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Contents

Abstract	1
Introduction	2-9
Part I	10-99
African Studies: Agendas for the Future	
Chapter 1 Emerging Themes in African Studies in China Li Anshan	11-37
Chapter 2 Chinese Economic Engagement in Africa from the Perspective of International Law: The Practice of Anti-Neocolonialism Han Xiu Li	38-65
Chapter 3 Blue Economy, Challenges and Multilateral Cooperation in African Coastal Countries Zhenke Zhang and Yun Xing	66-72
Chapter 4 Sino-African Philosophical Conversations: Confucius and Black Africa Leon-Marie Nkolo Ndjod	73-91
Chapter 5 Ideological Cleaning: Why the New Brazilian Government Combats the General History of Africa? Valter Silvério	92-99
Part II	100-136
Cultural Heritage: Forms, Management, and Protection	
Chapter 6 Managing the Diversity of a Continent: Balancing Africa's Rich Heritage with Development Needs George O. Abungu	101-111
Chapter 7 Museum of Black Civilizations: Time is Running Out Hamady Bocoum	112-119
Chapter 8 Cultural Heritage's Value in African Sustainable Development Pan Huaqiong	120-136

Part III	137-261
Anthropological Perspectives	
Chapter 9	138-149
The Origin and Dispersal of Yamnaya Steppe Ancestry Inferred from Ancient Genomes	
Wang Chuan-Chao	
Chapter 10	150-166
Genetics and African Historiography: Limitations and Insights	
Shomarka O. Keita	
Chapter 11	167-188
Early Human Lithic Technologies: Multiple Technical Histories from Africa to East Asia	
Louis de Weyer	
Chapter 12	189-202
Late Pleistocene Societies of Northwestern Africa: Technology and Lifeways	
Latifa Sari	
Chapter 13	203-224
Burial Protocols, Megaliths Production, and Ancestor-Hood in Ancient Senegambia (ca. 1450 BCE – 1500 CE)	
Augustin F. C. Holl	
Chapter 14	225-250
Technological Innovation and the Emergence of the State in Eastern and Southern Africa	
Chapurukha M. Kusimba	
Chapter 15	251-261
On the Antiquity of Southern Africa – China Interaction	
Shadreck Chirikure	

List of figures

Figure 7.1: The Museum of Black Civilizations
Figure 7.2: view of the exhibition Africa, cradle of humanity
Figure 7.3: No to sharia law in Timbuktu
Figure 7.4: Appropriations of the Abrahamic religions
Figure 7.5: Black women and knowledge production
Figure 9.1: Sites and archaeological cultures in Caucasus mentioned in this study.
Figure 9.2: admixture and PCA results, and chronological order of ancient Caucasus individuals.
Figure 9.3: PCA and ADMIXTURE Analysis for Shirenzigou samples.
Figure 11.1: Map of Oldowan sites in Africa.
Figure 11.2: Map of Mode 1 sites in Europe.
Figure 11.3: Location of Asian Early Pleistocene sites.
Figure 12.1: Location of sites mentioned in the text

Figure 12.2: Iberomaurusian lithic and bone industry
Figure 13.1: Map of the Senegambian megalithic zone
Figure 13.2: distribution patterns of the Petit-Bao Bolon study area megalithic cemeteries
Figure 13.3: Aerial view of Sine Ngayene large Megalithic cemetery
Figure 13.4: Different features of Sine-Ngayene Ceremonial space for funeral rituals
Figure 13.5: Variability of burial monuments
Figure 13.6: Sine-Ngayene single primary burials
Figure 13.7: Shifting use of Monument SN 27, the central twin-circle from Sine-Ngayene cemetery
Figure 14.1: Map showing known sites in Eastern and Southern Africa
Figure 14.2a: The Gede Palace, Kenya ca. 1000-1500 CE.
Figure 14.2b: Naletale.
Figure 14.3: Ndogo Site
Figure 14.4: The Great Enclosure at Great Zimbabwe
Figure 14.5: Cut Ivory

List of tables

Table 13.1: Chronological chart of Senegambian megalithism
Table 14.1: Principle Trade Items from Eastern and Southern Africa
Table 14.2: Periodization of Social Complexity and the State

Studying Africa and Africans Today

Augustin F. C. Holl ^{a*}

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ABSTRACT

This book entitled 'Studying Africa and Africans Today' is derived from the Second Meeting of Xiamen University Belt and Road Research Institute Africa Regions Sub-Forum, that took place at Xiamen University in April 2019. The different contributions triggered vivid and interesting debates in a collegial and friendly atmosphere. The Africa sub-Forum debates lead to a series of suggestions on how to strengthen the scientific, academic and cultural collaboration and exchange between China and Africa in the context of the Belt and Road Initiative. The strongest recommendation suggests a stronger promotion of cultural, scientific, and academic collaboration and exchanges that will open the way to better mutual understanding. The study is an interdisciplinary research initiative with focus on Africa and people of African descent worldwide. Scholars from different parts of the world, Algeria, Brazil, China, France, Kenya, Senegal, South Africa, and the United States of America contributed to the debates and discussion that took place at Xiamen university.

Keywords: Cultural collaboration; Africa; Xiamen University; China-Africa Cooperation.

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STUDYING AFRICA AND AFRICANS TODAY: AN INTRODUCTION

INTRODUCTION

This book entitled 'Studying Africa and Africans Today' is derived from the Second Meeting of Xiamen University Belt and Road Research Institute 'Africa Regions Sub-Forum, that took place at Xiamen University in April 2019. It is an inter-disciplinary research initiative with focus on Africa and people of African descent worldwide. Scholars from different parts of the world, Algeria, Brazil, China, France, Kenya, Senegal, South Africa, and the United States of America contributed to the debates and discussion that took place at Xiamen university. The contributions are arranged in three parts: 1) a survey of the state of African studies in different countries with assessments of their possible future developments; 2) cultural heritage policies, problems and prospects; and finally, 3) anthropological perspectives ranging from genomics and populations genetics to the archaeology of technological inventions and innovations.

1 – Academic cultures and Research traditions

Part I, "African Studies: Agendas for the Future" with 5 contributions, features interesting views on the future directions of African studies in different disciplinary fields, and different parts of the world (China, Brazil, Turkey) with however, a dominant focus on China and the Belt and Road Initiative. The Chinese economic engagement in Africa was addressed from the perspective of international law in a refutation of the "Western Neo-colonial slander", as well as Sino-African philosophical conversations and African Studies with Chinese characteristics.

In chapter 1, Li Anshan offers an impressive and detailed panorama of the accelerated development of African studies in China. Although African studies started in China in the 1960s, they were still lagging behind during the Cultural Revolution and caught up since the early 1980s. Chinese academia began to pick up its study on the continent and slowly recovered and moved on. Since the FOCAC framework established in 2000, the academic institutes of African studies mushroomed both in the state level and local level. Various conferences, seminars, workshops and roundtable meetings have been held to discuss the African issue, especially China-Africa relations. The presentation explores the emerging themes of African studies in China, features and characteristics, strong points and weak ones. The author provides his understanding of the current situation of African studies in China from a perspective of both a Chinese Africanist and the Chair of Chinese Society of African Historical Studies.

In chapter 2, Han Xiu Li argues that western countries have transformed their existence in Africa from colonialism to neocolonialism and this originally had nothing to do with China. With the in-depth development of Sino-Africa economic cooperation, China has often been labeled as neocolonialist. All these neocolonialism accusations if not curbed will have a negative impact on China's economic engagement in Africa, destroy interests of both sides and hinder the

further development of Sino-Africa economic cooperation. From the perspective of the development of international law related to anti-colonialism and anti-neocolonialism, her paper postulates that China's economic engagement in Africa is an innovative practice of the international law of anti-neocolonialism. She refutes the western slander of transplanting the neocolonialism "title" to China, discloses the "solidarity" and "joint development" essence of Sino-Africa economic cooperation, and further explores the approaches to practice the international rule of law under the concept of the Sino-Africa Community of Shared Future.

Zhang Zhenke, Hang Ren and Binglin Liu discuss Africa marine economy, security and multilateral cooperation in chapter 3. They argue that African economy going through a booming period needs a new fuel and that new fuel is Blue economy. With 38 coastal countries, marine economy with environmentally sustainable features can be considered as the engine for economic growth if handled properly. One of the crucial challenge however is marine security and stability. The authors believe that the environmental impacts corresponding with the blue economy development will be the key issues along the long African coast. In the sectors of marine economy, African countries have more close relationships with the European Union and Asian countries. China is also interested in the marine economy cooperation with African countries. Multilateral cooperation will be the main stream in the future.

Leon Nkolo explores different dimensions of Sino-African philosophical conversations in chapter 4. He asserts that the rise of China as a global player initiates changes in the the geography of reason. This meteoric transformation is affecting the great figures of Chinese science and philosophy. One of these reemerging personalities hitherto neglected is the antic philosopher Confucius. The interest for Confucius is justified by the massive mobilization of his philosophical heritage by the Chinese leadership in order to give a solid theoretical base to its acceptance of a new globalization governed by the principles of harmony, mutual understanding, reciprocal interest, friendship, cooperation and peaceful development. In parallel with this evolution, since three or four decades the global scientific consciousness experimented fundamental shifts in favor of the *de-centration* of the epistemological thought. The criticism of eurocentrism opened the windows to alternative models of truth, mainly the discourses from ex-colonies. So was born the "postmodernist" concept of "Southern epistemologies". Meanwhile, the challenge of the liberation of Africa imposed the rediscovering of the ancient African cultural and intellectual tradition. Under the framework of the South-South cooperation, Africa and China engaged a new dialogue. What could be the philosophical foundations of the China-Africa cooperation? How can the two cultural worlds converse peacefully? Concretely, in what terms Confucius can be confronted to the abstractive thought of black Africa whether in philosophy, cosmogony, science, morality, ethics or politics? What theoretical principles can come out from this debate and how can each vision enrich the other? From the analysis of some African texts of Ancient Egypt, medieval and traditional Africa, the author's is to think philosophically the possibility of a Community with Shared Future between China and Africa.

In chapter 5, Valter Silv rio addresses the ideological cleansing that is about to take place in Brazil. The threat to end the public policy of Affirmative Action for Blacks and Indigenous Peoples in Public Universities is being shaped in a project to limit access to higher education of a new generation of academics and intellectuals with a distinct and conscientious vision of the importance of their ancestral origins. He hypothesizes that for the new political leadership of Brazil, the General History of Africa is considered ideological indoctrination that should be expurgated, even if it has not been adequately implemented in the education system. What is happening in Brazil? For the descendants of Africans, judging by the speeches of the new elected President, the count-down has started for the history of their ancestors that is taught in few educational institutions. V. Silverio provides brief reflections on two moments in the country's history (1960 and 2003), in which Africa entered the national political agenda in strict terms of economic interests of the Brazilian business community. However, the predominant tropes in both periods were about the "brother peoples" synthesized in the phrase: "a rediscovery of Africa and a reunion of Brazil with its roots". The difference between the two periods is precisely that the rediscovery and re-encounter with Africa, at present, is a historical construction of the Brazilian Black Movement, with the General History of Africa as a core element. What the new regime is trying to deconstruct by attacking Affirmative Action for Blacks is a kind of solidarity that re-encounter with the part of Afro-descendants history, still denied today in the curricula of the Brazilian educational system.

2 – Africa's Cultural Heritage: Comparisons and cross-views

Part II "Cultural Heritage: Forms, Management, and Protection" surveys in 3 contributions the richness, diversity of Africa cultural heritage, its institutions as well as the perspectives and challenges faced by experts and managers of these special categories of human – human/natural productions. The new Museum of Black civilization built with China cooperation assistance was featured as a glowing example of what China-Africa collaboration has achieved. A sample of Africa world heritage sites from Egypt, Mali, and others, policies and managerial problems were reviewed and their touristic and economic impacts assessed. And finally, new methodologies to address issues of tangible and intangible african heritage, based above all on listening, were presented in the last contribution of the sub-forum.

In chapter 6, George O. Abungu examines the richness, diversity of Africa cultural heritage and the challenges derived from fast changing social and economic environment. Africa is a continent endowed with diverse and rich cultural and natural heritage. From snow capped mountains, great rivers, tropical forests and savannas teeming with wildlife to hominid sites, rock art and medieval towns, Africa is a continent of plenty. With a long history of interaction including with the outside world, the continent is also rich in intangible heritage. Its rich natural resources including gas and oil, forest products and minerals the protection of some of these rich heritages, including some world heritage sites have become a challenge. This is more so as governments balance benefits of conservation and development with the two often seen as in conflict. This paper

looks at a sample of the rich African's heritage, tangible and intangible, movable and immovable, the potentials they provide as well as the challenges faced. It interrogates the notion of inherent conflicts between heritage management and development in Africa with a view towards reaching a middle ground of win-win situation. This topic is relevant to China as the country is one of the largest investors in the African continent and would obviously prefer to see developments that do not negatively impact on the cultural heritage of Africa. To the contrary, one would envisage it promoting developments that enhance existing rich cultural heritage.

Hamadi Bocoum outlines the history and the realization of the Museum of Black Civilizations inaugurated in December 2018 in chapter 7. It is above all the expression of needs in a specific historical context. Its origins are anchored in the Negritude ideology devised to counter the denial of Black peoples heritage, technological and cultural achievements. The then dominant ideological constructs based on racial classifications, triggered transcontinental and common strategies of Black intelligentsia resulting in such important meetings as the London Panafrican Meeting (July 23-25, 1900), Manchester Panafrican Congress (October 15-21, 1945), and Accra Meeting (April 15-22, 1958). Beside these overtly political activism against inequality and domination, the Paris (1956) and Rome (1959) congresses of Black Writers and Artists added artistic and cultural content to the global dynamics set in motion. The creation of the Museum of Black Civilizations thus initiates a radical paradigmatic shift in museum visions, away from the colonial institutions framework that showcased subaltern Africa. The goal is to fulfill an almost one century old dream, a dream to create a powerful linkage and worldwide consciousness of all Black Civilizations, a space where they showcase their diversity and contacts with humanity in the making.

Cultural Heritage's values in African sustainable development are assessed and reviewed by Pan Huaqiong in chapter 8. Most of African World Cultural heritage belong to tourist attractions. By July 2018, there are 89 sites of cultural heritage (C), 47 sites of natural heritage (N), and 7 sites of mixed heritage (M) distributed in 42 countries. The sites of cultural heritage are distributed, according to the similarity of their main characteristics, in the three regions: North Africa(36C+1M) can be represented typically by the Egyptian and Nile civilization, ancient Roman ruins, Saharan rock arts, Arabs' medina, and Berbers' Ksour; East-South Africa (34C+3M) can be represented by its unique human fossils, and San's Rock arts as well; West-Central Africa (19C+3M) has outstanding medieval towns on the trans-Saharan roads, but also castles and forts associated with the Atlantic slave trade. Moreover, African local cultural landscapes belong to cultural heritage having more than twenty generations and showing a sustainable development. Being cultural carrier, world heritage is representation of African cultures and historical values. To achieve the UN's Sustainable Development Goals, it cannot rely solely on economic factors. Africa can exploit its long history and diversity through cultural heritage to improve its attractions.

3 – Global Anthropological Lenses

Part III, 'Anthropological perspectives' includes contributions arranged in two sub-themes: genomics and populations genetics on the one hand and archaeological discussions on the other hand. The international project 'Human Genome' opened a new and fast developing research field here termed "Genomics: Population Genetics" for sake of simplicity. It relies on different genetic markers to trace human history. Two contributions, one by Wang Chuan Chao and the other by Shomarkha O. Keita opened the forum presentations and featured complimentary forays into genomics. They featured significant advances in the understanding of world population genetics through a detailed case study on the one hand and an epistemological and methodological reflection on the other hand.

Even if not connected directly to African population *stricto-sensu*, the Central Asia case study provides an illuminating illustration of the significant contribution of genomics to the understanding of humans history worldwide. In chapter 9, Wang Chuan Chao analyzes the origins and dispersal of a central Asia ancient pastoralists group through the lenses of ancient genomes. Current and recent studies of early Bronze Age human genomes revealed a significant population expansion of individuals related to the Yamnaya culture, from the Pontic Caspian steppe into Western and Eastern Eurasia. But it was still unclear when and where this Yamnaya Steppe ancestry arose and whether it was related to a horizon of cultural innovations in the 4th millennium BCE that subsequently facilitated the advance of pastoral societies linked to the dispersal of Indo-European languages. To address this issue, his research team generated genome-wide SNP data from 45 prehistoric individuals along a 3000-year temporal transect in the North Caucasus and 10 ancient individuals from the Shirengizou site in northeastern Xinjiang dated to around 2200 years ago. The study presented reveals that the steppe groups from Yamnaya and subsequent pastoralist cultures show evidence for previously undetected farmer-related ancestry from different contact zones, while Steppe Maykop individuals harbour additional Upper Palaeolithic Siberian and Native American related ancestry. The majority of the East Eurasian ancestry in the Shirengizou individuals is related to northeastern Asian populations, while the West Eurasian ancestry is best presented by 20% to 80% Yamnaya-like ancestry. Data thus suggests a Western Eurasian steppe origin for at least part of the ancient Xinjiang population.

Chapter 10, S. O. Keita contribution, examines some methodological and theoretical issues related to the use of genetics/genomics in studies of African populations of a historical nature as opposed to exploratory molecular biology of discovery (the elucidation of DNA sequences, frequencies of variants, variants related to physical traits, etc). Data have been generated from samples collected from living populations and skeletal remains ("ancient DNA") from various regions although not usually by African investigators. There are various theoretical questions that can be raised about genetic data used in the service of "historical" questions. Notable among them is when, if ever, should genetic data be used to lead or be determinative of the narrative or framework in a population history

question. Gene history is not “population history”- a possibly problematic concept. Population history is not linguistic, social, political or ethnic history, although these may intersect. Presentism has to be avoided. The history of ideas about African variability, identity and “racial thinking” also has to be considered in the organization and interpretation of data. A critical analysis of selected case studies illustrates the problems of an over dependence on genetics as well as where genetics may provide critical information. Canons of the use of genetics in African historiography have yet to be fully elucidated.

The archaeological discussions address in five contributions different aspects of technological and cultural evolution from the early days of human first technological invention: the Making of stone tools – to the spread of Ancient China material culture in Eastern and Southern Africa. Archaeological research allows to follow the spread of early humans technological skills from their African cradle to Eastern Asia and China. The shifting adaptation of north African Late pleistocene societies, ritual inventivity and innovation in a West African megalithic tradition, and East African long-term social evolution, political economy, and the advent and spread of China material culture in East and Southern Africa.

In chapter 11, Louis de Weyer chapter presents a grand scale picture of the expansion of early human stone tools traditions. Early technologies appear in East Africa between 3,3 and 2,6 million years (Myrs), and spread to different parts of the Old World up to 1,8 Myrs. This phenomenon reached Eastern Asia, especially China from 2,2 to 1 Myrs. The recorded number of early sites is now rich enough to allow an investigation of early hominin regional behaviors. The study presents a comparative analysis of inner variability of African and Asian Early Stone Age assemblages and offers an updated knowledge about early human technologies in East African and China.

Latifa Sari discusses technological development and Late Paleolithic lifeways in North Africa between 25,000 and 12,000 BP in chapter 12. Several Late Paleolithic technocomplexes have been differentiated in the Late Pleistocene microlithic traditions. They include the Iberomaurusian of the Maghreb, Eastern Oranian of Cyrenaica and Southern Tunisian bladelets of Tunisia. The contribution focuses on the Iberomaurusian populations that were concentrated along the coastal Maghreb some 25,000 to 12,000 years ago. The oldest occurrence of the Iberomaurusian culture recorded so far is dated to at least ca 25,000 BP at Tamar Hat rockshelter in Algeria. The Early Iberomaurusian developed in relatively dry environmental conditions documented in well stratified sequences. The Late Iberomaurusian seems to be related to wetter climatic conditions, characterized by ashy sediments accumulation and midden layers with large amount of burnt land snail shells. Moreover, diversification of broad-spectrum subsistence pattern, appearance of large cemeteries and existence of specific ritual practices are distinct innovations that took place during the Late Iberomaurusian. The chapter explores different facets of the technological and subsistence adaptation of these coastal Maghrib late Pleistocene hunter-gatherers

Chapter 13 by Augustin F. C. Holl focuses on the Senegambian megalithic traditions. The study area under consideration is located in the westernmost portion of West Africa. It witnessed the emergence of megalithic monument construction in the middle of the second millennium before common era (BCE). With regional variations, the practice lasted up to the middle of the second millennium of the common era (CE). The megalithic phenomenon consists of a diverse range of burial monuments, including earthen tumuli, stone-circles, stone-tumuli, and monolith-circles. The latter are highly elaborate constructions requiring extensive geological knowledge and high stone carving skills. The presentation discusses the production of Senegambian burial monuments architectonic elements, especially monoliths as reconstructed from detailed analyses of a sample of excavated sites exploring the diversity of recorded monuments, quarrying protocols, and monoliths shaping techniques. It is argued that stone-quarrying was a highly specialized craft, requiring long and maybe secret apprenticeship. Such complex craft was geared to the memorialization of Ancestor-hood.

How and what ways might one view technological invention, innovation, transfer, and impact of metallurgy on ancient and modern African culture and the environment? These are the question addressed by Chapurukha M. Kusimba in chapter 14. The discoveries of early copper and bronze working sites in Niger and the Central Africa has strengthened the hypothesis that knowledge of iron working independently evolved in that region and spread to other regions of Africa. The 1200 BCE date for the making and use of iron in Central Africa weakens the once popular notion that iron and copper working spread in conjunction with the Bantu migration. The production of carbon steel in northwest Tanzania during the first century CE and crucible steel on the Kenya coast around 700 CE provide significant evidence for technological innovation of African practitioners. What is the relationship between technological innovation and the emergence of socially complex societies? Regional scholarship posits that elite control of internal and external trade infrastructure, investment in extractive technologies, restricted access to arable land and accumulation of surplus, manipulation of religious ideology, and exploitation of ecological crises were among the major factors that contributed to the rise of the state. To what extend did elite investment and monopolization of trade, technology, and other wealth-creating resources coalesce to propel the region towards greater interaction, complexity. Major transformations in the form and increase household size, clear differences in wealth, and inequality? It appears that opportunistic use of ideological and ritual power enabled a small elite initially composed of elders, ritual and technical specialists to control the regional political economy and information flows. The timing of these transformations was continent-wide and date to the last three centuries of the first millennium CE. The chapter critically evaluates the emerging evidence from Eastern and Southern Africa to assess the role of technological invention, innovation, transfer on the evolution and sustenance of socially complex chiefdoms and states.

Shadreck Chirikure tackles the issue of the time-depth of Southern Africa – China interaction in chapter 15. Interdisciplinary research in the southern Indian Ocean continues to show that region as a crucible for interaction of peoples, ideas and materials from multiple worlds in Africa, Asia and beyond. A deconstruction of the various studies suggests that while the most talked about interaction involves trade and exchange between hinterland and coastal southern Africa and the Indian Ocean rim region, via the interceding role of Swahili merchants very little is known about the antiquity and evolution of China-Southern Africa relations through time. The recovery of Song dynasty celadon from Mapungubwe and Great Zimbabwe confirms that contact existed between Southern Africa and the Far East from the late first millennium CE onwards. However, the total number of undisputed Chinese objects ever recovered from the interior is not very high, when compared to the East African coast. This raises questions relating to the little explored topic of the mechanics of circulations of objects, ideas and peoples between these regions. For example, what were the mechanics of interaction between these regions like? As a follow up, was the interaction direct or indirect? Do small numbers of exotics equate to scarcity, rarity and high values in the interior? This paper marshals available archaeological evidence from southern Africa to show that direct and indirect contact existed between the Far East and southern Africa with intensity accelerating with time, especially from the late first millennium CE onwards. Recourse to concepts from African philosophies offers useful suggestions regarding the possible ways in which Chinese exotics and those from elsewhere articulated with local value systems resulting in cooptation, friction and thresholds which unfolded at the interface of the pre-existing and the incoming.

FINAL REMARKS

The different contributions triggered vivid and interesting debates in a collegial and friendly atmosphere. The Africa sub-Forum debates lead to a series of suggestions on how to strengthen the scientific, academic and cultural collaboration and exchange between China and Africa in the context of the Belt and Road Initiative. The strongest recommendation suggests a stronger promotion of cultural, scientific, and academic collaboration and exchanges that will open the way to better mutual understanding.

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Part I- African Studies: Agendas for the Future

Emerging Themes in African Studies in China

Li Anshan ^{a*}

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INTRODUCTION: TWO STORIES ABOUT CHINA-AFRICAN RELATIONS

Africans have some strange ideas about the Chinese. A Kenyan once asked a very interesting question to his Chinese friend, a news reporter of Xinhua News Agency. "Do you know why the Chinese football team have always failed in international games?" The Chinese answered no with puzzled expression. Then the Kenyan explained, "You Chinese football players all look alike and they change the players in the field so frequently that the international referee got very angry, therefore the Chinese team is doomed to failure (Gui Tao, 2012).

Ordinary Chinese are also very much ignorant about Africans. Madame Zhu, a Chinese lady, came back from morning market and heard something in the grass. She found it was a black baby and took him home. She thought the baby was so dirty with the black skin and tried to clean it yet without success. Madame Zhu was so afraid the baby was seriously ill that she rushed him to the hospital. The doctor made a check-up and said, "He is ok, his skin is black like that." She named the child Junlong and raised him 18 years till he was enrolled by a university.¹

The two real stories tell us how little knowledge for both Africans and Chinese about their partners. It also indicates that to increase mutual understanding of each other is very important for strengthening China-Africa relations. This chapter deals with the emerging themes of African studies in China in the context of Belt & Road Initiative (BRI).

1 - Belt and Road Initiative in history and reality

The "Silk Road" existed in the Han Dynasty (202 B.C.-220 A.D.). In 1993, Austrian archeologists discovered the fiber of worm-silk in the hair of a female

¹ "Zhu Junlong", <https://baike.baidu.com/item/朱军龙/14075629>. Accessed 2019-06-20.

