages the frame of mind whereby a minority exists only insofar as it is legislated to be such. Minorities left out of consideration, for whatever reason, are consequently aligned to the majority, forced to pay in consequence, and their linguistic assimilation comes to be taken for granted. These excluded minorities not only are non-existent as far as positive legislation is concerned, but very often cease to exist in the speakers' mind too: an entity exists only insofar as power has decreed it to, and under its conditions.[4]

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[4]   Other possible and more tragical outcomes of positive language legislation are not

The "Ausbau-centric" view of language tends to do much the same: resting as it does on the existant (e.g., laws 1, 2, 3), it is forced to work on the linguistic material defined by it (languages a, b, c) and passes under silence whatever portion of the linguistic reality is not taken into account by those same laws (languages x, y, z). From this to the negation of the un-legislated reality it is but an easy step.

It is also an easy step with many unintended consequences. In the end, only what law has defined as existing really does – much to the joy of the frame of mind which sees reality as a stipulated social convention and truth as conventional wisdom and nothing else. In such a paradoxical upshot, post-modernism welds with a legalistic frame of mind against both common sense and science – and good riddance to all the (self-styled) potential for social criticism which, we are often told, would be inherent in social studies.

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really germane to the present discussion and must be left out of consideration; they involve the devaluation of bottom-up, grassroot activities for language preservation which, as Fishman (1991) argues at length, are possibly the most (or even the only) effective in matters of language diversity: when governments "take care" (usually inefficiently) individuals and local groups may well take a rest. Cf. Tosco (forth.) for a few preliminary observations.

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Bayso, Haro and
the "paucal" number

History of contact around the Abbaya and C'amo Lakes of South Ethiopia

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ABSTRACT

The present paper is a first attempt of an historical reconstruction on the transmission of the number category "paucal" in the area of the Abbaya and C'amo lakes in Southern Ethiopia. The languages involved are Bayso (Cushitic), Haro (Omotic) and Haro's strongly related sister-languages Ganjule and Gets'ame.
The present situation of bilingualism of the Haro in Bayso suggests that Bayso has passed the paucal to the Haro. However, the presence of the paucal in the other documented dialect of Haro, Ganjule, makes this hypothesis untenable since the Ganjule do not speak Bayso and have no particular relation with the Bayso group. There is no description of the other dialect of the cluster, Gets'ame, but, according to Haro oral traditions, the Haro come from the Gets'ame, as well as their language. It is, therefore, very likely that the Gets'ame language has also the paucal. The paper presents two hypotheses that explain the presence of the paucal in these languages of the Abbaya and C'amo lake.

1. THE BAYSO AND THE HARO

The Bayso and the Haro are two minority groups of the North Omo Zone (formerly Gamo Gofa), which is one of the provinces of the Southern Nations, Nationalities and Peoples Federal State of the Federal Democratic Republic of Ethiopia. The Bayso number about 2.000, while the Haro are around 200. The regional administration does not count the Haro among the recognised groups of the North Omo Zone. These are Gamo, Gofa, Oyda, Zayse and Gidicco. The latter name indicates the Bayso (as we will see it is the name of an island in the Abbaya like inhabited by both Bayso and Haro). The Haro are commonly considered as part of the Gidicco group and they are also referred to as Gidicco. The Bayso and the Haro live together on the Gidicco island of the Abbaya lake and on the mainland village of Alge. Some of them are also found in other villages on the west bank of the lake.

1.1 THE BAYSO

In origin the Bayso were living only in two villages on the Gidicco island of the Abbaya lake: Bayso and Shigima. Presently Gidicco is the only inhabited island of the lake, but formerly the Bayso used to occupy also on the Golmaka island. This island nowadays is only used as a temporary base for fishing. Their main economic activity on the island used to be fishing and crocodile and hippo hunting, but afterwards they abandoned the hunting activity, kept on fishing and developed cattle-keeping, agriculture and honey production.

Since four or five generations the Bayso started migrating to the mainland areas of the lake. The migration was triggered by the raising of the water of the lake, that occupied a major part of the most fertile land, and lack of rain that caused desertification. In particular, lack of rain left an extremely salty and unproductive soil. Nowadays, the migration is almost complete as only a handful of homesteads are found in the island. The main reasons why some of the families did not settle on the mainland of the lake are that the head of the family is deeply involved in fishing, that is more fruitful of the island rather than on the mainland, and they prefer to keep cattle on the island, that is disease-free and guarantees water. They still have relations with the mainland when they visit relatives and because on the mainland they keep their farming fields, mostly growing maize.

The Gidicco island lies about 200 meters from the east coast of the lake, that is inhabited by Guji-Oromo, Gedeo and Sidamo. In spite of the fact that the east bank is so close, the Bayso preferred to settle on the west bank of the river, that is about 20 km away. The reason is that on the west coast urban life and trade are more developped as there is a urban centre, Mirab Abbaya ("West Abbaya" in Amharic), locally known also as Birbir, along the

main road from and to Addis Ababa. In fact, if the trigger of the migration from the island is environmental, the settling on the west coast has economic reasons. Here the Bayso have created a whole village, called Alge, that hosts most of them. Some moved to neighbouring villages such as Shinkiko and Wajifo, mixing with peoples coming from Gamo, Haro and Wolayta ethnic groups. In Alge the Bayso diversified the agricultural production in cooperatives. Besides maize, they started to cooperate in the cultivation of bananas, tomatoes, cabbage, potatoes and carrots. Apiculture was also developed in cooperatives with the use of modern techniques for honey production. Fish cooperatives are also very active and nowadays make large use of motor boats, also in collaboration with the people living on the Gidicco island. In Mirab Abbaya there is the reference weekly market in which the goods are sold. People living on the island also come to the Mirab Abbaya market, but they sell and buy goods also on the market in Melka, on the east coast of the lake. Besides trade, some Bayso found an occupational solution in the administrative and services sectors. There are people working for the local administration, in local health centres as nurses and in schools as teachers.

Bayso people, in particular young people, are very much projected to the Mirab Abbaya urban life. Children are more and more involved in modern education rather than working to support family economy. In town it is possible to find bars and restaurant, that normally have satellite TV, and cinemas. Recently also internet cafés started and there is a branch of the Commercial Bank of Ethiopia. Two visible impacts on everyday life are the conversion to Orthodox and Protestant Christianism, while traditionally the Bayso have their own religion, and the increasing use of Amharic, the Ethiopian economic and administrative working language. The use of Amharic can be appreciated both in terms of bilingualism and code-switching to Amharic while talking Bayso (Savà to appear).

1.2 THE HARO

The Haro occupy one village on the Gidicco island, called Haro, Harro or Haruro. They used to live on crocodile hunting, hippo hunting and fishing. Nowadays they keep on fishing and hippo hunting and practice agriculture, cattle-keeping and apiculture. Like the Bayso, most of them now live in Alge. While the Haruro village is phisically apart from the Bayso and Shigima villages, lying in the middle of the two on the east coast of the island, in Alge the Haro live side by side with the Bayso. This is an important aspect of their life as in the past they have always been despised by the Bayso and only since recently there is more acceptance and collaboration. The reasons for being marginalised are, besides being numerically inferior, the practice of hippo hunting, the fact that they eat hippo meat (that is something aber-

rant for the Bayso) and that the Haro do not circumcise. The last reason (and partly also the second one) has a religious connotation and is due to the fact that the Haro resist more than the Bayso to the conversion to Christianism, even though circumcision is limited to Orthodox Christianism. Moreover, the Bayso consider themselves as the legitimate owners of the Gidicco island and the Haro as the newcomers. Indeed, the Haro originate from a group of Gets'ame, living on the southern part of the lake, that a couple of centuries ago settled on the island asking for permission to fish from there. The most radical Bayso state that the Haro are not an ethnic group at all because, as mentioned previously, they are not officially recognised as such by the administration. The situation nowadays is changing because is order to gain more acceptance from the Bayso the Haro living in Alge are giving up hunting and eating hippo meat. Hunting became also difficult on the coast as it is illegal. An increasing number is also converting to Christianism.

The Haro who left the island and moved to the mainland are not so successful as the Bayso in developing their business. No Haro takes part of the agriculture, apiculture and fishing cooperatives and none of them made it in the public sector. Nonetheless they visit Mirab Abbaya for the market and for relaxing and enjoying the entertainment that a town can offer.

2. BAYSO AND HARO LANGUAGES: CLASSIFICATION AND BILINGUALISM

Bayso and Haro are two Afroasiatic language belonging to two different groups of this language family: Bayso is Cushitic and Haro is Omotic. Haro's classification is based on the assumption that Omotic in an independent branch of the Afroasiatic Family (Bender 1975). In fact, the genetic validity of an Omotic group is one of the most debated questions in Ethiopian lingusitics and until about four decades ago the languages that are now called Omotic were part of the Cushitic group and classified under the west branch of Cushitic. Without going in details into the discussion, my classification refers to the most commonly accepted idea on Cushitic and Omotic as two independend branches of Afroasiatic and that Haro is an Omotic language. Bayso and Haro are two of the endangered languages of Ethiopia indicated by the UNESCO in the Atlas of the World's Language in Danger (http://www.unesco.org/languages-atlas/).

Bayso is part of the Omo-Tana subgroup of East Cushitic. In particular, it is included in the East Omo-Tana cluster together with Rendille, Boni and Somali. The affiliation with the Omo-Tana languages is historically interesting as these languages, scattered in southwest Ethiopia, northern Kenya and in the Somali Region, are spoken far away from the present location of the Bayso. The main hypothesis is that the area of the Omo-Tana languages was much wider and
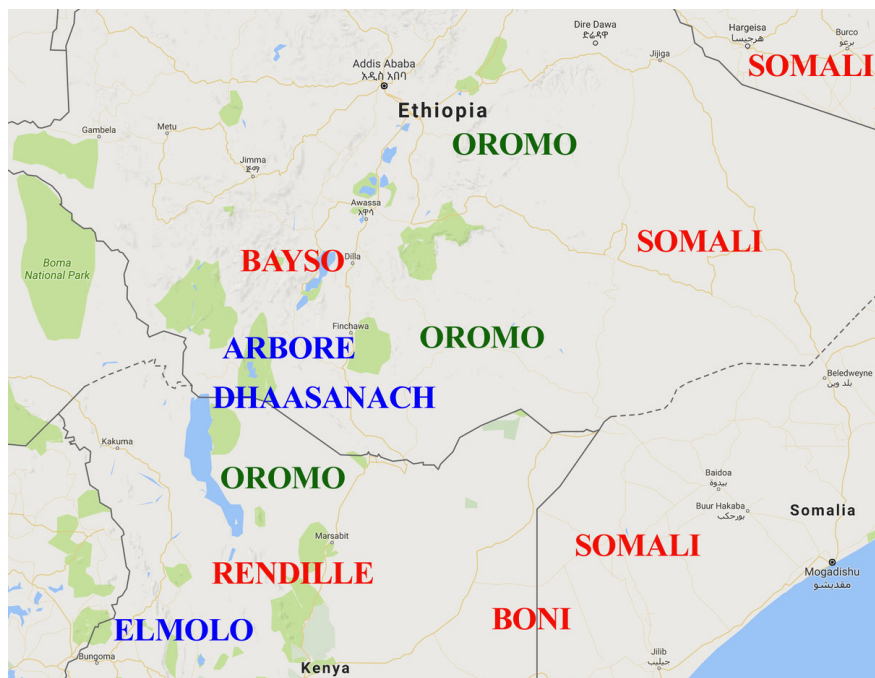
Map 1 – Distribution of the Omo-Tana languages of East Cushitic and Oromo

**Map 2
Distribution of the East
Ometo languages**

reached the South-Eastern coast of the Abbaya lake and the separation of the Bayso from the rest or the other Omo-Tana languages is due to the invasion of the Oromo, the numerically most important ethnic group of Ethiopia, in the 16th century. It is probably as a consequence of the Oromo incursions that the Bayso found protection in the Gidicco island and settle there.

Haro is part of the Ometo languages of the Omotic group. Within Ometo it is one of the East Ometo languages together with Zayse, Koorete, Ganjule and Gets'ame, all languages spoken on the coast of the Abbaya lake and the near-by C'amo lake. Within East Ometo, Haro has a particular affiliation with Ganjule and Gets'ame, with which it forms a dialectal cluster. In fact, the three should be treated as variants of one "language", while the linguistic distinction is only ethnically based. This is clear if one has a look to the origins of the Haro. As stated previously, traditional history says that the Haro are the result of the relatively recent migration of a group of Gets'ame people to the Gidicco island. Once settled they defined their identity and developed their actual variant.

In terms of bilingualism Bayso-Haro[1], all the Haro start speaking Bayso since their childhood. In the context of Alge village they learn it easily just because they are constantly in contact with the Bayso children on the streets and in homesteads. On the Gidicco island the most common meeting point between Bayso and Haro children is the primary school that was built besides the Haro village. However, since last year Haro children started to be exposed to Bayso also during classes as these are taught in Bayso and not in Amharic anymore.

Haro adults speak Bayso both to gain social acceptance and to communicate more easily with the Bayso, with which they are in daily contact, particularly in Alge. Moreover, Bayso men speak Haro and for the same practical reason. This is an indication of their growing social acceptance of the Haro.

3. THE PAUCAL NUMBER

The paucal number is a category that is not normally attested in the languages of the Horn of Africa. It is a number category that indicates a handful quantity of items, up to five or six.

According to the available documentation, the paucal is shared by Bayso, Haro and Ganjule. It is highly likely that Gets'ame also has it, but there is no description of this language that can confirm this hypothesis. Since the Haro dialect comes from Gets'ame, probably Gets'ame also has this category.

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[1]   Even though the discussion is here limited to the bilingualism between Bayso and Haro, it should be noted that the Bayso and Haro are famous in the area for their multilingualism. Thanks to their skills in learning the main languages of the area it very common to find Bayso and Haro people speaking Gamo, Gofa, Wolayta, Oromo, Sidamo and Amharic.

The paucal is very much attested in the languages of the world, but always in the following implicational chain:

singular < plural < dual < {**paucal**, trial}
(Croft 1990, Corbett 2000)

This means that universally the paucal exists only if the language also expresses a singular, a plural and a dual. Bayso and Haro-Ganjule-(Ges'ame?) contradict this alleged universal because they have no dual, so that the implicational chain is reduced to:

singular < plural < **paucal**
(Savà 2011)

In Haro, Ganjule and Bayso the paucal is realised as follows:

Paucal in Haro
– Suffix -**uns'ú** (with nouns having accented penultimate syllable) or **úns'ú** (with nouns having and accented ultimate syllable)
– Attached to the singular
– Paucal nouns are always determined
– Paucal nouns have plural agreement

Hirut Wolde-Mariam (2015: 42) suggests that "The etymological root for the Haro paucal marker may be the quantifier expression **ʔááns'u** 'how many/how much' ". Here are some examples:

lúkku 'hen'   **lúkk-úns'ú** 'few hens'
déyšši 'goat'   **déyšš-úns'ú** 'few goats'
s'olínte 'star'   **s'olínt-úns'ú** 'few stars'
(Hirut Wolde-Mariam 2015: 42)

ʔass-*uns'ú* ána   ʔú-hang-e
person-PAUC where 3PL-go-AFF:DEC
Where do the people go? (or better "Where do those few people go?")
(Hirut Wolde-Mariam 2015: 43)

Paucal in Ganjule
– Suffix -**úns'o**
– Attached to the singular
– Paucal nouns can be determined
– It is not clear what kind of agreement paucal nouns have (Fitsum Abate 2013:60-61)

See an example of paucal in Ganjule:

kap-*úns'o*-z-i   **kárt^{S}-i-kko**
bird-PAUC-DEF-NOM   black-NOM-FOC
The few birds are black
(Fitsum Abate 2013:60-61)

Paucal in Bayso
– Suffix -**jaa**
– Attached to the basic, number-undetermined form of the noun
– Agreement with plural
– Part of a number derivational system with singulative (**-ti** and **-titi**) and plurative (**-jool**, -**lal**, **-eel**, **-l**, reduplication, reduplication + PLUR suffix)[2]
– Probably etymologically related to the plural marker **-jool**.

Here is an example of paucal from one of the texts of the DoBeS Bayso corpus[3]:

iso ibaaddo*jaa*na
iso   ibaaddo-*jaa*-na
SBJ.3PL   man/people-PAUC-TOP
As for those few people...

4. WHY DO BAYSO AND HARO SHARE THE PAUCAL?

The present situation shows that, on the one hand, all the Haro are bilingual in Bayso and that bilingualism started a long time ago and that, on the other hand, only some, normally adult men, speak Haro. It is, therefore, logical to think that the Haro speakers absorbed the paucal from Bayso. This is also the idea suggested by Hirut Wolde-Mariam (2015:42).

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[2]   Notice that singulative nouns agree with masculine and feminine, while plural nouns agree with masculine. This means that paucal is the only number derivation that triggers agreement with plural. This agreement system is part of a broader discussion on the possible three-gender system masculine-feminine-plural in Bayso and other East-Cushitic languages, which is a very debated topic in Cushitic and typological linguistics (Savà 2006, Mous 2008).