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corps of the 21st Dynasty (1070-945.B.C.) in Lower Egypt. Since only China had the technology of producing silk at the time, the product was most likely made in China and transferred to Egypt.² According to Sun, there are a North Way and a South Way to connect China and the "West".³ The "North Way", from Chang'an to Sogdiana, through the border between Sabbath and Rome, by water to Syria, Damascus and Gaza, finally reached Alexandria in Egypt. This is the main trade route from China to Egypt. The South Way", from Loulan to Kabul, the capital of Afghanistan, and then southward to the upper reaches of the Sindhu River, then to the port of Karachi, and finally reaching the western and Indian Ocean countries. There are other connections between China and Africa as well (Xu, Y., 2019; Li, A., 2019).

Besides the land route, there is a Maritime Silk Road. Historically, various ports in East African coast and west Indian Ocean were important destination for maritime traffic between China and Africa, or the middle station for the Chinese travel boats to go further to Europe. According to historical records, the names of Ethiopia, Somalia, Kenya, Tanzania, Mozambique, Madagascar and other countries all appeared in the various travel notes and official history⁴ of ancient China. China's maritime contact with Africa, especially East Africa, was much earlier than Da Gama's voyage around the Cape of Good Hope to East Africa. Cities in Africa did act as port, supply depot, settlement, protection area in China's maritime endeavor in ancient time.

At present, BRI tries to link the world with capital, trade and personnel. African can play an even more important role. It is found that BRI is constantly making with African countries gradually involved. At first, the proposed 65 countries in BRI only included Egypt, the only African country. Later, the Chinese official mentioned African countries as "natural extension" of One Belt One Road (OBOR). During his visit to Madagascar, Foreign Minister Wang Yi proposed that "both countries seize the two major opportunities for international cooperation respectively brought about by the implementation of the outcome of the 2015 Forum on China-Africa Cooperation in Johannesburg and the promotion of international cooperation under Belt and Road Initiative".⁵ This invitation was confirmed when President Xi Jinping met Madagascar President Hery Rajaonarimampianina and both countries signed "Maritime Road Memorandum of Understanding".⁶ Till now, 37 African countries have signed the MOU or agreement of BRI with China in the past two years.⁷

² Lubec, G., et al. 1993. "Use of silk in ancient Egypt." *Nature*. Vol.362(March 4 1993) 6415:25.

³ "West" in ancient China indicates the foreign land west of China, including Mid-Asia and West Asia, North Africa and further westwards (Sun, 1979).

⁴ "Chinese FM meets Madagascar's president on cooperation under Belt-Road Initiative", January 8, 2017, Xinhuanet. http://www.xinhuanet.com/english/2017-01/08/c_135964672.htm. Accessed 2019-4-3.

⁶ "Xi meets Madagascar's president", September 5, 2018, China Daily. <http://www.chinadaily.com.cn/a/201809/05/WS5b8f67a7a31033b4f46545dd.html>. Accessed 2019-4-3.

⁷ "China signed BRI Memorandum with 37 African countries and AU", September 7, 2018. Chinese Government Net. http://www.gov.cn/xinwen/2018-09/08/content_5320263.htm. Accessed 2019-4-3.

Yet what is the role that Africa can play in BRI? In general, ports on the east coast of Africa are a key part of the Maritime Silk Road. African islands in the West Indian Ocean constitute an expressive fulcrum of maritime traffic. Maritime safety in the Gulf of Aden is an important guarantee for the international sea route, Africa is becoming an important investment and trade partner of Asian countries. Africa is an important hub and transshipment point for maritime exchanges between Asia and Europe. The BRI is supposed to bring mutual benefits to both China and the partners. China has gained a great deal from Africa, such as political support and economic benefits, and vice versa. There are examples of bilateral cooperation in Ethiopia, Kenya, Tanzania, etc., such as Chinese Light Rail in Addis Ababa of Ethiopia, first batch of Kenyan female drivers in Mombasa-Nairobi Railway, the Chinese-built Dar es Salaam University Library, etc. All symbolizes the concrete result of cooperation related to BRI in Africa. In addition, there is a great deal of similarity between Chinese and African civilizations and many aspects that both can learn from each other.⁸ That is why mutual understanding and mutual learning is very important for both side, thus African studies become a vital factor in promoting China-Africa relations and facilitating the implementation of BRI.

2 - Three Generations of African Studies

I have published two articles specifically on African studies in China in the 20th and 21st century respectively (Li, A., 2005, 2016) Therefore, I would only sum up the achievements of three generations in the field.⁹ Although there are some studies on China-African relations in the early 20th century, yet the study of Africa per se began only after the founding of People's Republic of China. The first generation (1950s-1970s) includes Zhang Tieshen, Yang Renpian, Zhang Tongzhu, etc. Zhang Tieshen who served as early director of Institute of West Asia and Africa started the research on China-African relations and published his booklet in 1960. Prof. Yang Renpian (1903-1973) of Dept. of History of Peking University graduated from University of Oxford. Although his major is originally French history yet he switched to African history in 1958 owing to the lack of research talents on Africa in China. His posthumous work was published with the edition of his students. Besides, he trained several students as backbone of the second generation thus starting the process of African studies in Peking University. Prof. Zhang Tongzhu (1915-2008) of Department of Geography of Nanjing University contributed to the field by setting up the Research Office of African Geography (1965), the predecessor of Institute of African Studies (1992). He coordinated the study on the strategies for economic and social development in Africa, a national project, as well as studies on African economic development and various fields of economy.

The second generation runs from the 1980s to the end of the 20th century. Since the period began with the opening-up, the scholars had more opportunities than

⁸ Li Anshan, "China and Africa: Cultural Similarity and Mutual Learning", James Shikwati, ed., *China-Africa Partnership The quest for a win-win relationship*, Nairobi, 2014, pp.93-97.

⁹ For the detail of the publication of the three generations, see Li, A., 2005, 2016, 2018.

ever before. This generation comprised of professors of universities and researchers from different institutions, such as Zheng Jiaying, Lu Ting-en, He Fangchuan, Ning Sao of Peking University, Ge Jie, Tu Erkang, Chen Gongyuan, Xu Jiming, Gao Jinyuan, Tang Dadun, Yang Lihua, etc. of the Institute of West Asia and African Studies of Chinese Academy of Social Sciences (thereafter IWAAS, CASS), Zeng Zungu and Jiang Zhongjin of Nanjing University, Ai Zhouchang of East China Normal University, Gu Zhangyi of Minzu University of China, Li Guangyi of Xiangtan University, Zhao Shuhui of Renmin University, Shen Fuwei of Suzhou University, Xu Yongzhang of Zhengzhou University, Zhang Xiang of Nankai University, etc. Some of them have published articles internationally (Chou Yi Liang, 1972; Gao Jinyuan, 1984; He Fangchuan, 1987; Ge Jie, 1997; Yang Lihua, 2006). Their major achievements cover three aspects, set-up of academic organizations, e.g., Chinese Association of African Studies in 1980 and Chinese Society of African Historical Studies in 1981; organizing Africanists of different institutions and universities for conference and coordinating debates on various issues; publishing series of African studies and translation of various of works by foreign scholars, especially UNESCO General History of Africa (Vol. 1-8), etc.¹⁰ Some of the scholars continued their work till the 21st century.

The new century coincided with the set-up of Forum of China-Africa Cooperation (FOCAC) in 2000, which ushered a new period of African studies in China. The bilateral cooperation urged the academic support, thus triple request from the government, business sector and the public. As for the third generation, several characteristics are expressive. Firstly, they all received disciplinary training and have solid academic capability. What is more, they visit Africa frequently, love Africa and like their profession, such as Yang Guang, Zhang Hongming, Li Xinfeng, He Wenping, Shu Yunguo, Zhang Zhongxiang, Mu Tao, Liu Hongwu, Zheng Xian, Hong Yonghong, Chen Xiaohong, Lin Fengmin, Pan Huaqiong, Liu Haifang, Li Anshan, etc. Secondly, they are much more actively involved in international academic exchange. Some of them have gradually gained the international recognition. Yang Lihua and Li Anshan were invited by African Diplomat Corp in Beijing to give keynote speech at OAU-AU Golden Jubilee on May 24, 2013. Li Anshan launched his new book (eds. by Li Anshan & F. April) in a ceremony held in the Ministry of Foreign Affairs of South Africa, and he was also elected as Vice-Chair of the International Scientific Committee of UNESCO *General History of Africa* (Vol. 9-11) at its first session in 2013 in Brazil. Zhu Weidong received his appointment to the International Commercial Panel by the Arbitration Foundation of Southern Africa (AFSA) in 2013. Liu Haifang was appointed as Member-at-Large of the Executive Board of CA/AC Research Network in 2018. Thirdly, they organize various activities on and outside campus, both internally and internationally, and they enjoy working with African colleagues who either participate in various research projects or academic activities in China or become researchers in Chinese universities. Fourthly, they keep a close

¹⁰ The most prominent is the publication of three volumes of *General History of Africa* (1996), Ge Jie, ed. *Concise Encyclopaedia of Sub-Saharan Africa* (2000) and Zhao Guozhong, ed., *Concise Encyclopaedia of West Asia and North Africa (Middle East)* (2000). For more details, see Li, A., 2005, 2016.

contact with society, providing consultations to the governmental institutions, suggestions to the entrepreneurs who go to Africa, or common knowledge to the mass who know little of Africa.

More impressive, a batch of young scholars have appeared with foreign language, fieldwork experience, academic background, etc. They are energetic and capable, with a strong social network. Sun Xiaomeng received her Hausa Language MA in Nigeria and PhD (African culture) in Beijing Foreign Studies University (Sun, X., 2016, 2016a, 2017, 2017a, b, 2018). Lian Chaoqun (Lian, C., 2016, 2017, 2018), Cheng Ying (Cheng, Y., 2018) and Xu Liang (Xu, L., 2017) all educated in Peking University for BA and MA, received their PhD in Arab-African culture, African literature and African history from University of Cambridge, SOAS at University of London and Harvard University respectively. Cheng Ying won 2018 LSA Best Doctoral Thesis in Lagos Studies Award from Lagos Studies Association, the first case for the Chinese scholar.¹¹ The three talents are now the backbone of the Center for African Studies at Peking University. Dr. Liu Weicai of Shanghai Normal University has studied and traveled in Africa and have several publications on Africa (Liu, W., 2016, 2016a, 2017, 2017a, 2018, 2018a, 2019). Li Pengtao has published extensively on African history (Li, P., 2016, 2016a, 2017, 2018a, 2019, 2019a, 2019b). As the first Xhosa language expert in China, Ma Xiujie received her PhD. (Linguistics) on Xhosa grammar from Rhodes University and now teaches in Beijing Foreign Studies University (Ma & Wang, 2019; Ma, 2019). Shen Xiaolei in IWAAS, CASS, a PhD of Peking University interested in land issue and politics, did fieldwork in Zimbabwe and translated several books of Africa (Shen, 2016, 2017, 2018, 2018a, 2018b, 2019, 2019a). Liu Shaonan with PhD (African history) from Michigan State University, won the Graduate Student Paper Prize in 2018 U.S. African Studies Association Conference in U.S., the first Asian scholar who got this honor, and now is teaching in Beijing Normal University (Liu, S., 2019).¹² There are more young talents, such as Xu Wei, PhD of Anthropology (Minzu University of China) who did fieldwork in Botswana, now the Deputy-Director of the Institute of African Studies of Zhejiang Normal University (Xu, W., 2016, 2016a, 2018, 2019), Yuan Ding, PhD of Anthropology (KU Leuven & Yunnan University), who did fieldwork in Congo (Kinshasa) and currently teaches in Shanghai Normal University (Yuan and Pang, 2018), Zhang Yong, the first to study African cinema and to shot Africa-related films (Zhang, Y., 2017, 2018, 2018a; Zhang, Y. & Chen, Y. 2017).

3 - Emerging Themes

In terms of emerging themes, quite a few subjects come to my mind. However, it is important to grasp the major ones. I once analyzed current focus and new interests of African study in China, such as China-Africa relations, country studies, current situation, African history, politics, international relations and law

¹¹ "2018 LSA Best Doctoral Theses in Lagos Studies Award: Ying Cheng (Assistant Professor, Peking University, China)", https://lagosstudies.wcu.edu/?page_id=724. Accessed 2019-6-20.

¹² "Graduate Student Paper Prize Winners", <https://africanstudies.org/awards-prizes/graduate-student-paper-prize/graduate-student-paper-prize-winners/>. Accessed 2019-6-26.

studies, etc. (Li, A., 2016, 2018). To avoid repetition, I only summarize a few new trends indicated by research subjects, fields, and projects.

One of the main character of African studies in China is its close linkage with African reality. Politics is always the key subject comprised of various topics, such as African leadership and political terms, party politics (Gao, T., 2018), governance and corruption, NGO and political stability, power and prejudice, ethnic issue and nation-building, anti-terrorism and security issue, African law and legal system, regional cooperation and integration, etc., one important is African democracy and the "third term" issue. The so-called "third term" issue refers to the phenomenon that the supreme leader of a country (mainly the president) continues to participate in elections after the end of the term of office stipulated in the constitution by amending or canceling the term provisions of the constitution, thus prolonging the term of office. This phenomenon occurs frequently in African countries in recent years and it has some implication in the stability of political order. There are two views regarding the phenomenon. One criticized severely the political practice and regarded it as the biggest political crisis after the cold war and a "democratic recession" in Africa, yet the author also condemned the interference from the West especially the U.S. (Yin, R. & Sun, H., 2015; Li, W., 2016). Another view suggests that "The prevalence of the 'third term' phenomenon is closely related to the influence of African 'strong man politics' and traditional political culture, the immature development of democratic politics, the consideration of leaders' realistic interests and the contradictory position of the international community. The third term of office highlights the complexity and long-term nature of the democratization process in African countries. It reflects the attempts made by these countries to explore ways of democratic consolidation and road of democratic development in line with their national conditions." (Shen, X., 2018).

Africa now has become increasingly confident and tried to improve its diplomatic autonomy. Here, "autonomy" refers to the relationship between a country with other countries, international organizations or institutions, e.g., the sovereign government's right to decide and deal with the political, economic, military, social, religious and cultural affairs. African countries' sense of autonomy has increased in recent years. "Looking eastward is only a stage in the development of African countries, not the final result", and strengthening cooperation with emerging countries does not mean that "African countries will shift their focus to emerging countries, but hope to maximize the use of international resources through the practice of a more comprehensive and balanced strategy of international relations" (Zhou Yuyuan, 2017). The phenomenon is manifested in three levels, e.g., political and diplomatic, economic and financial. The first level goes strongest and reflects in three aspects, e.g., the partnership between the AU and UN, the relationship between the AU with its member states and the International Criminal Court, and its partnership with other regions. Though various problems occur in African countries, yet they refuse others to intervene and hoped to solve the problems by themselves. The economic level is reflected in the consciousness of development strategy while the third is less obvious, e.g.,

Africa's fiscal and financial autonomy, indicated in AU's new fiscal revenue plan in 2016 (Zhang Chun, 2018; Zhang Hongming, 2018).

There has been a discussion about whether it is possible for Africa to take its advantage to develop its economy. If yes, how? Justin Yifu Lin's new structural economics reflected China's perspective on world development, specifically on Africa. The theory suggests a framework to complement previous approaches in the search for sustainable growth strategies. An economy's structure of factor endowments evolves from one stage of development to another. Each structure requires corresponding infrastructure to facilitate its operations and transactions. Each stage of economic development is a point along the continuum from a low-income agrarian economy to a high-income industrialized economy, not a dichotomy of two economic development stages ("poor" versus "rich" or "developing" versus "industrialized"). At each given stage of development, the market is the basic mechanism for effective resource allocation. To achieve the ideal aim, industrial upgrading and corresponding improvement in "hard" and "soft" infrastructure is required. The development must conform to the principle of comparative advantage. The government should choose the existing industries in an economy that is twice as high as the current income level and help enterprises overcome difficulties (Lin, 2012; Lin Yifu, 2012). There has been a debate about the issue and the most important work is two-volume *Oxford Handbook of Africa and Economics*, sub-entitled "Context and Concept" and "Policies and Practices" respectively, and Lin's chapter indicates the linkage between China's rise and African economic structural transformation (Monga & Lin, 2015; Yao, 2017; Zhao, et al., 2018; Brautigam, et al., 2018; Tang, 2018, 2019a, 2019b).¹³

The study of African economy covers various aspects, such as agriculture, industrialization, finance, poverty reduction, technology transfer, etc. New works on African economy are mainly related to international cooperation especially to China-Africa cooperation. Liu Haifang deals with agriculture in Zambia and the effect of FDI and African agriculture in South-South cooperation (Liu, H. & Liu, J., 2017; Liu, et al, 2018). Industrialization is a new issue (Shu, Y., 2016; Yao, G., 2016; Li, Z., 2016; Tang, X., 2018, 2019, 2019a) and *African Yellow Book (2016-2017)* is specifically on the industrialization and industrial park of Africa (Zhang H., 2017). Cheng Cheng explores the new opportunity of China's FDI and its effect to African finance (Cheng C, 2018). The linkage of international transfer of industrial capacity with African manufacturing industry is also studied (Wei X. & Huang, M., 2018). Li Xiaoyun, an expert on agriculture and international development cooperation analyzed the failure of the West development assistance as well as the new role of China and look forward the future of international development cooperation (Li X., 2019). There are studies on development issues, such as technological transfer (Li, A., 2016a), BRI and African industrialization and development (Lian, 2016c; Bi, 2017; Zhao C., 2017; Zhao, S., et al, 2018, 2018a; Zhao, Z., et al., 2018; Zhao, S., et al, 2019; Deng,

¹³ There is a heated discussion among the international scholars. Here I have only mentioned its influence in Chinese academia in relevance with African economy.

Y., 2019), non-traditional security (Wang, T., 2017; Bi & Chen, 2017; Cao, 2017), marine fishery resources (Fang, et al., 2019; Ren, et al., 2018, 2018a), food security (Zhang, S., 2018), demographic dividend (Liang & Wang, 2018), debt sustainability and Chinese loan to Africa (Gu, L. 2019), etc.

Several fields are gaining momentum in recent years and African law is one of them. With the strengthening of China-African relations, increasing Chinese business and migrants have entered Africa. They want to know laws of different African countries to facilitate their commercial activities, which stimulates the Chinese scholars to concentrate on the issue. *African Law Review* has provided a platform to disseminate African legal knowledge and discuss the subject, which includes papers, reviews, translations, book reviews and materials on domestic laws of African countries and African international law, etc. (Hong, Y., 2016, 2017). Besides translations of African laws or legal systems, Zhu has published various articles on international arbitration, settlement of disputes, etc. His most important work deals with L'Organisation pour l'Harmonisation en Afrique du Droit des Affaires, e.g., OHADA (Zhu, W., 2018). There are other studies especially on economic laws in Africa (Cai & Zhu, 2016, 2016a, 2017, 2017a; Tang, Y., 2017). The overseas Chinese in Africa are probed (Li, A., 2016b, 2017, 2017a, 2017c, 2017d, 2017e, 2017f, 2017g, 2018d; Xu, W., 2018).

African political ecology, economic development, security situation, geopolitics, foreign relations, legal environment and public opinion environment have changed to various degrees in the past (Zhang, H., 2017, 2018). Scholars of international politics become increasingly engaged in African studies. How is China-Africa relation? (Liu, H., 2016; Zhi, Y., 2016; Yang, B., 2018). Various issues are explored, such as border with focus on conflicts and solutions (Guan, P., 2017), Africa's involvement in the governance of the sea (Zhen, H & Zhang, C., 2018), or an assessment of the effect of American policy towards Africa after the Cold War (Song, W., 2018), the partnership between South Africa and India (Xu, G., 2019), the policy of France, Britain, U.S., Germany, Japan and EU towards Africa (Peng, S., 2019; Zhang, H., 2019; Li, J., 2019; Liu, Z., 2019; Zhang, H., 2019; Zhang, Y., 2018; Jin, L., 2019), etc. Anthropology/Ethnology is carried out with an emphasis on the historical origin, national identity, tribal factor, ethnic policy, etc. (Xu, W., 2016; Li, P., 2016b, 2018; Wang, J., 2016; Zhuang, C., 2017; Hou, F., 2017; Feng, 2019; Wang, J., 2018, Li, W., 2018; Shi, 2019; Li, A., 2019; Jiang, J., 2019; Qing & Zhu, 2019; Zhao, J., 2019, Feng, D., 2019). Liu published her work on the international environment for China-Africa relations (Liu, Q., Zhao, C. & Wang, C., 2019) and also supervised several PhD students on African issues, such as the EU's politically oriented aid to Africa since 21st century (Zhao, Y., 2019), the US and EU's North African security policy (Wang, C., 2019).

There is a boom in the study of African literature (Wang, L., 2015; Bao & Wang, 2016; Chen & Gao, 2017; Li & Jiang, 2018; Yao, F., 2019; Zhu, Z., 2019,

2019a).¹⁴ Apart from few works in the late 19th century and the introduction in *Eastern Miscellany* from the early 1920s, African literature was studied seriously from the 1960s and systematically after the 1980s. Various important African writers were explored and about 990 papers on African literature were published in Chinese journals during 1986-2016, covering 16 African countries (Yu, H., et al., 2012; Wang, L., 2015; Huang, H., 2016). In the past decades, the translation of African works has several features, anti-colonialism or national independence, strong African tradition or local culture, Nobel Prize Winners' works, more English than French works, more male than female works, more novels than dramas, etc. (Wang, L., 2015; Chen, F., 2017; Deng Y., 2018).¹⁵ Besides, some are interested in South African poets (Jiang, H., 2017, 2017a, 2017f, 2018, 2018a), the American African diaspora (Tan, H., et al., 2016; Li, P. & Tan, H., 2017; Tan, H., 2017, 2017b, 2018, 2018a; Zhang, M. & Tan, H., 2018), or African literature critics (Jiang, H., 2016, 2016a, 2016b, 2017e; Yao, F., 2019). There are several national projects for the translation or study of African/African diasporic literature. Recently, the research has extended from Nobel Prize winners to popular writers, from literature to critical theory, from general to particular. The expansion witnessed the translation by Yao Feng's team of *African Literature: An Anthology of Criticism and Theory* compiled by two African-American scholars, Ato Quayson and Tejumola Olaniyan, the first collection of key texts of African literary criticism and theory, which highlights the African endogenous position.

The National Social Science Fund of China and Ministry of Education offer funding every year for various projects in different disciplines. There are several important projects related to African studies, such as African Economic History chaired by Shu Yunguo (Shu, Y., 2018, 2019), African Historiography in the 20th Century chaired by Zhang Zhongxiang (Zhang Z, 2017, 2019), and the Documentation of China-African Relations chaired by Mu Tao (Zhang, C. & Mu, T.). There are other projects as well. For example, Zhang Jin is doing a project on African environment, focusing on water resource in southern Africa (Zhang, J., 2016, 2017, 2018). Zhou Yuyuan, Huang Yupei, Jiang Hui, Li Peilei and Zheng Xiaoxia (Zheng, X., 2017) newly received the 2019 national fund for projects on African international relations, debt issue, African-American literature, and African women studies respectively.

4 - Institutions of African Studies

Various institutions of African studies have mushroomed owing to a strong and expressive need. There are three pioneers, e.g., IWAAS of CASS set up in 1961, with a newly founded China-Africa Institute (2019), Institute of Afro-Asian Studies at Peking University in 1965 with a later established Center for African Studies (2000); Research Office of African Geography at Nanjing University in 1965 with a later Institute of African Studies (1992). More institutions of African studies have appeared in Xiangtan University (1978), East China Normal University

¹⁴ For a comprehensive bibliography of the research of African literature in China, see Zhu Zhenwu's recent works on the study of English literature in Africa by the Chinese scholars (Zhu, Z., 2019, 2019a).

¹⁵ For example, there are 445 articles studying J.M. Coetzee from January 1986 to June 2016 (Huang, H., 2016).

(1985), Shanghai Normal University (1998), Yunnan University (1998), Zhejiang Normal University (2007), etc., besides institutions of the government ministries. Now more than 30 institutions of Africa studies have been set up. The institutions play a leading role in research, with key journals, weekly, annual report, websites, and various publications.

IWAAS of CASS has published *Middle East and Africa Yellow Book* since 1998, covering various features of African affairs. Its journal *West Asia and Africa* (1980-) becomes the flagship journal in African studies in China and *African Yellow Book* was separated from the former since 2012. In 2019, China-Africa Institute is set up here with a trilingual *Journal of China-Africa Studies* (Chinese, English and French).¹⁶ Center for African Studies at Peking University held an international Forum on China-African Cooperation even before the set-up of FOCAC in 2000 and carried out academic cooperation with Egypt and other African countries for a long time. Besides *Annual Review of African Studies in China* (2011-), it has run a weekly *PKU African-Tele Info* for 8 years with more than 400 issues and over 6000 international subscribers. Institute of African Studies of Nanjing University has been doing African economic geography and started an annual *Africa Development Studies* in 2017. Centre for African Legal and Social Studies of Xiangtan University has put its emphasis on African law thus has published *African Law Review* (2015-), focusing on legal studies in Africa. Center for African Studies of Shanghai Normal University concentrated on the study of African economy. Besides a regular workshop on African economy, it has published two annual reviews, e.g., *African Economic Review* (2012-) and *African Economic Development Report* (2014-). Institute of African Studies in East China Normal University focuses on East Africa especially on Tanzania. Mu Tao's team has translated the four-volume *Selected Works of Julius Nyerere* (2014-2015) and started a workshop on African art and culture. As a new comer, Institute of African Studies of Zhejiang Normal University has achieved a great deal in recent years, runs *African Studies* (2010-), *Annual Report on the Development of Africa*, and a Museum of African Art, publishes series of books and manages several centers including that of education, cinema, anthropology, etc. School of Asian and African Studies of Beijing Foreign Studies University started *Journal of Asian and African Studies* (2007-) besides its unique teaching of African languages.

Yangzhou University established the Center for Sudanese Studies in 2012 with researchers including two Sudanese and has produced research reports, especially about the Sudan crisis in 2019. Jiangxi Normal University has the Centre de Recherche Sur Madagascar with two Malagasy researchers. Center for West African Studies at University of Electronic Science and Technology of China was co-founded in 2017 with four Ghanaian universities including University of Ghana, and has issued annual reports regularly. The creative way is that the African and Chinese faculty members have published articles together (Ameyaw & Li, 2018; Asare-Kyire, et al., 2018; Boadi, et al, 2018; Boadi, et al.,

¹⁶ President Xi Jinping sent a letter to congratulate the inauguration of the China-Africa Institute on April 9, 2019.