[3]   The Bayso and the Haro text corpora were created in the context of the DoBeS project *The Documentation of Bayso (Cushitic) and Haro (Omotic), two Afroasiatic Languages of the Abbaya Lake in the Ethiopian Rift Valley,* on which I was the principal investigator (Savà 2012). The project was sponsored by the Volkswagen Stiftung, which I wish to acknowledge for their substantial financial help. The corpora can be browsed from the Language Archive website https://corpus1.mpi.nl/ds/asv/?0&openpath=node:1569575.

In fact, the transmission of the paucal between Bayso and Haro is not due to present situation and the Bayso did not pass it to Haro. The reason is that also Ganjule, that is closely related to Haro, has the paucal. The Ganjule do not have special relation with the Bayso and are not bilingual in Bayso. This means that between Bayso and Ganjule there is no situation of bilingualism that may justify the influence of Bayso on Haro. Moreover, we know that the Haro are originally a branch of the Gets'ame and that their language comes from the Gets'ame language. Due to lack of documentation we cannot confirm that Gets'ame has the paucal, but in view of the close structural similarity of Haro, Ganjule and Gets'ame it is highly probable that Gets'ame does have the paucal and that Haro inherited it from Gets'ame.

The question now is how come that Bayso has the paucal? The Haro did not pass it to the Bayso since few Bayso speak Haro and they started only recently. I suggest two hypotheses. One is that people speaking East Ometo languages of the Ganjule-Gets'ame group were more powerful than today and were present in the Abbaya area when the Bayso arrived from the Somali area. Once on the coast of the Abbaya and C'amo lakes the Bayso were absorbed by these East Ometo people and became bilinguals in these languages. It is in this situation that they acquired to paucal. Afterwards, the Bayso became more powerful, they settled on the Gidicco island and "received" the Haro establishing a relation of dominance with them. However, in that moment both Bayso and Haro already had the paucal. It is, therefore, a substratum influence that resulted in the integration of the paucal category in the Bayso grammar. It is to note that the formal expression of paucal in Bayso and Haro is different and that the trasmission was limited to the grammatical category. Something very interesting is also that both Bayso and the group Haro-Ganjule-(Gets'ame?) lack the dual, which, as exposed previously, is something universally peculiar to these languages face to the others expressing a paucal in the world.

The aforementioned hypothesis gives from granted that no Cushitic language has the paucal and that the Bayso must have adopted it from some East Ometo languages. However, there is one language, very close to Somali, that has the paucal category (Mekonnen Hundie 2016). It is called Girirra and it is spoken on the eastern part of the Somali Federal State of Ethiopia. Besides the considerable geographic distance between Bayso and Girirra, one should notice that the paucal marker in Girirra, -*ati*, is different from Bayso -*jaa* and that Girirra has a dual, which has a form very clause to the paucal, -*ata.* Some similarity can be found between the expression of plurality in Bayso and Girirra and the paucal marker in Bayso. One of the Bayso plurative marker is -*jool,* while one of the two plural markers in Girgirra is -*jaali*. On the basis of the presence of the paucal in Girirra one may suggest that this language and Bayso are particularly related in the Omo-Tana group since they share this innovation. Indeed, this is a category that is not attested anywhere in Cushitic,

as far as we know. If this is true, one could propose the idea that the Bayso passed it to the Ganjule-Gets'ame group after Bayso lost the dual in a period in which these languages came into contact in the region of the Abbaya and C'amo lakes.

5. CONCLUSIONS

The present paper deals with an universally unique feature shared by Bayso (Cushitic > East Cushitic > Omo-Tana) and Haro (Omotic > Ometo > East Ometo): the presence of the paucal number in a system without dual. In particular, the paper attempts to explain how these languages came to share this feature. The main conclusion is that the observation of the present situation takes to the erroneous idea that the Bayso passed the paucal to the Haro. This conclusion is based on the fact that all the Haro are since a long time bilingual in Bayso in a context of cultural and social dominance of the Bayso group on the Haro group. This idea is erroneous because Ganjule, a dialect of Haro whose speakers are not bilingual in Bayso, also has the paucal. Moreover, the Haro are newcomers on Gidicco the island, that they share with the Bayso. In fact, they come from a branch of the Gets'ame that settled in the island. Gets'ame is a third dialect of the Haro-Ganjule-Gets'ame dialect cluster, that is not documented but that most probably also has the paucal. Another conclusion is that the Haro, as part of the Gets'ame and originally speaking Gets'ame, already had the paucal when they extablished a special relation with the Bayso and started speaking their language.

A consequent conclusion is that the trasmission of the paucal must have happened sometimes in the far past, when people speaking these languages first met on the Abbaya and C'amo lakes region. A hypothesis is that the Bayso, arrived from the Somali area, acquired it from the Ganjule-Gets'ame. In fact, the Bayso had acquired the category concept and not the form, which is different from the one attested in Haro and Ganjule today. This hypothesis is challenged by the fact that a Somali dialect, Girirra, has also the paucal. However, Girirra also has the dual and the shape of the paucal marker is, again, different from the one used in Bayso.

I leave the question open, hoping that further research will reach a definite conclusion about the diffusion of the paucal in South Ethiopia.

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Due note tipologiche
sulla lingua bawlé (Kwa)

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ABSTRACT

In the paper are discussed two problems of Bawlé morpho-syntax, the existence of a real relative pronoun and the non-canonical passive of some verbs.

KEYWORDS

Bawlé morphosyntax, Bawlé relative pronoun, Bawlé non canonical passive

1.

Spero che i linguisti che si occupano di tipologia linguistica e di sintassi per-
doneranno questa incursione nel loro territorio da parte di chi non appartiene
alla loro gente: sempre più spesso oggi si è oculisti dell'occhio sinistro, perché
quello destro è affidato alle cure di uno specialista diverso. Riassumo con due
frasi il tema che intendo descrivere.

1) *ɛwia ɔ kpa tanni* il sole scolorisce il tessuto (sole-III pers. sing.-scolorire-
tessuto)

2) *tanni ɔ a kpa* il tessuto si è scolorito (tessuto-III pers. sing.-RISULTATIVO-
scolorire)
   C'è una differenza di voce, non marcata da alcun tratto morfologico o pro-
   sodico e costrutti di questo tipo sono molto comuni. Ancora alcuni esempi:

3) *i dyabue ɔ saki-li sangɛ ɔ a sa su* la sua tibia si era rotta, ma si è riaggiusta-
ta (POSS. III pers. sing.-tibia-III pers. sing.-rompere PASSATO-ma-III pers.
sing.-RISULTATIVO-adattare-sopra)

4) *longa mian y'ɔ tɛ ɔ* "il tamburello è teso e (allora) risuona" (tamburello-
tendere-FOCUS-III pers. sing.-risuonare-FOCUS); proverbio

5) *like saki, kundɛ uflɛ* "una cosa si è rotta, cerca un'altra!" (cosa-rompere-
cercare IMPERATIVO-altra); proverbio

Nel suo vocabolario della lingua Bawlé J. Timyan (2003) suppone che la va-
riazione della voce pertenga alla semantica del verbo[1] ma non è opinione da
condividere, poiché è la sintassi che determina la variazione. A prima vista
queste potrebbero esser considerate costruzioni non canoniche del passivo,[2]
tuttavia è più corretto concludere che il problema è di diatesi verbale labile,[3]
un fenomeno noto in molte lingue. Riassumo i fatti.

    a. Un verbo transitivo può essere impiegato in un costrutto intransitivo e
l'oggetto transitivo diventa soggetto:

6) *ɔ a yi-a be kun* lui non ha riempito il loro ventre (= lui non li ha saziati);
III pers. sing.-RISULTATIVO-riempire-NEGAZIONE-possessivo III pers. pl.-
ventre)

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[1]   Ad esempio *sende* è glossato "*suspendre; être suspendu*".

[2]   Alexiadou, Schäfer 2013; Cobbinah, Lüpke 2009; Keenan, Dryer 2007; Lyngfelt,
Solstad 2006; Reineke, Miehe 2005; Siewierska 2005; Shibatani 1988; Siewierska 1984.

[3]   Dixon, Aikhenvald 2000; Klaiman 1991; su queste problematiche sintattiche vedi
Dixon 2010-2012. V. anche Khachaturian 2015 (con bibliografia) e Letuchiy 2013. Più in
generale sull'inaccusatività v. Alexiadou, Anagnostopoulou, 2004 e Kuno, Takami 2004.

7) *n kun ɔ a yi* il mio ventre è stato riempito (= sono sazio); possessivo I pers. sing.-ventre-III pers. sing.-RISULTATIVO-riempire

8) *ɔ a tike anuan* lui ha aperto la porta (III pers. sing.-RISULTATIVO-aprire-porta)

9) *nzüe ɔ a tike* la pioggia si è aperta (= c'è stato un acquazzone); pioggia-III pers. sing.-RISULTATIVO-aprire

b. A seconda del verbo si possono distinguere una labilità anticausativa incoativa ed una più specificamente riflessiva o reciproca:

10) *oflɛ ɔ a kpɔtɔ* la papaya si è ammaccata (papaya-III pers. sing.-RISULTATIVO-ammaccare)

11) *i dyabue ɔ saki-li sangɛ ɔ a sa su* La sua tibia si era rotta, ma si è riaggiustata (POSS. III pers. sing.-tibia-III pers. sing.-rompere PASSATO-ma-III pers. sing.-RISULTATIVO-adattare-sopra)

12) *like saki, kundɛ uflɛ* una cosa si è rotta, cerca(ne) un'altra! (cosa-rompere-cercare IMPERATIVO-altra); proverbio

13) *longa mian y'ɔ tɛ ɔ* il tamburello è teso e (allora) risuona (tamburello-tendere-FOCUS-III pers. sing.-risuonare-FOCUS); proverbio

14) *Yao ni Kofi b'a bla nu* Yao e Kofi si sono allacciati (= stanno lottando); Yao-congiunzione-Kofi.III pers. pl.- RISULTATIVO-allacciare-dentro

15) *wɔ nyunu ɔ a kun* il tuo volto si è sporcato (possess. II. pers. sing.-volto-III pers. sing.- RISULTATIVO-sporcare.

16) *ɔ fia-li sua lɔ ɔ* si è nascosto in casa (III pers. sing.-nascondere PASSATO-casa-là-FOCUS)

c. L'agente o la causa dell'evento finale non sono espressi né possono essere espressi. È dunque difficile identificare con certezza una labilità passiva rispetto a quella anticausativa.
La labilità è una caratteristica del singolo verbo, ad esempio *kpaci* "fendere, spezzare" e *saci* "guastare, rovinare" la possiedono, *kun* "uccidere" no. La mia impressione è che un tratto importante sia costituito dalla semantica del verbo transitivo, l'aspettativa di una precisa animatezza dell'agente (dunque verbi come uccidere, chiamare, dire, vedere, generare e simili) non sembra ammettere la labilità.[4]

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[4] I parlanti ritengono intraducibile una frase come "l'animale è stato ucciso" e diranno "essi (= impersonale) hanno ucciso l'animale".

Ciò pare coerente con l'anticausatività che di norma è impersonale. Il passivo mi pare essere una delle possibilità dell'anticausalità:

17) *ɔ fia-man* non è nascosto, è ovvio (III pers. sing.-nascondere-NEGAZIONE)

18) *be ima bo wɔ, i ti i buɛ ɔ tanni?* Il loro occhio è stato bucato, per questo la sua orbita è stata ostruita? (III pers. pl.-occhio-rovinare-bucare-a causa di-possess. III pers. sing.-buco-III pers. sing.-ostruire).

Si sarà notato che la labilità anticausativa è spesso, anche se non esclusivamente, espressa nel modo verbale risultativo e credo che ciò dipenda dal fatto che essa designa un cambiamento come risultato di un processo, mentre lo stato di fatto può essere espresso con la copula (*ti*) e la forma nominale del verbo in *–wa* il cui senso è quello di participio passivo: è questa la differenza che passa tra le espressioni *ɔ a bli* e *ɔ ti bliwa*, la prima indica quanto è stato piegato e dunque è piegato, la seconda semplicemente quanto è piegato.
La labilità della diatesi nella lingua Bawlé ha dunque molti punti di contatto con quella riscontrabile nelle lingue Mande, ma anche significative differenze.

2.
D. Creissel e N. Kouadio (1977 p. 317) a proposito della frase relativa sostengono che *bɔ / mɔ* non è un pronome relativo, bensì un "*morphème de subordination*", osservazione sostanzialmente corretta se si guarda allo stato attuale della lingua: il morfema infatti introduce un'espansione subordinata al soggetto o all'oggetto della frase, ad es. *flɛ talua mɔ be ba-li mu* "chiama le ragazze che sono arrivate" (chiamare IMPERATIVO-ragazza-SUBORD.-III pers. pl.- venire passato-PLUR.; *ibid.* p. 319). I proverbi (Crevatin in st.), che spesso hanno una formulazione linguistica più antica, conservano invece anche un uso di *bɔ / mɔ* indiscutibilmente come pronome relativo; alcuni esempi:

1) *mɔ mli ɔ kundɛ-mɛn i wun* Chi si è perso non può cercarsi (RELATIVO-perdere-III pers. sing.-cercare-NEGAZIONE-possess. III pers. sing.-RIFLESS.)

2) *mɔ sua fuen ɔ di-a adya* Chi porta il cadavere non eredita (RELATIVO-portare-cadavere-III pers. sing.-avere una relazione NEGAZIONE-eredità)

3) *mɔ wlan ɔ wun sa* Chi viaggia capisce le cose (RELATIVO-viaggiare- III pers. sing.-vedere-faccenda)

Nel parlato contemporaneo questi costrutti sarebbero riformulati con l'inserzione di un antecedente, ad es. *sran nga mɔ…* La persona che….

Queste constatazioni sono rafforzate dall'esistenza di un processo di nominalizzazione, oggi a quanto ne so non più vitale, del relativo + verbo, ad es. *bɔwlan* "vagabondo" (relativo-viaggiare), *bɔwuliɛ* "defunto" (relativo-morire-

morfema di relazione; anche, abbreviato, *bɔliɛ*), (*b*)*ɔtɔliɛ* "persona morta di morte violenta" (< *tɔ* "cadere; morire di morte violenta", (*b*)*ɔtuɔbie* "raganella arboricola ("che salta e piscia"). Mi chiedo se tale nominalizzazione, davvero sorprendente e non trasparente per i parlanti, si sia verificata durante il passaggio del relativo da testa di frase ad espansione subordinata.

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The Costs of the Linguistic Transitions: Traces of Disappeared Languages in Ethiopia

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ABSTRACT

For the most part, the linguistic history of the Ethio-Eritrean highlands in ancient and mediaeval times cannot be reconstructed because of the lack of direct sources. The hegemonic role played by a few cultural centers and the prevalence of the 'dominant' languages caused the disappearance of a number of unknown idioms. Therefore, in order to raise a reliable reconstruction, the modern historical research must take into account also the scanty philological traces of languages used by peoples that lost their linguistic identities as a consequence of the cultural assimilation. Particularly, the etymological interpretation of some royal names allows one to cast a light on the linguistic origin of the members of ancient dynasties ruling between the 3rd and the 13th c.

Essentially, most of what we know about the ancient history of the Ethio-Eritrean plateau relies upon the considerable archaeological evidence, but when we attempt to reconstruct the linguistic picture of the highlands, all we have is nothing but a collection of scanty fragments from a selected number of written sources, namely no more than 300 inscriptions in Sabaic, Gəʿəz and Greek. We don't know how many languages were spoken in the millennium and half between the Ethio-Sabaean phase of Daʿamat (8th-7th c. B.C.) and the end of the Kingdom of Aksum (7th c.), but most likely some idioms were used for a certain period of time and then disappeared without leaving clearly recognizable traces. In other words, as always and everywhere, in the Ethio-Eritrean regions too a few cultural centers played an hegemonic role, imposing their practices over the surrounding communities, and in this context the linguistic transitions were the result of strategies of gradual assimilation and forced integration (Taddesse 1988). These obvious statements prove to be of some importance when we consider that the commonly accepted ideas about the peopling and the historical development of the lands between the Red Sea coasts and the Ethio-Sudanese borders are based on a surviving documentation issued by some cultural *élites* pivoting around the leading political groups, and that most of the 20th c. scholars tended to consider the facts related by the written sources as the absolute truth. Instead, some philological traces of a more complex framework can be still detected and looking at the sources against the light we can try to understand also what the documents don't tell us openly.

A good example of this dynamics is given by the South-Arabic inscriptions of Ethiopia. In the second half of the 20th c. a brilliant team of scholars pointed out that «the language of the Sabaean inscriptions from Ethiopia is distinguished from South Arabian Sabaean by a number of features which are undoubtedly due to interference of the local language or languages» (Drewes 1980: 35). A long and intense debate about this hypothesis brought about a reshaping of the original idea. Particularly, the distinction between two different groups of inscriptions (named I and II) as expressions and products of separate linguistic communities entered into crisis. Firstly, the inscriptions of group I contain unusual features, differing from Classical Sabaic (e.g. the verb *slʾ* instead of *hqny* and the preposition *ḫ-* instead of *l-*); secondly, the peculiar phenomena of group II can be explained in terms of linguistic development and historical change within the Sabaic (e.g. the replacement of the interdentals /t̠/ and /d̠/ by the sibilants /s/ and /z/, the third person plural suffix *-mw* instead of *-hmw*, with the loss of the laryngeal sound, a morpheme *-hy* denoting opposites, the indirect object of the verb *hqny* introduced by the preposition *l-*, the use of the *plurale maiestatis*).

Nonetheless, the researches carried by F. Anfray, A.J. Drewes and R. Schneider had the huge merit of calling the attention of the others scholars to the limits of the previously accepted reconstructions. Actually, the pecu-

liarities of the Sabaean inscriptions from Ethiopia deserve to be considered as the result of an interference between two linguistic levels producing «una situazione diglottica, presupposto al cambio linguistico, alla nascita di una nuova lingua» (Avanzini 1987: 221). In other words, the changes detected by comparing Classical and Ethiopian Sabaic can be better interpreted in terms of a drift of speech, because all of the features characterizing the Ethiopian Sabaic are nothing but forerunners of the Gə'əz grammar. This means that the society wasn't uniform. The kings of Da'amat used to bear the title *mukarrib* of Da'amat and Saba' (*mkrb d'mt wsb'*), without claiming the dominance over two different territories, but presenting themselves as the rulers of a 'confederation' between two components (whose full identity still remains to be explained). Eventually, this political agreement found its more complete expression in the 'supranational' Sabean title of *mukarrib*, indicating the role the kings of Da'amat played as of guarantors of a coexistence.

* * *

If we turn our attention to the linguistic situation of the Kingdom of Aksum, whose ruling class left inscriptions in Greek and Gə'əz (the latter written also in Sabaean characters), we must admit that things are less clear than we would desire. Though we have an incomplete, but sufficient understanding of the Aksumite Gə'əz used for the great royal inscriptions, some of the epigraphic records in Old Gə'əz still present many problems, «massimamente perché il tessuto lessicale che in essi appare sfugge quasi del tutto a ogni nostra intepretazione sia per il valore dei suoi temi sia per quello delle sue forme» (Ricci 1991: 1292-1293). The same definition of these inscriptions as written in Gə'əz is based simply upon their Semitic aspect, but as to their interpretation the results are completely frustrating.

Moreover, shadows of unknown idioms spoken in the Kingdom of Aksum can be still detected in the remaining sources, and at least in one case we can assume that an epigraphic language different from Gə'əz had been used in the Aksumite times. The inscription RIÉ 287, discovered in 1897 in the Eritrean place called by the local people Ṣəḥuf 'Ǝmni ('inscribed stone' in Tigrinya), bears a text in South-Arabic alphabet totally impervious to every attempt of interpretation (Conti Rossini 1947: 13-15). According to the paleography, the carved letters look like those adopted by 'Ezana in the mid-4th c. for his inscriptions in South-Arabic characters, a writing use commonly called 'pseudo-Sabaic', but the text is not even in a Semitic language. Consequently, most of the scholars shared the opinion that the text is incomprehensible because the language is totally unknown (Drewes, Schneider 1970: 66-67).

* * *

The Aksumite royal names represent another delicate matter. We must admit that the native tongue and the cultural origin of most of the kings of Aksum remain substantially obscure, because referring to the Gəʿəz grammar and vocabulary it is impossible to ascertain the linguistic affiliation of names such as Endybis *bisi* Dachy, Afilas *bisi* Dimēlē, Ousana *bisi* Gisene, ʿEzana *bəʾəse* Ḥalen, Sazana, Wazeba (*Ouazēbas*), Ebana, Nezana, Tazena (*Thezena*), Wazena. The title *bisi/bəʾəsi* (Greek/Gəʿəz), meaning 'man of' and probably indicating a tribal or clan designation, is the only recognizable Semitic word. In the case of Endybis *bisi* Dachy, the second has been considered close to Cushitic, provided this has to do with Saho *dakano* 'elephant' (Vergari, Vergari 2003: 68), appearing also in *sarwe dakʷen* (*daken*), the name of one of ʿEzana's army corps.

Some attempts of interpretation based upon the assumption that the Aksumite kings should have been of Semitic origin since they used to write in Gəʿəz are unsatisfactory. E.g., in the case of Ebana, because of the assonance with the Gəʿəz word *ʾəbn* 'stone', it has been suggested that this name «may be derived from a Semitic word designating a (sacred) stone, yet with a Christian connotation» (Hahn 2005: 211*a*). However, one should pay attention to the fact that the two endings -*ana* and -*äna* look like suffixes regularly employed in Aksumite royal names, as in Ou-/Usana (in Greek orthography and phonetic transcription), ʿEzana, Sazana, Ebana, Nezana, Tazena, Wazena. Therefore, if the semantic root to be isolated isn't Eban-, but Eb- (maybe the same element appearing in the name Waz-eb-a) the comparison with *ʾəbn* 'stone' seems to vanish. Once this approach has been accepted, we can identify monosyllabic roots like Us-, ʿEz-, Saz-, Eb-, Nez-, Taz- and Waz-, and we can look for a reasonable comparison within a different linguistic domain, where this kind of 'short' roots is attested.

This is the case with the Agaw languages (particularly the Kəmantnäy), where the suffixes -*ana* and -*äna* are employed in the formation of derived nouns (Conti Rossini 1912: 105). Thus, the name of Usana could be tracing back to a base *ʾus recognizable in the forms attested in Bilin (*ʾus-), Ḥamtanga (*wäs-) and Kəmantnäy (*yus-), originally meaning 'male' (Appleyard 2006: 65). In modern Agaw feminine suffixes have been added to the monosyllabic root to generate the present words *ʾus-äri* (Bilin) *wäs-räy* (Ḥamtanga) and *yus-äy* (Kəmantnäy) meaning 'female' (according to the same mechanism applied in Gəʿəz to create *bəʾəsit* 'woman' from *bəʾəsi* 'man'). If we suppose that this base ʾus- was expanded by adding the nominal suffix -*ana*, we can hypothetically reconstruct for Usana the meaning 'virility'. The name of Tazena (Kaleb's father) could be connected to the Kəmantnäy *taz 'kernel of grain' (Conti Rossini 1912: 262), and with the suffix -*äna* this could mean 'ear of corn' (cp. the Gəʿəz personal name Säblä Wängel, 'ear of corn of the Gospel'). In this case, it is noteworthy to mention the possible relationship between this interpretation and the well-known design on the obverse of the Aksumite

coins, with the depiction of two wheat stalks framing the royal bust. The name of Wazena could be connected to the Kəmantnäy *waz 'deposit' (Conti Rossini 1912: 268), and with the suffix *-äna* this could mean 'guarantor' (possibly, the radical element is the same appearing at the beginning of the name Waz-eb-a).

One could find it dubious that some of the kings of Aksum could have brought names of Cushitic (particularly Agaw) origin, considered that they were rulers of a state whose official and literary language was Semitic, namely Gəʿəz. Yet, it is sufficient to recall that Aksum was a capital-city for at least six centuries, a long period during which it is reasonable to admit that several royal families alternated to the throne and we have no reason to postulate that these ruling dynasties were all of Semitic origin. Nobody doubts that the Agaw-speakers were a considerable part of the Aksumite society, and the political role they played within the Kingdom of Aksum is proved at least by a passage of the 6th c. *Topographia Christiana* of Cosmas Indicopleustes (II, 51), who describes the gold trade route between Aksum and the land of Sasou/-u and relates about the special role played by the 'governor' of the Agaw region (διὰ τοῦ ἄρχοντος τῆς Ἀγαῦ), serving as the trustee of the King's interests.

At any rate, this is nothing but a linguistic and historical hypothesis, and the supposed Cushitic affiliation of some of the Aksumite names can be called into question only for a part of the documented rulers. The access of Semitic-speaking kings to the throne of Aksum is proved at least by the name of Sembrouthēs, whose Greek inscription can be dated to the period between the 2nd and the 3rd c.: «Sembrouthēs, (the) great(est) king from among the kings of the Aksumites, came and set (it) up in the 24th year of Sembrouthēs the great king» (RIÉ 275; Fiaccadori 2004; Marrassini 2014: 194-196). A brilliant interpretation of this name as a Greek adaptation of the Semitic form *Ṣənf Rəʿəd* 'The border is Trembling' or *Ṣənf Rəʿud* 'The border is Terrified' (with a typical Greek nominal ending *-ēs*) traces back to C. Conti Rossini (1919-20: 239), and has been recently reaffirmed by G. Fiaccadori (2004: 144). Since a Semitic onomastic typology offers a reasonable explanation, there is little need to look for a different linguistic affiliation, as provided by the problematic comparison of Sembrouthēs with the Σε(μ)βρίται/-ίδαι mentioned by Strabo (XVI, 770 and XVII, 786) in the wake of Eratosthenes and Artemidorus, and the *Se(m)b(er)ritae* recorded by Pliny (VI, 191-193), inhabiting a territory along the Blue Nile (Abbay) between Meroë and Aksum, more or less in the historical region of Sennār.

Similarly, the explanation of the name of the capital-city Aksum through an half-Agaw and half-Semitic etymology, resulting from the combination of *aqʷ* or *axʷ* 'water' and *šum* 'governor', therefore 'the water of the governor' (to be compared to the place-name *May Šum*) is not only dubious, but also unnecessary. In this case both the verbal construction *ʾaksämä* 'to assign a land' and the passive participle *kəsum* 'land assigned' are attested in Gəʿəz,

therefore with all probability the original meaning of Aksum is '(territory) assigned' (Ricci 1994). Typologically this is the same explanation suggested for the name of Adulis as a Greek adaptation of the passive participle *'ədul '(territory) allotted' from a Tigre verbal stem *'adlä (0_1) that in the modern language brought about the intensive forms (0_2) 'əddul and 'addälä (Lusini 2006: 451).

<p style="text-align:center">* * *</p>

The supposed Agaw affiliation of some of the Aksumite names immediately recalls the question of the linguistic identity of the members of the Zagʷe dynasty (1137-1270). Since their Cushitic cultural origin is commonly accepted, the question is whether they used to speak a native language. To this direction points a passage in the 15th c. *Vita* of king Nä'akkʷəto Lä'ab (Conti Rossini 1943: 149 text, 208 transl.), containing a sentence and a proverbial saying addressed by Lalibäla, Nä'akkʷəto Lä'ab's uncle, to his own wife Mäsqäl Kəbra: 'Then he spoke to her in the language of his country; and the meaning of that speech was: first you gave him, and now you pray' (*wäka'əbä tänagära bänägärä bəḥeru wätərgʷamehu läwə'etu nägär qädimu wähabkiyo yoməssä sä'alki*). Probably this passage contains an allusion to the linguistic 'diversity' of the Zagʷe kings.

It has been suggested (Taddesse 1972: 57, nt. 3) that an Agaw word is contained in a passage of the 15th c. *Vita* of king Yəmrəḥannä Krəstos (Marrassini 1995: 44 text, 80 transl.), referring how the people welcomed the coronation of the king: 'ḥawisa, ḥawisa for the king of Ethiopia, ḥawisa, Yəmrəḥannä Krəstos, ḥawisa' (*ḥawisa ḥawisa lä'iṭoypəya nəgusa ḥawisa yəmrəḥannä krəstos ḥawisa*). Actually, in Kəmantnäy the verbal form *xʷaš-* (causative stem of *xʷa-*) means 'he anointed' (Conti Rossini 1912: 209; Appleyard 2006: 24), but the interpretation is weak, because *ḥawisa*, whatever etymology it has, was already integrated in the Gə'əz vocabulary in the 15th c., when the *Vita* was composed.

Instead, more instructive seems to be the analysis of the names of the Zagʷe kings, because some of them prove to have a Cushitic affiliation. The father of Yəmrəḥannä Krəstos is Gərwa Səyyum (the alternative form Gərma Səyyum can be explained as a later Semitic-looking form), and in several Agaw languages *gərwa* is the most common word for 'man', 'male' (Conti Rossini 1912: 201; Appleyard 2006: 96). For the interpretation of the name of Lalibäla, the most celebrated king of the dynasty, we can consider two Agaw words: one is *läla* meaning 'bee' in Ḥamta and Ḥamir, the two main dialects of the Ḥamtanga language (Conti Rossini 1904: 220, 1912: 223; Appleyard 2006: 30); the second element is close to *bäla* meaning 'strong, strength' in Bilin (Appleyard 2006: 130). The final meaning 'strength of the bees' (Mercier, Lepage 2012: 24, 44 note 9) can be explained through the sacred status of

these animals in the Agaw tradition (Haberland 1965: 123-127), an auspicious role reflected by the same 15th c. *Vita* of king Lalibäla (Perruchon 1892: 12 text, 77-78 transl.), telling the story of a swarm of bees that encircled the newborn 'as the troops stay around the king' (*kämä zäyä'awdəwo ḥarahu länəgus*).

* * *

In the same years of the Zagʷe rule (1137-1270) and in the following decades, when the Christian kings, from Yəkunno Amlak (1270-85) to 'Amdä Ṣəyon (1314-44), stabilized the power of the so-called 'Solomonid' dynasty, beyond the southern borders of the kingdom different aristocratic families and military heads of Islamic culture used to fight among themselves. Eventually, they gave birth to independent Sultanates that periodically confronted the Christian hegemony over the southern and central regions of the historical Ethiopia. Among these, the most organized and influent was the state of Ifāt. According to a statement by the 14th c. Egyptian writer al-Maqrīzī in the *Kitāb al-ilmām*, in the Sultanate of Ifāt an 'Ethiopic language' was spoken together with Arabic (Cerulli 1936: 19-20). The words used by al-Maqrīzī cannot be interpreted with precision, since *al-luġa al-ḥabašiyya* could indicate whatever Semitic or Cushitic language. In any case, according to the same author, Arabic too was spoken in that Islamic country, most probably as the trade vehicle or a prestige idiom. Indeed, all the rulers of the Walašma (or Walasma') dynasty had Arabic names, as shown by the so-called 'Harär chronicle', an Arabic text transcribed in 1926 and published in 1931 by Enrico Cerulli.

The beginnings of the preeminence of the Sultanate of Ifāt can be dated with precision to the year 684 of hijra, namely 1285 AD. In that year the Ifāt hegemony originated from a political and military clash with a previous Islamic state, ruled by the dynasty established by Wudd b. Hišam al-Maḫzūmī of the qurayšite clan of Banū Maḫzūm. Of this more ancient Sultanate, extending its own control over eastern Šawa, we know the name of the capital-city Walalah and the overall duration, 400 years starting from 896-897 AD, namely 283 of hijra.

These chronological data are reported in a different Arabic document, transcribed in 1936 from a 1863 original found in Harär and published in 1941 by the same Enrico Cerulli. Unlike the 'Harär chronicle', containing the 'History of the Walašma', in this text not all the rulers of the Maḫzūmī dynasty have Arabic personal names. Here and there one can find «nomi propri di sovrani e principi scioani che, pur non essendo di facile interpretazione, sembrano composti di voci di una lingua semitica del gruppo etiopico» (Cerulli 1941: 32). To cite but one example, the name of the tenth Sultan of the dynasty, who reigned from 1269 to 1278, is reported in the vocalized form Dilmārrah, to be analyzed as a composition of *dil* and *mārrah*. In Harari

dili means 'victory' (to be compared with Tigrinya, Amharic and Gurage *dəl*). The root *mrḥ meaning 'to guide' is well attested in North-Ethiopic, but it is reflected also in Argobba *märraha*, Amharic *märra*, and Gurage *mära*. Therefore, this Ethio-Semitic name can be interpreted as 'guide to the victory' (*ad victoriam ducens* in Cerulli 1941: 33).

In conclusion, this analysis highlighted once again the peculiar richness of the linguistic history of this corner of the world and the opportunity for reconstructing events of considerable importance through the comparative and etymological study of the sources. From this approach one can infer the possibility that several linguistic and cultural groups, both of Semitic and non-Semitic origin, were an integral part of the ruling classes that took power in different Ethio-Eritrean regions. The adoption of literary idioms, namely Gəʿəz or Arabic, as the instruments of the historical narrations, simply indicates that these ruling classes used to support one of the main religious systems, e.g. Christianity or Islam. And even though the use of a written language in place of the native tongue for purposes of communication is an obvious practice, this shouldn't prevent us from trying to detect what is concealed under the veil of the cultural conventions.

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Clause chaining across the Sahara

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ABSTRACT

Clause chaining is a clause-linking strategy which stands in between coordination and subordination, combining the lack of embeddedness of the former with the dependence of the latter (Foley and Van Valin, 1984). A finite verb form may be either preceded or followed by one or several less-finite forms: these two options are referred to as medial-final and initial-medial clause chaining, respectively. While medial-final chaining is attested all over the world, initial-medial chaining was until recently deemed to be unattested; however, recent research has demonstrated its existence in several Niger-Congo and Nilo-Saharan languages. While Berber (Afroasiatic) was long neglected in the relevant typological literature, Mauri (in press) has shown that Berber's Chained-Aorist construction is an instance of initial-medial clause chaining. This paper highlights the similarities between Berber's Chained Aorist and the clause-chaining constructions of some genetically-unrelated sub-Saharan languages. These similarities might support an interpretation of initial-medial clause chaining in these languages as an areal feature.