2018a; Lartey & Li, 2018; Dumor & Li, 2019,). Center for African Studies at Sun Yat-Sen University carries out archeological excavation in port Manda in Kenya and anthropological fieldwork in Ethiopia.¹⁷ Department of Anthropology and Ethnology of Xiamen University sent Chinese students to Senegal for archeological excavation during the summer of 2018 under the guidance of Distinguished Prof. Augustin Holl, an internationally well-known expert.¹⁸ China Foreign Affairs University focuses on Africa's French-speaking countries, so are Wuhan University (Wang, Z. et al., 2018) and Jinan University (Li, C., 2017). Institute for African Studies at Guangdong University of Foreign Studies was set up in 2016 and has carried out various activities at home and abroad. African language teaching started early, now more active in Beijing Foreign Studies University, Tianjin Foreign Studies University, Peking University, Chinese University of Communication, etc., and Chinese students were sent to African countries to study languages such as Arabic, Kiswahili, Amhara, Hausa, Yoruba, Zulu, Xhosa, etc.

CONCLUSION

African studies in China have gained momentum and made great progress with new themes and new trends. However, it has to be acknowledged that the studies are still weak with focus on China-Africa relations and superficial with policy oriented. We are looking forward to academic cooperation with African colleagues, more emphasis on individual countries or topics, and solid fieldwork and interdisciplinary studies.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES¹⁹

- Ameyaw, B. & Li, Y. (bì sī mǎ · ā mǐ yà wū, lǐ yào). 2018. "Analyzing the impact of GDP on CO2 emissions and forecasting Africa's total CO2 emissions with non-assumption driven bidirectional long short-term memory", *Sustainability*, 10:9.
- Asare, A. & Shao, Y. (lǐ ān wén, shào yún fēi). 2018. *Information and Communication Technology (ICT) and Growth for SMEs in Ghana*, Social Sciences Academic Press (China).

¹⁷ See a brief of the workshop on fieldworks in Africa at the launch of the center. "Articulating Connections: China and Africa", June 30, 2018. http://www.sohu.com/a/238647070_501399. Accessed 2019/6/20.

¹⁸ "Archaeological Field Records of Senegal", <https://rwxxy.xmu.edu.cn/2018/0814/c9686a349620/page.htm>.

¹⁹ Works published in and after 2016 are listed here with few exceptions. Articles published in newspapers, networks, edited Chinese books or annual reviews and translations are not included owing to the limited space.

- Asare-Kyire, L., Z. He, C. Essel, D. Junaid(lì dí yà·ā sà ěr·jī ěr、hé zhēng、chá ěr sī·hā kè màn·āi sài ěr、dān ní sī·nài dé), 2018. "Prevalence of Copycat in Africa Textile Clusters: The Blame Game Among Stakeholders", *Journal of Business Economics and Management*,19:6.
- Bao, X. & Wang, L., ed., (bào xiù wén、wāng lín zhǔ biān), 2016. 《èr shí shì jì fēi zhōu míng jiǎ míng zhù dǎo lùn》, zhè jiāng rén mín chū bǎn shè.
- Bì, J. (bì jiàn kāng) , 2017. 《"yī dài yī lù" yǔ fēi zhōu gōng yè huà——yǐ zhōng āi jīng mào hé qū hé yà jí tiě wéi lì》, 《xīn sī lù xué kān》, dì yī qī。
- Bì, J. & Chen, L.(bì jiàn kāng、chén lì róng), 2017. 《suǒ mǎ lǐ nǎn mín zhì lǐ dē kùn jú jí chū lù》, 《xī yà fēi zhōu》, dì liú qī。
- Boadi, E., Z. He, J. Bosompem, J. Say, E. K. Boadi(āi wén sī·ā sāng tè·bó ā dí、hé zhēng、yuē sè fēn·bō sè mǔ、qiáo yī·sài、āi lǐ kè·kē fēi·bó ā dí),2018."Let the Talk Count: Attributes of Stakeholder Engagement, Trust, Perceive Environmental Protection and CSR", *SAGE Open*,9:1.
- Boadi, E, Z. He, D. Darko, E. Abrokwhah (āi wén sī·ā sāng tè·bó ā dí、hé zhēng、dānī sī·fēi fēi·dá kē、yóu jīn·ā bù lǚ kè wǎ) . 2018a. "Unlocking from community stakeholders, corporate social responsibility (CSR) projects for effective company–community relationship", *Labor History*,59:6.
- Brautigam, D., T. Weis & X. Tang, 2018. "Latent advantage, complex challenges: Industrial policy and Chinese linkages in Ethiopia's leather sector", *China Economic Review*, 48 (April), <http://dx.doi.org/10.1016/j.chieco.2016.06.006>. Accessed May 20, 2019.
- Cai, F., et al., ed., (zhái fèng jié、wáng yù huá、pān liáng, zhǔ biān) , 2016. 《fēi zhōu yī tí huà bèi jīngxiàdē zhōng fēi hé zuò》, shì jiè zhī shí chū bǎn shè.
- Cai, G. & Zhu, W., ed., (cài gāo qiáng、zhū wěi dōng, zhǔ biān) , 2016. 《xī bù fēi zhōu dì qū xìng jīng mào zǔ zhī fǎ lù zhì dù zhuān tí yán jiū》, xiāng tán dà xué chū bǎn shè.
- _____, 2016a. 《dōng nán bù fēi zhōu dì qū xìng jīng mào zǔ zhī fǎ lù zhì dù zhuān tí yán jiū》, xiāng tán dà xué chū bǎn shè.
- _____, 2017. 《nán fēi jīng mào tóu zī fǎ lù zhì dù zhuān tí yán jiū》, xiāng tán dà xué chū bǎn shè.
- _____, 2017a. 《nán fēi lǎo gōng fǎ lù zhì dù zhuān tí yán jiū》, xiāng tán dà xué chū bǎn shè.
- Cao, F. (cáo fēng yù), 2017. 《jǐ nèi yà wān hǎi dào wèn tí jí qí zhì lǐ》, 《xī yà fēi zhōu》, dì liú qī。
- Chen, F. (chén fèng jiāo), 2017. 《fēi zhōu nuò jiǎng zuò jiā yán jiū zài zhōng guó: huí gù jí yì yì》, 《qiú suǒ》, dì sì qī。
- Chen, F. & Gao, Z. (chén fèng jiāo、gāo zhuó qún) , 2017. 《fēi zhōu yīng yǔ wén xué zài zhōng guó dē yán jiū》, liú hóng wǔ : 《fēi zhōu yán jiū》, dì shí juàn : dì yī qī。
- Chen, T. & Peng, C. (chén tiān dù、péng chāo) , 2019. 《mù bǎ lǎ kè shí qī kē pǔ tè rén shēng cún zhuàng kuàng jí kùn jìng》, 《shì jiè mín zú》, dì yī qī。

- Cheng, C. (chéng chéng), 2018. 《“yī dài yī lù” zhōng fēi fā zhǎn hé zuò xīn mó shì : “ zào xiě jīn róng ” rú hé gǎi biàn fēi zhōu》, zhōng guó rén mín dà xué chū bǎn shè.
- Cheng, Y. (chéng yíng), 2017. 《“ wǒ měn dē chuán tǒng shì fēi cháng xiàn dài dē chuán tǒng ” : jiě dú fēi zhōu wén běn dē líng liè fāng shì 》, 《zhōng guó tú shū píng lùn 》, dì sì qī 。
- , 2018. “The Bag is My Home’: Recycling China Bags in Contemporary African Arts,” *African Arts* 51(2).
- Chou, Yi Liang (zhōu yī liáng), 1972. “Early contacts between China and Africa”, *Ghana Notes and Queries*, 12:6, pp.1-3.
- Deng, Y. (dèng yán tíng), 2019. 《“yī dài yī lù” chàng yì yǐn lǐng xià dē dōng fēi xiàn dài huà tiě lù hù lián hù tǒng jiàn shè 》, 《xī yà fēi zhōu》, dì èr qī 。
- Deng, Y. (dèng yún), 2018. 《 jìn bǎi nián lái fēi zhōu wén xué zài zhōng guó fān yì chū bǎn dē tè zhēng yǔ kùn jìng tàn xī 》, 《 chū bǎn fā xíng yán jū 》, dì sān qī 。
- Dumor, Kofi, & Li, Yao (kē fēi• dù mò 、 lǐ yào), 2019. “Estimating China’s Trade with Its Partner Countries within the Belt and Road Initiative Using Neural Network Analysis”, *Sustainability*, 11:5.
- Fang, J. et al. (fáng jùn hán、 rèn háng 、 luó yíng 、 zhāng zhèn kè), 2019. 《fēi zhōu yán hǎi guó jiā hǎi yáng yú yè zī yuán kāi fā lì yòng xiàn zhuàng 》, 《 rè dài dì lǐ 》, dì sān qī 。
- Feng, D. (féng dìng xióng), 2019. 《 gǔ xī là zuò jiā bǐ xià dē āi sài é bǐ yà rén 》, 《 shì jiè mín zú 》, dì yī qī 。
- Gao, J. (gāo jìn yuán), 1984. “China and Africa: The development of relations over many centuries”, *African Affairs*, 83:331.
- Gao, T. (gāo tiān yí), 2018. 《 cóng xuǎn jǔ zhì dù biàn gé tàn xī tǎn sāng ní yà zhèng dǎng zhèng zhì dē yǎn biàn 》, 《xī yà fēi zhōu》, dì liù qī 。
- Ge, J. (gě jí), 1997. “China”, in John Middleton, ed., *Encyclopedia of Africa, South of the Sahara*, Vol. 4., New York: Scribner’s Sons.
- Gu, L., “Why no need to worry about debt sustainability and Chinese loan to Africa?”, 2018-08-27 CGTN. <http://www.ecns.cn/news/politics/2018-08-27/detail-ifyxikfc9643661.shtml>. Accessed, 2019/7/9.
- Guan, P. (guān péi fèng) , 2017. 《fēi zhōu biān jìng hé lǐng tǔ zhēng duān jiě jué mó shì yán jū 》, shè huì kē xué wén xiàn chū bǎn shè.
- , 2018. 《 wài bù gān yù yǔ suǒ mǎ lǐ—āi sài é bǐ yà biān jìng zhēng duān 》, 《xī yà fēi zhōu》, dì sān qī 。
- Gui, T. (guì tāo), 2012. 《 shì fēi zhōu 》, zhōng guó dà bǎi kē chū bǎn shè 。
- He, F. (hé fāng chuān) , 1987. “The relationship between China and African history”, *UCLA, African Studies Center Newsletter*, Fall.

- He, J. & Wang, Y. (hè jiàn 、 wáng yù quán), 2019. 《fēi zhōu guó jiā shè hǎi tiáo kuān rù xiàn jí qí duì zhōng guó dē qī shì 》, 《xī yà fēi zhōu 》, dì liú qī 。
- He, W. (hè wén píng), 2016. 《zhōng fēi guān xì : lǐ xìng píng héng jí qián zhān fā zhǎn shì jiǎo 》, 《dāng dài shì jiè 》 dì jiǔ qī 。
- Hong, Y. & Li, B., ed., (hóng yǒng hóng 、 lǐ bó jūn zhǔ biān), 2016. 《fēi zhōu fǎ píng lùn 》, xiāng tán dà xué chū bǎn shè
- Hong, Y. & Li, B., ed., (hóng yǒng hóng 、 lǐ bó jūn zhǔ biān), 2017. 《fēi zhōu fǎ píng lùn 》, xiāng tán dà xué chū bǎn shè
- Hou, F. (hóu fā bīng), 2017. 《lú wàng dá dē mín zú shēn fèn jiě gòu : fǎn sī yǔ qǐ shì 》, dì yī qī 。
- Huang, H. (huáng huī), 2016. 《fēi zhōu wén xué yán jiū zài zhōng guó 》, 《wài guó wén xué yán jiū 》, dì sān qī 。
- Jiang, H. (jiǎng huī), 2016. 《ōu zhōu yǔ yán bà quán shì hòu zhí mín lǐ lùn dē líng hún 》, 《wén yì lǐ lùn yǔ pī píng 》, dì yī qī 。
- _____, 2016a. 《lùn xiàn dài fēi zhōu wén xué shì tiān rán dē zuǒ yì wén xué 》, 《wén yì lǐ lùn yǔ pī píng 》, dì èr qī 。
- _____, 2016b. 《shì nì xiě dì guó hái shì dì guó nì xiě ? 》, 《dú shū 》, dì wǔ qī 。
- _____, 2016c. 《guān yú fēi zhōu guó jiā shè huì zhǔ yì yùn dòng dē jǐ diǎn duàn xiǎng 》, 《tái wān shè huì yán jiū jì kǎn 》, dì liú qī 。
- _____, 2016d. 《sū shān . bā dùn yǔ xiě bù chū lái dē fēi zhōu xiǎo shuō—kù qiè <fú>dē yuè dú bǐ jì 》, 《yì shù shǒu cè 》, 2016nián12yuè 。
- _____, 2017. 《“wǒ mēn shì zuì hòu dē shī rén”—cǎi fǎng nán fēi zhù míng shī rén kǎi ào lā pèi cè . kǎo sī ěr 》《wén yì lǐ lùn yǔ pī píng 》, dì yī qī 。
- _____, 2017a. 《hēi pí fū , bái miàn jù —fǎng nán fēi nǚ shī rén fēi lì pà . wéi lì yè sī 》, 《wén xué lǐ lùn yǔ pī píng 》, dì èr qī 。
- _____, 2017b. 《fēi zhōu : zuò wéi chén mín yǔ zhǔ tǐ dē lì shǐ 》, 《zhōng guó dú shū píng lùn 》, dì sì qī 。
- _____, 2017c. 《mǎ lǐ kǎ nà méi yǒu lái lín dē chūn tiān 》, 《dú shū 》, dì liú qī 。
- _____, 2017d. 《nán fēi“ xué fèi bì xū xià xiàng ”dē xué shēng yùn dòng yǔ rén mín jiào yù dào lù dē shī bài 》, 《qū yù 》, dì yī qī 。
- _____, 2017e. 《zǎi dào hái shì xī huà : zhōng guó yīng yǒu zěn yàng dē fēi zhōu wén xué yán jiū ? 》《shān dōng shè huì kē xué 》, dì liú qī 。
- _____, 2017f. 《dāng zì yóu tū rán lái lín —fǎng nán fēi xiǎo shuō jiā ní kè . mù lóng gē 》, 《wén yì lǐ lùn yǔ pī píng 》, dì liú qī 。
- _____, 2018. 《zài jiū lóu shàng—fǎng nán fēi xiǎo shuō jiā fú léi dé . kù mǎ luò 》, 《wén yì lǐ lùn yǔ pī píng 》, dì èr qī 。

- _____, 2018a. 《shēng huó zài gōng rén zhōng jiān dē xué shēng —fǎng nán fēi shī rén mǔ pǔ tè lǎ ní . bù fēi luò》, 《wén yì lǐ lùn yǔ pī píng》, dì sì qī 。
- Jiang, H. & Sun, X.(jiǎng huī 、 sūn xiǎo méng), 2017. 《fēi zhōu: zuò wéi chén mín yǔ zhǔ tǐ dē lǐ shǐ》, 《zhōng guó tú shū píng lùn》, dì sì qī 。
- Jiang, J. (jiǎng jùn), 2019. 《“qù zú qún huà : dà tú shā hòu lú wàng dá shēn fèn zhèng zhì dē chóng jiàn, 《shì jiè mín zú》, dì yī qī 。
- Jin, L. (jīnlíng), 2019. 《ōu méng dē fēi zhōu zhèng cè tiáo zhèng : huà yǔ 、 xíng wéi yǔ shēn fèn chóng sù》, 《xī yà fēi zhōu》, dì èr qī 。
- Lartey, Victor Curtis, & Li, Yao(wéi kè duō•kē dì sī• lǎ dì、 lǐ yào), 2018. “Zero-Coupon and Forward Yield Curves for Government of Ghana Bonds”, *SAGE Open*, 8:3.
- Li, A. (lǐ ān shān) , 2005. “African Studies in China in the Twentieth Century: A Historiographical Survey”, *African Studies Review* (U.S.A.), 48:1.
- _____, 2016. “African studies in China in 21st century: A historiographical survey”, *Brazilian Journal of African Studies*. <http://www.seer.ufgrs.br/index.php/rbea/article/view/66296/40014>. Accessed 2019/7/9.
- _____, 2016a. “Technology transfer in China-Africa relation: myth or reality”, 8:3, *Journal: Transnational Corporations Review (RNCR)*.
- _____, 2016b. 《guó jì zhèng zhì huà yǔ zhōng dē zhōng guó yí mín: yǐ fēi zhōu wéi lì》, 《xī yà fēi zhōu》, dì yī qī 。
- _____, 2017. “Chinese migration to Africa: historical perspectives and new developments”, in Ute Röscenthaler and Alessandro Jedlowski, eds., *Mobility between Africa, Asia and Latin America*, London: Zed.
- _____, 2017a, “Migrations internationales et la question identitaire focus sur les zones littorales de l’océan Indien et les communautés chinoises de l’île Maurice, la Réunion et Madagascar”, *Revue historique de l’Océan Indien*, 14
- _____, 2017b. “The Study of China-Africa Relations in China: A Historiographical Survey”, *World History Studies*, 4:2.
- _____, 2017c. 《shì xī èr zhàn yǐ hòu fēi zhōu huà rén zōng jiào yì shí dē biàn qiān yǔ róng hé》, 《huà qiáo huà rén lǐ shǐ yán jiū》, dì sān qī 。
- _____, 2017d. 《qiǎn xī zhàn hòu fēi zhōu huà qiáo huà rén wén huà shēng huó dē yǎn biàn》, 《bā guì qiáo kān》, dì sān qī 。
- _____, 2017e. 《shì lùn fēi zhōu huà rén shè tuán dē chuán chéng yǔ yǎn biàn (1950-2016)》, 《shì jiè mín zú》, dì wǔ qī 。
- _____, 2017f. 《èr zhàn hòu fēi zhōu huà rén shè huì shēng huó dē shàn biàn》, 《xī yà fēi zhōu》, dì wǔ qī 。
- _____, 2017g. 《zhàn hòu fēi zhōu zhōng guó yí mín rén kǒu zhuàng kuàng dē dòng tài fēn xī》, 《guó jì zhèng zhì yán jiū》, dì liù qī 。
- _____, 2018. “African Students in China: History, Policy, Purpose and Role”, *African Studies Quarterly* (Florida University), No.1.

- _____, 2018a. "African studies in China in 21st century: A historiographical survey", in Chris Alden & Daniel Large, eds., *New Directions in Africa-China Studies*, Routledge.
- _____, 2018b. 《fēi zhōu liú xué shēng zài zhōng guó : lì shǐ, xiàn shí yǔ sī kǎo》, 《xī yà fēi zhōu》, dì wǔ qī 。
- _____, 2018c. 《shì "wén huà hù jiàn"》, 《xī běi gōng yè dà xué xué bào (shè huì kē xué bǎn)》, dì sì qī 。
- _____, 2018d. 《fēi zhōu huá qiáo yǔ mín guó zhèng fǔ dē hù dòng guān xì (1911-1949, 《lì shǐ jiào xué wén tí》), dì yī qī 。
- _____, 2018e. "Huaqiao-Huaren in the Framework of International Migration - An Analysis of Identity and Dual Nationality", *China International Strategy Review* 2016.
- _____, 2018f. 《rén liè míng yùn gòng tóng tǐ shì yù xià zhōng fēi chǎn néng hé zuò : qián lì , yǒu shì yǔ fēng xiǎn . 《tǒng yī zhàn xiàn xué yán jīu》, dì sān qī 。
- _____, 2018g. 《zhōng guó guó jì yí mín dē ān quán bǎo hù : zé rèn dē tí shēng yǔ wài yán》, 《gōng ān xué yán jīu》, dì wǔ qī 。
- _____, 2018h. 《2018 nián zhōng fēi hé zuò lùn tán fēng huì zhǎn wàng : yǒu shì yǔ tiǎo zhàn》, 《dāng dài shì jiè》, dì qī qī 。
- _____, 2019. 《lì bǐ yà dē bù luò yīn sù yǔ kǎ zhā fēi dē mín zú zhèng cè》, 《shì jiè mín zú》, dì yī qī 。
- _____, 2019a. 《gǔ dài zhōng fēi jiāo wǎng shǐ liào bǔ yí yǔ biàn xī》, 《shǐ lín》, dì èr qī 。
- Li, A. & Jiang, H. ed., (lǐ ān shān、jiǎng huī, zhǔ biān), 2018. 《zhōng guó fēi zhōu yán jīu píng lùn 2016》(fēi zhōu wén xué zhuān jí), shè huì kē xué wén xiàn chū bǎn shè。
- Li, C., ed., (lǐ cháng lěi, zhǔ biān), 2017. 《fēi zhōu fǎ yǔ guó jiā yán jīu(dì 1jí)》, shān dōng dà xué chū bǎn shè。
- Li, H. (lǐ hóng fēng), 2017. 《mò lì huā gé míng hòu tú ní sī jīng jì zhuàng kuàng fēn xī jí zhǎn wàng》, 《fǎ yǔ guó jiā yǔ dì qū yán jīu》, dì yī qī 。
- _____, 2017. 《zhà dé (liè guó zhì)》, shè huì kē xué wén xiàn chū bǎn shè。
- _____, 2017. "Les Brics dan la gouvernance mondiale: état des lieux des recherches chinoises", *Hermes la revue*, 2017.
- _____, 2018. 《fǎ guó guó jì guān xì zhì kù dē zhōng guó yán jīu : shì jiāo yǔ lì chǎng》, 《guó jì lùn tán》, dì sì qī 。
- _____, 2019. 《21shì jì yǐ lái xī gòng tǐ duì chéng yuán guó niè bù zhèng zhì dòng dòng dē yīng duì》, 《fǎ yǔ guó jiā yǔ dì qū yán jīu》, dì èr qī 。
- i, D.(lǐ dān), 2017. 《běn tǔ huà shì yě xià dē tàn sāng ní yà jiào xué yǔ yán wén tí》, 《xī yà fēi zhōu》, dì sān qī 。
- Li. J., (lǐ jīng kūn), 2019. 《"quán qiú yīng guó" lǐ niàn xià yīng guó duì fēi zhōu zhèng cè dē tiáo zhèng》, 《xī yà fēi zhōu》, dì èr qī 。

- Li, P. (lǐ péng tāo), 2016. 《zhí mín dì nóng yè fā zhǎn jì huà yǔ fēi zhōu nóng cūn fǎn kàng dē xīng qǐ》, 《shǐ lín》, dì yī qī。
- _____, 2016a. 《tè lùn sī lán jié jí qí fēi zhōu shǐ yán jīu》, 《shǐ xué lǐ lùn yán jīu》, dì sān qī。
- _____, 2016b. 《dōng fēi yìn dù rén dē lì shǐ yǔ xiàn zhuàng》, 《shì jiè mín zú》, dì liú qī。
- _____, 2017. 《yīng shǔ zhōng bù hé dōng bù fēi zhōu zhí mín dì dē chéng zhèn lǎo dòng lì zhèng cè》, 《shì jiè lì shǐ》, dì èr qī。
- _____, 2017a. 《tǎn sāng ní yà gé míng dǎng dē fā zhǎn qián jǐng jí miàn lín dē tiǎo zhàn》, 《dāng dài shì jiè yǔ shè huì zhǔ yì》, dì wǔ qī。
- _____, 2018. 《kěn ní yà suǒ mǎ lǐ rén dē yóu lái yǔ xiàn zhuàng》, 《shì jiè mín zú》, dì wǔ qī。
- _____, 2018a. 《jìn èr shí nián lái fēi zhōu huán jìng shǐ yán jīu dē xīn dòng xiàng》, 《shǐ xué lǐ lùn yán jīu》, dì sì qī。
- _____, 2019. 《yīng shǔ fēi zhōu zhí mín dì dē jìn jīu zhèng cè》, 《shǐ xué jí kān》, dì sì qī。
- _____, 2019a. 《fēi zhōu jīng jì shǐ yán jīu dē xīn jìn zhǎn》, 《shǐ lín》, dì yī qī。
- _____, 2019b. 《zhí mín zhǔ yì yǔ fēi zhōu shè huì biàn qiǎn ——yǐ yīng shǔ fēi zhōu zhí dì mín wéi zhōng xīn (1890-1960)》, shè huì kē xué wén xiàn chū bǎn shè。
- Li W. (lǐ wén tāo), 2016. 《fēi zhōu mín zhǔ zhèng zhì zhuǎn xíng yǎn quán jú shì : fēn xī yǔ zhǎn wàng》, zhāng hóng míng : 《fēi zhōu huáng pí shū fēi zhōu fā zhǎn bào gào (2015-2016)》, shè huì kē xué wén xiàn chū bǎn shè。
- Li, W. (lǐ wéi jiàn), 2011. 《xī bù fēi zhōu yī sī lán jiào lì shǐ yán jīu》, shè huì kē xué wén xiàn chū bǎn shè。
- Li, W., (lǐ wén gāng), 2018. 《ní rì lì yà nóng mù mín chōng tū: chāo yuè mín zú zōng jiào yīn sù dē jiě dú》, dì sān qī。
- Li, X. (lǐ xiǎo yún), 2019. 《fā zhǎn yuán zhù dē wèi lái》, zhōng xīn chū bǎn shè。
- Li.X. (lǐ xīn fēng), 2019. 《zhōng fēi guān xì yǔ “yī dài yī lù” jiàn shè》, 《qiú shì》, dì bā qī。
- http://www.qstheory.cn/dukan/qs/2019-04/16/c_1124364289.htm. 2019/7/12.
- Li, Z. (lǐ zhì biāo), 2016. 《fēi zhōu gōng yè huà zhàn lüè yǔ zhōng fēi gōng yè huà hé zuò zhàn lüè sī kǎo》, 《xī yà fēi zhōu》, dì wǔ qī。
- Lian, C. (lián chāo qún), 2016. "ليبديب داجي إالى خسل او.. طسوتعمل اضي بال رحبل" ²⁰ ارس ٦١٠٢. في «العربي الجديد»، ٣١ م

²⁰ Ā lā bó wén shì cóng yòu zhì zuǒ, qǐng zhù yì。cǐ chù zhǐ néng rú cǐ pái, zhì qiàn.