KEYWORDS

Berber, clause linking, language contact, clause chaining, Niger-Congo

1. INTRODUCTION

Intense language contact and multilingualism have left evident marks in the linguistic landscape of the African continent, with a high degree of lexical borrowing and grammatical convergence (Dimmendaal, 2011:203ff.). In other words, contact between genetically-unrelated languages has resulted in a number of shared features, giving rise to several language areas, such as the "Ethiopian language area" (Dimmendaal, 2011:204). This work highlights the existence of some similarities in clause-linking strategies adopted by unrelated languages spoken across another region: the Sahara.

The Saharan area has been of interest to human beings since prehistorical times. Recent works show that trans-Saharan relations were far more intense than previously thought (Ross, 2011). Such relations were primarily of a commercial nature, with goods such as gold, salt, and slaves among the main commodities traded across the region. Several trade routes served the necessities of people living on the desert's northern and southern shores. Such routes experienced changing fortunes, depending on a web of economic and political factors.

As for its current linguistic landscape, the peoples living in and around the region speak languages belonging to different families and/or phyla. Berber languages (Afroasiatic) are spoken north of and across the Sahara, over a vast territory stretching from Mauritania in the West to Egypt in the East, and from the Maghrebi countries in the North down to the lands inhabited by the Tuareg, who speak some distinctive Berber varieties. In addition to Berber, Arabic (Semitic, Afroasiatic) is widely spoken throughout the region, both natively and as a lingua franca, being widely used for mainly administrative and religious purposes. The southern edge of the Sahara constitutes a sort of transitional area between Berber and languages belonging to the Chadic family (Afroasiatic) as well as to genetically-unrelated language families such as Songhay (Nilo-Saharan) and several subgroups of Niger-Congo (Lewis et al., 2014).

Some important works on language contact in the Sahara have been published in recent years, such as Souag (2010), Kossmann (2013b), and Souag (2015), among others. Souag (2010) is a detailed account of how extensive language contact with Arabic has differently affected two genetically-unrelated languages spoken in the Sahara, namely in the Egyptian oasis of Siwa (Siwi Berber) and the Algerian town of Tabelbala (Korandjé, Songhay). Kossmann (2013b) is an analysis of the impact of Arabic on Northern Berber. Finally, Souag (2015) digs deep into history to unravel the web of relations accounting for the idiosyncratic nature of the Berber-influenced variety of Songhay spoken in Tabelbala.

Ross (2011:1) states that, as a field of enquiry, "Saharan Studies […] is still in its infancy". Despite the presence of the notable exceptions mentioned above, the investigation of language contact in and across the Sahara is simi-

larly in its early stages. The present work contributes to studies of language contact by focusing on *clause-chaining* constructions. The observation that this clause-linking type plays a role as an areal feature on the African continent is not new. For instance, Dimmendaal states that the widespread use of converbs[1] in genetically-unrelated languages should be conceived of as a feature confirming the existence of the Ethiopian linguistic area (Dimmendaal, 2011:207). Similarly, this paper shows that initial-medial clause chaining may well be an areal feature too: despite its seemingly cross-linguistic rarity, this chaining type is attested in both sub-Saharan languages and further north in Berber, as the Ayt Atta Tamazight data presented here show.

The paper is structured as follows: a typology of clause linking is given in 2; the illustration of clause-chaining structures through numerous examples from a number of sub-Saharan languages is provided in 3; Ayt Atta Tamazight's *Chained-Aorist* construction is illustrated in section 4; finally, section 5 concludes the paper indicating some directions for future research.

2. CLAUSE CHAINING AS A CLAUSE LINKING STRATEGY

The domain of clause linking has gathered some conspicuous interest in recent decades, notably in works such as Stassen (1985), Longacre (1985, 2007), Foley and Van Valin (1984), Dixon and Aikhenvald (2009), Haspelmath (1995, 2004), Bril (2010), Gast and Diessel (2012), among others. What follows provides a typology of clause-linking strategies (2.1) as well as an investigation of the syntactic properties of clause chaining (2.2).

2.1 CO-RANKING AND CLAUSE-CHAINING STRATEGIES

Cross-linguistic variation is attested in the way the predicates of two juxtaposed clauses can be encoded. This essentially revolves around two strategies. The first strategy consists in the use of two verbs of equal rank, i.e. each of them could be used in an independent clause. This means that the juxtaposition of two (or more) clauses does not cause any inflectional effect on their verbs: this is a *balanced construction* (Stassen, 1985:76)[2] or a *co-ranking* structure (Haspelmath, 1995, Longacre, 1985, Longacre, 2007).

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[1]   Cf. Haspelmath (1995) for a discussion of the difference between converbs and medial verbs (also discussed in section 4, below).

[2]   Stassen's work concerns temporal relations between clauses, but his analyses seemingly applies to other semantic types of linking.

This is seen in a sentence such as *John jumped out of his chair and grabbed a gun* (Stassen, 1985:76), in which both predicates are finite. Co-ranking structures are common in most contemporary European languages, but are also widely attested elsewhere, as the following example from Ibaloi (a language spoken in the Philippines) shows:

1) Co-ranking structure in Ibaloi (Longacre, 2007:389)

Binoshasan	*sha*	*sota*	*kapi*	*jet*	*indaw*	*sha'd*	*San Fernando*
harvested	they	the	coffee	and	took	they to	San Fernando

'They harvested the coffee and took it to San Fernando'

Two clauses are here coordinated with the help of the conjunction *jet* and there is no structural difference between them.

The second clause-linking strategy consists in lowering the rank of one of the two predicates, turning it into a nonfinite form. This means that the main diagnostic feature of this clause-linking type is the presence of just one fully-inflected verb form in a clause chain, with the other verb displaying reduced marking and deriving aspectual or temporal interpretation from the former. This structure is a *deranked construction* (Stassen, 1985:77) or a *clause-chaining* structure (Foley and Van Valin, 1984, Longacre, 2007:375, Payne, 1991): the latter is also the label adopted in this paper.

Clause chaining is illustrated via the following examples from Selepet, a language spoken in Papua New Guinea:

2) Clause-chaining structure in Selepet (Longacre, 2007:375-376)

a.
kawa	*ari-op*
Kawa	leave-3SG.REM

'Kawa left'

b.
kiap	*ya*	*taka-op*
patrol.officer	that	arrive-3SG.REM

'That patrol officer arrived'

c.
kawa	*ari-mu*	*kiap*	*ya*	*taka-op*
Kawa	left-3SG.DSU	patrol.officer	that	arrive-3SG.REM

'Kawa left and that patrol officer arrived'

In (2a) and (2b), the morpheme *-op* is suffixed onto the predicate to mark remote past tense. On the other hand, (2c) shows that the juxtaposition of the former two clauses causes *-op* to be dropped from the first predicate; this predicate is also interesting for it is marked by *different subject* (see 3.1, below).

2.2 THE SYNTACTIC NATURE OF CLAUSE CHAINING

Once the basic characteristics of clause-chaining constructions have been introduced, one may wonder what their syntactic properties are. A possible answer is found in Foley and Van Valin (1984). Their theory of syntactic linkage (aka nexus) stems from a fundamental distinction between *embeddedness* and *dependence*, since "whether a clause is dependent in some way upon another clause is independent of whether it is embedded as an argument of another clause" (Foley and Van Valin, 1984:243). The role of *operators*[3] such as tense and aspect is central in determining whether a dependence relation between two clauses exists or not, since these may be independently specified by operator (i.e. both clauses being – *dependent*), or such a dependence relation may exist instead (i.e. one of the two clauses being + *dependent*).

The combination of these two features yields three nexus types, namely *coordination*, *subordination*, and *cosubordination* (from Foley and Van Valin, 1984:242). Coordination is characterised by lack of embeddedness and lack of dependence, whereas subordination has opposite values for both parameters. The novelty of Foley and Van Valin's approach consists in recognising that the traditional classification of sentences into coordinate and subordinate structures cannot account for those structures in which a clause is not embedded into the other while somehow being dependent on it. These are best represented by clause-chaining and serial-verb constructions, which are then analysed as instances of *cosubordination*, a notion first introduced in Olson (1981).

To summarise, clause-chaining constructions display some idiosyncratic behaviour which sets them apart from the traditional classification of sentences into coordinate and subordinate, prompting the recognition of cosubordination as a syntactic category in its own right. Some tests for distinguishing subordination from cosubordination in Berber are discussed in 4.2.

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[3]   Operators are grammatical categories which modify the three levels of the clause mentioned above: they "are not constituents of the layer but are operators *over* the entire layer" (Foley and Van Valin, 1984:208).

3 CLAUSE-CHAINING CONSTRUCTIONS ACROSS THE SAHARA

What follows further illustrate the typological characteristics of clause-chaining constructions, with the help of data from sub-Saharan languages. It is shown that these constructions can be pooled into two groups depending on the directionality of chaining: these are referred to as *medial-final* and *initial-medial* chaining, depending on the location of the independent verb. These two chaining structures have also been named *anterior* and *posterior deranking* (Stassen, 1985), *anterior* and *posterior chaining* (Haspelmath, 1995), and *prenuclear* and *postnuclear dependency* (Dooley, 2010), respectively.

3.1 MEDIAL-FINAL CLAUSE CHAINING

Medial-final chaining refers to structures in which the independent-verb clause comes last in the chain, whereas each preceding clause has a dependent form, aka *medial verb*[4] (as in the Selepet example above). A distinctive feature of medial-final chaining is the presence of *switch-reference*, "a discourse tracking device, whose main function is to monitor the subject" (Fedden, 2012:393), i.e. it usually indicates whether any one medial clause has the same subject as the final, independent clause or not.

Medial-final chaining is found in languages spoken in many parts of the globe, such as Papua New Guinea and South America (Longacre, 1985, Longacre, 2007). An instance of medial-final chaining was given in (2c) above. Further examples from a Papua New Guinea language are provided below:

3)   Medial-final chaining

   a.   Kewa (Franklin, 1971: quoted in Foley and Van Valin 1984:257)

ní	*réka-no*	*ágaa*	*lá-a*
1SG	stand-DSU.SMP	talk	say-3SG.PST

   'I stood up and he talked'

   b.   Kewa (Franklin, 1971: quoted in Foley and Van Valin 1984:257)

ní	*réko-a*	*ágaa*	*lá-lo*
1SG	stand-SSU.SMP	talk	say-1SG.PRS

   'I stood up and am speaking'

---

[4]   Several alternative labels refer to similar verb types in the literature, for example "gerunds", "participles", and "coverbs" (Longacre, 1990:11). Haspelmath (1995) shows the fundamental difference between medial verbs and "converbs" (see section 4, below).

Sentences (3a) and (3b) show polar marking for switch reference: the first example shows that the medial clause has a different subject (DSU) from the fully-marked final clause; the second sentence shows that the opposite holds true (SSU).

Medial-final clause chaining is also a common feature of genetically-unrelated languages spoken in the Ethiopian region, where converb constructions may often be used in clause-chaining constructions (Amha and Dimmendaal, 2006, Amha, 2010). This is shown in the following example from Wolaitta (Omotic, Afroasiatic), a language spoken in Ethiopia:

4) Medial-final chaining in Wolaitta (Amha, 2010:120)

yaát-ídí	*káwa*	*miz-ídí*	*hiittá-a*
that.do-SSU.SQ.CNV$_2$	dinner.ACC	feed-SSU.SQ.CNV$_2$	bed-M.ACC

hiit't'-ídí	*ʔaíss-ídósona*
make.bed-SSU.SQ.CNV$_2$	spend.night.CAUS-3PL.PST.AFF.DCL

'Having done that, they gave dinner (to the man), made a bed (for him) and hosted him for the night'

In (4), only the final verb is overtly marked by tense, whereas the preceding verb forms display one of the converbs attested in the language.

3.2 INITIAL-MEDIAL CLAUSE CHAINING

The second chaining type consists in the combination of an *initial* clause having a finite verb form and one or more *medial* clauses characterised by less-finite verb forms, which are dependent on the initial predicate. While called *initial-consecutive* clause chaining by Longacre (2007), this structure is here referred to as *initial-medial*, for the label 'consecutive' would generate the wrong expectation that these medial verbs only occur in the expression of temporal sequentiality (Mauri, 2015, in press).

Initial-medial clause chaining reportedly has less widespread currency than medial-final chaining cross-linguistically: Longacre (1985:285) claimed that this chaining type was unattested, although he speculated that such a structure could in principle exist. Recent research has demonstrated its existence in several sub-Saharan languages mainly belonging to Niger-Congo and Nilo-Saharan (Creissels et al., 2008, Longacre, 1990, Longacre, 2007).

Initial-medial chaining languages vary as to whether their initial forms are always obligatory (Longacre, 2007:417). In Mündü (Eastern Niger-Congo), a medial form may be used without any initial form in narrative discourse, whereas such obligatory initial forms are required in other genres (Longacre,

1990:111, Longacre, 2007:419). A similar situation is attested in Sabaot and Jur-Luwo, two Nilotic languages (Longacre, 2007:419). However, it seems to be more normal for initial-medial chaining languages to display obligatory initial forms, as in Obolo (Lower Cross Group, Niger-Congo), a language spoken in Nigeria (Longacre, 2007:418). This is also the case in Nzema (Kwa, Niger-Congo), a language spoken in southwest Ghana and southeast Ivory Coast, which has a "consecutive tense whose occurrence is dependent on the prior occurrence either of a past tense or of an historical present" (Longacre, 1990:125).

This chaining type is also attested in Wolof (Atlantic Congo, Niger-Congo) a language mainly spoken in Senegal. Wolof has a verb form known as 'Null tense' or 'Aorist', which is especially frequent in narratives, although it can also be used in proverbs and stage directions (Robert, 2010:490). The Null tense is "the only non-tensed conjugation" in Wolof's verbal system (Robert, 2010:478): it is a verb which has no tense of its own, so it needs what Robert calls "situational anaphora": its tense is derived from the temporal specifications given by the tensed predicate of a preceding clause. An example is given in (5):

5) Initial-medial chaining in Wolof (Robert, 2010)

dafa	*sàcc,*	*ñu*	*kaaf*	*ko*
VBFOC.3SG	steal	NULL.3SG	imprison	him

'He stole (therefore) he was put in jail.'

Similar instances of initial-medial clause chaining are found elsewhere in Niger-Congo. Tem (Kotokoli – Gur, Niger-Congo) is a language spoken in Togo, Ghana, and Benin. An example of initial-medial chaining is given below:

6) Initial-medial chaining in Tem (Kotokoli) (Niger-Congo: Longacre, 2007:418)

mɔ́ɔ́gbɔ́ɔ	*Ɣɛlívɔ́ɔ*	*níbááwʊ*	*mɛɖéɛ*	*Wasáára-déɛ*
1SG.take.PFV	the.Yelivo	road	1SG.go	to-Wasaara

'I took the Yelivo road and then I went to Wasaara'

In (6), the initial verb *mɔ́ɔ́gbɔ́ɔ* shows person-number agreement in addition to being marked as Perfect, as opposed to the medial verb *mɛɖéɛ*, an aspectually-unmarked form which relies on the initial form for its TAM interpretation. A similar situation is attested in another Gur language, namely Yom (Pila-Pila) (Longacre, 2007:418).

Moving further east one encounters Toposa (Nilo-Saharan), a strict VSO language spoken in South Sudan (Longacre, 1990:65). In narrative discourse, this language makes use of initial-medial clause chaining to encode events on the main storyline, but also to provide some background information and express flashbacks.

3.3 CHAINING DIRECTION AND CONSTITUENT ORDER

One last point to be mentioned before discussing the Berber data is the existence of a correlation between chaining direction and constituent order (Dooley, 2010, Haspelmath, 1995, Longacre, 2007, Roberts, 1997, Stassen, 1985). On the one hand, languages having medial-final chaining typically show SOV constituent order: this means that their full marking of the last verb in the chain corroborates their head-final nature (Longacre, 2007:417).

On the other hand, initial-medial chaining languages have head-initial structure, showing VO order, i.e. either SVO or VSO: a paradigmatic example of this is Toposa (Eastern Nilotic: Longacre, 1990:65).[5] This is also seen in Tem (see (6), above) as well as in languages such as Nzema (Kwa, Niger-Congo: Longacre, 1990:125) and Anywak (Northern Nilotic: Longacre, 1990:88) among others. Once again, the structure of their clause-chaining constructions is consistent with more general typological properties displayed by these languages (Longacre, 1990:174, Longacre, 2007:417, Stassen, 1985:88ff.).

4 CLAUSE CHAINING IN AYT ATTA TAMAZIGHT (BERBER)

Ayt Atta Tamazight (henceforth AAT) belongs to the Tamazight dialect continuum (ISO 639-3: *tzm*), a cluster of closely-related Berber varieties spoken from the Middle Atlas down to the Anti Atlas region, in South-East Morocco (Amaniss, 2009, Hart, 1981, Hart, 1984, Mauri, 2015, Taïfi, 1991). The AAT variety described here is the one spoken by the Ayt Lfrsi community in the eponymous village situated in the Jbel Saghro area. The Ayt Lfrsi are a small fraction of the larger Ayt Atta "supertribe" (Hart, 1981, Hart, 1984).

AAT displays a number of morphosyntactic characteristics which make it similar to many other Berber varieties, notably the use of non-concatenative morphology, the presence of a *state* alternation, and VSO order. The AAT verbal system includes several stems. The Perfective, the Imperfective, and the Imperative stems are TAM-marked forms, as opposed to the so-called Aorist which can be either preceded by TAM particles or used alone, in its bare

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[5]   Longacre (1990:65) states that Toposa "is the strictest VSO language [he has] ever encountered."

form. It is precisely the latter use of the Aorist which is relevant to this paper (for a sketch grammar of the language, see Mauri, 2015).

In Berber dialects allowing for the bare Aorist to be used, this generally follows a TAM-marked verb form (henceforth TAM-V). Several varieties display the Chained-Aorist construction (henceforth C-AOR), although some dialects only show it to a marginal extent or heavily constrain its use.[6] As shown in Mauri (in press), this pattern can be reinterpreted according to the conceptual and terminological tools discussed in the previous sections: AAT's Chained-Aorist construction is an instance of *initial-medial clause chaining*. This structure links two clauses, namely an *initial* clause having a TAM-marked verb and a *medial* clause with a bare-Aorist form. The medial clause is dependent on the initial one for its aspectual interpretation.

The Chained-Aorist construction has at least some marginal presence in many Berber dialects. A few examples from a score of Berber dialects are displayed below (for further examples, see Mauri, 2015, in press):[7]

7) IMP (V$_1$) – AOR (V$_2$) in Kabyle (Chaker, 1983:229)

Fɣ[IMP]*, t-fk-ḍ*[AOR] *as t!*

'Go out[IMP] and give[AOR] it to him!'

8) IMP (V$_1$) – AOR (V$_2$) in Tamashek Tuareg (Heath, 2005:720-721)

ɣas ìnnas[PFV]*ǽyy*[IMP] *aman tə̀tkəlæ̀d*[AOR] *terě̀witt d ˀækǽbar təkkə̀d*[AOR] *ebǽɣæw én*

'Well, he said[PFV] to him: "leave[IMP] the water, and pick up[AOR] the hide cord and the wooden milk bucket, and go[AOR] to that bull over that way […]'

9) PFV (V$_1$) – AOR (V$_2$) in Figuig (Kossmann, 1997:350)

lmalik y-uzen[PFV] *i-ɛessas-en af-en*[AOR] *din ta-meṭṭu-t*

'The king sent[PFV] guards and they found[AOR] a woman there'

10) PFV (V$_1$) – AOR (V$_2$) in Tamashek (Heath, 2005:698)

əndǽr i-wæt[PFV] *ˀə̀-jənna ənḍnǽšel, ə̀zjər*[AOR]*-æɣ*

'If it had rained[PFV] yesterday, I'd have gone[AOR] out'

11) IPFV (V$_1$) – AOR (V$_2$) in Ghadames Berber (Kossmann, 2013a:166)

asəf n ălarəbɛa, assǎswónăt[IPFV] *təmǎnṣabén msəkkərăn*[AOR] *(ǎ)lgrágəš*

'on Wednesday the "dames d'honneur" put[IPFV] on henna and pastry is prepared[AOR]'

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[6]   For example, a bare-Aorist verb form cannot be used after an initial Perfective in Ghadames Berber (Kossmann, 2013a:162).

[7]   V$_1$ and V$_2$ indicate the predicate of the first clause and the predicate of the second clause, respectively.

12) IPFV (V₁) – AOR (V₂) in Ayt Ndhir Tamazight (Penchoen, 1973:86)

*la ittəddu*ᴵᴾᶠⱽ *xirḷḷah ddaw n wašal ṯili*ᴬᴼᴿ *nnigas yuṯ n ṛṛuṯṯ*

'It goesᴵᴾᶠⱽ a very long way beneath the earth. There isᴬᴼᴿ a cemetery above it'

In all of these data, a bare-Aorist verb form is preceded by a TAM-marked form. The aspectual value of the initial TAM-V determines the aspectual interpretation of the bare Aorist which follows.

Despite its presence in several Berber dialects, nowhere is the Chained-Aorist construction more widely used than in AAT (and, presumably, in other dialects from South-East Morocco). Its role is especially prominent in narration, where it mainly carries storyline information. However, it is also found in non-storyline contexts as well as in non-narrative texts. As the following data show, the bare Aorist can be found after any TAM-marked form in Ayt Atta Tamazight. Similarly to the sub-Saharan languages discussed in 3.2, the Aorist is often used to express main storyline information, continuing the function of a preceding verb. This can be seen in the following examples:

13) IMP (V₁) – AOR (V₂)

asj	*t-a-mlal-t=nnk*		*t-kk-t*
take.IMP	F-AS-gazelle-F=2SG.M.POSS		2SG-take.AOR-2SG
a-brid	*ajffas*		
AS-road	right		

'Take your gazelle, take the road on the right […]'

14) PFV (V₁) – AOR (V₂)

t-wt=ttit	*t-Ø-srdun-t*		*t-mmt*
3SG.F-hit.PFV=3SG.F.ACC	F-DS-mule-F		3SG.F-die.AOR

'A mule hit her, she died'

15) IPFV (V₁) – AOR (V₂)

ass=a	*lʕid*	*aχatar*	*da*	*j-ttddu*
day=PROX	Eid	big	TAM	3SG.M-go.IPFV
simana	*j-ili*	*w-jdud*	*n*	*lḥart*
week	3SG.M-be.AOR	DS-Ajdud	of	Lḥart

'Today it is Eid al-Adha: a week goes by, the Ajdud of Lḥart starts'

The Aorist is chained to a preceding Imperative in (13), whereas it comes after a Perfective verb and an Imperfective verb in (14) and (15), respectively.

The previous data show that the C-AOR is a construction which shows operator dependence, since the aspectual value of the initial verb has scope over the non-initial verb: in other words, the latter is dependent on the former. Incidentally, the fact that the independent form precedes the dependent one is also compatible with the observed correlation between chaining direction and a language's constituent order (Berber is a VSO language; see 3.3, above).

Dependence is one of the defining features of cosubordinate clauses (see section 2). This shows that C-AOR is not an instance of coordination, for the latter is a nexus type characterised by independent clauses. As far as embeddedness is concerned, this can be tested on the basis of criteria for subordination, such as the ones devised by Haspelmath (1995). The behaviour of AAT's Chained Aorist vis-à-vis some of those criteria is discussed in what follows.

The first criterion concerns the possibility for a subordinate clause to be placed either before or after its superordinate clause without any significant semantic change, at least when temporal sequentiality is not involved (Haspelmath, 1995:13-14). AAT Aorist-marked clauses do not behave like subordinate clauses in this respect, since their position is fixed, as they necessarily follow the initial clause:

16)   No variable position for C-AOR clauses

   a. *j-dda*   *ħmad*   *s*   *ssuq*   *j-ddu*   *iʃʃu*   *s*   *iʁrm*

   3SG.M-go.PFV Ahmed   to   market 3SG.M-go.AOR Yousef   to   village

   'Ahmed went to the market and Yousef went to the village'

   b. **j-ddu*   *iʃʃu*   *s*   *iʁrm*   *j-dda*   *ħmad*   *s*   *ssuq*

   3SG.M-go.AOR Yousef   to   village 3SG.M-go.PFV Ahmed   to   market

   'Yousef going to the village, Ahmed went to the market'

This shows that it is simply impossible for an Aorist-marked clause to be freely placed before the TAM-marked clause.

The second criterion concerns some extraction constraints on coordinate structures. Two coordinate clauses do not allow for the extraction of a main clause's argument; conversely, if two combined clauses allow for extraction to take place, this shows that only one of them is independent, whereas the other clause is subordinate (Haspelmath, 1995:16). In this respect, AAT medial clauses do not behave like subordinate clauses, since they do not allow for the extraction of an initial clause's argument. This is seen below:

17) No extraction is possible in TAM-V (V$_1$) + AOR (V$_2$) constructions

   a. *j-dda*   *s*   *t-a-ddar-t*   *afad*   *ad*   *j-swunfu*

      3SG.M-go.PFV   to   F-AS-house-F in_order_to TAM 3SG.M-rest.AOR

      'He went home in order to rest'

   b. *ma-s*   *j-dda*   *afad*   *ad*   *j-swunfu*

      Q-to   3SG.M-go.PFV   in_order_to   TAM 3SG.M-rest.AOR

      'Where did he go in order to rest?'

   c. *j-dda*   *ħmad* *s*   *ssuq*   *j-ddu*   *iʃʃu*   *s*   *iʁrm*

      3SG.M-go.PFV Ahmed to   market 3SG.M-go.AOR Yousef to   village

      'Ahmed went to the market and Yousef went to the village'

   d. **ma-s* *j-dda*   *ħmad* *j-ddu*   *iʃʃu*   *s*   *iʁrm*

      Q-to   3SG.M-go.PFV   Ahmed 3SG.M-go.AOR Yousef to   village

      'Where did Ahmed go and Yousef went to the village?'

Sentence (17a) has a main clause followed by a purposive, subordinate clause. Extraction of the noun *taddart* is allowed, as shown in (17b). On the other hand, (17c) is an instance of C-AOR construction: extraction is not allowed, as shown by (17d). This demonstrates that C-AOR does not involve subordination, since *jddu iʃʃu s iʁrm* (in 17c) is not embedded into the clause which precedes it.

    This section has discussed the syntactic status of C-AOR in AAT. Lack of embeddedness and dependence on the preceding TAM-V for its aspectual interpretation jointly support an interpretation of the C-AOR in terms of clause chaining, i.e. as an instance of cosubordination. This seems to mirror the situation attested in the Saharan languages discussed in section 3.2.

5 CONCLUSIONS

Initial-medial clause chaining has wider distribution in African languages than it was previously thought, being found in genetically-unrelated languages spoken across the Sahara. While it was documented in Niger-Congo and Nilo-Saharan, this paper has showed that initial-medial clause chaining is also attested in Berber, notably in Ayt Atta Tamazight, a language where this chaining type plays a prominent role in clause linking.

Just like converbs are deemed to be a significant areal feature in the Ethiopian linguistic area, so it might be the case that the widespread use of initial-medial clause chaining across the Sahara support the hypothesis of the Sahara itself as a linguistic area. More evidence is certainly necessary in order to define the Sahara as a linguistic area. A larger number of grammatical features of Saharan languages should be taken into consideration. Moreover, it is also necessary to further investigate the cross-linguistic distribution of initial-medial clause chaining, for the apparent rarity of this phenomenon might only be due to lack of data from other regions and language families. Nevertheless, the analysis put forward here arguably leads to a better mapping of clause-chaining languages in the Sahara, which will hopefully contribute to a better understanding of language contact in the region.

* * *

ABBREVIATIONS

-	morpheme boundary	NULL	Null Tense
=	clitic boundary	O	object
1	first person	PFV	Perfective
2	second person	PL	plural
3	third person	POSS	possessive
AAT	Ayt Atta Tamazight	PROX	proximal
ACC	accusative	PRS	present
AFF	affirmative	PST	past
AOR	Aorist	PTCP	participle
AS	absolute state	Q	question word
CAUS	causative	REM	remote past tense
C-AOR	Chained Aorist	S	subject
CNV$_2$	converb type 2	SG	singular
DCL	declarative	SMP	semantic pivot
DSU	different subject	SQ	sequential
DS	dependent state	SSU	same subject
F	feminine	TAM	tense-aspect-mood
IMP	Imperative	TAM-V	TAM-marked verb
IPFV	Imperfective	V	Verb
M	masculine	VBFOC	Verb-focusing conjugation

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Accounting for *Vox Populi*

Adjusting the Cost-Benefit Model of Language Planning by Incorporating Network Analysis in the Ghanaian Context

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ABSTRACT

Language planning is a formal or informal problem-solving administrative activity which "advocate[s for] either expanding or restricting the resources of a language" and is aimed at total adoption of a language-use strategy on a national level (Haugen 1966a; Kloss 1969; Haarman 1990). This activity has often relied on a cost-benefit analysis structure to choose and eventually implement an official language on a national level. This work investigates such choices made during the independence period in Ghana and advocates for editing the cost-benefit strategy going forward by incorporating network analysis to provide government leaders with a cohesive sociolinguistic valuation of alternatives for their consideration.

1. INTRODUCTION

Ghana, the first independent nation in Sub-Saharan Africa, came into the forefront of global politics at a time when the ideologies surrounding what it meant to be a nation were fundamentally changing, at the height of the Cold War. In Africa newly independent nations emerging into the modern world faced the challenges of being self-sufficient while also shrugging off the remnants of colonialism. An aspect of this emergence was language planning, which chooses the linguistic vehicle(s) not only to carry the country forward, but also to define national identity. Language planning (LP) is a formal or informal problem-solving administrative activity which "advocate[s for] either expanding or restricting the resources of a language" and is aimed at total adoption of a language-use strategy on a national level (Haugen 1966a; Kloss 1969; Haarman 1990). The Ghanaian context provides an interesting venue for a case study because English was maintained as the national language post-independence, and investigating the ways in which this choice has shaped the popular valuation and application of this language in Ghanaian society from our current historical distance will illuminate ways in which LP models can be edited to better control for not only unanticipated social factors, but also desired social outcomes.

2. HISTORICAL FRAME

On March 6th 1957, Kwame Nkrumah, Ghana's first president, ascended the world stage and called for a unified, self-governing Africa. Nkrumah's policies presented a mixture of models[1], aimed at promoting a Ghana at liberty, an archetype for burgeoning free Africa's adoption. Nkrumah, the Osagyefo (meaning *redeemer* in Twi), envisioned a unified, unburdened Africa, free from the fetters of the market and what he called neo-Colonialism (Asirifi-Danquah 2007). Pan-Africanism was renowned Trinidadian nationalist George Padmore's philosophy (who Nkrumah aided as personal secretary at the 1945 Manchester Pan-African Congress), but it was Nkrumah who presented it to the world in an active sense; "What Nkrumah did was to give flesh to the skeleton" (Atta 2014). Inspired by the non-violent methods of Gandhi, harnessing the rage and hope sweeping the colonized peoples of the imperial world, Nkrumah began promoting a campaign for Gold Coast (lat-

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[1] Much research into Nkrumah's legacy investigates political motivations (capitalist and socialist) during his presidency; whatever his leanings, he is upheld as a hero by Western idealists, Socialist statesmen, and Ghanaians for his successes, and for his forward thinking which astutely predicted the economic and social setbacks that Ghana, and Africa, faces today.

er "Ghana")'s outright independence[2] called "Positive Action" (Birmingham 1998).

Post WWII, in the interest of promoting economic stability, the British government sacrificed some control over its holdings throughout the world, shifting day-to-day operations in colonies to local leaders, but in Africa the situation differed because of the immense revenue generated by prized and abundant commodities (Birmingham 1998). In other West African colonies, the British government educated "a local élite" who could lead with a debt to the crown, as a manipulable administrators (Birmingham 1998), but once the UGCC became functional, the colonial administration thought it best to offer Gold Coast its own constitution, creating a commonwealth[3].

With this new-found autonomy, many administrative decisions needed to be made, including whether to sustain the English language post-independence or deviate from its influence and elevate one or more Ghanaian languages to national status. Notwithstanding the usefulness of English's "ethnic neutrality,"[4] the use and propagation of English became inseparable from Nkrumah's plans for rapid industrialization[5] (Huber 1999). English is the language of capitalism. And Africa arrives late to the industrial, economic, and technological revolutions, creating a distance from the theaters of modernity. For a high-functioning continent to be developed, a leader had to consider that the calls for modernity "impose a constraint on the language policies of African nations" (Bamgboşe 1991). It was necessary for Ghana to secure a place on the world stage by presenting stable and viable administrative organization to the United Nations (Nkrumah 1963). Because of this, Ghana's leaders were hesitant to show signs of divergence from a Western government model, and were thus perhaps unwilling to officially promote multilingualism. The Nkrumah administration had to put forth a face of civility if the fledgling nation hoped to be taken seriously, not only as an autonomous unit, but also as the head nation of a union of African states (Birmingham 1998). Ghana also had to project an ease of travel and cross-country communication to swiftly lure investors for profitable, large-scale infrastructure and business

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[2] Nkrumah quickly broke away from the United Gold Coast Convention (UGCC) because of their conservative, wait-and-see approach to dealing with colonial administration, and on June 12, 1949 he inaugurated a new political network, the Convention People's Party (CPP), the party which backed his presidency several years later (Nkrumah 1963).