- kě néng xìng 》(ā wén), 《xīn ā lā bó rén 》, 2016 nián 3yuè 13rì 。)
- _____, 2016a. "قبرغلا نغ فبرغلا داريتسا ..نصل". الجدي د، ٨ ماي و ٦١٠٢.
- (《cóng xī fāng huò qǔ duì dōng fāng dē rèn zhī 》(ā wén), 《xīn ā lā bó rén 》, 2016nián 5yuè 8rì 。)
- _____, 2016b. "ديجل يبرغلا" يف "نصل يف فبرغلا قروئل". ١٠ ويلوي ٢٠١٦.
- (《zhōng guó dē yǔ yán gé mìng 》(ā wén), 《xīn ā lā bó rén 》, 2016nián 7yuè 10rì 。)
- _____, 2016c. 《"yī dài yī lù"kuāng jià xià dē zhōng fēi chǎn néng hé zuò yǔ fēi zhōu gōng yè huà 》, 《zhōng guó guó jì zhàn lüè píng lùn 2016 》, shì jiè zhī shí chū bǎn shè, 2016nián.
- _____, 2017. 《"gé mìng"zhī hòu dē yǔ yán — zhèng zhì guān xì fǎn sī 》, 《zhōng guó tú shū píng lùn 》, dì sì qī .
- _____, 2018. "Metaphorical Recurrence and Language Symbolism in Arabic Metalanguage Discourse", Yonatan Mendel & Abeer Alnajjar, eds., *Language, Politics and Society in the Middle East*, Edinburgh: Edinburgh University Press.
- Liang, Y. & Wang, J. (liáng yì jiǎn 、wáng jīn), 2018. 《sà hā lā yǐ nán fēi zhōu rén kǒu hóng lì jí guó jiā zhèng cè qǔ xiàng 》, 《xī yà fēi zhōu 》, dì liù qī .
- Lin, Y. (lín yì fū), 2012. 《xīn jié gòu jīng jì xué 》, běi jīng dà xué chū bǎn shè.
- Lin, J. Y.(lín yì fū), 2012. *New Structural Economics: A framework for rethinking development and policy*, Washington, DC: World Bank.
- Liu, C. (liú chéng fù), 2018. 《fēi zhōu gài kuàng yǔ zhōng fēi guān xì 》, nán jīng dà xué chū bǎn shè.
- Liu, H. (liú hǎi fāng), 2017. "China's Influence in Africa: Current roles and future prospects in resource extraction", *The Journal of Sustainable Development. Law and Policy*, Vol. 8:1.
- Liu, H. & Liu, J. ed., (liú hǎi fāng、liú jūn, zhǔ biān), 2017. 《zàn bǐ yà nóng yè wài guó zhí jiē tóu zī :jiǎn pín hé fā zhǎn dē jī huì yǔ tiǎo zhàn 》, shè huì kē xué wén xiàn chū bǎn shè
- Liu, H., et al., ed., (liú hǎi fāng、wǎn rú、liú jūn、kē wén qīng, zhǔ biān) , 2018. 《fēi zhōu nóng yè dē zhuǎn xíng fā zhǎn yǔ nán nán hé zuò 》, shè huì kē xué wén xiàn chū bǎn shè.
- Liu, H. (liú hóng wǔ), 2016. 《xīn shí qī zhōng fēi hé zuò guān xì yán jīu 》, jīng jì kē xué chū bǎn shè.
- _____, 2016. 《fēi zhōu yán jīu dē"zhōng guó xué pài " : rú hé kě néng ? 》, 《xī yà fēi zhōu 》, dì sān qī .
- _____, 2017. 《cóng zhōng guó biān jiāng dào fēi zhōu dà lù - kuà wén huà qū yù yán jīu xíng yǔ sī 》, shì jiè zhī shí chū bǎn shè.

- _____, 2018. 《mìng yùn gòng tóng tǐ shì yù xià zhōng fēi gòng xiǎng zhī shí tǐ xī dē jiàn gòu》, 《xī yà fēi zhōu》, dì wǔ qī。
- _____, 2019. 《fēi zhōu xué fā fān》, rén mín chū bǎn shè。
- Liu, H. & Xu, W., (liú hóng wǔ 、 xú wēizhǔ biān), 2018. 《zhōng guó —nánfēi rén wén jiāo liú fā zhǎn bào gào (2016—2017nián)》, zhè jiāng rén mín chū bǎn shè。
- Liu, Q. et al. (liú qīng jiàn、 zhào chén guāng 、 wáng cōng yuè), 2019. 《zhōng guó duì fēi zhōu guān xì dē guó jì huán jìng yán jiū》, shè huì kē xué wén xiàn chū bǎn shè。
- Liu, S.(liú shào nán), 2019. “China Town in Lagos: Chinese Migration and the Nigerian State since the 1990s.” *Journal of Asian and African Studies*, April 25, 2019. <https://journals.sagepub.com/eprint/EVQIT3TH7N264ESE6BEC/full>.
- Liu, W. (liú wěi cái), 2016. 《zàn bǐ yà dē fēi zhèng fǔ zǔ zhī chū tàn》, 《xī yà fēi zhōu》, dì sì qī ;
- _____, 2016a. 《fàn xīn à dē fēi zhōu shǐ yán jiū》, 《shì jiè lìshǐ》, dì liù qī ;
- _____, 2017. 《zàn bǐ yà zhèng jiào guān xì dē lì shǐ tòu shì —jī yú zhí mín dāng jú yǔ chuán jiào huì tōng xìn dē yán jiū》, 《shǐ xué jí kān》, nián dì yī qī ;
- _____, 2017a. 《“yī dài yī lǚ” zài fēi zhōu dē shì yòng fàn wéiyǔshíshī》, 《guó bié hé qū yù yán jiū》, shè huì kē xué wén xiàn chū bǎn shè, 4yuè。
- _____, 2018. 《19shì jì yīng guó rén fēi zhōu xíng jì zhōngdē jīng jì shǐ zī liào jí qí lì yòng》, 《shàng hǎi shǐ fān dà xué xué bào (zhé xué shè huì kē xué bǎn)》, dì sì qī。
- _____, 2018a. 《fēi xíng zhě yán : 19shì jì yīng guó rén fēi zhōu xíng jū jì lù dē shǐ liào jià zhí jí qí lì yòng》, shàng hǎi shè huì kē xué yuánchū bǎn shè。
- _____, 2019. 《lěng zhàn shí qī měi sū zài fēi zhōu zhèng duó dē dé shī yǔ jiào xùn》, 《biān jiāng yǔ zhōu biān wén tí yán jiū》, 2019nián dì èr qī。
- Liu, Z. (liú zhōng wěi), 2019. 《měi fēi guān xì zhōng é luó sī yīn sù dē lì shǐ shàn biàn》, 《xī yà fēi zhōu》, dì èr qī。
- Lubec, G., et al. 1993. “Use of silk in ancient Egypt.” *Nature*. Vol.362(March 4 1993) 6415:25.
- Ma, X. & Wang, W. (mǎ xiù jié、 wáng wén bīn), 2019. 《cóng yǔ hàn 、 yīng dē duì bǐ hé bǐ jiào jiǎo dù lùn zǔ lǚ yǔ dē shí jiān xíng tè zhì》, 《běi jīng kē jì dà xué xué bào(shè huì kē xué bǎn)》, dì 35 juàn dì èr qī。
- Ma, X. (mǎ xiù jié), 2019. 《nán fēi bù tóng shí qī dē yǔ yán zhèng cè jí qí zài mín zú rén tóng hé gòu jiàn zhōng suǒ chǎn shēng dē yǐng xiǎng》, 《yǔ yán zhèng cè yǔ guī huà yán jiū》, dì wǔ juàn dì yī qī。

- Monson, J., X.Tang, & S. Liu (mèng jié méi 、 táng xiǎo yáng、 liú shào nán) . 2017. "Working History: China, Africa, and Globalization", Dorothy Hodgson and Judith Byfield, eds., *Global Africa: Into the Twenty-First Century*, Oakland, California: University of California Press.
- Peng S.(péng shū yī),2019. 《cóng dài gāo lè dào mǎ kè lóng : fǎ guó dē fēi zhōu zhèng cè biàn huà giǔ jì yǔ niè zài luó jí 》, 《xī yà fēi zhōu》, dì èr qī 。
- Qing, J. & Zhu, P. (qīng jué zhū péng fēi), 2019. 《cóng kuān shù dào kuān róng : hòu chōng tǔ shí dài nán fēi shè huì hé jiě yǔ zhuǎn xíng zhèng yì zhī fǎn sī —jī yú kāi pǔ dūn dì qū dē tián yě tiáo chá yán jiū》, 《shì jiè mín zú》, dì yī qī 。
- Ren, H. et al.(rèn háng 、 zhāng zhèn kè、 jiǎng shēng nán 、 wáng qīng 、 hú hào), 2018. 《fēi zhōu gǎng kǒu chéng shì fēn bù tè zhēng jí qí gǎng chéng guī mó guān xì bǐ jiào》, 《rén wén dì lǐ》, dì liù qī 。
- Ren, H. et al. (rèn háng 、 tóng ruì fèng、 zhāng zhèn kè、 jiǎng shēng nán 、 wāng huān), 2018a. 《nán fēi hǎi yáng jīng jì fā zhǎn xiàn zhuàng yǔ zhōng guó -nán fēi hǎi yáng jīng jì hé zuò zhǎn wàng 》, 《shì jiè dì lǐ yán jiū》, 27 (3) 。
- Shen, X. (shěn xiǎo léi) , 2016. 《jīn bā bù wéi zhí mín shí qī dē tǔ dì bō duó、 zhōng zú gé lǐ yǔ mín zú fǎn kàng 》, 《shì jiè mínzú》 dì sì qī 。
- , 2017. 《fēi zhōu fǎn jiàn zhì zhǔ yì dē bó xíng — duì dāng qián fēi zhōu zhèng zhì biàn qiān dē líng yī zhōng jiě dú 》, 《guó jì zhèng zhì kē xué 》, dì èr qī 。
- , 2018. 《jīn bā bù wéi zhèng jú biàn huà yǔ zhí zhèng dǎng jīn mín méng dē zhèng cè zǒu xiàng 》, 《dāng dài shì jiè 》, dì yī qī 。
- , 2018a. 《tòu shì fēi zhōu mín zhǔ huà jìn chéng zhōng dē “dì sān rèn qī” xiàn xiàng 》, 《xī yà fēi zhōu》, dì èr qī 。
- , 2018b. 《jīn bā bù wéi tǔ dì chōng xīn ān zhì yǔ zhōng zú hé jiě yán jiū》, 《shì jiè mín zú》, dì èr qī 。
- , 2019. 《jīn bā bù wéi “hòu mù jiā bèi shí dài” shí dài yǐ lái dē zhèng zhì biàn qiān》, 《dāng dài shì jiè 》, dì sān qī 。
- , 2019a. 《“kuài chē dào ” tǔ dì gǎi gé yǔ jīn bā bù wéi zhèng zhì fā zhǎn 》, 《guó jì zhèng zhì yán jiū》, dì sān qī 。
- Shi, L. (shī lín), 2019. 《chāo yuè “gòng shēng” yǔ “chōng tǔ” : fēi zhōu mín zú yán jiū fāng fǎ lùn dē jīng jìn yǔ qǐ shì 》, 《shì jiè mínzú》, dì yī qī 。
- Shu, Y. (shū yùn guó), 2016. 《fēi zhōu yǒng yuǎn shī qù gōng yè huà dē jī huì ma?》, 《xī yà fēi zhōu》, dì sì qī 。
- , 2018. 《guān yú fēi zhōu jīng jì shǐ dē lì shǐ fēn qī 》, 《shàng hǎi shī fàn dà xué xué bào (zhé xué shè huì kē xué bǎn) 》, dì wǔ qī 。

- _____, 2019. 《yán jiū hé biān zuàn zhōng guó bǎn <fēi zhōu jīng jì shǐ>dē jǐ diǎn sī kǎo》, 《shàng hǎi shī fàn dà xué xué bào (zhé xué shè huì kē xué bǎn)》, dì sān qī 。
- Song, W. (sòng wēi), 2018. 《bèi jiǎo dòng dē zhàn lüè dǐ duān ——lěng zhàn hòu měi guó duì sà hā lǎ yǐ nán fēi zhōu zhèng cè jí xiào guǒ píng gū (1990—2016)》, zhōng guó shāng wù chū bǎn shè。
- Sun, X. (sūn xiǎo méng), 2016. 《háo sà yǔ dì sān cè》, wài yǔ jiào xué yǔ yán jiū chū bǎn shè。
- _____, 2016a. “ní rì lì yà xīn wén chū bǎn yè fā zhǎn gài kuàng jí zhōng ní hé zuò qián jǐng”, 《chū bǎn fā xíng yán jiū》, dì sān qī 。
- _____, 2017. “xī huà wén xué xíng shì bèi hòu dē mín zú xìng —— lùn háo sà yǔ zǎo qī wǔ bù xiàn dài xiǎo shuō”, 《wén yì lǐ lùn yǔ pī píng》, dì liù qī 。
- _____, 2017a. “nán fēi xīn wén chū bǎn yè xiàn zhuàng yǔ zhōng nán rén wén jiāo liú dē tuò zhǎn”, 《zhōng guó chū bǎn》, dì 12 qī 。
- _____, 2017b. “cóng wén huà bà quán shì jiǎo tàn xī zhōng guó dē wén huà xuǎn zé”, 《xiàn dài chuán bō》, dì 12 qī 。
- _____, 2018. 《háo sà yǔ shū miàn shī gē dē qǐ yuán jí qí shè huì gōng néng yán jiū》, 《wài guó yǔ wén》 dì sān qī 。
- Sun, Y. (sūn yù táng), 1979. 《hàn dài dē zhōng guó yǔǎi jí》, 《zhōng guó shǐ yán jiū》, dì èr qī 。
- Tan, H. (tán huì juān), 2017. 《xiàn dài zhǔ yì shì yě xià dē T.S.āi lüè tè yǔ lǎ ěr fū ·āi lì sēn》, 《wài guó wén xué yán jiū》, dì yī qī 。
- _____, 2017a. 《lǎ ěr fū ·āi lì sēn hé mǎ kè-tǔ wēn dē wén xué xiū cí》, 《wài guó yǔ wén yán jiū》, dì liù qī 。
- _____, 2017b. 《lǐ chá dé-lai tè dē jī è shū xiě》, 《wài guó yǔ yán》, 2017nián, dì liù qī 。
- _____, 2018. 《lǎ ěr fū ·āi lì sēn dē shēng cún zhé lǐ》, 《shān dōng wài yǔ jiào xué》, dì yī qī 。
- _____, 2018a. 《lǎ ěr fū ·āi lì sēn wén xué yán jiū》, sān lián shū diàn, 2018nián。
- Tan, H., et al. (tán huì juān、luó liáng gōng、wáng zhuó dēng), 2016. 《měi guó fēi yì zuò jiā lùn》, shàng hǎi wài yǔ jiào yù chū bǎn shè。
- Li, P. & Tan, H. (lǐ bèi lěi、tán huì juān), 2017. 《lùn měi guó fēi yì zhōng zú mào chōng xiǎo shuō dē ě zuò jù xù shì》, 《wài guó wén xué yán jiū》, dì wǔ qī 。
- Tang, X.(táng xiǎo yáng), 2016. “Does Chinese Employment Benefit Africans? Investigating Chinese Enterprises and their Operations in Africa”, *African Studies Quarterly* | Volume 16, Issue 3-4, pp.107-128, <http://www.africa.ufl.edu/asq/v16/v16i3-4a8.pdf> December 2016
- _____, 2016a. “Social Responsibility or Development Responsibility? What is the Environmental Impact of Chinese Investments in Africa: What are its

- Drivers, and What are the Possibilities for Action?”, with Irene Yuan Sun, *Cornell International Law Journal*, 49:1.
- _____, 2018. “Geese Flying to Ghana? A Case Study of the Impact of Chinese Investments on Africa’s Manufacturing Sector”, *Journal of Contemporary China*, 27:114, 924-941, DOI: 10.1080/10670564.2018.1488106.
- _____, 2019. “Chinese Economic and Trade Cooperation Zones in Africa”, in *The Oxford Handbook of Industrial Hubs and Economic Development*, Oxford.
- _____, 2019a. “Time Perception and Industrialization: Divergence and Convergence of Work Ethics in Chinese Enterprises in Africa”, with Janet Eom, *China Quarterly*, 238, Cambridge, UK, <https://doi.org/10.1017/S030574101800142X>
- Tang, Y. (táng yǒng), 2017. 《dāng dài fēi zhōu qī guó jīng jì fā gài shù》, zhè jiāng rén mín chū bǎn shè.
- Wang, C. (wáng cōng yuè), 2019. 《měi guó yǒu méng dē bēi fēi ān quán zhèng cè yán jiū》, shè huì kē xué wén xiàn chū bǎn shè.
- Tong Ruifeng, et al. (tóng ruì fēng、rèn háng、wáng xīn、wāng huān、zhāng zhèn kè), 2017. 《zhōng guó duì fēi mào yì kōng jiān gé jú yǎn biàn yǔ kōng jiān jūn héng》, 《rè dài dì lǐ》, 37 (4)。
- Wang, J. (wáng jīn yán), 2016. 《lì bǐ yà zhàn hòu luàn jú zhōng dē bù luò yīn sù》, 《ā lā bó shì jiè yán jiū》, dì sì qī。
- _____, 2018. 《lì bǐ yà bù luò wén tí dē lì shǐ kǎo chá》, shè huì kē xué wén xiàn chū bǎn shè.
- Wang, L. (wāng lín), 2015. 《fēi zhōu fā yǔ wén xué zài guó niè dē fān yì》, 《shí dài wén xué (xià bàn yuè)》, dì qī qī。
- Wang, T. (wáng tāo). 2017. 《ní rì lì yà “yóu qì jì shēng xíng” fǎn zhèng fǔ wǔ zhuāng tàn xī》, 《xī yà fēi zhōu》, dì sān qī。
- Wang, X. (wáng xiǎo yún), 2018. 《“yī dài yī lù” shì jiāo xià guó jì jiǎn pín hé zuò jī zhì yán jiū——yǐ zhōng fēi jiǎn pín shì yè wéi lì》, 《wèi lái yǔ fā zhǎn》, dì 11 qī。
- Wang, Z., et al., ed., (wáng zhàn、zhāng jīn、liú tiān qiáo zhǔ biān), 2018. 《fēi zhōu jīng jì hé shè huì wén huà zhì dù yán jiū》, wǔ hàn dà xué chū bǎn shè.
- Wei, X. & Huang, M. (wéi xiǎo huì、huáng méi bō), 2018. 《guó jì chǎn yè zhuǎn yí yǔ fēi zhōu zhì zào yè fā zhǎn》, rén mín chū bǎn shè.
- Xu, G. (xú guó qīng), 2019. 《yīn dù yǔ nán fēi huǒ bàn guān xì yán jiū》, shè huì kē xué wén xiàn chū bǎn shè.
- Xu, L. (xǔ liàng), 2017. “Cyrildene Chinatown, Suburban Settlement and Ethnic Economy in Post-Apartheid Johannesburg”, in Young-Chan Kim ed., *China and Africa: A New Paradigm of Global Business*, London: Palgrave Macmillan.
- Xu, W. (xú wēi), 2016. 《rén liè xué dē fēi zhōu yán jiū : lì shǐ、xiàn zhuàng yǔ fǎn sī》, 《mín zú yán jiū》, 2016 nián dì èr qī。

- _____, 2016a. 《zhōng guó yǔ fēi zhōu : néng fǒu kuà yuè zhì dù yǔ wén huà de biān jìng ——jī yú mǒu zhōng bó hé zī bō lí chǎng de gōng shāng rén liè xué kǎo chá》, 《qīng hǎi mín zú yán jiū》, dì sān qī。
- _____, 2018. 《nán fēi huà rén de lì shǐ、xiàn zhuàng yǔ wén huà shì yīng》, 《guǎng xī mín zú dà xué xué bào (zhé xué shè huì kē xué bǎn)》, dì sān qī。
- _____, 2019. 《nán fēi fēi zhōu dú lì jiào huì jí qí duì shè huì yǔ zhèng zhì de yǐng xiǎng ——yǐ xī ān jī dū jiào huì wéi lì》, 《shì jiè zōng jiào wén huà》, dì èr qī。
- Xu, Y. (xǔ yǒng zhāng), 2019. 《gǔ dài zhōng fēi guān xì shǐ gǎo》, shàng hǎi cí shū chū bǎn shè。
- Yang, B. (yáng bǎo róng), 2018. 《fēi zhōu kāi fàng shì zì zhǔ fā zhǎn yǔ “yī dài yī lù” zhōng fēi chǎn néng hé zuò》, jīng jì guǎn lǐ chū bǎn shè。
- Yang, L. (yáng lì huá), 2006. “Africa: A view from China”, *South African Journal of International Affairs*, 13:1, Summer/Autumn, pp.23-32.
- Yao, F. (yáo fēng), 2016. 《xiǎo mín zú wén xué de lǐ lùn yì yì : zuò wéi gè àn de ā qì bèi de chū bǎn huó dòng》, 《wén xué lǐ lùn qián yán》, dì èr qī。
- _____, 2019. 《yì shù yǔ zhèng zhì zhī biàn : fēi zhōu wén xué pī píng chú yì》, 《shàng hǎi shī fàn dà xué xué bào》, dì wǔ qī。
- Yao, G. (yáo guì méi), 2016. 《cóng yī tǐ huà shì jiào kàn fēi zhōu gōng yè huà de xīn dòng lì》, 《xī yà fēi zhōu》, dì sì qī。
- _____, 2017. 《“yī dài yī lù” jiàn shè xià de zhōng fēi chǎn néng hé zuò》, 《dāng dài shì jiè》, dì qī qī。
- Yin, R. & Sun, H. (yīn yuè、sūn hóng), 2015. 《fēi zhōu guó jiā líng dǎo rén móu qiú “dì sān rèn qī” wèn tí pǒu xī》, 《guó jì yán jiū cān kǎo》, dì 12 qī。
- Yu, H., et al. (yú hào dōng、yáng xiù yún、yú rèn yuǎn biān), 2012. 《fēi zhōu wén xué zuò jiā zuò pǐn sǎn lùn, níng xià rén mín chū bǎn shè》。
- Yuan, D. & C. Pang. (yuán dīng、péng qīng lián) 2018. “South Migrant Trajectories Africans in China as Guoke”, in Felicitas Hillmann, Ernst Spaan & Ton van Naerssen, eds., *Trajectories and Imaginaries in Migration The Migrant Actor in Transnational Space*. Routledge.
- Zhang, C. & Mu, T. (zhāng chí、mù tāo), 2019. 《zhí mín shí qī fǎ guó duì hán niè jiǎ ěr tóng huà zhèng cè píng xī》《shàng hǎi shī fàn dà xué xué bào (zhé xué shè huì kē xué bǎn)》, dì sān qī。
- Zhang, C. (zhāng chūn), 2018. 《fēi zhōu zì zhǔ xìng shàngshēng yǔ “yī dài yī lù” jiàn shè》, zhāng hóng míng zhǔ biān、wáng hóng yī fù zhǔ biān : 《fēi zhōu huáng pí shū : fēi zhōu fā zhǎn bào gào (2017~2018)》, shè huì kē xué wén xiàn chū bǎn shè。
- Zhang H. (zhāng hǎi bīng), 2019. 《cóng “fēi zhōu qì yuē” kàn dé guó duì fēi zhōu zhèng cè de zhuǎn xíng》, 《xī yà fēi zhōu》, dì èr qī。

- Zhang, H., ed., (zhāng hóng míng zhǔ biān、wáng hóng yī fù zhǔ biān) , 2017. 《fēi zhōu huáng pí shū : fēi zhōu fā zhǎn bào gào (2016~2017) fēi zhōu gōng yè huà yǔ zhōng guó zài fēi zhōu chǎn yè yuán qū jiàn shè 》 , shè huì kē xué wén xiàn chū bǎn shè。
- Zhang, H. (zhāng hóng míng) , 2018. 《 gǎi gé kāi fàng yǐ lái zhōng fēi guān xì kuài sù fā zhǎn de niè zài luó jí yǔ chéng gōng jīng yàn 》 , 《 dāng dài shì jiè 》 , dì qī qī 。
- , 2018. 《zhōng guó zài fēi zhōu jīng lüè dà guó guān xì de zhàn lüè gòu xiǎng 》 , 《xī yà fēi zhōu》 , dì wǔ qī 。
- , 2019. 《“duō chéng guān xì” jiāo hù zuò yòng xià de zhōng fā zài fēi zhōu guān xì 》 , 《xī yà fēi zhōu》 , dì sān qī 。
- Zhang, J. (zhāng jīn), 2016. 《 dāng qián fēi zhōu hǎi yáng jīng jì fā zhǎn xiàn zhuàng 》 , 《 xiàn dài jīng jì tàn tǎo 》 , dì wǔ qī 。
- , 2017. “Past and Present Hydro Politics, Civilizations and Prospective Futures in the Zambezi River Basin”, *ACADEMICS*. No. 6.
- , 2018. 《fēi zhōu shuǐ wén tí jí qí zhì lǐ 》 , 《 xiàn dài guó jì guān xì 》 (CSSCI) , 2018nián12yuè 。
- Zhang, M. & Tan, H. (zhāng méi 、 tán huì juān) , 2018. 《qiáo yī sī wén xué pī píng sī xiǎng zhōng de fēi zhōu qíng jié 》 , 《shān dōng wài yǔ jiào xué 》 , dì yī qī 。
- Zhang, S. (zhāng shuài), 2018. 《āi jí liáng shí ān quán : kùn jìng yǔ guī yīn 》 , 《xī yà fēi zhōu》 , dì sān qī 。
- Zhang, Y. (zhāng yǒng) , 2017. 《zhōng fēi yǐng shì hé zuò : lù jìng、 wén tí yǔ duì cè——yǐ tǎn sāng ní yà wéi lì 》 , 《 dāng dài diàn yǐng 》 , dì shí qī 。
- , 2018. 《 cóng nuò lái wú dào xīn nuò lái wú : ní lì yà diàn yǐng yè de xīn jìn guān chá 》 , 《běijīng diàn yǐng xué yuán xué bào》 , dì wǔ qī 。
- , 2018a. 《zhōng guó yín mù shàng de fēi zhōu : wén tí yǔ fǎn sī 》 , 《 dāng dài diàn yǐng 》 , dì shí qī 。
- Zhang, Y. & Chen, Y. (zhāng yǒng 、 chén yuǎn) , 2017. 《<zhan liang>de fēi zhōu xù shì fēn xī 》 , 《běijīng diàn yǐng xué yuán xué bào》 , dì wǔ qī 。
- , 2018. 《rì běn duì fēi zhōu wài jiāo : cóng shí yòng zhǔ yì píng héng dào zhàn lüè zhōng shì 》 , 《xī yà fēi zhōu》 , dì wǔ qī 。
- Zhang, Z. (zhāng zhèn kèzhǔ biān), 2018. 《 hǎi wài lì yì wéi hù jiāo dù de fēi zhōu fā zhǎn yǎn quán dòng tài huí gù yǔ zhǎn wàng 》 , 《 shì jiè jīng jì yǔ zhèng zhì lùn tán 》 , dì 20qī 。
- , 2019. 《fēi zhōu jīng jì dì lǐ yǔ qū yù fā zhǎn yán jīu zī liào huì biān 》 , jiāng sū rén mín chū bǎn shè。
- Zhang, Z. (zhāng zhōng xiáng) , 2017. 《āi zhōu chàng jiào shòu yǔ fēi zhōu shǐ yán jīu 》 , 《shǐ xué lǐ lùn yán jīu 》 , dì sì qī 。

- _____, 2019. 《ā dù •bó hēng yǔ fēi zhōu shǐ yán jīu》, 《shàng hǎi shī fàn dà xué xué bào (zhé xué shè huì kē xué bǎn)》, dì sān qī。
- Zhao, C. (zhào chén guāng), 2017. 《cóng xiān xíng xiān shì dào zhàn lüè duì jiē : lùn “yī dài yī lù” zài fēi zhōu dē tuī jìn》, 《guó jì lùn tán》, dì sì qī。
- Zhao, J. (zhào jùn), 2019. 《zú qún biān jìng 、 quán lì jiè rù yǔ zhì dù huà—lú wàng dá zú qún guān xì dē lì shǐ biàn qiān jí qí zhèng zhì luó jí》, 《xī yà fēi zhōu》, dì sān qī。
- Zhao, S. et al. (zhào shǔ róng děng), 2018. *Governance in Anglophone West Africa: Challenges and Responses*, Social Sciences Academic Press (China).
- Zhao, S., et al. (zhào shǔ róng、yáng kē kē、lóng lín àn), 2018. 《“yī dài yī lù” jī chǔ shè shī jiàn shè zhōng mó shì miàn lín dē fēng xiǎn yǔ duì cè yán jīu》, 《zhōng guó xíng zhèng guǎn lǐ》, dì 11 qī。
- Zhao, S., et al. (zhào shǔ róng、tán mèng hán、dù yíng、wáng zhèng qīng), 2018a. 《lùn “yī dài yī lù” chàng yì bèi jǐng xià zhōng guó gǎi gé kāi fàng jīng yàn duì fēi zhōu guó jiǎ dē jiè jiàn yì yì》, 《diàn zǐ kē jì dà xué xué bào (shè kē bǎn)》, dì wǔ qī。
- Zhao, S., et al. (zhào shǔ róng、yáng kē kē、tán mèng hán、lóng lín àn), 2019. 《zhōng fēi guó jì chǎn néng hé zuò miàn lín dē fēng xiǎn yǔ duì cè yán jīu》, 《jīng jì wèn tí》, dì sì qī。
- Zhao, S., et al. (zhào shǔ róng、fán wén xuě、dǒng yú fēi、bāng ní •bèi lín dá), 2019a. “On the Risk Analysis and Countermeasures Concerning the Chinese Enterprises’ International Industrial Capacity Cooperation with Africa—Case Study for Sichuan and Ghana”, in Zhao, S. ed., *Governance in Anglophone West Africa: Challenges and Responses*.
- Zhao, Y. (zhào yǎ tíng), 2019. 《21shì jì ōu méng duì fēi zhōu yuán zhù dē zhèng zhì dǎo xiàng yán jīu》, shè huì kē xué wén xiàn chū bǎn shè。
- Zhao, Y. (zhào yì níng), 2018. 《21shì jì dē zhōng guó yǔ fēi zhōu》, : zhōng xīn chū bǎn shè。
- Zhao, Z., et al. (zhào zuò xiáng, wú xīn yuè, lǐ hào mín), 2018. 《“yī dài yī lù” chàng yì xià zhōng fēi chǎn néng hé zuò dē jī zhì hé shí jiàn——jī yú xīn jié gòu jīng jì xué dē shì jiǎo》, 《guó jì mào yì》, dì bā qī。
- Zheng, H. & Zhang, C. (zhèng hǎi qí、zhāng chūn yǔ), 2018. 《fēi zhōu cān yǔ hǎi yáng zhì lǐ : líng yù、lù jìng yǔ kùn jìng》, 《guó jì wèn tí yán jīu》, dì liù qī。
- Zheng, X. (zhèng xiǎo xiá), 2017. 《shū xiě “tā” dē lì shǐ——fēi zhōu fù nǚ shǐ dē xīng qǐ yǔ fā zhǎn》, 《shǐ xué lǐ lùn yán jīu》, dì èr qī。
- Zhi, Y. (zhì yǔ chēn), 2016. 《zhōng guó zhōng yāng qǐ yè zǒu jìn fēi zhōu》, shè huì kē xué wén xiàn chū bǎn shè。
- Zhou, Y. (zhōu yù yuān), 2017. 《fēi zhōu shì jì dē dào lái ? fēi zhōu zì zhǔ quán yǔ zhōng fēi hé zuò yán jīu》, shè huì kē xué wén xiàn chū bǎn shè。

- Zhu, W. (zhū wěi dōng) , 2016. 《 wài guó tóu zī zhě yǔ fēi zhōu guó jiā zhī jiāndē tóu zī zhēng yīfēn xī ——jī yú jiě jué tóu zī zhēng duān guó jì zhōng xīn 相关案 例 检索 查 》 , 《 xī yà fēi zhōu 》 , dì sān qī 。
- _____, 2016.. 《 fēi zhōu guó jiā shè wài hé tóng dē fǎ lù shì yòng fēn xī 》 , 《 hé běi fǎ xué 》 2016 nián dì wǔ qī 。
- _____, 2017. “China-Africa Dispute Settlement: Logic Reading for Choosing Arbitration”, *Cambridge Journal of China Studies*, vol.12.
- _____, 2018.. 《 “yī dài yī lù” bèi jīng xià zhōng ā tóu zī zhēng yìdē jiě juétú jīng 》 , 《 xī yà fēi zhōu 》 , dì sān qī 。
- _____, 2018. 《 fēi zhōushāng fǎ xié tiáo zǔ zhī 》 , zhōng guó shè kē wén xiàn chū bǎn shè 。
- Zhu, Z. et al., ed., (zhū zhèng wǔ zhǔ biān, lǐ dān、yuán jùn qīng fù zhǔ biān), 2019. 《 fēi zhōu yīng yǔ wén xué yán jiū 》 , huá dōng lǐ gōng dà xué chū bǎn shè 。
- Zhu, Z. et al., ed., (zhū zhèng wǔ zhǔ biān、lán yún chūn 、 féng déhé fù zhǔ biān), 2019a. 《 fēi zhōu guó bié yīng yǔ wén xué yán jiū 》 , huádōng lǐ gōng dà xué chū bǎn shè 。
- Zhuāng Chén yàn, 2017. 《 mín zú chōng tǔ dē jiàn gòu yǔ jī huà——yǐ lú wàng dá yī jiǔ jiǔ sì nián zhōng zú tú shā wéi lì 》 , 《 xī běi mín zú yán jiū 》 , dì èr qī 。

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Chinese Economic Engagement in Africa from the Perspective of International Law: The Practice of Anti-Neocolonialism

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INTRODUCTION

In recent years, with the convening of the Forum on China-Africa Cooperation in 2000 and the deepening of economic and trade relations between China and Africa, Chinese economic engagement in Africa has attracted greater attention from politicians, media and scholars in Western countries, and has been branded or characterized by "neo-colonialism" from time to time. It is impressive that the former U.S. secretary of state, Hillary Clinton had provoked discord in 2011 by warning Africans of Chinese "neo-colonialism."¹ With the introduction and in-depth implementation of the "Belt and Road" Initiative, some Western media and politicians are more worried about China, trying to vilify and distort the "Belt and Road" initiative, rendering the assumption of the so-called "Chinese neo-colonialism" with color, and describing China-Africa economic cooperation as "neo-colonialism". For example, on December 30, 2014, CNBC criticized Chinese investment in Africa through raising colonialism questions.² The English version of the New York Times put forward similar questions on May 1, 2017 when reporting Chinese investment in Africa, these were, "is China the world's new colonial power?" and "is China presenting a new model of development to the world", or is the "Belt and Road" itself a new type of colonialism?"³ Even more alarming was the statement "China in Africa: neo-colonialism?" which was the subject of a hearing before a subcommittee of the United States Senate in 2018.⁴ Further, the New African Strategy of the United States used the phrase

¹ See Clinton Warns Africa Against "China's Neocolonialism", *China Times*, June 11, 2011.

² See Mark Esposito, Terence Tse and Merit Al-Sayed, *Recolonizing Africa: A modern Chinese story?* CNBC, Dec 30, 2014, <https://www.cnbc.com/2014/12/30/recolonizing-africa-a-modern-chinese-story.html>, Jan. 7, 2019.

³ See James A. Millward, *Is China a Colonial Power?* *The New York Times*, <https://www.msn.com/en-ph/news/opinion/is-china-a-colonial-power/ar-AAwLkFz>, Jan. 7, 2019.

⁴ See *China in Africa: The New Colonialism? Hearing before the Subcommittee on Africa, Global Health, Global Human Rights, and International Organizations of the Committee on Foreign Affairs, House of Representatives*, One Hundred Fifteenth Congress, Second Session, Washington: U.S. Govt.

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"predatory" practice while blaming China, but in essence, it is only another expression of "neo-colonialism".⁵ It is very visible that criticism from the western countries on Chinese "neo-colonialism" became regular after the "Belt and Road" initiative was proposed in 2013. Under the propaganda of Chinese "neo-colonialism", even exceptional officials from African countries echo this argument,⁶ and the writings of some scholars portray China as a greedy resource grabber who came to Africa without bringing economic growth opportunities to Africa.⁷

The fallacy that China's economic engagement in Africa is "neo-colonialism" will not only bring about the loss of Chinese image, and cast a shadow over China-Africa political relations, it will also bring obstacles to trade and investment between China and Africa, and thus ultimately affect the development of Africa. At present, "Chinese investments in Africa are becoming the target of hostile propaganda and are suffering attacks".⁸ Therefore, it is of theoretical and practical significance to examine the nature of Chinese economic engagement in Africa. This topic cannot be circumvented when studying the economic cooperation between China and Africa, however there is little research on this theoretical issue from a legal perspective.⁹

Print. Off., Mar. 7, 2018. <https://www.govinfo.gov/content/pkg/CHRG-115hhrg28876/pdf/CHRG-115hhrg28876.pdf>, Sep. 27, 2018.

⁵ See Remarks by National Security Advisor Ambassador John R. Bolton on the Trump Administration's New Africa Strategy, delivered on December 13, 2018, Heritage Foundation, Washington, D.C., <https://www.whitehouse.gov/briefings-statements/remarks-national-security-advisor-ambassador-john-r-bolton-trump-administrations-new-africa-strategy/>, Dec. 30, 2018.

⁶ For example, on March 14, 2013, Hua Chunying, a spokesman of Foreign Ministry of China, presided over a regular press conference, she said, "We have taken note of the remarks made by the President of the Nigerian Central Bank. These remarks do not accord with the facts, and China expresses its concern and dissatisfaction with this." <http://www.china-un.org/chn/fyrth/t1021324.htm>, January 7, 2019.

⁷ See Elizabeth Manero, *China's Investment in Africa: The New Colonialism?*,

Harvard Political Review, February 3, 2017; Markus Weimer and Alex Vines, *China's Angolan oil deals 2003-11*, in Marcus Power and Ana Cristina Alves eds, *China & Angola, A Marriage of Convenience?* Pambazuka Press, 2012, pp.85-102; A. J.Bergesen, *The New Surgical Colonialism: China, Africa, and Oil*. Paper presented at the annual meeting of the American Sociological Association, Boston, Jul. 31, 2008, http://citation.allacademic.com/meta/p237190_index.html, Dec. 30, 2018; H. Jauch, *Chinese Investments in Africa: Twenty-First Century Colonialism?* In: *New Labor Forum*, Vol. 20, No. 2, Spring 2011, pp. 48-55; K.Sharife, *China's New Colonialism*. In: *Foreign Policy*, 2009, http://www.foreignpolicy.com/articles/2009/09/25/chinas_new_colonialism, Dec. 30, 2018; Patrick Loch Otieno Lumumba, *Africa in the age of China influence and global geo dynamics*, <https://lasentinel.net/tag/africa-in-the-age-of-chinas-global-influence-and-global-geodynamics>, Nov. 1, 2018.

⁸ Excerpt from a letter sent by André Thomashausen, a Professor of the University of South Africa, to the author on September 28, 2018.

⁹ Existing domestic research in China mainly focuses on political or economic perspectives, for example, Liu Ailan, Wang Zhixuan & Huang Meibo, *Neocolonialism in China's Aid to Africa? Empirical Evidence from Trade Effects of China and EU Aid to Africa*, *Journal of International Trade*, No. 3, 2018; Ma Hanzhi & Cheng Enfu, *China-Africa Economic and Trade Relation is Not "Neocolonialism"*, in *Contemporary World*; Zhou Wen & Zhao Fang, *Is China-Africa cooperation under China's "Belt and Road" initiative "neo-colonialism"?* in *Studies on Marxism*, No. 1, 2017. Another study from the legal perspective focuses on trade and investment areas between China and Africa, and demonstrates that China-Africa economic relation is based on mutual benefit, and both sides have benefited from this relationship, so that the nature of Chinese investment and trade in Africa is not neo-colonialism. See

The term "neo-colonialism" is used primarily to describe situations in which the former colonies are politically independent but their economies are still under the control and exploitation of the former suzerains. As is well known, modern China became a semi-feudal and semi-colonial country, and suffered from aggression, oppression and exploitation by the imperialist powers. The new China has effectively co-operated with the vast number of developing countries, especially African countries to oppose colonialism in all forms resolutely after the founding of the People's Republic of China. Obviously, the accusation of "neo-colonialism" against Chinese economic engagement in Africa has no historical and realistic basis, and is an attempt of shitting the blame. In view of this, based on discussing the development of anti-colonialism and anti-neo-colonialism international law, this paper establishes that Chinese economic engagement in Africa is an innovative practice of anti-neo-colonialism international law, and then discusses the direction of international rule of law under the concept of Sino-Africa Community of Shared Future.

1 - The Development of International Law on Anti-colonialism and Anti-neo-colonialism

Colonialism and neo-colonialism is an important concept in the development of modern international law and contemporary international law. Therefore, the development of anti-colonialism and anti-neo-colonial international law needs to be explored on the basis of the analysis of these two concepts.

Colonialism and the colonization of Africa

Scholars have firmly agreed that colonialism can be defined in both the broad and the narrow sense. In the broad sense, between two or more unequal groups of power, one group controlled and ruled other groups, and efforts to impose its cultural order on others constituted colonialism. In a narrow sense, it refers exclusively to Europe's political, economic and cultural expansion into Latin America, Africa, Asia and the Pacific. Based on the broad definition of colonialism, the concepts of so-called domestic colonialism, welfare colonialism and so on arose. However, this is not really colonialism.

According to the interpretation of the authoritative dictionary, colonialism is "the principle or practice in which a powerful country rules a weaker one and establishes its own trade and culture there".¹⁰ Colonialism is a "policy of acquiring colonies and keeping them dependent".¹¹ Thus, in general, colonialism is a policy or practice of conquest and domination by powerful states using various means of aggression to transform backward countries into their colonies, semi-colonial or dependent states. Typical colonialism refers to European

Ying Chen, *China's Investment and Trade in Africa: Neo-Colonialism or Mutual Benefit*, 24 *Cardozo J. Int'l & Comp. L. aw*, Vol. 24, 2016, pp. 511-529.

¹⁰ Pearson Education Group, *Longman Dictionary of Contemporary English (English-English · English-Chinese)* (5th edition), Foreign Language Teaching and Research Press 2004, p. 1312.

¹¹ A S Hornby, *Oxford Advanced Learner's English-Chinese Dictionary (4th edition)*, editor and translator, Beida Li, Oxford University Press (China) Ltd. 1994, p. 266.

colonialism, which is often based on the conquest of force. It needs to be emphasized that colonialism is the practice and policy of a state, and the policy of the capitalist powers to conquer, rule, oppress, enslave, extract and exploit the weak countries or regions. It must also be emphasized that the practice of one State's private subject in another cannot generally be called colonialism, unless it is a tool for a country to pursue its policies, such as the British East India Company and the South African company.

Specifically, to the process of colonization in Africa, from late 19th century to the beginning of 20th century, Western countries used force to divide Africa into their respective colonies and to secure the gains through unequal treaties. Among them, the 1885 Congo conference marked the official beginning of the partition of Africa. The conference, led by the German Empire, by the General Act of the Berlin Conference Regarding Africa, and was signed by the Western countries, is an important treaty in the process of colonization in Africa. It provided for guarantees of free trade in the Congo River basin and the Niger, R. Basin and provided for the principle of effective possession of land by States in Africa, and to submit statements to other countries.¹² Moreover, the different manifestations of the colonies, such as protectorate, sphere of influence, leased land and so on, were achieved through the conclusion of unequal treaties between Western and African colonies and the conclusion of treaties between Western countries.¹³ Similarly, consular jurisdiction had existed in African countries, seriously interfering with the right of African countries to judicial independence.¹⁴ Under the colonial system of international law, Westerners enjoyed privileged status in Africa, while colonies and colonial people were essentially the object of international law.¹⁵ In African colonies, the colonists threatened by force, plundered Africa's natural resources and made Africa a market for commodity sales and as industrial raw materials were supplied, and the colonists even traded Africans for more than 400 years as slaves.¹⁶ The colonists had sold 100 million people in Africa as slaves. France built Suez Canal in Egypt, and robbed the lives of more than 20,000 Egyptian workers.¹⁷

¹² *General Act of the Berlin Conference Regarding Africa, signed in Berlin on Feb. 26, 1885.*

¹³ For example, on Nov. 4, 1911, Germany and France signed the *Treaty on the Land of Equatorial African Land between Germany and France in Berlin*. Similar practice is that the West defeated China through a series of wars such as the Opium War and then turned China into a colonial and semi-colonial state with a series of unequal treaties

¹⁴ About Consular jurisdiction in Egypt and African countries, see Zhou Gengsheng, *International Law*, Volume One, Wuhan University Press, 2009, p. 252, 258, footnote (1), p. 252. Zhou Gengsheng, *Outline of International Law*, proofreader, Zhou Li, China Fangzheng Press, 2004, pp. 77-78. Zhou Gengsheng, *International Law*, Volume One, Wuhan University Press, 2009, p. 252, 258, footnote (1), p. 251. Western countries have also exercised the consular jurisdiction in China against China's national sovereignty through unequal treaties for China's "harsh criminal law", "bad prison conditions", "judicial is not separated from administration", "discrimination against aliens, and the law does not grant equal treatment to aliens" and other reasons,

¹⁵ See U. O. Umozurike, *International Law and Colonialism in Africa: A Critique*, 3 *Zam. L.J.* 95 (1971), at 96, 123.

¹⁶ Group of selected materials on the history of international relations, *History of International Relation*, Volume One, Wuhan University Press, 1983, p. 122, 127.

¹⁷ Group of selected materials on the history of international relations, *History of International Relation*, Volume One, Wuhan University Press, 1983, p. 123, 125.

Neo-colonialism and colonialism come down in one continuous line

Neo-colonialism, by contrast, is "the economic and political influence which a powerful country uses to control another country",¹⁸ or "the use of economic or political pressure by powerful countries to obtain or keep influence over other countries, especially former colonies".¹⁹ In view of the definition of neo-colonialism, which contained the term "influence", some scholars used the word "influence" when they mention Chinese engagement in Africa instead of using the term "neo-colonialism", but maybe referring to the same thing.²⁰ Another notion that has frequently been referred to nowadays in various submissions is that neo-colonialism "encompasses any form of alien economic, political, or cultural domination in present international relations that resembles classic colonialism".²¹

From a historical point of view, it can be argued that neo-colonialism is a way or system for the indirect domination of the former colonies by the western developed countries after the dissolution of the old colonial system and the success of the decolonization movement. Furthermore, it is also the old colonialism, which had been under the naked direct rule of the conquest of force, continued and developed into this new phase. Compared with colonialism, the external manifestations of neo-colonialism have changed, the means are diverse, the form of presentation is no longer naked, but more hidden. Neo-colonialism involves political, economic, religious, ideological and cultural aspects.

On the economic front, the neo-colonialist instruments of Western countries for developing countries included controlling world markets and commodity prices, exploiting and controlling former colonies through colonial investment, the provision of usury and conditional assistance, and monopolizing trade in services such as shipping and insurance, among others. In other respects, neo-colonialism has used the means of marketing films, preaching, propaganda activities, intelligence activities, assassination operations, the establishment of military bases, the provision of arms, armed intervention, etc.²² Moreover, some of the economic arrangements between the EU and the former colonies were also seen as the colonialism of modern camouflage,²³ namely neo-colonialism.

¹⁸ Pearson Education Group, *Longman Dictionary of Contemporary English (English-English-English-Chinese)* (5th edition), Foreign Language Teaching and Research Press 2004, p. 1312.

¹⁹ A S Hornby, *Oxford Advanced Learner's English-Chinese Dictionary (4th edition)*, editor and translator, Beida Li, Oxford University Press (China) Ltd. 1994, p.986.

²⁰ See China Lecture: Kenyan Law Professor Lumumba Departed from Zambia, Sep. 30, 2018, <https://www.modernghana.com/news/886502/china-lecture-kenyan-law-professor-lumumba-departed-from-za.html>, Oct. 13, 2018.

²¹ see, eg, S Demeske, *Trade Liberalization: De Facto Neocolonialism in West Africa*, (1997) 86 *GeoLJ* 157. (Emphasis added)

²² See Jack Woddis, *An introduction to neo-colonialism: The New Imperialism in Asia, Africa & Latin America*, London: International Publishers, 1967, pp. 45-52; pp.85-103; (Ghana)Kwame Nkrumah, *Neo-Colonialism: The Last Stage of Imperialism*, Chinese version, translated by Beijing Compilation & Translation, World Affairs Press, 1966, p.246, pp.248-258.

²³ See Danielle Robertson, *EU-ACP Economic Partnership Agreements: Modern Colonialism Disguised in Violation of the WTO*, 50 *Vand. J. Transnat'l L.* 463 (2017).

Indeed, South Africa is phasing out bilateral investment treaties with Western countries on the basis of awareness of "the reflection of colonial relations with bilateral investment treaties between traditional trade and investment partners" and "the violation of South Africa's sovereignty by bilateral investment treaties concluded on the basis of inequality".²⁴

The vicissitudes of the times and the manifestations of neo-colonialism had kept pace with the times, but the nature of neo-colonialism in the western countries had not changed. Kwame Nkrumah, Ghana's first president, had earlier used the term neo-colonialism, and in his view the essence of neo-colonialism was that the state controlled by neo-colonialism was theoretically independent and had the appearance of a sovereign state, but in practice its economic system and political policies were governed by external forces.²⁵ After losing direct political control, imperialist powers shifted to use neo-colonialism to maintain and expand its economic control thus to achieve political coercion.²⁶

The definition and implementation mechanism of old and new colonialism reflected that, although they behaved differently in the external form, they were essentially consistent and were the plundering, exploitation and control of colonies or former colonies by Western countries on the basis of sovereign inequality. The colonists always believed that their religion, civilization, government, law and culture were the only legitimate and effective, with legitimacy and superiority.²⁷

The definition of colonialism and neo-colonialism was crucial and affected the recognition of the existence of neo-colonialism, for which there were differences among scholars. For example, some scholars have understood colonialism as actual possession, so that colonialism is considered to be only a short-lived phenomenon and no longer exists. Some scholars argue that colonialism still exists today and constitutes an integral part of international law, except that it does not use neo-colonialist language.²⁸ In particular, the blurring of the understanding of neo-colonialism had also led to the generalization and misuse of the term neo-colonialism, as is the case with the so-called "neo-colonialism" of China. It was also not possible to judge whether neo-colonialism was a formality, for example, some would argue that having substantial direct investment in the host country constituted neo-colonialism. Kwame Nkrumah had long pointed out that anti-neo-colonialism was not the exclusion of foreign capital per se, but

²⁴ See United Nations Economic Commission for Africa, *Investment Policies and Bilateral Investment Treaties in Africa: Implications for Regional Integration*, 2016, pp.3, 17; South Africa, *Bilateral Investment Treaties (BITs)*, <http://investmentpolicyhub.unctad.org/IIA/CountryBits/195#iialInnerMenu>, Jul. 16, 2018.

²⁵ (Ghana)Kwame Nkrumah, *Neo-Colonialism: The Last Stage of Imperialism*, Chinese version, translated by Beijing Compilation & Translation, World Affairs Press, 1966, p.1.

²⁶ (Ghana)Kwame Nkrumah, *Neo-Colonialism: The Last Stage of Imperialism*, Chinese version, translated by Beijing Compilation & Translation, World Affairs Press, 1966, p.33.

²⁷ See Robert J. Miller, *The International Law of Colonialism: A Comparative Analysis*, 15 *Lewis & Clark Law Review*, 2011, Vol. 15, pp. 847-922, at 922.

²⁸ James Thuo Gathii, *Neoliberalism, Colonialism and International Governance: Decentering the International Law of Governmental Legitimacy*, 98 *Mich. L. Rev.* 1996 (2000), p. 2019 and footnote 57.

opposed the impoverishment of foreign capital, which should be used to develop rather than exploit host countries.²⁹

In order to illustrate what was the attribution of neo-colonialism, in addition to mastering the definition and nature of neo-colonialism, it was important to understand the context from colonialism to neo-colonialism. Back to history, colonialism and neo-colonialism had only followed the western countries, and the history of colonialism and neo-colonialism was in fact the history of western expansion and maintenance of their rule at the international time, while colonialism and neo-colonialism had also undergone an evolutionary process of illegality in international law. Oddly enough, however, there were few entries in the legal dictionary for the two frequently used terms, such as colonialism and neo-colonialism,³⁰ which therefore indicated the need to study the issue from a legal point of view.