[3] For Gold Coast, becoming a commonwealth created a formal mechanism for representation and participation by native Ghanaians in their governmental processes within the existing English system. The 1951 constitution gave Gold Coast a Prime Minister (Nkrumah) who was able to act legally and globally in the expressed will of the people.

[4] Bamgboşe takes issue with the notion of English's "neutrality", stating that "language is only a convenient scapegoat on which the real causes of divisiveness are usually hung" (1998) (see also Haugen 1966b)

[5] See Nkrumah's manifesto *Africa Must Unite* for an illustration of the theoretical underpinnings of this bent on rapid industrialization by way of education.

projects (*Black Power* 1992). All of this required English in print, in policy and in public practice. The English medium, effectively, became strategic; it is how the modernity game is won.

Pan-African leaders across the globe embraced print media as a vehicle for political change and issue awareness, and Nkrumah followed in this tradition, publishing many pamphlets, establishing news outlets, and promoting creative projects in the English language (Polsgrove 2009). The maintenance of English as the general print language in Ghana was pragmatic because mechanisms were already in place to widely and rapidly disseminate information in it (Bamgboṣe 1991). Once the government, any government, is communicating with a "mass reading public," there is a certain necessity of continuity in language (Anderson 1991; see also Haugen 1966b). Were an administration to splinter its publications to fill each language niche, (a particular challenge within Ghana, which encompasses striking linguistic diversity[6]) it would find the task cumbersome enough to halt all momentum[7] (Bamgboṣe 2013). English became and remains the national language of Ghana, and this choice was solidified by the administration through public policy.

3. LANGUAGE PLANNING AND COST-BENEFIT ANALYSIS

Ayee (2000) evaluates in general terms the success and failures of macro-level public policy in Ghana. He holds that for any policy to be successful in Ghana specifically or Africa universally, it must be "transformational," meaning that it must be outward-faced, aimed at long-term goals. Ayee does include a single, important absolute: "The leader should be committed to the development of the entire society over which he or she rules, ensuring that formulation and implementation of policies aim at enhancing the quality of life of all the citizens." If a government is not approaching policy from an informed, equitable, responsive, appropriate standpoint, then the results will never yield benefits for the maximum (Ayee 2000). In his estimation, the well-intentioned approach to policy is more important than the policy's outcome. Discovering intention is impossible without a statement from the policy maker which unequivocally outlines the motivations, considerations, and goals of a workable plan *before* it is put into action. The majority of circumstances do not provide us with the luxury of assessing clear statements of objective; Ghana's are no exception. Observation of program outcomes, however, is certainly possible, and Thorburn states that *a posteriori* assessment is the best approach, because

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[6]   Today, over 130 recognized languages in a nation the size of Montana, some dialects being supported by less than 100 speakers. (Lewis et al. 2016)

[7]   See also Anderson (1991, specifically p.43) for thoughts on linguistic unification.

reviewing the choices made, and their effects over time, is the only way good planning models can be developed (1971).

The Rational Choice (RC) model arose in economics as a useful, analytical tool for applying cost benefit analysis to cultural goods (Thorburn 1971). Applied to questions of language planning this model argues that for the choices made in LP to be successful, we must consider language as a commodity in its own right. The basic valuation "behind the cost-benefit calculation is that…Language is an instrument to achieve certain results and is, therefore, to be looked upon as a resource" (Thorburn 1971). Yet, language does not act like a resource on the ground, it is not developed or traded, promoted or valued in veins which lend themselves to quantification. This is why proponents of this approach have admitted that, "It is not possible, however, to make a cost-benefit analysis of language planning in general" (Thorburn 1971; Jernudd and Da Gupta 1971; Rubin 1971). Thorburn and Jernudd suggest that is it perhaps most productively applied in observing the outcomes of planning from an informed, post factum perspective in order to adjust future implementation of the model.

To aid in such post factum decision making—in consideration of the challenges of calculating the future impact of a commodity invisible yet integral to the market and the measurement of this plan's success—Thorburn (1971) has provided us with steps to use for valuation of language in a planning framework. These steps are designed to walk a planner through the RC model, weighing the "consequences of output" between elevating or maintaining a national language (NL) (i.e. Twi) versus a language of wider communication (LWC) (i.e. English). Considering the choice of language through reflection on these consequences provides scope and weight to a language planner's argument, and an administration's decision.

Nkrumah did not have access to an RC model of LP as such, but we can assume that he consulted advisors[8] who proceeded with a similar process to a greater or lesser degree. LP involves a choice made "within the limits… of [national] resources" (Jernudd and Das Gupta 1971). These choices present challenges that must be overcome with effort and attention paid to the "kind[s] of goals that the government allows to dominate their decision" (Haugen 1966; Jernudd and Das Gupta 1971). For the nascent Ghana under Nkrumah's leadership these goals were undoubtedly economic solvency, international participation and respect, and political stability.

By making English the national language, Ghana followed what is known as the Zero Alternative, or no-change scenario (Dzamshie 1988). I would ar-

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[8] His personal papers (see Akussah 1994) indicate these meetings took place, but this author has recovered neither minutes, notes, or records which yielded details of deliberations, nor official citation of new (or maintained) government-sanctioned language initiatives. (Jernudd and Das Gupta 1971 specifically reference a trend of this type of lack of direct evidence on p.201)

Table 1 – Steps of the RC model (Adapted from Thorburn 1971)

| Step	Description of Valuation
1. Teaching Costs	Increases in education spending
2. Learning Costs	Price per hour of work devoted to language learning
3. Knowledge of LWC	Valuation manifests through consequences of output
4. Knowledge of NL	See 3
5. Effectiveness of Central Administration	Number of civil servants who cannot understand government's core doucments
6. Trade Relations	Use economic markers to forecast the two alternatives
7. Connection to technology and world cultures	Enumerate the study abroad, higher educational, and foreign contact opportunities to forecast the two alternatives
8. National Unity	Most variable over time. Use other indicators to project in 5 year slices
9. Equal Opportunity	Evaluate advancement opportunities within the central administration
10. National Culture	Forecast cultural development for the two alternatives
11. Standard of Living	Forecast for the two alternatives
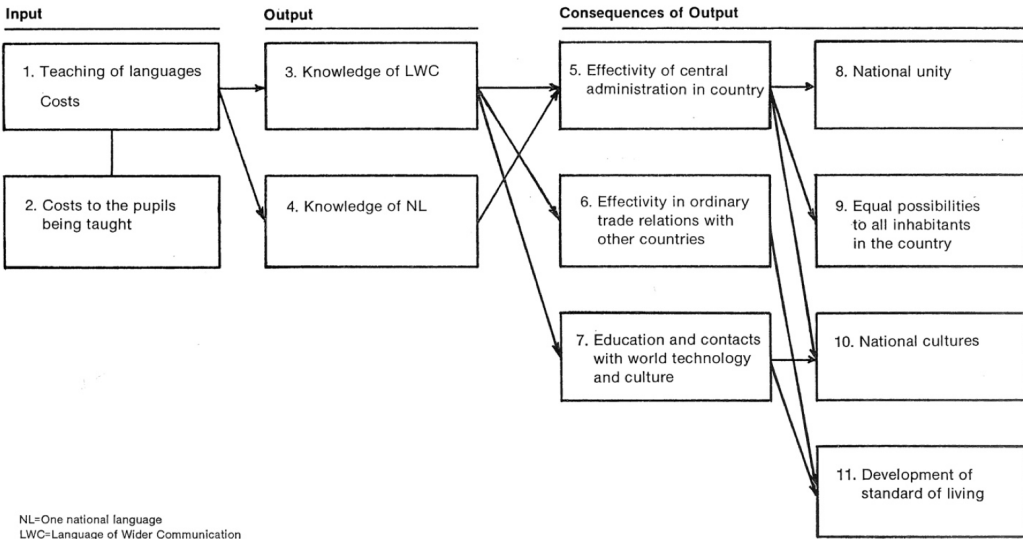
Figure 1 – Thorburn's Rational-Choice Flow Chart for LP (1971)

gue that any politician from a densely multilingual nation using Thorburn's model would choose the LWC, because, as seen in Figure 1, promoting a NL cannot reach Step 11. Jernudd and Dzamshie agree that macroeconomic standards (upon which the RC model is built) tell administrators to keep the LWC (1971; 1988). Further, Thorburn's model is inherently flawed because it hinges on choosing a language based on an assessment of its value, a value which "manifests itself" through the subsequent "consequences of output," which he admits are difficult to quantify in monetary terms (Thorburn 1971). In this scheme, these markers are the only forecast a politician may use to consider their choices. If choosing an NL provides no direct route to Steps 9, 10, and 11, what politician would limit their people to a life without sufficient education, international prowess, or a high standard of living? Further, Ayee (2000) would consider this choice reflective of unethical leadership because the NL would select a future which does not provide desired outcomes for the citizenry. We cannot say these realities are due entirely to linguistic factors, but we can say that this model is rationally biased towards the continuation of an LWC. That said, it is difficult to rationalize a better model. And it does provide post factum language planners with some tangible markers to delineate and assess intervening factors which have traditionally thwarted success.

4. PLANNING *POST FACTUM*

Fortunately, we *are* poised on this side of history, and able to engage the kind of post factum assessment that Jernudd proposes. We can look for ways of reducing uncertainty in the outcomes of language policy by casting the RC model as "supportive rather than definitive" (Jernudd 1971). Time always works against us because it is difficult to unravel the past and future factors which contact the policy (Jernudd 1971). Planning in and of itself always aims at "non-linguistic ends" (Cooper 1989), and one set of complicating factors that we can underscore in previous planning attempts are governmental motivations. Because a governing body always has broader, national considerations which will warp its view of language problems, the government's view is inherently complicated; the model's view (as such) is inherently theoretical, it is blind to the life it seeks to value. Further, "Relatively few language-planning decisions can be implemented by fiat" (Cooper 1989). For these reasons, it is best that these uncertainties are accounted for through a non-governmental, micro-level qualitative assessment of language in the interaction of public and private domains (Jernudd 1971) to develop a more accurate valuation of language alternatives (steps 3 and 4 in the RC model). I would argue that the most useful assessment on this level begins with initial network analysis, a "systems study" approach, geared towards assessing on-the-ground communicative interaction and applying information about

these communicative networks to future planning efforts (Jernudd 1971). Language planners, then, will be able to use the RC model's output markers to forecast core concerns about language and language use as opposed to potential success, efforts which can lead to the development of the type of policy Ayee (2000) calls for.

In beginning to consider LP from a network analysis standpoint, it becomes clear that for LP to be successful, it must fully incorporate prestige planning—a crucial, and often overlooked step[9]. Prestige planning[10] is focused on building in the people "a positive, psychological representation" (Mesthrie 2009) of the language chosen by policy makers (Haarman 1990). Jernudd claims that, "In order for an official language decision to be of benefit to a nation, people would have to feel uniformly solidary with such a decision" (1971). Looking at policy in retrospect will reveal areas were this solidarity failed to adequately develop, either due to a lack of sufficient implementation (Haarman 1990) or intervening social factors (Thorburn 1971). In areas like Ghana, assessing daily language choices is a challenge, especially where each tongue is associated with a specific place, activity, or register; most Ghanaians exhibit a "localized trilingualism" (Bodomo 1996). Jernudd and Das Gupta hold that, "A linguistically adequate theory… cannot be implemented because… of 'acceptability-obstacles' in the speech community" (1971). Network analysis will be useful in this regard, allowing us to pinpoint not only where use of the official language is most pronounced, but also where a positive, psychological representation of the official language is missing or will radiate out to the corners of the socioscape (Anderson 1991), creating supporters across domains that the administration itself cannot reach. Cooper holds that the targets of LP research need to be communication networks, paralleling planning study with the study of language spread (1989). We must look "between sentimental and instrumental motivations, between ideology and communicative efficiency" to determine where what language is being used, by whom, and how they feel about it (Cooper 1989). Haugen (1966c) describes this somewhat figuratively, saying "The planner proposes, but the community disposes...Language habits, like floating icebergs, are mostly submerged. Their essential nature is still largely hidden from us, and planners who act on the assumption that they understand their nature risk

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[9]   Prestige (Haarman 1990) is the most recent, and least discussed, member of the 4 canonical types of language planning: Kloss (1967) originally delineates corpus and status planning, Cooper (1989) incorporates acquisition planning.

[10]   Occurs during the implementation stage of LP. Haugen (1983) outlines 4 stages of LP: selection, codification, elaboration, implementation, which exist in both social and linguistic domains. Given that Ghana went with the Zero Alternative, the selection stage involves no change, and codification and elaboration do not happen because English is already sufficiently codified and functional across domains, so the implementation stage becomes the focus of *a posteriori* evaluation and future planning effort in the Ghanaian context.

running afoul of the invisible nine tenths." Haugen adds that "Public opinion research may actually have much to say about the possibility of launching linguistic changes" (1966c). Network analysis therefore can aid in identifying groups of individuals and smaller areas of society which, when looked at in the long term, can add the specifics needed to help fill the gaps in Thorburn's model that cannot be quantified.

In January of 2014 I was the guest of a former international civil rights lawyer in Ghana. This man recalled his upbringing, from village to university to working in and through the UN. As he described language use in the Ghanaian courtroom he revealed that, while all official documents were kept in English, communication was entirely in Twi (a regional lingua franca). There are countess examples of the intersectional and diglossic realities of Ghanaian life[11], but this specific individual example illustrates that, in years directly following independence, English enjoyed institutional support (and prestige in that regard), yet there had not been sufficient implementation; the language held no popular respect. We see here English regarded as a necessity needed to achieve a certain station, but not as a means for facilitation of efficient communication. This direct evidence—gained through micro-level participant observation—shows a complication of Thorburn's step 5 (the efficiency of central administration). English was maintained through an RC model-type evaluation to, among other things, make government run smoothly, and while we cannot say it has *not* done so, fluency in the language does not seem to be essential for those running the country. It is, in effect, a mere keycard, possession of which allows access to the domains of power. Dzamshie tells us that "acceptable LP must fulfil two twin functions: the state must run efficiently and the citizens must have a feeling of oneness," (1988) and in the case of Ghana one might question whether there has been successful implementation in this regard. This error creates barriers to progress instead of bridges; social mobility is limited by the avenue created to ensure it. Cooper states that language change and policy efforts usually occur after substantial social change (e.g. independence movements). With the benefit of hindsight, and in light of the lawyer's anecdote, one could argue that the Ghanaian socioscape changed little post-independence—only the top echelons were reorganized in terms of power players, and even then, domain structures (and the languages associated with each) were unchanged. Those originally in institutional power—native English speakers—became those in commercial power, controlling the professional and academic highways out into the competitive world for average Ghanaians. This reality reifies the external value of English as the language of power and works directly against effective prestige planning vis-à-vis English.

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[11] Huber 1999, 137-8; Priebe 2006, 41-51; Bamgboşe 1991, 14

Cooper provides an example of a positive, psychological representation for new lexical variants created through prestige planning in the Feminist movement's reassessment of personal pronouns (1989). Though an isolated case, the proof is visible that targeted, affective, implementation can succeed in rapid and ubiquitous variant adoption across dialect, domain, speech community. Much of this success was driven by the historical moment—and the high visibility of the actors, as well as the density of the Feminist network. One could argue that such a moment existed during Ghanaian independence that Nkrumah and other leaders could have capitalized on in a similar way by making appeals to emotion and morality of speakers, underscoring explicitly the value of English and the benefit of leaving the educational and administrative domains intact, thereby overtly presenting the people with the rationale for the Zero Alternative. They could have made learning English equivalent to national pride, as opposed to civic duty, made it sexy, as opposed to a necessity for upward social mobility. Indeed, the prestige promotion approach has the negative effect of stifling the growth of indigenous language[12], of cutting ties to Ghanaianness which the mother-tongue binds. Although, even without overt prestige implementation, this reality has come to pass, particularly among a wide swath of the younger generations who increasingly deploy English, but whose social mobility is nonetheless limited by English's presence in the socioscape. Looking for value in step 10's consequence of output we see that indigenous languages are, regardless, erased. Further we see that even though English is not essential for daily life, the valuation of it continues to increase as long as speakers flock to it[13] to the detriment of their own language[14].

5. MOVING FORWARD

We have established that Nkrumah did not have access to the RC model of language planning; his efforts were before its time. Prestige planning as an overt stage and type had also not yet been worked out conceptually. Armed with hindsight, the RC model, and the ideas of prestige planning, this paper suggests adding the potential additional revelations to be gained from micro-level study and network analysis. We have seen that previously Thorburn's markers were the only RC forecast a politician may use to consider their

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[12] Vernaculars exist in an "unhappy state … [due] to the absence of any clearly articulated and consistently applied language policy…" (Bamgboṣe 2013).

[13] This phenomenon has been well-documented in other settings, for example Gal's (1978) study of the shift from Hungarian to German in Oberwart, Austria.