In summary, from the perspective of international law Research, Neo-colonialism defined in this article refers to Since World War II and decolonization movement thereafter, the practice and policy of Western countries, especially the former colonial powers, on the basis of sovereign inequality, have utilized various economic or political means, and exercised economic or political influence to plunder, exploit and control weak countries, particularly, the former colonies, to achieve their own interests at the expense of the interests of the weak. Neo-colonialism is not only immoral, reprehensible, but also contrary to contemporary international law.

Development of anti-colonialism international law

Colonialism was an important issue in international law, and the development of colonialism had never left international law. Colonialism had been formed and consolidated in the name of modern traditional international law, especially unequal treaties, which had been dominated by Western countries, and had an important impact on the development of international law.

Under the old system of colonialism, the practice was manifested in the political, economic, social, cultural and legal control and exploitation of colonies by the sovereign State, the loss of sovereignty, the lack of autonomy and discrimination against colonial peoples, often based on the military conquest of the colonies by the sovereign State and fixed in the form of so-called treaties.

The Treaty of the League of Nations, signed in 1919, established the system of appointment to classify the colonies of the defeated countries in the First World

²⁹ (Ghana)Kwame Nkrumah, *Neo-Colonialism: The Last Stage of Imperialism*, Chinese version, translated by Beijing Compilation & Translation, World Affairs Press, 1966, pp.1-2.

³⁰ The two terms are not included in Bryan A. Garner, *Black's Law Dictionary*, 9th edition, Thomson Reuters, 2009 or Susan Ellis Wild, *Webster's New World Law Dictionary*, Wiley Publishing, Inc., 2006 or Daniel Oran, *Oran's Dictionary of the Law*, 3rd edition, West Legal Studies, 2000.

War,³¹ and decide whether or not to allow it to be independent, depending on whether it reaches the level of autonomy. However, its guiding philosophy was that "independence is not the best way to improve the well-being of the Colonies", which led to the independence of Egypt in Africa only in 1922-1945 years ago.³² Therefore, the Covenant of the League of Nations did not really characterize and solve the problem of the illegality of colonialism, and for many colonies, the only difference is that the colonial powers had been replaced by others.

After the war, due to the active participation of socialist countries and the vast number of developing countries, modern international law based on the Charter of the United Nations gained transformative development. According to the modern principles of international law generally accepted by all countries, because colonialism was based on the conquest of force and the establishment of unequal treaties, its emergence and existence lacks legitimacy. After the founding of the United Nations in 1945, the issue of decolonization had become an important agenda for successive UN-general conferences, and after more than 30 years of efforts, the colonial system had finally collapsed.³³ South West Africa, now Namibia, became independent in 1990, and all African countries have become politically independent states.

Many resolutions adopted by United Nations General Assembly, especially the *Declaration on the Granting of independence to Colonial countries and peoples*, proclaimed by resolution 1514 (XV) of the General Assembly on the December 14 of 1960 declared the illegality of colonialism. One of the main objectives of the Declaration was "a speedy and unconditional end to colonialism in all its forms and manifestations". This was at the United Nations General Assembly, through which it had even declared the continuation of colonialism in all its forms and manifestations as a criminal act and constituted a violation of the *Charter of the United Nations* and the *Declaration on the Granting of independence to Colonial countries and peoples* and the principles of international law.³⁴ In short, these instruments of international law negate the legality and legitimacy of colonialism.

It is worth mentioning that, outside the United Nations system, the *Declaration on the Promotion of World Peace and Cooperation* agreed at 1955 Conference (Asian-African Conference)/ Bandung Conference, also advocated the principles of anti-colonialism, anti-imperialism and peaceful coexistence and gave a strong impetus to the independence movement in Africa.³⁵

³¹ See Wang Tieya, *Introduction to International Law*, Peking University Press, 1998, p.291; Group of selected materials on the history of international relations, *History of International Relation*, Volume One, Wuhan University Press, 1983, p. 329.

³² Group of selected materials on the history of international relations, *History of International Relation*, Volume One, Wuhan University Press, 1983, p. 365.

³³ See Yang Zewei, *History of Macro international law*, Wuhan University Press, 2001, p.303.

³⁴ See [Britain] Rober Jennings and Arthur Watts, *Oppenheim's International Law*, Vol.I, fascicle1, translated by Wang Tieya, Encyclopedia of China Publishing House, 1995, p.180.

³⁵ See Yang Zewei, *History of Macro international law*, Wuhan University Press, 2001, p.296-297.

Development of international law against neo-colonialism

Although the post-war decolonization movement had been a great success, traces of colonial rule in Western countries persisted and new forms of colonialism had proliferated. Nkrumah once pointed out that neo-colonialism was a stage of historical development that replaced colonialism as the main instrument of imperialism and was "the last, perhaps the most dangerous, stage of imperialism".³⁶ After the war, although the vast number of colonial, semi-colonial countries had gained political independence, but as a condition for political independence, they are often forced to sign unequal treaties at the time of independence, for the colonists to retain vested interests or to obtain new preferential treatment. Thus, as emerging developing countries, their economic, social, cultural, legal and other sovereignty remained under the control of the former colonists, the western developed countries, for a considerable period of time. As a result of the indirect influence of colonialism on the political, social, economic and cultural life of former colonial societies, colonialism had and still has a profound impact on Africa, a colonial heritage that was neo-colonialism.³⁷ Africa's "neo-colonialism is the continuation of the ongoing Western control and domination".³⁸

After a long process of decolonization, the influence of the former colonial powers on their former colonies remained, albeit through the adoption of new institutions, new structures and new relations.³⁹ In order to promote neo-colonialism, the post-war imperialist countries ostensibly recognized the independent rights of the people of the former colonies and affiliates of Africa, while in fact used various deceptive means to exercise control and infiltration from all sides in the face of African countries that had gained political independence. Their colonial approach had evolved into: strengthening national capital exports, transnational corporations had become an important tool for the pursuit of neo-colonialism, opening the road to private capital expansion in the name of aid, using a monopoly on modern science and technology to control and plunder developing countries. In particular, it needs to be emphasized that Western transnational corporations even interfere in the sovereign affairs of developing countries, and at the end of 20th century, some petroleum multinationals, as new global actors, were able to act as the agents of neo-colonialists.⁴⁰

³⁶ (Ghana) Kwame Nkrumah, *Neo-Colonialism: The Last Stage of Imperialism*, Chinese version, translated by Beijing Compilation & Translation, World Affairs Press, 1966, p.1.

³⁷ See Joy Asongzoh Alemazung & Hochschule Bremen, *Post-Colonial Colonialism: An Analysis of International Factors and Actors Marring African Socio-Economic and Political Development*, *The Journal of Pan African Studies*, Vol.3, No.10, 2010, pp. 62-84, at 63.

³⁸ See Joy Asongzoh Alemazung & Hochschule Bremen, *Post-Colonial Colonialism: An Analysis of International Factors and Actors Marring African Socio-Economic and Political Development*, *The Journal of Pan African Studies*, Vol.3, No.10, 2010, pp. 62-84, at 65.

³⁹ See Josalee S. Deinla, *International Law and Wars of National Liberation against Neo-Colonialism*, 88 *Phil. L.J.* 1 (2014), p.28.

⁴⁰ See Robert P. Barnidge, Jr., *Neocolonialism and International Law, with Specific Reference to Customary Counterterrorism Obligation and the Principle of Self-Defense*, *Indian Journal of International Law*, Vol. 41, 2009, p. 31.

In this context, the former colonies, after gaining the status of independent States placed particular emphasis on the principle of permanent sovereignty over natural resources, emphasized the establishment of a new international economic order, emphasized the right to regulate transnational corporations, and emphasized the nationalization and expropriation of the property of foreigners on a pro bono basis, with appropriate compensation at best. These actually emphasize the fight against neo-colonialism. To this day, countries such as Zimbabwe and South Africa still, in the name of eliminating the remains of colonialism, have adopted regulatory measures for the free expropriation of land without law by amending the Constitution and terminating bilateral investment treaties with Western countries.⁴¹

Neo-colonialism, which is contrary to the fundamental principles of sovereign equality and independent international law, is illegal and not legitimate in nature, is not only indirectly reflected in the aforementioned documents of international law, but is more directly reflected in a series of international law documents establishing the new international economic order after the war. Listing few examples;

Declaration on the Establishment of a New International Economic Order states, "... The remaining vestiges of alien and colonial domination, foreign occupation, racial discrimination, apartheid and neo-colonialism in all its forms continue to be among the greatest obstacle to the full emancipation and progress of the developing countries and all the peoples involved", and it is therefore necessary to strengthen assistance to developing countries, peoples and regions that had been oppressed by neo-colonialism in all forms.⁴²

Programme of Action on the Establishment of a New International Economic Order emphasizes that every effort should be made "to put an end to all forms of foreign occupation, racial discrimination, apartheid, colonialism neocolonial and alien domination and exploitation through the exercise of permanent sovereignty over natural resources".⁴³

Charter of Economic Rights and Duties of States provides that "It is the right and duty of all States, individually and collectively, to eliminate colonialism, apartheid, racial discrimination, neo-colonialism and all forms of foreign aggression, occupation and domination, and the economic and social consequences thereof, as a prerequisite for development. States which practice such coercive policies are economically responsible to the countries, territories and peoples affected for the restitution and full compensation for the exploitation and depletion of, and

⁴¹ Government clarifies misunderstanding on land expropriation target, Jul. 6, 2018, <https://www.gov.za/speeches/government-clarifies-misunderstanding-land-expropriation-target-6-jul-2018-0000>, Aug. 2, 2018.

⁴² United Nations General Assembly, *Declaration on the Establishment of a New International Economic Order*, A/RES/S-6/3201, May 1, 1974, 1; 4(i).

⁴³ *Programme of Action on the Establishment of a New International Economic Order*, A/RES/S-6/3202(S-VI), May 1, 1974, I.1(a).

damages to, the natural and all other resources of those countries, territories and peoples. It is the duty of all States to extend assistance to them".⁴⁴

In conclusion, the resolutions adopted by the General Assembly emphasize the economic sovereignty of newly independent States, affirm the inalienable right of dependent peoples to independence, self-determination and the enjoyment of their natural resources, and enjoy regulatory oversight over all their economic affairs, including domestic foreign investment, and the principles and spirit of the fight against neo-colonialism, such as the right to participation and decision-making in international economic affairs. While there were differences between developed and developing countries in the characterization of those General Assembly resolutions, in any event it could not be completely denied the role, effectiveness and significance of those resolutions in international law.⁴⁵ Since the post-war period, the principle of self-determination of peoples corresponding to decolonization had been recognized as a fundamental principle of international law, and the principle of self-determination of peoples was based on the principle of sovereignty and covered political, economic and cultural aspects, which, on the other hand, confirmed the binding nature of the anti-colonial provisions of the General Assembly document. Neo-Colonialism, contrary to the fundamental principles of international law established in the Charter of the United Nations, including respect for the sovereignty and territorial integrity of States, sovereign equality and non-interference in internal affairs, is undoubtedly not only not legitimate, but also illegal. In the post-war world Economic order established by the United States, developing countries have also been engaged in the relentless struggle against neo-colonialism, such as the GSP of the WTO system and special and differential treatment, which are the result of such struggles.

2 - Chinese Economic Engagement in Africa as Innovative Practicing of International Law Against Neo-colonialism

As far as China's economic presence in Africa is concerned, many Western countries have recently moved the label of neo-colonialism to China, accusing it of plundering resources in Africa, abusing labor, destroying traditional industries, plunging Africa into a debt crisis and damaging the ecological environment, and so on,⁴⁶ as if they had rocked themselves and had been divorced from neo-colonialism and became an "anti-colonialist fighter". This is extremely absurd! Reality shows that China has no neo-colonialism in its non-economic existence, which embodies a new development model of Sino-African cooperation and win-

⁴⁴ *United Nations General Assembly, Charter of Economic Rights and Duties of States, A/RES/3281(XXIX), Dec. 14, 1974, Article 16(1).*

⁴⁵ See Malcolm N. Shaw, *International law (seventh edition)*, Cambridge University Press, 2014, pp. 81-82.

⁴⁶ See Jian Junbo & Dontata Frasheri, *Neo-colonialism or De-colonialism? China's economic engagement in Africa and the implications for world order*, *African Journal of Political Science and International Relations*, 2014, Vol. 8, No. 7, pp. 185-201; See Howard W. French, *China's Second Continent: How a Million Migrants Are Building a New Empire in Africa*, New York: Vintage Books, 2015; Brahma Chellaney, *China Ensnares Vulnerable States in a Debt Trap*, *Nikkei Asian Review*, Feb. 20, 2018.

win situations, and is an innovative practice of anti-colonial international law. To understand this argument, we must start from the national level, that is, China has always adhered to the basic principles of dealing with international relations

China's fundamental principles of international law in handling Sino-African relation

Under the leadership of the CPC, since the establishment of the new China, it has firmly pursued an independent foreign policy of peace, and has put forward and actively practiced the peaceful coexistence, that is, "mutual respect for sovereignty and territorial integrity, non-aggression, non-interference in internal affairs, equality and mutual benefit and peaceful coexistence". The evolving peaceful coexistence of the past is and will remain the cornerstone of China's independent foreign policy of peace.⁴⁷ China has always firmly defended the fundamental principles of international law with the Charter of the United Nations at its core.⁴⁸ These principles of international law, in particular sovereign equality, independence and national self-determination, do not leave any room for neo-colonialism. In dealing with international relations under the guidance of these principles, it is also impossible for China to engage in neo-colonialist activities. For more than hundreds of years, the great powers have competed for interests and hegemony through war, colonization and the division of spheres of influence, but as President Xi Jinping has pointed out, "Now, things in the world increasingly need to be discussed together by all countries, to establish

⁴⁷ According to President Xi Jinping, under the new circumstances, the spirit of the Five Principles of Peaceful Coexistence is not outdated, but has been renewed, the significance of the Five Principles of Peaceful Coexistence is not diluted, but has been long-lasting, and the role of the Five Principles of Peaceful Coexistence is not weakened, but has been enduring. See Xi Jinping, Carry forward the Five Principles of Peaceful Coexistence to build a better world through win-win cooperation, At Meeting Marking the 60th Anniversary Of the Initiation of the Five Principles of Peaceful Coexistence, XINHUANET, http://www.xinhuanet.com/politics/2014-06/28/c_1111364206.htm, Sep. 23, 2018. Xi Jinping, Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era, Delivered at the 19th National Congress of the Communist Party of China October 18, 2017, http://www.qstheory.cn/lqikan/2017-12/03/c_1122049424.htm, Sep. 23, 2018. Liu Zhenmin, Follow the Five Principles of Peaceful Coexistence and Work Together to Build A Community of Destiny, The Department of Treaty and Law, Ministry of Foreign Affairs, the People's Republic of China, Selected Cases of Chinese International Law Practice, World Affairs Press, 2018, p.135.

⁴⁸ 1. The Organization is based on the principle of the sovereign equality of all its Members; 2. All Members, in order to ensure to all of them the rights and benefits resulting from membership, shall fulfill in good faith the obligations assumed by them in accordance with the present Charter; 3. All Members shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered; 4. All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations. 5. All Members shall give the United Nations every assistance in any action it takes in accordance with the present Charter, and shall refrain from giving assistance to any state against which the United Nations is taking preventive or enforcement action. 6. The Organization shall ensure that states which are not Members of the United Nations act in accordance with these Principles so far as may be necessary for the maintenance of international peace and security. 7. Nothing contained in the present Charter shall authorize the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any state or shall require the Members to submit such matters to settlement under the present Charter; but this principle shall not prejudice the application of enforcement measures under Chapter VII.

international mechanisms, to abide by international rules, and to pursue international justice as the consensus of the majority of countries."⁴⁹ This is in line with the historical trend that international law has gradually moved from "coexistence law" to "cooperative law". On the premise of this understanding, China's concept of dealing with diplomatic relations is to work together to build a partnership of equal treatment, mutual understanding and cooperation, and to build a community with a shared future for mankind. In the short years since the idea of building a community with shared future for mankind, the United Nations body resolutions have been enshrined in the concept of a community with shared future for mankind on several occasions, indicating the growing understanding and acceptance of it by the international community, and fully stating that this concept reflects the aspirations of peoples for the future of the world.

China's idea of a shared future for mankind is firmly opposed to neo-colonialism, and the idea of a community with shared future for mankind wants humanity to move towards a common future, rather than "I go to heaven, and you go to hell". The 19th congress report of the Communist Party of China in 2017 had "promote to build a community with shared future for mankind" as one of the basic strategies for adhering to and developing socialism with Chinese characteristics in the new era, and comprehensively expounds its connotation, which can be understood as including the five major aspects: "lasting peace, universal security, common prosperity, open and inclusive, clean and beautiful".⁵⁰ First, neo-colonialism cannot bring peace and security, because its imposition of its will and bullying will inevitably lead to resistance, including the use of violent resistance, which is contrary to the fundamental premise of building a community with shared future for mankind, with lasting peace as the basic prerequisite and universal security as the fundamental guarantee. Secondly, neo-colonialism could not bring about common prosperity, since the neo-colonialist country develops itself at the expense of the interests of the other country and would certainly undermine the material basis for building a community with shared future for mankind. Once again, neo-colonialism could not bring about openness and inclusion, since adopting a condescending and exclusive attitude that regards other countries as inferior and uncivilized, will surely undermine the civilized bonds that build a community with shared future for mankind. Finally, neo-colonialism ignores the ecological environment of other countries and undermines the ecological pursuit of building a community with shared future for mankind.

⁴⁹ Xi Jinping, *Speech on the 27th collective study of the Political Bureau of the Central Committee on October 12, 2015*.

⁵⁰ Xi Jinping, *Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era, Delivered at the 19th National Congress of the Communist Party of China October 18, 2017*, http://www.qstheory.cn/llqikan/2017-12/03/c_1122049424.htm, Sep. 23, 2018. On these five aspects, Xu Hong summarized it as the five pillars of a community of shared future for mankind. See Xu Hong, *A Community of Shared Future for Mankind and International Law*, in *Chinese Review of International Law*, pp.3-14, at 6-8.

With the profound changes in the international balance of power, the rapid development of emerging market countries, including China, and a large number of developing countries, taking into account the legitimate concerns of others in pursuing their own interests, promoting the common development of all countries and establishing a new international political and economic order in the pursuit of their own development, should be the main theme of the contemporary international community. The United States, which has pushed one's own self-interest to the extreme, admired the supremacy of American interests, ignored the interests of other countries, ignored the responsibility of the great powers, and recklessly and unilaterally withdrew from one international treaty or organization after another, thus achieving the use of hard power or soft power to bully other countries and their private practices, will lead to neo-colonialism.

China, which has experienced semi-feudal and semi-colonial social forms, has always emphasized sovereign independence, sovereign equality and non-interference in the internal affairs of other countries in its foreign relations, which is a concrete manifestation of China's adherence to the principle of sovereign equality. In Sino-Africa relations, China has always stressed that countries take the path of independent choice, emphasizing mutually beneficial cooperation, and the kind of development model countries adopt depends on their own national conditions and their own choices, which fall within the sovereignty of States. China has always advocated, "Africa is Africa's Africa". Therefore, the kind of development model that tries to sell itself to other countries has the suspicion of neo-colonialism.⁵¹ Practice shows that the neoliberal and democratic models advocated by Western countries such as the United States have failed in Africa. China is not marketing its own development model to Africa, but many African countries are autonomous in learning about China's development model.

Traditionally, China-Africa relations fall within the scope of South-South cooperation, which is based on the principles of sovereignty, equality and mutual benefit. Because of the particularity of China-Africa relations, compared with other international relations, such as Central Europe, Sino-Arab, Sino-Russian, etc. China attaches special importance to friendly cooperation and common development. The 2000 China-Africa Cooperation Forum (FOCAC) was formally established with the aim of strengthening friendly cooperation and seeking common development. As a long-term cooperation mechanism, as it plays a vital role in promoting China-Africa cooperation. In the China Policy paper on Africa (2006), it is emphasized that "sincere friendship, equality and mutual benefit, unity and cooperation and common development" are the principles of Chinese-African exchanges and cooperation.⁵² The 2015 Johannesburg Summit of the Forum on China-Africa Cooperation opened a new era of win-win and common

⁵¹ In 1947, U.S. President Harry S. Truman argued that the world should adopt the U.S. system. See David Ryan, *Colonialism and Hegemony in Latin America: An Introduction*, 21 *International History Review*, 1999, Vol. 21(2): 287-296. It is well known that the United States has been promoting the American model in the world by various means, including manipulating multilateral international institutions.

⁵² See *China's Africa Policy Paper (2006)*, *Regulatory Documents of the State Council*, came into effect on Jan. 12, 2006;

development of China-Africa cooperation. At the summit, President Xi Jinping announced that China-Africa relations should be upgraded from a "new type of strategic partnership" to a "comprehensive strategic cooperative partnership", stressing that he would "uphold the true sincerity of non-policy ideas and correct righteousness and benefit", and clarify that the five pillars of China-Africa comprehensive strategic cooperative partnership include: political Equality and mutual trust, Civilized exchange and mutual learning, security on the lookout for mutual assistance, international affairs in Unity and cooperation.⁵³ In the China Policy paper on Africa (2015), the concept of China-Africa community with a shared future is also put forward, that is, committed to win-win cooperation and common development.⁵⁴ *The Beijing Declaration -- Toward an Even Stronger China-Africa Community with a Shared Future*, adopted at the Beijing Summit of the Forum on China-Africa Cooperation in 2018, further emphasized working together to forge a closer union of China-Africa community with a shared future. President Xi Jinping has made clear the direction of the development of the China-Africa community with a shared future, which has worked together to assume joint responsibility, to pursue win-win cooperation, delivers happiness for all of us, invigorating our civilizations and cultures, with harmonious co-existence.⁵⁵

In short, China has no intention of interfering in the political governance of African countries, let alone the economic sovereignty of African countries, and in China-Africa relations, it seeks win-win cooperation, and China's presence in Africa fits the interests of African countries.

Typical characteristics of Chinese economic engagement in Africa

China-Africa Economic cooperation is mainly manifested in economic assistance, investment, trade, finance and other aspects, the following part will establish the point of present authors though combining with the understanding of neo-colonialism in this article, analyzing the most persuasive three aspects, and comparing with the western countries' practice.

Chinese economic engagement brings economic development and people's well-being to Africa

Nkrumah has long said that Africa is not trying to exclude capital, but to prevent it from impoverishing Africa. In today's discourse, that is, Africa needs win-win

⁵³ Xi Jinping, *Open a New Era of China-Africa Win-Win Cooperation and Common Development At the Opening Ceremony of the Johannesburg Summit of The Forum on China-Africa Cooperation*, Dec. 4, 2015. See Xi Jinping: *On Together Building a Human Community with A Shared Future*, in Xi Jinping: *The Governance of China II*, Chinese version, Foreign Languages Press, 2017, pp. 456-460. http://www.gov.cn/xinwen/2015-12/04/content_5020184.htm, Oct. 14, 2018.

⁵⁴ See *China's Africa Policy Paper (2015)*, *Regulatory Documents of the State Council*, came into effect on Dec. 4, 2015.

⁵⁵ Jinping Xi, *Work Together for Common Development and a Shared Future*, a keynote speech at the opening ceremony of the 2018 Beijing Summit of the Forum on China-Africa Cooperation (FOCAC), September 3, 2018, http://www.xinhuanet.com/world/2018-09/03/c_129946118.htm.

common development, not foreign investment at the expense of African interests. In the light of the long-standing existence of the West in Africa, including the colonial and neo-colonial phases, it has seized Africa's wealth, leaving it with serious problems of poverty, environmental degradation, health and security, because it is only naked in pursuit of its own interests. As stated by the United States Department of State for its purpose in making and publishing reports on the investment environment in Africa, including African countries, the reports are designed to support U.S. companies in finding new and effective ways to boost U.S. exports, create jobs, improve the welfare of American workers, and boost America's overall economy.⁵⁶ The full text does not refer to the promotion of economic development in Africa and the improvement of local livelihood, only "profit" and No "righteousness". Today, the new African strategy proposed by the Trump administration is to make Africa another battleground in the Sino-US trade war, and its so-called "Prosperity Africa Plan" emphasizes curbing China-Africa cooperation and giving priority to promoting American interests.⁵⁷

China's economic presence in Africa is based on Africa's development and future, and has brought great benefits to the lives of African residents. Western colonists had adopted the practice of destroying colonial industries through the export of cheap goods, but China-Africa economic cooperation was helping to industrialize and modernize Africa, and the notion that it hindered economic growth in Africa and used African countries to enhance its influence amounted to falsehood.⁵⁸ Most of Africa's major infrastructure today is a product of China-Africa economic cooperation. The continent's electronics, telephone, road, port, airport connectivity, water, public health, electricity, hospitals, health, government infrastructure and other aspects, all show the results of China-Africa economic cooperation. Some scholars have studied that 70% of China's loans are spent on power generation, transmission and transportation infrastructure, easing local electricity pressure and transportation difficulties, and promoting local economic development. In addition, 75% of the workers employed by projects not in China come from the local area, solving local employment problems and improving the living standards of the people.⁵⁹ On the latter issue, if there is a slight understanding of the legislation of African countries, the rumours in the Western media that China has imported a large number of its own workers into Africa will be unbreakable, since most of the laws of African countries provide for the

⁵⁶ See Bureau of Economic and Business Affairs, *Investment Climate Statements for 2017, Overview*, <https://www.state.gov/e/eb/rls/othr/ics/investmentclimatestatements/index.htm#wrapper>, Jun. 18, 2018.

⁵⁷ See Remarks by National Security Advisor Ambassador John R. Bolton on the Trump Administration's New Africa Strategy, delivered on Dec. 13, 2018, Heritage Foundation, Washington, D.C., <https://www.whitehouse.gov/briefings-statements/remarks-national-security-advisor-ambassador-john-r-bolton-trump-administrations-new-africa-strategy/>, Dec. 30, 2018.

⁵⁸ See Remarks by National Security Advisor Ambassador John R. Bolton on the Trump Administration's New Africa Strategy, delivered on Dec. 13, 2018, Heritage Foundation, Washington, D.C., <https://www.whitehouse.gov/briefings-statements/remarks-national-security-advisor-ambassador-john-r-bolton-trump-administrations-new-africa-strategy/>, Dec. 30, 2018.

⁵⁹ See Deborah Bräutigam, US Politicians get China in Africa all wrong, *The Washington Post*, Apr. 12, 2018, https://www.washingtonpost.com/news/theworldpost/wp/2018/04/12/china-africa/?noredirect=on&utm_term=.a35a16452ddf, Jan. 5, 2019.

proportion of locals employed. Not only South Africa has the Black Economic Revitalization Act, but Zambia also requires foreign companies to Locals have to share a certain proportion, and, in addition to workers' wages, companies are responsible for the cost of education for workers' children.⁶⁰ In terms of manufacturing life cycle theory, some industries have moved to African countries, one reason being the abundance of labor resources there, so it is unreasonable logic for China to bring large numbers of workers to Africa.

China's assistance to Africa has contributed to the investment and trade of Chinese enterprises in Africa,⁶¹ and has led to the development of African countries. Although China also has the incentive to promote trade and investment in non-aid, this is not the only motivation of China, and its main motivation is still to promote the common development of Africa.⁶² Specific to each African country, the results of an economic study by African scholars show that China's trade has a substantial impact on Nigeria's economic growth.⁶³ Professor Deborah Brautigam of Johns Hopkins University made the argument that China is neo-colonialist in non-investment, and has refuted it in real cases by conducting research in Africa in person.⁶⁴ For example, her 57 Chinese non-investment findings on China's acquisition of a large amount of land in Africa show that the number of land areas actually obtained by China is only 4% of what is reported.⁶⁵ In short, China, as Africa's largest trading partner and with more investment than the United States, has brought business prospects to Africa and is changing the face of poverty in Africa.

It should be added that the Belt and Road Initiative, initiated by China, has achieved the interface between economic cooperation with Central Africa, and that the Belt and Road Initiative is a global platform, an international public product, dedicated to communicating and connecting national policies, infrastructure, economy and culture, so as to enable all to participate and benefit from it. Instead of unilaterally importing economic development models or cultural traditions, it is impossible to do so on the basis of an already national strength.

⁶⁰ This conclusion is drawn according to the investigation conducted by the present author to NFC AFRICA MINING PLC and other private enterprises in the Sino-Zambia Cooperation Zone from 11 to 14 September 2015.

⁶¹ See Kimura H, Todo Y. *Is Foreign Aid a Vanguard of Foreign Direct Investment? A Gravity-Equation Approach*, *World Development*, Volume 38, Issue 4, 2010, pp. 482-497; Zhang Hanli, Yuan Jia and Kong Yang, *A Study on the Linkage between China's ODA and FDI to Africa*, in *World Economy Study*, No. 11, 2010, pp. 69-74; Yang Yaping & Li Linlin, *Can Aid Mitigate the Effect of Corruption on Investment? — The Sino-Africa Trade and Economic Cooperation Strategy Based on the Belt and Road Initiative*, in *Finance & Trade Economics*, Vol. 39, No. 3, pp. 95-108.

⁶² Liu Ailan, Wang Zhixuan & Huang Meibo, *Neocolonialism in China's Aid to Africa? Empirical Evidence from Trade Effects of China and EU Aid to Africa*, *Journal of International Trade*, No. 3, 2018.

⁶³ See Emmanuel Igbinoba, *China, Africa's New Colonial Master? Global Journal of Management and Business Research: B Economics and Commerce*, Vol. 16, No. 5, 2016, pp.47-55.

⁶⁴ Deborah Brautigam, *The Dragon's Gift: The Real Story of China in Africa*, Oxford University Press, 2010.

⁶⁵ See Deborah Bräutigam, *US Politicians get China in Africa all wrong*, *The Washington Post*, Apr. 12, 2018. https://www.washingtonpost.com/news/theworldpost/wp/2018/04/12/china-africa/?noredirect=on&utm_term=.a35a16452ddf, Jan. 1, 2019.

China's economic aid is not subject to any political conditions

Attaching political conditions means interfering in internal affairs and being tough. After the independence of African countries, Western countries continued to engage in neo-colonialism, one of the means of which was through their own domestic financial institutions and their controlled World Bank and the International Monetary Fund, but the practical effects of their assistance did more harm than good. The conditions attached to aid, including the requirements for political, economic and social policy reform and adjustment, have also had a negative impact, with the consistent conditional assistance of Western countries praying for Western donors to defend their rule by the autocratic rulers of certain African countries, contributing to dictatorship and economic poverty, and foreign aid resulting in exploitation, destruction, Excessive debt, relationship dependency and resource curse.⁶⁶ In fact, the more serious problem caused by conditional aid in Western countries is interference in the internal affairs of African countries and undermining their national sovereignty. Conditional aid has put caps on African countries, severely limiting the policy space for African countries, making their policies dependent on the intentions of Western countries and losing their sovereignty to develop in accordance with their own national circumstances. Even the new African strategy of the United States is emphasizing the right policy choice for recipient countries, that is, to meet the requirements of the United States.⁶⁷ It is based on the ills of Western aid that African scholars are declaring the death of Western aid.⁶⁸

As early as the 1974 *Declaration on the Establishment of a New International Economic Order* and other instruments of international law, it was emphasized that aid should not be subject to any political or military conditions. This is not the case in terms of the so-called act of aid for trade by the United States towards Africa. Through the forum of the *African Growth and Opportunity Act*, held annually, in order to achieve the economic objectives of the United States,⁶⁹ the African Growth and Opportunity Act was promulgated in 2000 and was extended for 10 in 2015. Under this Act, only more than 30 sub-Saharan African countries are eligible exporters, in accordance with a range of stringent conditions set out in the Act and enjoy GSP treatment in the United States. Moreover, in order to maintain their suitability, those countries must cooperate with the United States in continuously improving their rule of law, human rights and core labour standards,

⁶⁶ See Joy Asongzoh Alemazung & Hochschule Bremen, *Post-Colonial Colonialism: An Analysis of International Factors and Actors Marring African Socio-Economic and Political Development*, *The Journal of Pan African Studies*, Vol.3, No.10, 2010, pp. 62-84; Dambisa Moyo, *Dead Aid: Why Aid Is Not Working and How There is a Better Way for Africa*, Farrar, Straus and Giroux, 2009.

⁶⁷ See Remarks by National Security Advisor Ambassador John R. Bolton on the Trump Administration's New Africa Strategy, delivered on Dec. 13, 2018, Heritage Foundation, Washington, D.C., <https://www.whitehouse.gov/briefings-statements/remarks-national-security-advisor-ambassador-john-r-bolton-trump-administrations-new-africa-strategy/>, Dec. 30, 2018.

⁶⁸ See Dambisa Moyo, *Dead aid: why aid is not working and how there is a better way for Africa*, Farrar, Straus and Giroux, 2009.

⁶⁹ See Bureau of African Affairs: *Our Mission*, <https://www.state.gov/p/af/mission/index.htm>, Jun. 18, 2018.

in particular by requiring those countries to remove barriers to trade and investment in the United States. As a form of unilateral authorization, the United States may revoke such authorization every year.⁷⁰ It can be found that, in this relationship, these African countries and the United States are fundamentally unequal, the fate of their products that can be exported to the United States is at the mercy of the United States. The United States is committed entirely to unilateralism and protectionism. For the African Growth and Opportunity Act, although known as "growth", it has not led to substantial growth in African economies. While trying to protect its own industries, the United States is trying to force African countries to open up their markets, with the result that is bound to harm Africa's local economy. In addition to the conditional so-called aid, the United States has "helped" some African countries to carry out so-called democratic transitions through sanctions, such as Côte d' Ivoire, Guinea, Niger, as well as helping Nigeria to elect and promote the independence of South Sudan, which is a stark realization of interference in the internal affairs of African countries.

As we all know, China's economic assistance to Africa is not subject to any political conditions, which is China's consistent policy towards Africa.⁷¹ The China-Africa Cooperation Forum includes 53 African countries and the African Union Commission that have established diplomatic relations with China. Compared with the propaganda of Western media, scholars' research tends to be more objective and fair, and their research is often based on fieldwork. Scholars in Eastern Europe have been candid in pointing out that China offers significant opportunities to lift African countries out of poverty and isolation, as well as to reduce their dependence on Europe and North America, and that, as a developing country that has successfully developed through a development path different from that of the West, African countries prefer China's approach of not attaching any political demands. However, China's growing influence has undoubtedly hurt the interests of the West, whose influence in Africa is increasingly being overshadowed by China's arrival.⁷² Based on this, it is understandable why, at the beginning of the 21st century, when China began to increase its investment in Africa, the Western media gave a lot of negative comments.

China's economic aid won't bring a debt trap

Nkrumah has long pointed out that Western countries have adopted the means of usury to impose neo-colonialism. In contrast to the usury of Western countries and international organizations, China has often taken interest-free loans, two-

⁷⁰ See *African Growth and Opportunity Act (AGOA)*, <https://www.state.gov/p/af/rt/agoa/index.htm>, Jan. 7, 2019.

⁷¹ See *China's Africa Policy Paper (2006)*, *Regulatory Documents of the State Council*, came into effect on Jan. 12, 2006; *China's Africa Policy Paper (2015)*, *Regulatory Documents of the State Council*, came into effect on Dec. 4, 2015.

⁷² See Ágnes Szunomár (2014): *China's relations with the developing world: a new type of colonialism or a fruitful cooperation*, in Agnieszka McCaleb (ed.): *China's Changing Competitiveness: Shaking up or Waking up the European Union?* Warsaw: Warsaw School of Economics Press, 2013. pp. 85-110.

excellent lending, low interest rates on loans, and many projects that have even been built without compensation. China's non-lending time is long, and much of the debt has even been cancelled. In 2009, China cancelled the maturing debt of 32 African countries in one lump sum.⁷³ China is committed to seriously implementing the exemption of intergovernmental interest-free loan debt commitments for African least developed Countries, Landlocked Developing Countries and Small Island developing States that were not repaid as at the end of 2015.⁷⁴ At a press conference at the March 2018 meeting in China, the Vice Minister of Commerce mentioned that China has forgiven interest-free loan debt due at the end of 2015 for more than 20 African countries. China has also pledged to forgive such debts due at the end of 2018.⁷⁵ The Chinese Government not only helps the African countries concerned to resolve and reduce their debt to China through friendly consultations, but also calls on the international community, especially the developed countries, to take more substantive action on debt relief for African countries⁷⁶ because African countries are not just in debt to China. Therefore, the claim that "China deliberately set a debt trap for Africa" is groundless.

At the Beijing Summit of the Forum on China-Africa Cooperation in 2018, China again pledged to "provide US\$ 60 billion in support of Africa, including the provision of US\$ 15 billion in non-reimbursable assistance, interest-free loans and concessional loans; the provision of US\$ 20 billion quotas in credit funds; Supporting the establishment of US\$10 billion special funds in China-Africa developmental finance and US\$5 billion special funds for import trade financing from Africa; and pushing Chinese companies to invest no less than US \$10 billion in Africa over the next 3 years."⁷⁷ In terms of the structure of these financial support, there is also no problem of usury and excessive borrowing. In the colonial process, Western countries used the method of signing loan treaties with colonial governments, which plunged their finances under the control of the colonists and caused economic attachment.⁷⁸ It is not the same, in that, in order to promote China-Africa economic Cooperation, China has made remarkable contributions to Africa's economic development by generously providing support in the form of non-reimbursable assistance, interest-free loan, preferential loans

⁷³ See *China Announces Debt Cancellation at African Summit*, <https://www.commondreams.org/newswire/2015/12/04/china-announces-debt-cancellation-african-summit>, Oct. 14, 2018.

⁷⁴ *China's Africa Policy Paper (2015)*, *Regulatory Documents of the State Council*, came into effect on Dec. 4, 2015.

⁷⁵ Ministry of Foreign Affairs, the People's Republic of China, *Forum on China-Africa Cooperation Beijing Action Plan (2019-2021)*, https://www.fmprc.gov.cn/mfa_eng/zxxx_662805/t1593683.shtml, Sep. 5, 2018.

⁷⁶ See *China's Africa Policy Paper (2006)*, *Regulatory Documents of the State Council*, came into effect on Jan. 12, 2006.

⁷⁷ Xi Jinping, *Work Together for Common Development and a Shared Future*, At the Opening Ceremony of the 2018 Beijing Summit Of the Forum on China-Africa Cooperation Beijing, 3 September 2018, http://www.xinhuanet.com/world/2018-09/03/c_129946128.htm, Sep. 5, 2018.

⁷⁸ Group of selected materials on the history of international relations, *History of International Relation*, Volume One, Wuhan University Press, 1983, p. 124.

and special loans without any political conditions.⁷⁹ In other words, China's "south-South" equal cooperation with African countries on development issues is based on enhancing the capacity of African countries to develop themselves, rather than maliciously placing African countries in a "debt trap". Indeed, even the Asian Infrastructure Investment Bank, an international multilateral financial institution initiated by China, conducts quasi-commercial operations, achieves financial sustainability, does not pursue profit maximization, and loan terms are more favorable than commercial banks.

Take, for example, the most contentious debt problem of the moment, which is in fact a weapon in the African strategy implemented by the United States to attack China,⁸⁰ Western reports catering to this strategy are also more false. With regard to Zambia's debt problem, the fact is that Zambia's total debt is \$10.2 billion (2018, the World Bank) in the composition of its external debt, including 3 billion dollars in external debt borrowed from the European market since 2012, for infrastructure, wages, subsidized food, electricity and fuel prices, respectively, with interest of approximately between 6% - 9%. The principal and interest reached a total of 5 billion U.S. dollars; And 3 billion of dollars in loans from China, mainly for hydroelectric power stations, water supply systems, airports, communications and highways and other projects, with its own economic benefits, can be used to repay the loan. Chinese companies have also tried a new BOT financing model to ease the financial burden on the Zambian government.⁸¹ With regard to Kenya's debt, the Kenyan President pointed out that Kenya's creditors were not the only ones, and that Kenya would continue to borrow money from China and the rest of the world for development in order to improve infrastructure lending, and that Kenya's claim to "Mombasa Harbor as collateral" for the construction of the Mombasa-Nairobi railway was nonsense.⁸² The belief that China achieves its own colonial purposes through the debt trap, which is based on the premise that state-owned enterprises are the tools of the state government, but this is not the case, and the behavior of state-owned enterprises is basically commercial. Both the port of Hambantotta in Sri Lanka and the port of Djibouti are commercial in nature.⁸³ This is supported by the International Investment Arbitration Case.⁸⁴

⁷⁹ See Xi Jinping: *Jointly usher a new era of win-win cooperation and common development between China and Africa* (Dec. 4, 2015), in Xi Jinping: *The Governance of China II*, Chinese version, Foreign Languages Press, 2017, pp. 456-460.

⁸⁰ See the "debt trap theory" propagated by Tillerson during his visit to Africa in March 2018, and the U.S. plan for a new U.S. strategy for Africa, known as "Prosperity of Africa" as outlined by U.S. security adviser John Bolton on December 13, 2018.

⁸¹ Yang Youming, *China-Zambia's Opportunities and Challenges for Sustainable Development and Africa's 2063 Agenda*, https://www.fmprc.gov.cn/web/dszlsjt_673036/t1420614.shtml, Dec. 17, 2018.

⁸² See *China isn't Kenya's only lender, Uhuru Kenyatta tells CNN*, Oct. 31, 2018. <https://www.nation.co.ke/news/Chinese-loans-don-t-bother-me--Uhuru-tells-CNN/1056-4828434-13l4ibz/index.html>, Jan. 5, 2019.

⁸³ See Deborah Bräutigam, *Misdiagnosing the Chinese Infrastructure Push*, April 4, 2019, <https://www.the-american-interest.com/2019/04/04/misdiagnosing-the-chinese-infrastructure-push/>. Deborah Bräutigam is the Bernard L. Schwartz Professor of Political Economy and Director of the China Africa Research Initiative at Johns Hopkins University's School of Advanced International Studies.

⁸⁴ *Beijing Urban Construction Group Co. Ltd. v. Republic of Yemen*, ICSID Case No. ARB/14/30, *Decision on Jurisdiction*. Under WTO, state-owned enterprises are not a general assumption.

From the above, whether it is the basic principle or the basis for China-Africa economic relations or the concrete manifestation of Chinese economic existence in Africa, it shows that China's economic presence in Africa is not neo-colonialism. China-Africa Economic cooperation is completely different from the neo-colonialist model of the Western countries in Africa, led by the United States, and has come out of a new way of co-winning cooperation, common development and working together to build China-Africa community with a shared future. My Government also solemnly declares that "there has been a long period of colonial domination in African history and it should be understood what colonialism is. In recent years, China-Africa cooperation has strongly promoted economic development and the improvement of people's livelihood in Africa, which has been widely appreciated by African countries and the international community. It is clearly illogical to equate China-Africa cooperation with former Western colonialist practices."⁸⁵ In addition, it should be pointed out that China's "One Belt, One Road" initiative is a platform for "discussing, building and sharing" development, and although individual countries, politicians or scholars regard it as a "neo-colonialist tool", it is increasingly subject to the active participation of countries around the world and the high recognition of the United Nations.⁸⁶ This also makes accusations of neocolonialism self-defeating.

3 - Exploring the Road of International Rule of Law Under the Concept of Sino-Africa Community of Shared Future

Colonialism or neo-colonialism were the attributes of Western imperialist countries, and African countries had long been exploited and oppressed by Western colonists and were unusually sensitive to colonialism and neo-colonialism. In the context of the abuse of neo-colonialism by the generalization of Western countries, China's economic existence in Africa should pay special attention to practicing the road of international rule of law under the concept of Sino-Africa Community of Shared Future

Adhere to the guiding philosophy of Sino-Africa Community of Shared Future

When the global economy is facing a new situation, China-Africa cooperation also needs to be elevated to a new strategic level, not to weaken, but to strengthen. The idea of China-Africa community with a shared future pursues China-Africa common interests, not just Chinese interests. The idea of China-Africa community with a shared future focuses not only on China, but also on

⁸⁵ Foreign Ministry Spokesperson Hua Chunying Hosted a Regular Press Conference on March 14, 2013. <http://www.china-un.org/chn/fyrth/t1021324.htm>, Jan. 17, 2019.

⁸⁶ Xi Jinping, Openness for Greater Prosperity, Innovation for a Better Future Keynote Speech, At the Opening of the Boao Forum for Asia Annual Conference 2018 Boao, 10 April 2018. In March 2016, the UN Security Council adopted Resolution S/2274, which included the promotion of the "Belt and Road Initiative". On November 17, 2016, the "Belt and Road Initiative" was first written into the 71st Session of the UN General Assembly Resolution A/71/9. Permanent Mission of the People's Republic of China to the United Nations. The UN General Assembly unanimously passed resolutions calling on countries to promote the "Belt and Road Initiative", <http://www.fmprc.gov.cn/ce/un/chn/lhghywj/fyywj/20160116/t1416496.htm>, Apr. 15 2018.

African issues. Therefore, the idea of China-Africa community with a shared future transcends the narrow nationalist ideology and stands at an all-time high. With the United States and other countries increasingly emphasizing the supremacy of national interests, we should adhere to the concept of China-Africa community with a shared future, and that neo-colonialism ideas and practices is contrary to the concept of China-Africa community with a shared future.

China, which has come from colonial and semi-colonial history, should be well aware that it is impossible to endure the weak and exploit the weak by power, let alone be legitimate and legal, and that the idea of a community with shared future based on cooperation and common development is the moral high ground that we should uphold. President Xi Jinping pointed out that "In more areas, higher levels to achieve win-win cooperation, common development, do not attach to others, let alone plunder others", " All things grow together without harming each other, while *Tao* goes hand in hand without contradicting each other. ",⁸⁷ this is indeed a wise saying, and is the ideal of China-Africa relations that we should adhere to.

A country's foreign practice is necessarily guided by its belief in the concept, theory and policy of international relations, "the concept of leading action". Under the concept of China-Africa community with a shared future, China has put forward to practice the correct way of acting and benefit, seeking to expand the intersection of interests, promote the construction of a new type of international relations with win-win cooperation as the core, and promote the formation of China-Africa community with a shared future.

Persist in fundamental principles of international law

At the international level, the universally recognized fundamental principles of international law under the Charter of the United Nations, as well as the peaceful coexistence, should always be our guide to action. In particular, it is China's diplomatic tradition to insist on the principles of respect for sovereignty, sovereign equality and non-interference in internal affairs, and to exercise rights and fulfill obligations in good faith in accordance with the law. At the Beijing Summit of the 2018 Forum on China-Africa cooperation, President Xi Jinping elaborated on the "five no" approach to China-Africa relations. That is, "non-interference in African countries to explore development paths in line with national conditions; non-interference in Africa's internal affairs; not to impose China's will on African countries; not to attach any political conditions to aid to Africa; and not to seek political self-interest in non-investment financing ".⁸⁸ This "five no" approach is in fact a concrete manifestation of the fundamental principles of international law in

⁸⁷ Xi Jinping, *Speech at the Commemoration of the 200th Anniversary of Marx's Birth*, Jun. 4 2018, Oct. 15 2018.

⁸⁸ Jinping Xi ,*Work Together for Common Development and a Shared Future*, At the Opening Ceremony of the 2018 Beijing Summit Of the Forum on China-Africa Cooperation Beijing, Sep. 3 2018, <https://www.focac.org/chn/ttxx/t1591395.htm>, Jan. 3 2019.

China-Africa relations and is the most fundamental difference between Chinese and western non-policy, which must be upheld.

China will not and should not interfere in the internal affairs of any country, either now or in the future. The Chinese national values adhere to the "no desire, do" as a country that has been colonized by Western countries for more than more than 100 years, China does not want other countries to interfere with its own fundamental political and economic development path, in an attempt to make China "fit" according to their delimitation objectives. Of course, China should not dictate the internal affairs of African countries. Only taking its own national interests as the benchmark, insisting on Zero-sum game thinking, imposing its will on others, interfering in the internal affairs of other countries, bullying, and trying to control or curb the development of other countries in order to maintain its own leading status, which has never been China's practice, but the neo-colonialist's practice.

China's development will not and should not be based on the greed to invade and plunder other countries. Since the founding of New China, especially since the reform and opening up, the development process shows that China's development is not dependent on foreign military expansion, nor relying on foreign colonial exploitation and plunder, but on the people's hard work and wisdom. In fact, after the reform and opening up, China has developed through free trade and attracting foreign investment. So far, China is still the world's largest trading power, and the developing countries receiving the most foreign direct investment are the countries receiving the largest number of foreign direct investment after the United States. However, "over the next 5 years, China will import 8 trillion of dollars in goods and absorb 600 billion of dollars in foreign investment."⁸⁹

Lay emphasis on the design of specific legal system

China-Africa Economic cooperation is a systematic project, a full range of cooperation in industrialization, agricultural modernization, infrastructure, finance, green development, trade and investment facilitation, poverty reduction for the poor, public health, humanities, peace and security. The implementation of all aspects of cooperation requires not only the concept of China-Africa community with a shared future and the guiding principles of international law, but also the implementation of specific legal norms. Therefore, at the international level, it is necessary to construct a legal system between African countries to promote sound economic activities in the environmental, labor and social aspects, and at the domestic level, we should also strengthen the compliance management norms for the overseas operation of enterprises.

For example, noting that international investment law is undergoing transformation and modernization, as well as the reality of economic cooperation

⁸⁹ See Xi Jinping: *On Together Building a Human Community with A Shared Future*, in Xi Jinping: *The Governance of China II*, Chinese version, Foreign Languages Press, 2017, p. 546.

between China and Africa, in this context, the Central African (African countries) Bilateral investment treaty should meet both the need to protect Chinese investors abroad and the need to shape responsible investors, as well as the need to strengthen the regulatory authority of the host country. Therefore, China-Africa should update existing bilateral investment treaties and conclude new BIT's, so that China-Africa bilateral investment treaties more fully reflect the ideas of fairness, balance, win-win and inclusion, including, of course, corporate social responsibility provisions.⁹⁰ It is also important to explore the possibility of entering into free trade agreements with the African Union and sub-regional organizations in Africa that reflect the aforementioned ideas, which may be a shortcut to the legal promotion and protection of trade and investment in Central Africa, as African countries attach great importance to the economic integration of regions and the continent as a whole. Moreover, both the Chinese-led BRICS bank and the Asian Infrastructure Investment Bank, as well as the domestic banks involved in African operations, should operate within the internationally recognized framework of the rule of law, including consideration of the relevant international "soft law".⁹¹

For example, at the domestic law level, we should continue to attach great importance to legislation regulating the activities of Chinese enterprises abroad. The Standing Council of the National People's Congress has long ratified the *United Nations Convention against Corruption*,⁹² and to criminalize bribery of foreign public officials in our criminal law, since, as a State party, the regulation of commercial bribery in accordance with the provisions of the Convention includes not only domestic but also overseas commercial bribery. Article 164, paragraph 2, of our Criminal Code provides that, in order to seek improper commercial interests, foreign public officials shall be given a penalty in a larger amount of imprisonment or detention for a term of not less than three years; a long duration of three years or more in prison and a fine. If the unit commits this crime; it shall impose a fine on the unit and punish the supervisor and other persons directly responsible for it.

In fact, in recent years, China has introduced a number of legal norms directly aiming at foreign investment, contracting project, overseas credit and other aspects,⁹³ which in other countries in the world is unprecedented, but also China's unique practice. Legislation in that regard should continue to be strengthened in the future, in particular by raising the legislative hierarchy.

⁹⁰ See Xiuli Han, *The Future of Bilateral Investment Treaties between China and Africa*, SA Yearbook of International Law, 2015, pp. 29-57.

⁹¹ See e.g., UNCTAD, *Principles on Promoting Responsible Sovereign Lending and Borrowing*, United Nations, Amended and restated as of 10 January 2012, https://unctad.org/en/PublicationsLibrary/gdsddf2012misc1_en.pdf, Nov. 11, 2018.

⁹² See Decision of the Standing Committee of the National People's Congress on Ratifying the United Nations Convention Against Corruption, issued on Oct. 27, 2005, came into effect on Oct. 27, 2005.