[14] A choice costs "not just the expense in terms of dollars and cents, but the malaise of training one's children in a medium that is not their own, and of alienation from one's own past" (Huber 1966c).

choices. The approach proposed here will provide planners with a new valuation, one constructed apart from the governmental policy-making process and presented to leaders as a full, cohesive sociolinguistic valuation of alternatives for their consideration. This allows the RC model to become truly "supportive," as Jernudd claims it should be (1971). Once a choice is made, the network analysis will provide further illumination of the way forward, highlighting areas where prestige implementation will be most effective, where it will be instantly accepted (Haugen 1983), zealously promoted, and sustained over time.

Language policy should not be considered behind closed doors. It infuses the daily lives of speakers. If taking the micro to macro planning approach, we must obverse and then *involve* the people. A survey[15]—from 30 years ago—shows that the average Ghanaian citizen was aware enough of multiple codes to benefit from a community conversation on language. Ghanaians have the intellectual space to comprehend the consequences of policy changes because they see how language functions within and around each day and over time.

Language is intimate, so the policy maker who wants to steer their model into successful application must engage feelings, must appeal to speaker identity, or even the best model fails. We have seen this in the preceding pages where a good-enough model fails for lack of sufficient popular will. Other sources (Owu-Ewie 2006; Bamgboşe 1991) show that over the last century, Ghana has implemented every education model possible, to no avail; the problems have remained the same[16.] One could argue that no one model has been applied consistently with duration adequate enough to have a measurable effect, but success of a language plan is less about time and scope than it is about participation of the populous. For language policy to be successful, the hearts and minds of the people must be engaged as well. No model to date has taken the crucial step of building a positive, psychological representation of the official language in the Ghanaian people. I would argue, however, that with observation and meaningful involvement of these people in the LP process, the structure of the resulting solution matters little; if they value the language of power, they will assist in its diffusion throughout the social network. The example with the lawyer shows how this can work. Going to Ghana and interviewing people will help, but not just any people, the ones who occupy the central, integral, domain nodes in the social network, will reveal the best ways to apply any outcome of the RC model—LWC or NL—with the widest positive acceptability. The idea of solving language problems is often placed on the backburner because "the effects of not taking action" are not immediately felt (Bamgboşe 1991). This hesitancy is understandable when

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[15]   Dzamshie 1988.

[16]   The typical method of acquisition planning (Cooper 1989) and implementation (Haugen 1983; Haarman 1990) is through adaptation of the education system.

one considers the choices faced by a leader who must choose between bringing eighty percent of her population to literacy in a single, official language versus providing an equivalent number with reliable housing or sustainable agriculture. I have hoped to show in this work that these goals are not separate, that effective LP can and will tackle both when it involves learning from the past, applying sound sociolinguistic method, and accounts from the socially-networked patterns of daily linguistic interaction.

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An Early 20th-Century Arabic Vocabulary as Evidence of Language Contacts in the Uele district and the Redjaf-Lado Enclave

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ABSTRACT

The paper examines the Arabic component of a five-language vocabulary published at the beginning of the 20th century (Wtterwulghe 1904). The aims of the analysis are: (i) to illustrate the multiple sources of this variety of Arabic; (ii) to establish the nature of the variety of Arabic represented in the vocabulary, which Luffin (2004) calls "arabe véhiculaire". The comparison made with other contemporary sources on African Arabic-lexified pidgins and creoles (Cook 1905, Jenkins 1909, Meldon 1913, Owen & Keane 1915, Muraz 1926) suggests that the variety illustrated is a pidgin-like mix, with input from a wide range of sources, including Egyptian, Sudanese and Moroccan Arabic as well as several African languages, e.g. Bari, Luganda, Swahili, and Zande. It is also shown that the Wtterwulghe's (1904) vocabulary contains some of the earliest attestations of features also found in the African Arabic-lexified creoles Nubi and Juba Arabic.

KEYWORDS

Language contacts, Arabic, pidgin

1. INTRODUCTION

This paper is concerned with a vocabulary (Wtterwulghe's 1904)[1], also analyzed by Luffin (2004), which is illustrative of the Arabic once spoken in the Uele district and the Redjaf-Lado enclave of the former so-called "État Indépendant du Congo". It aims at illustrating the multiple sources of this variety of Arabic as well as at ascertaining its nature. For reasons of space, only a limited number of topics are examined.

The structure of the paper is as follows. Section 2 discusses two issues pertaining to morphology: the paradigm of possessive and the verbal system. Section 3 focuses on selected lexical items. Section 4 summarizes the findings.

All examples appear in the orthography or system of transcription used in the sources. Relevant items in quotations are in bold characters. All examples and quotations are accompanied by their translation.

2. MORPHOLOGY

2.1 POSSESSIVE PRONOUNS

Wtterwulghe (1904: 27-28) includes in section "XII. – Quelques pronoms usuels" the paradigm of possessive pronouns. The forms and their variants (Wtterwulghe 1904: 27), including a variant which appears elsewhere (Wtterwulghe 1904: 4), are compared in table 1 to those found in the first records of early Nubi[2] (Cook 1905), Jenkins (1909), Meldon (1913), and Owen & Keane (1915)[3].

As can be seen, the forms provided by Wtterwulghe (1904) are similar to those reported in other contemporary sources documenting Nubi, with the exception of <tt>, which, however, cannot possibly stand for an etymologically unjustified [tt]. A few remarks are in order here. Consider first the 1SG forms. The variant *bitta-y* is identical with the forms found in Jenkins (1909), Meldon (1913), and in Owen & Keane (1915), whereas the variants *bitta-na/bittâna* resemble the form recorded by Cook (1905). Thus, Wtterwulghe (1904) is the only source explicitly recording this variation in the form of the 1SG possessive. As for the variant *bittâna* (Wtterwulghe 1904: 4), assuming that <â> stands for [a:], this may well correspond in fact to *bita-ana*, i.e. it reflects the occurrence of the independent 1SG pronoun. The following circumstantial evidence can be adduced in support of this interpretation. Firstly,

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[1]   A first printing was published in 1899 (Luffin 2004: 379) and a second one in 1903.

[2]   Kaye & Tosco (1993) and Nakao (2016) use the term "Early East African Pidgin Arabic".

[3]   Of these, Cook (1905) and Owen & Keane (1915) refer to the language as "Nubi".

Table 1 – Possessives in five early records of African pidginized/creolized Arabic

	Wtterwulghe (1904: 4 and 27)	Cook (1905)	Jenkins (1909: 2)	Meldon (1913: 6)	Owen & Keane (1915: 14)
1SG	*bitta-y/bitta-na/bittâna*	*bitana*	*bitai*	*bitai*	*bitai*
2SG	*bitta-k*	*bitita*	*bitak*	*bitak*	*bitak*
3SG	*bitta-hu/bitto*	*bito*	*bitau*	*bithu*	*bitau*
1PL	*bitta-na*	*bitanina*	*bitatina/bitanīna*	*bitana*	*bitatna*
2PL	*bittakoum*	*bitako*	*bitakom*	*bitakum*	*bitakom*
3PL	*bitta-houm*	*bita nyashumq*	*bitahom*	*bitahum*	*bitahum*

there is one instance of an independent 1SG personal pronoun used after a preposition:

(1) *alay-**ana**/alay-i* 'sur moi' (Wtterwulghe 1904: 26)

Secondly, in Moltedo (1905) independent pronouns also occasionally occur in possessives, alternating with pronominal suffixes[4]:

(2) *bit-**ana**/bit-aï* 'le mien' (Moltedo 1905: 20)

As in Wtterwulghe (1904), also recorded are instances of independent personal pronouns occurring with prepositions:

(3)   a.   *ma-**ana**/ma-i* 'avec moi' (Luffin 2004: 392)
        b.   *ma'-**ua**/ma-o* 'avec lui'   (Luffin (2004: 392)

Note also that the 2SG form provided by Cook (1905) consists of *bit* and the independent pronoun *ita*. Nakao (2013) also provides several examples of such forms occurring in samples of pidginized Arabic formerly used in Sudan:

(4)   a.   *banteloon bitaa **enta***
            trousers   POSS   2SG
            'your trousers'
        b.   *beledi bita **uwa***
            village POSS   3SG
            'his village'

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    [4]   See also Luffin (2004: 392) and Nakao (2016: 417, f.n. 30).

The evidence suggests that the 1SG form *bittâna* with the independent pronoun *ana* is a basilectal variant. The 2SG form in Wtterwulghe (1904) is identical with those in Jenkins (1909), Meldon (1913), and Owen & Keane (1915), with preservation of the Arabic possessive pronominal suffix. As for the 3SG possessive, Wtterwulghe (1904) again records variants: *bitta-hu* is similar to those found in Jenkins (1909), Meldon (1913), and Owen & Keane (1915), whereas *bitto* is identical with the form attested in Cook (1905). The 1PL form in Wtterwulghe (1904) is identical with the one given by Meldon (1913) and differs from all the forms recorded in the other contemporary sources. The 2PL form in Wtterwulghe (1904) is again identical with the one in Meldon (1913), and contains the vowel /u/ in the reflex of the Arabic pronominal suffix, whereas all the other contemporary sources list forms with the vowel /o/. Finally, the 3PL form in Wtterwulghe (1904) is identical with those in Meldon (1913) and in Owen & Keane (1915).

Consider next (table 2) the paradigms of possessive pronouns in modern Nubi (Pasch & Thelwall 1987: 120, Kaye & Tosco 1993: 283, Tosco & Owens 1993: 238, Wellens 2003, Luffin 2005: 173-174) and in Juba Arabic (Miller 1984: 193-194, Kaye & Tosco 1993: 283, Tosco & Owens 1993: 238, Nakao 2014: 5, and Watson 2015: 20).

Table 2 – Possessives in Modern Nubi and Juba Arabic

	Modern Nubi	Juba Arabic
1SG	*'tai/ta'yi*	*(bi)ta'ai/(bi)ta'i*
2SG	*'taki*	*(bi)'tak/(bi)'taki*
3SG	*to*	*(bi)'to*
1PL	*'tena/'tenna/'teyna /'tinna*	*(bi)'tana/(bi)ta'anna/(bi)ta'nina/te'ina*
2PL	*'takum/'tokom/'tokum*	*(bi)'takum*
3PL	*'toumon/to'umon/'tomwon*	*(bi)'tómon/(bi)to'umon*

On the whole, the paradigm in Wtterwulghe (1904), just as all those found in contemporary sources, is more conservative. The most striking difference resides in the loss of *bi-* in modern Nubi and it its being only optional in Juba Arabic. Kaye & Tosco (1993: 283) write that Juba Arabic optional *bi-* "was probably reintroduced via decreolization". However, as also shown by Avram (2015: 165), the fact that *bi-/be-* is found in earlier sources suggests that Juba Arabic optional *bi-* is rather a residue illustrative of earlier stages of the language. Note further that Miller (1984: 194) and Nakao (2016: 417) mention

the use in Juba Arabic of the structure *(bi)ta* + independent personal pronoun:

(5) a. *sekin* *bita* **ana** (Miller 1984: 194)
         knife POSS 1SG
         'my knife'

     b. *bita* **íta** (Nakao 2016: 417)
         POSS 2SG
         'yours'

Miller (1984: 194) writes that "l'emploi quasi exclusif de la tournure avec pronom indépendant relève d'un niveau très basilectal" and according to Nakao (2016: 417) such forms are found in "archaic JA [= Juba Arabic]". This accords with the analysis suggested above for the variant *bittâna* attested in Wtterwulghe (1904). One of the 3SG variants in Wtterwulghe, *bitto*, has the same word-final vowel with its modern Nubi and Juba Arabic counterparts. Similarly, the 1PL form in Wtterwulghe (1904) is identical with *(bi)'tana*, one of the variants used in Juba Arabic. Finally, the 2PL form in Wtterwulghe (1904) identical with the Juba Arabic form *(bi)'takum*.

Summing up, the forms of possessive pronouns recorded by Wtterwulghe (1904) are consistent with evidence from other contemporary sources documenting early Nubi as well as from modern Nubi and from Juba Arabic.

2.2 THE VERBAL SYSTEM

With three exceptions, all the verbs occur in section X. – Verbes usuels (Wtterwulghe 1904: 18-21), which also includes instances of the copula. With the exception of the copula, the verbs are glossed with the infinitive of their French equivalent. The form of the 94 verbs (excluding variants) is derived from Arabic perfects (mostly 3SG, but also 2SG), imperfects, imperatives, active participles, passive participles, nouns, and adjectives. Selected verb forms are compared in table 3 to those in four early records of African pidginized/creolized Arabic, including Turku[5].

With the exception of *goul* and *qalam*, the forms of the verbs meaning 'say' recorded by Wtterwulghe (1904) and listed in Table 3 are similar or identical with those attested in at least one other variety of African pidginized/creolized Arabic. Several forms are worth commenting in some detail.

The <s> in *aus* 'want' is most likely a misprint and should read <z>. On the assumption that *aus* stands for [auz], the form in Wtterwulghe (1904),

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[5] On the relation between Nubi and Turku see Tosco & Owens (1993: 236-253) and Wellens (2003: 206-266).

Table 3 – Selected verb forms in five early records of African pidginized/creolized Arabic

Wtterwulghe (1904)	Cook (1905)	Jenkins (1909)	Owen & Keane (1915)	Muraz (1926)	Gloss
arbuttu	*arabuto*	*rabat*	*arbut*	*arbottou/rabotou*	'tie, bind'
aus	*awuju*	*aūz*	*auz*	*doro*	'want'
be-dji/begui	*begi*	*begi/beji*	*begi*	*beji*	'come'
chouf	*aieno*	*shūf*	*shuf*	*choufou*	'see'
choule	*shil*	*shūlu*	*shilu*	*chili/choulou/sili*	'take'
djybu	*jibu*	*jib*	*jib*	*djibou*	'bring'
dousse	*dushu*	*dūsu*	–	*lobodou*	'hide'
esma	*ashuma*	*asmā*	*asma*	*bassman*	'hear; listen'
goul, kallem, qalam	*kelemu*	*gāl, kellem*	*kellem*	*oro*	'say; tell'
gousse	*gushu*	*gūssu*	–	*koussu*	'search for'
kabass	*kabas*	*kabbas/kibiss*	–	–	'lie; deceive'
nadu	*anado*	*nadī*	*nadi*	*nadi/nadu*	'call'
nessyt	*neshito*	*hasītū**	–	*niss*	'forget'
otbour	*ten*	*istanna*	*ishtanna*	*assbour*	'wait'
sidd	*shidu*	*sidū/shidū*	*sidu*	*siddi*	'shut'
sow	*sho*	*amal*	*ammal*	*sao/so*	'do'

* Where <h> should read <n>.

like those in Jenkins (1909) and in Owen & Keane (1915), is close to the acrolect – Egyptian Arabic *'āwiz*, unlike the form in Cook (1905).

The verb 'come' is of interest for three reasons. Firstly, it is illustrative of [g] ~ [ʤ] variation, also attested by Jenkins (1909). The variant with [g] can presumably be traced to Egyptian Arabic, whereas the one with [ʤ] is presumably of Sudanese Arabic origin, since, as stated by Kaye & Tosco (1993: 295), [ʤ] is "the pronunciation most typical of the SA [= Sudanese Arabic] *Sprachraum*". Secondly, it is interesting to note that 'come' includes the imperfective prefix *be-* in all these early records of African pidginized/creolized Arabic. Thus, the paradigm of the verb 'come' (Jenkins 1909: 4-5), typical of how verbs are conjugated in what Jenkins (1909: 3) calls ""A" being the way the majority speak" contains exclusively *beji/begi*, for all tenses, persons and numbers. Meldon (1913, Introduction: 11) also specifies that

Table 4 – Selected verb forms in Modern Nubi and Juba Arabic

Modern Nubi	Juba Arabic	Gloss
aju/azu	*awz*	'want'
shuf	*shuf*	'see'
shilu/sulu	*shilu*	'take'
jib/jibu	*jibu*	'bring'
dusu	*dusu*	'hide'
asma/asuma	*asma*	'hear; listen'
gul	*gul*	'say'
gusu	*fetish*	'search for'
kabas/kabasu	*kabas*	'lie; cheat' (modern Nubi) 'deceive' (Juba)
nadi	*nadi*	'call'
nesit/nesitu/nisitu	*nisitu*	'forget'
sidu	*gofulu*	'shut'
su	*amilu/amulu*	'do'

"the verb ﺀﺟﺍ jā to come is used with the prefix ﺏ". Similarly, Tosco & Owens (1993: 217) write that "the verb *beji* […] regularly […] has the form *beji*, though here *be-* must be regarded as morphemic material frozen in the Turku word". Thirdly, the variant *be-dji* is glossed 'come', whereas *begui* is glossed 'arrive' (Wtterwulghe 1904: 217). This bears a striking resemblance to Turku *bedji* which is glossed 'come' (Muraz 1926: 123), but also 'arrive' (Muraz 1926: 131).

The verb *kabass* 'lie' in Wtterwulghe (1904) is etymologically derived from Sudanese Arabic *ḥabbās* 'intriguer' (Amery 1905: 192, Hillelson 1925: 156). It also provides further evidence in support of Kaye & Tosco's (1993: 302) conclusion about the variants found in Jenkins (1909) that "the semantic shift from 'intrigue' to 'lie' is easily understood".

Another interesting item is *otbour*[6] 'wait', which is derived from an Arabic etymon ultimately meaning 'be patient', just as its Turku counterpart.

Many of the forms recorded by Wtterwulghe (1904) and listed in Table 3 closely resemble their counterparts in modern Nubi (Pasch & Thelwall 1987, Wellens 2003, Luffin 2005) and – with a few exceptions – in Juba Arabic (Miller 1984, Smith & Ama 2005, Nakao 2014, Watson 2015) (table 4).

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6   Where <t> should read <s>.

In the case of the verb 'say', the form *goul* provided by Wtterwulghe (1904: 20) is the only attestation in these early records of African pidginized/creolized Arabic of the modern Nubi and Juba Arabic form *gul*.

With respect to modern Nubi *kabas/kabasu*, Kaye & Tosco (1993: 302) write that "as the word has not been recorded for JA [= Juba Arabic], it is an important [...] isogloss". In fact, this word cannot serve as an isogloss. As shown in Table 4, the word does occur in Juba Arabic. Moreover, in early Nubi, as recorded by Cook (1905), the meaning of *kabas* is 'deceive', as in Juba Arabic. Finally, *kabas/kabas* also has a similar meaning in modern Nubi.

A number of verbs listed by Wtterwulghe (1904) contain the reflexes *be-* or *b-* of the prefix *bi-*[7]. Most of these are written as a single word:

(6)   a.   ***be****drab* 'tirer (un coup de feu)' (Wtterwulghe 1904: 19)
        b.   ***be****drop* 'frapper' (Wtterwulghe 1904: 20)
        c.   ***be****dour* 'aimer'/***be****dur* 'vouloir' (Wtterwulghe 1904: 18,)
        d.   ***be****noum* 'dormir' (Wtterwulghe 1904: 18)
        e.   ***be****rouh* 'partir'/***be****rowe* 'aller' (Wtterwulghe 1904: 18, 20))
        f.   ***bi****rgi* 'revenir' (Wtterwulghe 1904: 21
        g.   ***b****yekhâf* 'avoir peur' (Wtterwulghe 1904: 18)

In two of them the reflex of the prefix is written as a separate word:

(7)   a.   ***b****-asma* 'comprendre' (Wtterwulghe 1904: 19)
        b.   ***be****-arfou* 'connaître' (Wtterwulghe 1904: 19)

Reflexes of the prefix *bi-*, mainly expressing the future or the present progressive, are already attested in early records of Nubi[8]. Consider the following examples:

(8)   a.   *ana   ma   **bi****dūru*   (Jenkins 1909: 50)
                1SG   NEG   like
                'I don't like him'
        b.   *enta   **bi****kasar*   (Meldon 1913: 8)
                2SG   PREF break
                'you are breaking, you will break, you are going to break'
        c.   *ana   **bi**   rua*   (Owen & Keane 1915: 18)
                1SG   PREF   go
                'I will go.'

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[7]   Leaving aside *be-dji/begui* 'come, arrive', already discussed.

[8]   See also Kaye & Tosco (1993: 280), Avram (2015: 187) and Nakao (2016: 417).

Moreover, Meldon (1913: 8) clearly specifies that what he calls the "aorist" is built by "addition of letter ﺏ B before the verb".

There are also two instances, in pre- and respectively post-verbal position, of reflexes of the completive aspect marker *ḫalāṣ*, used in certain varieties of Sudanese Arabic:

(9)   a.   *begui **kalass*** 'arriver' (Wtterwulghe 1904: 18)
        b.   ***khalass** eflat* 'se sauver' (Wtterwulghe 1904: 21)

Such examples are comparable to evidence attesting to the use of such an aspectual marker in early Nubi[9]:

(10)   a.   *ana shūf **kalass*** (Jenkins 1909: 3)
                 1SG   see   COMPL
                 'I saw (I have finished to see)'
        b.   *enta kasar **khalas*** (Meldon 1913: 8)
                 2SG   break COMPL
                 'thou breakest'
        c.   *ana rua **khalas*** (Owen & Keane 1915: 18)
                 1SG   go   COMPL
                 'I have gone.'

Note that in early Nubi *khalas* occurs exclusively in postverbal position. In this respect Meldon (1913: 8) is again quite explicit on the formation of what he calls the "past" which is built by "suffix[ing] of word ص لاخ *khalās* after the verb".

In sum, the verbs in Wtterwulghe (1904) appear to be morphologically frozen forms. There is only *prima facie* evidence of the occasional occurrence of the aspectual markers *be-/b-* and *kalass/khalass*. Luffin (2004: 384) argues that "dans certains cas au moins, les préfixes TMA ne sont pas figés" and adduces in support of this claim the fact that *be-/b-* is sometimes written as a separate word as well as the occurrence of *kalass/khalass*. This is, however, a moot question, since neither of these two alleged aspectual markers occurs in any sentence[10]. Furthermore, just like all the other verbs, those containing *be-/b-* or accompanied by *kalass/khalass* are glossed with the infinitive of their French equivalent. Finally, only three of the verbs containing *be-/b-* also occur in non-prefixed forms, two of which (11a-b) differently glossed:

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9   See also Kaye & Tosco (1993: 281) and Avram (2015: 187).

10   There are only six sample sentences in Wtterwulghe (1904).

(11) a.   *b-asma* vs. *esma* 'entendre, écouter' (Wtterwulghe 1904: 20)
      b.   *bedrab/bedro*p vs. *darab* 'battre' (Wtterwulghe: 20)
      c.   *birgi* vs. *redjaa* 'revenir' (Wtterwulghe 1904: 21)

On the whole, the, the evidence is suggestive of a pidgin-like system.

3. LEXIS

Since the Egyptian, Sudanese[11] and the Classical Arabic words in Wtterwulghe (1904) are discussed by Luffin (2004: 386-387), this section mostly focuses on lexical items of other origins.

Luffin (2004: 386) mentions the occurrence in Wtterwulghe (1904: 27) of *dyel-ek* 'yours' as "an isolated term, typical of Moroccan Arabic". In fact, there are three other items of Maghrebian Arabic origin[12], two of which are from Moroccan Arabic:

(12) a.   *bork* 'canard' (Wtterwulghe 1904: 8)
      b.   *terbyah* 'petit enfant' (Wtterwulghe 1904: 4)
      c.   *zyt* 'huile' (Wtterwulghe 1904: 8)

In Behnstedt & Woidich (2011: 318 – Map 108 Enten) Morocco is the only Arabic-speaking area where forms phonetically similar to *bork* are attested for 'duck': *bəṛk*, *buṛk* (Behnstedt & Woidich 2011: 319). For 'baby', phonetically similar forms are recorded only in Malta and Morocco (Behnstedt & Woidich 2011: 44 – Map Baby). Therefore, *terbiyah* can be traced to Moroccan Arabic *teṛbīya*. As for *zyt*, given that in Wtterwulghe (1904) <y> frequently appears to represent [i:][13], it is similar to Maghrebian Arabic *zīt* 'oil' (Behnstedt & Woidich 2012: 275 – Map Öl), hence it could also be of Moroccan Arabic origin.

A lexical item derived from Egyptian Arabic *kubbaniyya* 'gang, group' (Hinds & Badawi 1986: 730) illustrates the semantic shift 'gang, group' > 'friend':

(13)   *kubanir*[14] 'ami' (Wtterwulghe 1904: 12)

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[11]   Nakao (2013) roughly estimates that "the lexicon […] is half Egyptian and half Sudanese".

[12]   For the presence of Moroccan (and Tunisian) merchants in geographically contiguous areas, see Luffin (2004: 386).

[13]   See also Luffin (2004: 380).

[14]   Where <r> should read <a>.

Interestingly, similar forms with similar or identical meanings are found in two records of early Nubi:

(14)　　a.　　　*kubaniya* 'to make friends' (Cook 1905)
　　　　b.　　　*kūbaniya* 'friend' (Jenkins 1909: 36)

Consider next one of the forms for 'pepper':

(15)　　*chitéda* 'poivre' (Wtterwulghe 1904: 8)

No similar forms from any Arabic dialects figure in Behnstedt & Woidich (2012: 262 – Map 248 Pfeffer). However, Hinds & Badawi (1986: 465) list *ʃiṭeeṭa* 'bird pepper'. Reflexes of this form are attested in early Nubi (16a) as well as in modern Ugandan Nubi (16b):

(16)　　a.　　　*siteita* 'pepper' (Jenkins 1909: 62)
　　　　b.　　　*šitíta* 'pepper' (Behnstedt & Woidich 2012: 263)

Also worth mentioning is the following compound, literally 'egg of hen':

(17)　　*bède gidaada* 'œuf' (Wtterwulghe 1904: 8)

Similar forms are attested in two other early records of varieties of African pidginized/creolized Arabic, such as early Nubi (18a), Turku (18b), as well as in modern Nubi (18c):

(18)　　a.　　　*bete kidada* 'egg' (Cook 1905)
　　　　b.　　　*bed-guidad* 'œufs' (Muraz 1926: 267)
　　　　c.　　　*bééda gidída* 'fresh eggs' (Pasch & Thelwall 1987: 144)

As noted by Luffin (2004: 386), a number of words of ultimately Turkish origin are recorded in Wtterwulghe (1904). With one exception, these are also found in records of early Nubi[15]: (table 5).

　　Two of these are worth commenting. Wtterwulghe's (1904: 12) *fissigligli*, from Sudanese Arabic *fashaklik* 'bandolier' (Amery 1905: 28), is the most "pidginized" form, exhibiting the substitution of [s] for etymological /ʃ/ and the loss of the etymological word-final /k/.

　　Egyptian Arabic as *karakoon/karakool* 'police station' (Hinds & Badawi 1986: 745) and Sudanese Arabic *karakōl* 'guard' (Amery 1905: 166, Hillelson 1925: 131) can account, both phonetically and semantically, for *karakōl*

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[15]　　Except for the first item, these words are also found in Juba Arabic (see Smith & Ama 2005).

Table 5 – Turkish-derived words in four early records of African pidginized/creolized Arabic

Wtterwulghe (1904)	Cook (1905)	Jenkins (1909)	Meldon (1913)	Gloss
bach	–	–	–	'chief'
beirat[*]	*bera*	–	–	'flag'
fissigligli	–	*fashaklīk*	*fashlek/fashleek*	'cartridge belt'
karakol	*kolokon*	*karakōl*	–	'chain', 'guard'
sengi	–	*singi*	*singi*	'bayonet'

[*] Where <t> should read <k> or <g>, cf. Sudanese Arabic *beirak* 'flag' (Amery 1905: 144), *bērag* 'flag' (Hillelson 1925: 112).

Table 6 – Shared Africanisms in four early records of African pidginized/creolized Arabic

Wtterwulghe (1904)	Cook (1905)	Jenkins (1909)	Meldon (1913)	Gloss
korofai	*korufu*	*karraffa*	*korāfah*	'leaf'; 'branch'
kiata	*kyata*	*khiaātā*	–	'(sweet) potato'
kibri	*kibra*	*kibera*	*kibrah*	'forest'

'guard' in Jenkins (1909: 40) and for Juba Arabic *korokoon* 'sentry post' (Smith & Ama 2005: 62). Rather surprisingly, the form *karakol* is glossed 'chain' by Wtterwulghe (1904: 12). Consider, however, the form *kolokon* in Cook (1905), which occurs only in the following phrases:

(19) a. *anas bita **kolokon*** 'prisoners' (Cook 1905)
      b. ***kolokon** bita bagara* 'yoke' (Cook 1905)

In both these cases, *kolokon* may plausibly mean 'chain/irons': the literal translation of (19a) may well be 'people in chains/irons' and the one for (19b) 'irons for cows'. The meaning of the forms in Wtterwulghe (1904) and in Cook (1905) may be partly influenced by Swahili. According to Rechenbach

(1967: 244), Swahili *karakoli/karakoni/korokoni* (and other variants) also means 'jail'. The forms in Wtterwulghe (1904) and Cook (1905) may illustrate the semantic shift 'jail' > 'chain/irons'.

Luffin (2004: 386-387) does not mention any borrowings from African languages in his section on the vocabulary in Wtterwulghe (1904). Three such loanwords found in Wtterwulghe (1904) are also attested in early Nubi (table 6).

The word for 'leaf', 'branch' is from Bari *karofo* 'Blatt' (Müller 1864: 45), *korópo* (*korófo*) 'n. pl. Blatt eines Baumes' (Mitterrutzner 1867: 202), *koró'fo* 'leaves' (Owen 1908: 140), *kɔrɔpɔ/koropo* 'leaves' (Spagnolo 1960: 107). This is also the etymon suggested by Kaye & Tosco (1993: 300) and Nakao (2012: 133) for modern Nubi and Juba Arabic *koró fo* 'leaf'.

For '(sweet) potato' Pasch & Thelwall (1987: 142) suggest a Swahili etymon *kyazi* 'sweet potato'. However, this is not sufficiently similar to the phonological shape of the various forms for '(sweet) potato' in Table 6, which all contain /t/ and end in /a/. More recently, Nakao (2012: 133) lists as possible etyma Acholi *kiyata ~ layata*, Bari *kayata*, Ma'di *kaata ~ kiata*. However, Acholi *layata* and Ma'di *kaata* cannot be the etyma and should therefore be excluded from the list. Acholi *kiyata* may itself be a borrowing, given that only *layata* appears in Acholi Language Manual (2009). The Bari form *kayata* is slightly less similar phonetically. Another possible etymon is Lugungu *kyata* 'sweet potato' (Robert & Diprose 2012: 169). Therefore, it is not possible to determine the source language.

The word for 'forest' is from Luganda *kibira* (Murphy 1972: 181). This is also the etymon mentioned by e.g. Pasch & Thellwall (1987: 142) and Nakao (2012: 133). The alternative origin suggested by Kaye (1991: 13) is less convincing. In his discussion of the etymology of the name Kibera, a suburb in Nairobi where the Nubi live, Kaye (1991: 13) claims that Kenyan Nubi *kibra* and Ugandan Nubi *kibíra* are derived from Sudanese Colloquial Arabic *kabra* 'thorny gate or fence for a corral; dried thicket'. According to Kaye (1991b: 13), "when Kibera was founded around 1900, it had lots of corrals, trees, bushes, and shrubs [and] it was only natural for the first SUD [= Sudanese] KN [= Ki-Nubi] speakers to call it kíbra". Kaye (1991: 13) further writes that "the a > i is a special KN development of SCA [= Sudanese Colloquial Arabic] dialects, probably to be explained via dissimilation". On the strength of these arguments, Kaye (1991: 13) concludes that "this is a SCA borrowing into Luganda rather than the other way around". Several objections can be levelled at this account. Firstly, it needs to invoke a "special KN development". Secondly, no independent evidence is provided for the dissimilation *a > i. Thirdly, forms with similar or identical meanings exist in other relevant Bantu languages, e.g. Lugungu *kibira* 'forest; large area of very many trees and other plants growing closely together' (Robert & Diprose 2012: 59) and Lunyoro *kibira* 'forest' (Maddox 1902: 99).

Also attested are four borrowings from Swahili:

(20)   a.   *bonduki* 'fusil' (Wtterwulghe 1904: 13) < *bunduki* 'gun, rifle' (Rechenbach 1967: 39)

        b.   *dokhani* 'fumée' (Wtterwulghe 1904: 13) < *dohani* 'smoke, soot' (Rechenbach 1967: 70)

        c.   *lakini* 'pendant que' (Wtterwulghe 1904: 24) < *lakini* 'but, however, nevertheless' (Rechenbach 1967: 260)

        d.   *samaki* 'poisson' (Wtterwulghe 1904: 8) < *samaki* 'fish' (Rechenbach 1967: 465)

Finally, there is one loanword from Zande:

(21)   *yulu* 'nuit' (Wtterwulghe 1904: 9)

The Zande etymon is *yúro* 'Nacht' (Schweinfurth 1872: 41), *youroú* 'nuit' (Colombaroli 1895: 476), *yolu* 'Nacht' (Czekanowski 1924: 76).

Note that the loanwords under (20)-(21) appear not to be attested in either Nubi or Juba Arabic.

4. CONCLUSIONS

Wtterwulghe's (1904) vocabulary provides evidence of language contacts involving not only varieties of Arabic, but also African languages such as Bari, Luganda, Swahili, and Zande.

Luffin (2004: 395) writes that Wtterwulghe's (1904) vocabulary is illustrative of "plusieurs parlers arabes", while Nakao (2012: 129-130, 2013) includes it among vocabularies of early Arabic creoles. Luffin (2004: 396) also mentions the possibility that it may additionally reveal "l'existence d'un parler arabe pidginisé, voire créolisé, utilisé par certains des informateurs". The morphological and lexical data examined in this paper are consistent with evidence from early 20th-century records of Nubi. This suggests that the variety at issue is early Nubi. If so, Wtterwulghe's (1904) vocabulary contains the first attestations of several morphological and lexical features of Nubi and/or Juba Arabic.

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