⁹³ The legal documents such as: Measures for the Administration of Overseas Investment of Enterprises (Order No. 11 of the National Development and Reform Commission in 2017), Guide to Environmental Protection for Overseas Investment Cooperation, Letter No. 74 [2013] of the Ministry of Commerce, and Guidelines for the Compliance Management on Overseas Operations of Enterprises, No. 1916 [2018] of the National Development and Reform Commission.

Compliance with specific legal systems is to be strengthened

The life of the law lies in its implementation, whether it be international or domestic law. Therefore, we should adhere to the concept of China-Africa community with a shared future as the fundamental principles of international law and the principles of dealing with China-Africa relations. International treaties between Central Africa (African countries) should also be effectively implemented at the domestic level and enhanced compliance. At the same time, China's economically active private individuals in Africa are subject to the relevant domestic laws of the host country and the relevant domestic laws of China. The legal norms governing the overseas economic activities of many enterprises with Chinese characteristics need the implementation of divest in order to make them from the law on paper into the law that really works. Strengthening the normative role of law can promote the sustainable development of China-Africa economic cooperation.

In short, neo-colonialism is out of step with China's national development strategy in Africa, and we firmly reject the fallacy that "China is neo-colonialist in the nature of its economic activities in Africa". Some of the issues and phenomena that have been branded "neo-colonialism", which have received much attention, are in fact either the neglect of social responsibility by individual enterprises, or the problem of individual private violations, or the false smear of Western countries, the absence of neo-colonialism, let alone the wanton distortion of "the Chinese government's neo-colonialist strategy in Africa". At present, the graft of "neo-colonialism" rumors in Western countries also reminds us that in China-Africa economic cooperation, in the face of the rumors of hostility and confusion in Western countries, it is necessary to refute the facts according to law, and we need to strictly practice the international rule of law and proceed cautiously.

CONCLUSION

In Africa, the topic of neo-colonialism could become a political tool used by opposition parties in African countries, and could also be of concern to international organizations such as the International Monetary Fund. Neo-Colonialism is one of the most inflammatory international discourse in the world today, and it is also a "killer" to provoke China-Africa relations, so it must arouse our great attention. Neo-colonialism had long been opposed by the academic community,⁹⁴ and neo-colonialism based on unequal oppression and exploitation, like old colonialism, contrary to the fundamental principles of international law, is

⁹⁴ For example, Jean-Paul Sartre, a famous existential philosopher opposed colonialism and neocolonialism in his various speeches. See Jean-Paul Sartre, *Colonialism and Neocolonialism*, London and New York: Routledge, 2006. The first edition of this book is published in French in 1964. The book is still very influential after 40 years of its first publication and was translated into English in 2006. Another representative book against neocolonialism: Kwame Nkrumah, *Neo-Colonialism: The Last Stage of Imperialism*, Thomas Nelson & Sons, Ltd., London, 1965. Published in the USA by International Publishers Co., Inc., 1966.

bound to give rise to international conflicts and domestic objections. It is worth noting that, to this day, there are Western scholars who, on various grounds, have been open in advocating the return of the Former colonists of Africa to Africa and the re-colonial rule.⁹⁵ This is very absurd.

Practice shows that under the guidance of the concept of China-Africa community with a shared future, China adheres to the basic principles of international law and, on this basis, creates a specific international legal system and domestic legal system between China and Africa that reflect the concept of inclusive interests and win-win cooperation and common development goals. It is clear that China's economic presence in Africa is an innovative practice of anti-neo-colonial international law and is bound to be recognized and welcomed by African countries.

For African countries, they should be vigilant and oppose all forms of neo-colonialism, and, on the basis of recognizing the essence of neo-colonialism, should actively carry out normal international economic cooperation, especially mutually beneficial economic cooperation between China and Africa. Whether it is based on Adam Smith's theory of absolute advantage, or the theory of comparative advantage of David Ricardo, or other theories related to international trade and investment, it is clear from different angles that economic development and communication models that need economic complementarity and give full play to the advantages of resources are the key to the problem only in this kind of economic relationship, Exploitation, fraud and plunder on the basis of inequality cannot exist. Facts have shown that Africa's development requires, first and foremost, the efforts of African countries and peoples themselves, as well as international cooperation, in particular South-South cooperation. China's economic presence in Africa is an innovative practice of anti-neo-colonialist international law, which has created a model of co-winning cooperation under the international rule of law framework and made its due contribution to the sustainable development of Africa.

COMPETING INTERESTS

Author has declared that no competing interests exist.

⁹⁵ William Pfaff, *A New Colonialism - Europe Must Go Back into Africa*, *Foreign Affairs*, Vol. 74, 1995, p.5.

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Blue Economy, Challenges and Multilateral Cooperation in African Coastal Countries

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INTRODUCTION

The oceans represent seventy-one percent of the earth's surface. There are plenty of resources in the coastal and oceanic environment, and which is the potential "new fuel" for the future economy growth in the coastal nations. The international organizations such as the FAO, OCED, World Bank as well as some NGOs interested to push forward the marine nations to accelerate marine economy development. In recent decade, the marine economy or blue economy is the highlighting field interested by the public, the government and the researchers.

In 2010, a famous book titled of *The blue economy: 10 years, 100 innovations, 100 million jobs* highlighted the concerns on the blue economy throughout the world (Pauli, 2010). Africa is a huge continent with long coastline. Development is the key task for the governments of African countries. To find the new sector of economic growth will accelerate the GDP increase and job position enlargement. In the year of 2015, the *Agenda 2063 what we want* popular version published by African Union, the marine economy/blue economy was regarded as the new engine for African economy growth in the future (AU, 2015).

In Africa continent, thirty-eight of the fifty-four countries are coastal states with more than 90 percent of Africa's imports and exports transported by sea. Marine space under Africa's jurisdiction totalled about 13 million square kilometers. Marine fishery makes a vital contribution to the food security and nutrition supply for over 200 million Africans in coastal states. If fully exploited and well managed, Africa's blue economy can therefore constitute a major source of wealth and sustainable development for the whole continent. *The Blue Economy Policy Handbook for Africa* produced by ECAs sub-regional Office in East Africa in 2015, was a contribution to helping the African coastal nations benefit from what the African Union call the "New Frontier of African Renaissance".

No doubt that the blue economy is the strategic sector for economic development in the future. Not only the Africans, but also many researchers and international

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organizations warmly welcome the coming of the era of blue economy. Recently, some important conference and forum focusing on African blue economy were held at Nairobi and London in the year of 2018.

The Sustainable Blue Economy Conference, held at Nairobi from 26th to 28th November 2018, was the first global conference on the sustainable blue economy and more than 18,000 participants from around the world are coming together to learn how to build a blue economy¹. The ABEF 2018 (African Blue Economy Forum) held at London and many researchers, journalists, CEOs of international enterprises, officials of small island countries as well as the managers of NGOs participated to the forum². The ABEF 2018 was the first ever forum on Africa blue economy. On 18 September 2018, the Economic Commission for Africa was fully committed to supporting the African Union, Regional Economic Communities (RECs) and member States to ensure that the untapped potentials of the continent's blue economy are fully realized during the meeting of 24th Intergovernmental Committee of Experts (ICE) of Southern Africa on the theme of Blue Economy, Inclusive Industrialization and Economic Development in Southern Africa. The potentials of the blue economy development will benefit the industrial growth and economic development in South African states³.

In this paper, the author is an expert on coastal ocean sciences, and familiar with the blue economy in China. From a Chinese personal perspective, the author generally reviewed the marine resources and the potentials of the blue economy in Africa. Following the discussion on the challenges of blue economy development in Africa and providing some suggestions on the multilateral cooperation for Africa's blue economy development in the future. The China's role in African blue economy was also discussed.

MARINE RESOURCES AND POTENTIALS OF BLUE ECONOMY IN AFRICA

Along the coast of the African continent, there are plenty of the marine resources, such as the fishes, the oil & gas, the beaches, the potential human resources of the youth in the coastal cities. Fishery resources are the most important resources for Africans. According to the FAO statistic reports, the Middle East Atlantic Ocean, the South East Atlantic Ocean, the West Indian Ocean are the key marine fishery areas with potentials for further exploitation in the world. The marine environments especially the Canary Current and the Benguela Current in the East Atlantic Ocean are the up-stream regions with plenty of the foods attracting the fishes. Along the coast, the Morocco, Namibia, Angola, Senegal as well as Mauritania are the major nations of marine fishery productions in the continent. In general, the South East Atlantic Ocean, the West Indian Ocean as

¹ Sustainable Blue Economy Conference. <http://www.blueeconomyconference.go.ke>.

² ABEF. <https://www.abef2018.com>

³ Communications Section of Economic Commission for Africa. Blue economy can be engine of Africa's economic growth if well utilized, says ECA's Adejumo. <https://www.uneca.org/stories/blue-economy-can-be-engine-africa%e2%80%99s-economic-growth-if-well-utilized-says-eca%e2%80%99s-adejumo>

well as the waters around South Africa still have the potentials for capture production.

The oil and gas along the Africa continent are also plentiful. The Algeria, Libya, Angola, Nigeria, Congo, Gabon, Egypt, Equatorial Guinea, Chad, Sudan, South Sudan as well as Mozambique are the main oil & gas countries in Africa. According to the BP report 2018, the total oil and gas proved reserves in Africa continent are 500 million tons and 13.8 trillion cubic meters respectively. The reserve and production ratios (R/P) of oil and gas are 35.6 and 61.4 respectively⁴ (BP, 2018). The R/P ratios indicated that the oil and gas have more potentials for the further exploitation in Africa. The world oil trade statistics found that the export number was 246.2 million tons and the import was 79.4 million tons. Africa continent is one of the net continent contributors to the world oil demands.

As a sea waters surrounding continent the international commercial goods are mostly transported by the sea. There are some important sea lanes around the African continent, the Suez Canal, connecting the Middle East, East Asia to the Europe and the surrounding the Cape of Good Hope, connecting the Indian Ocean and the Atlantic Ocean. All the oil and gas and the minerals as well as the agricultural products exported to the world by sea shipping. The security of the sea lanes is important to the world trade. The Pirate activities and the violent kidnapping that occurred on ships in the Gulf of Aden and Gulf of Guinea are the hotspots in the world and cost 1515 million USD in anti-pirate and related activities⁵. The Somali and Gulf of Guinea-based pirates are the highlighting topic in security studies (Denton and Harris, 2019; Khanna, 2019). Despite reduced pirate activity off the western Indian Ocean in recent years, the pirate networks responsible for the original Somali piracy crisis have sustained themselves through small-scale attacks and involvement in various maritime crimes⁶.

With the economic development of the African countries, the need of the sea transportation has been rising. There are many African sea ports, which have played important role in the regional development. For example, the Durban, Lagos, Mombasa, Dar es Salaam, Casablanca and the Egyptian ports along the Suez Canal are the main sea ports along the African coast.

There are many beautiful sea beaches in African coastal countries. Beaches are the precious coastal resources supporting tourism. In Egypt, the Hurghada has become a famous tourism resort along the Red Sea coast. Several hundred thousand tourists crowd in the beaches and hotels of Hurghada. The Agadir beach, one of the longest beaches in Africa, also attracted many international visitors. In Eastern Africa, the Mauritius and Seychelle, as well as Zanzibar

⁴ BP, 2018. BP statistical review of world energy 2018. <https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html>

⁵ OBP. The state of maritime piracy 2016. <http://oceansbeyondpiracy.org/publications/state-maritime-piracy-2016>

⁶ gCaptain. Declining Vigilance Threatens Return of Somali Piracy, Watchdog Says. May 1, 2017. <https://gcaptain.com/declining-vigilance-threatens-return-of-somali-piracy-watchdog-says/>

Islands are also the welcomed coastal destinations in Africa. In many African countries, there are many undeveloped beaches with more potentials for tourism. In general, the potentials of blue economy sectors in Africa are aspiring. And how to carry out the blue economy is an essential and urgent task. In 2014 South Africa launched the operation Phakisa, which is a national marine economy strategy with the detail designed and continuous improved contents and specific plans. Ren et al suggested that China should push forward the Sino-SA cooperation in blue economy sectors (Ren et al, 2018).

CHALLENGES OF BLUE ECONOMY DEVELOPMENT IN AFRICA

Although the blue economy highlighting the future economic growth in Africa and huge potentials for development, Africa is still facing many challenges in blue economy implementation in the future. The first challenge is the lack of government monitoring of the sea. Because many African countries care about the mineral mining, agriculture, and forest exploitation. Because of the weak navy and maritime ability, the sea resources especially the fishery lack government supervision and monitoring. So, the illegal, unreported, and unregulated fishing has been a common problem along most of the coastal African countries. The illegal fishing activities are global problems that threatens ocean ecosystems and sustainable fisheries. It also threatens economic security and the natural resources that are critical to global food security. West Africa alone loses \$1.3 billion per year due to illegal fishing. Apart from draining the region of revenue, overfishing reduces fish stocks, lowers local catches and harms the marine environment. It destroys communities, who lose opportunities to catch, process and trade fish⁷.

The second challenge is the lack of experiences of marine economy. For a long time, African countries either ignored and/or had no ability for the development of marine economy. The main reason was the low level of industrialization and lack of the marine scientific and technological supports.

The small scale of high education on marine sciences in African countries is another challenge for the push forward blue economy. Only few African countries, as is the case for South Africa have the relatively strong high education in marine sciences. The blue economy requires skilled marine experts and technicians in different sectors. The developed nations such as United States, United Kingdom, France, Germany, Netherland, Japan, Korea as well as the developing countries such as China, Brazil, India have penetrated in various sectors of the economy in Africa. In the value chains of the blue economy African countries are just the resources supplier and export the original materials, which results in few benefits in the development of the blue economy.

⁷ Illegal fishing is robbing Africa of its ocean wealth. <https://www.weforum.org/agenda/2016/06/illegal-fishing-is-robbing-africa-of-its-ocean-wealth>

MULTILATERAL COOPERATION FOR AFRICA'S BLUE ECONOMY DEVELOPMENT

Africa is in an aspiring era with rapid development, and the world is interested in the resources and markets of the continent (AfDB/OECD/UNDP, 2014). The emerging nations and the developed countries both have engaged in Africa economic activities. For example, the marine fishery in west Africa, is mainly controlled by the EU fishery companies. In 2010, a green peace published a report titled *How Africa is Feeding Europe?* The report indicated the EU fishery agreements and the overfishing activities in West Africa (Obaidullah and Osinga, 2010). In the sea port and marine transportation sectors, the EU is the main stakeholders of the maritime business. In the sector of coastal tourism, there are predominantly US and EU hotels along the beaches of African countries. In the past decade the emerging nations such as China, India, Brazil as well as Russia payed were more involved in for doing business with Africa. Investment and trade are the main approaches in the economic cooperation with African countries. It is no doubt that the competition in the sectors of blue economy in Africa will be obvious. How to deal with the competition? How to balance the benefits among the African and foreigners? In this part, the author puts forward the idea of the multilateral cooperation for African blue economy development.

The multilateral cooperation should concern the interests and the benefits of both sides. The large continent with huge marine space provides the possibility of multilateral cooperation among different countries in Africa. The AU and other regional organizations such as IOC-Africa should mobilize experts to draw the roadmap of the multilateral cooperation in the sectors of blue economy, which is the guideline for the detailed multilateral cooperation. According to the influence of the investment and the trade of commercial goods with African countries, the UK, France, US, Netherland, Spain, Japan, Korea, India and China are the important partners of African countries. The multilateral cooperation indicates the more choice for African countries to push forward the cooperation, and the *Real Cooperation* in blue economy should base on the interests of the African countries. The *Real Cooperation* will further economic growth and increase employment as well as the sustainable development with minimal marine environmental impacts.

As a continent lacking sustained marine management, the main developed countries and emerging countries engaging in the cooperation of blue economy should take into consideration the interests of coastal African countries. Capacity building of African countries is needed, which will support the sustainable development of the blue economy. How to push forward the marine sciences and technology education and professional training is essential to African countries. In China, the government fellowship for the African students studying marine sciences in China is in a limited scale compared to the huge continent. There are more potentials for the high education cooperation on marine science and technology in the future. Some institutions in China recently involved the marine spatial planning, marine fishery management training workshops with African

countries. The EU, US, Japan, Korea also engaged in the cooperation of capacity building related to blue economy with African coastal countries.

CONCLUSION

African coastal countries have the strong will for the blooming of blue economy in the future. While Africa coastal countries are facing many constraints for the blue economy implementation. Blue economy development is not just a matter of policy decision, but also a complex system supporting this new economic sector. Capacity building is essential to African coastal countries. The multilateral cooperation in the fields related to blue economy will be the main stream in the process of the blue economy development. We hope to see a sustainable, and prosperous blue economy in Africa.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

- AfDB/OECD/UNDP (2014), African Economic Outlook 2014: Global Value Chains and Africa's Industrialisation, OECD Publishing, Paris, <https://doi.org/10.1787/aeo-2014-en>.
- African Union, 2014. Agenda 2063: The Africa we want (popular version / second edition). Online available: <http://archive.au.int/assets/images/agenda2063.pdf>
- BP, 2018. BP statistical review of world energy 2018. <https://www.bp.com/en/global/corporate/-energy-economics/statistical-review-of-world-energy.html>
- Denton, G. L., & Harris, J. R. (2019). Maritime Piracy, Military Capacity, and Institutions in the Gulf of Guinea. Terrorism and Political Violence, 1-27. <https://doi.org/10.1080/09546553.2019.1659783>
- Khanna, T. (2019). The normative role of the International Maritime Organisation in countering Somali-based piracy. Maritime Affairs: Journal of the National Maritime Foundation of India, 1-14.
- Obaidullah F and Osinga Y, 2010. How africa is feeding Europe?-EU (over)fishing in West Africa. Expedition report west Africa ship tour March 2010. <https://allafrica.com/download/resource/main/main/يداتcs/00021536:70636fd254b38068cd8002a90345cfd7.pdf>
- Pauli G A. The blue economy: 10 years, 100 innovations, 100 million jobs. New Mexico: Paradigm publications, 2010.
- Ren H, Tong R, Zhang Z. et al. Marine economy development in South Africa and prospects for Sino-South Africa marine economy cooperation. World Regional Studies, 2017, 27(4): 137-145 (in Chinese with English Abstract)
- UNECA (United Nations Economic Commission for Africa), 2015. Africa's blue economy: A policy handbook. Online available: <https://www.uneca.org/publications/africas-blue-economy-policy-handbook>.

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Sino-African Philosophical Conversations: Confucius and Black Africa

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INTRODUCTION

Thanks to the rising of China as a global player, the geography of reason is changing. This meteoric transformation is affecting the great figures of the Chinese science and philosophy. One of these reemerging personalities hitherto neglected is the antic philosopher Confucius (....) The interest in Confucius is justified by the massive mobilization of his philosophical heritage by the Chinese leadership in order to give a solid theoretical base to its acceptance of a new globalization governed by the principles of harmony, mutual understanding, reciprocal interest, friendship, cooperation and peaceful development. In parallel with this evolution, since three or four decades the global scientific consciousness experimented fundamental shifts in favor of the *de-centration* of the epistemological thought. The criticism of eurocentrism opened the windows to alternative models of truth, mainly the discourses from ex-colonies. So was born the “postmodernist” concept of “Southern epistemologies”. Meanwhile, the challenge of the liberation of Africa imposed the rediscovering of the ancient African cultural and intellectual tradition. Under the framework of the South-South cooperation, Africa and China engaged a new dialogue. What could be the philosophical foundations of the China-Africa cooperation? How can the two cultural worlds converse peacefully? Concretely, in what terms Confucius can be confronted to the abstractive thought of black Africa whether in philosophy, cosmogony, science, morality, ethics or politics? What theoretical principles can come out from this debate and how can each vision enrich the other? From the analysis of some African texts of Ancient Egypt, medieval and traditional Africa, our aim is to think philosophically the possibility of a Community with Shared Future between China and Africa.

1 - Philosophy of knowledge

A fundamental feature of Confucius philosophy is the importance given to knowledge and the gradual steps one's should go through to attain the perfect knowledge of things. Confucianism shares that feature with African antic and traditional epistemology.

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The path of the truth

The *Confucian Analects* (1893) opens by the celebration of the virtues of learning and knowledge. Confucius traces the path of the truth as pleasant, delightful and joyful. He says: "Is it not pleasant to learn with a constant perseverance and application?" (Confucius, 1983: 1). For Confucius, the perseverance and application in learning aim to avoid someone to fall into suspicious appearances and error which sometimes can take the mask of language and discourse: "Fine words and an insinuating appearance are seldom associated with true virtue" (Confucius, 1983: 2). What is valuable for moral virtue is also valuable for knowledge, and the only way to achieve great learning and perfect knowledge is permanent and constant self-examination. Confucius writes: "I daily examine myself on three points: -- whether, in transacting business for others, I may have been not faithful; -- whether, in intercourse with friends, I may have been not sincere; -- whether I may have not mastered and practiced the instructions of my teacher" (Confucius, 1983: 2). Confucius calls for the constant vigilance of the mind which is well-trained in self-reflection and is therefore able to discriminate fine appearances from the reality, marvelous illusions from the truth. He pursues: "If a man withdraws his mind from the love of beauty and applies it sincerely to the love of virtuous [...]: -- although men say that he has not learned, I will certainly say that he has" (Confucius, 1983: 3). Only by knowledge one's can achieve his personal attainment which is the chief aim of life. Therefore, Confucius can say: "I will not be afflicted at men's not knowing me; I will be afflicted that I do not know men" (Confucius, 1983: 5).

Confucius describes knowledge as a gradual process of six steps:

At fifteen, I had my mind bent on learning.

At thirty, I stood firm.

At forty, I had no doubts.

At fifty, I knew the decrees of Heaven.

At sixty, my ear was an obedient organ for the reception of truth.

At seventy, I could follow what my heart desired, without transgressing what was right. (Confucius, 1893: 7).

From the initial decision of learning and studying to the final stage where the mind is full of knowledge, each step marks a progress in the path of the truth. Knowledge is a cumulative system, a long, patient and ceaseless process of accumulation wherein the new discoveries are added to the old and perfect the old. Confucius says: "If a man keeps cherishing his old knowledge, so as continually to be acquiring new, he may be a teacher of others" (Confucius, 1893: 9). But teaching the truth is a process of learning, reading and thinking. All these aspects should be interlinked, above all learning and thinking. Learning is the exercise of the thought, and thinking is the base of learning. Knowledge is the combination of learning and thinking. Out of that combination, knowledge is not possible: "Learning without thought is labor lost; thought without learning is perilous" (Confucius, 1893: 10). Such state of separation of learning and thinking is dangerous and leads to false theories, to ignorance which is the contrary of

knowledge. Confucius warns: "The study of strange doctrines is injurious indeed!" (Confucius, 1893: 10). By that condemnation of strange doctrines, Confucius stands firm against irrationalism. He defends rationalism whose first manifestation is the recognition of one's ignorance. The rational construction of the truth through the exercise of reason and thought begins once the certificate of one's ignorance has been established first. Confucius underlines the humility attached to the process of knowledge: "Yü, shall I teach you what knowledge is? When you know a thing, to hold that you know it; and when you do not know a thing, to allow that you do not know it; -- this is knowledge" (Confucius, 1893: 10). In summary, knowledge is knowing that we don't know, hence learn, think, see, hear much, exercise the curiosity, ask questions, dissipate obscurity and doubts in the mind. Confucius clarifies the point: "Hear much and put aside the points of which you stand in doubt [...] See much and put aside the things which seem perilous" (Confucius, 1893: 10). The foundation of knowledge is permanent questioning, reasoning, self-reflection and curiosity: "The Master, when he entered the grand temple, asked about everything" (Confucius, 1893: 17).

The maxims of wisdom

More than four thousand years before Confucius, the oldest human civilization emerged near the Nile, in Egypt. It was a colony of black people coming from Ethiopia and Sudan, and who invented all the institutions necessary for civilization: arts, sciences, techniques, religions, philosophy, ethics, government, etc. The existence of Ptahhotep is fixed in the Ancient Empire of the Egyptian civilization during the reign of the Pharaoh Djedkarê Isési (2388-2356 BC). His teaching is considered being transcribed in a papyrus around 1800 BC, meaning more than one thousand and three hundred years before Confucius. It is known as "The Maxims of Ptahhotep". Although the distance due time, space and culture, the similarities in the teachings of the two Masters, Ptahhotep and Confucius, are striking, whether it is knowledge, moral precepts or the government of the State.

Ptahhotep's philosophy of knowledge focuses on three factors: humility, the infinity of knowledge and the importance of listening as the key attitude in the process of learning and knowing. The humble person is the one who is aware of his ignorance, he knows when and what he does not know. To reach the truth, he should deprive himself of any pretention and arrogance; then he starts to study and learn, independently of the status, the age or the richness of the counterpart. The humility of the learner is also the humility before knowledge itself, because knowledge has no limitation, and no one ever reached the totality of knowledge. Knowing is then a process and the wise man gives a try again and again, he keeps trying. Hence these phrases of Ptahhotep, probably the most famous words of wisdom from ancient Egypt, Maxim 1 of his teaching:

Let not your heart be vain because of what you know; take counsel with the ignorant as well as with the scientist, for one does not reach the limits of art, and there is no artisan who has acquired perfection. A perfect word is more hidden

than the green stone; yet it is found with the maids who work on the millstone (Ptahhotep, 20... : 2).

Maxim 2 of Ptahhotep's teaching is about the rules of contradictory debate. Ptahhotep advises not to oppose to a discussant stronger than you, but to keep quiet:

If you meet a debater in action, who directs his heart and is more skillful than you, bend your arms and curve your back; do not set your heart against him because you will not match him. May you lower the one who expresses himself badly by not opposing him when he acts; this is how he will be designated as an ignorant as soon as your heart has suppressed its overabundance. (Ptahhotep, 20... : 3)

In Maxim 3 also, Ptahhotep recommends silence as the best response to someone equal to you; let the discussant speak so that his ignorance will appear clear on everyone's eyes:

If you meet a debater in action, your equal, the one who is at your side, act so that your superiority over him is manifested by silence, even when he speaks badly. Those who listen to him will think badly of him, whereas your name will be perfect in the minds of the great ones. (Ptahhotep, 20...:)

In Maxim 4, Ptahhotep pledges to stand firm and calm before he who is inferior to you in a discussion, to not use violence and aggressivity against him, to let his inferiority be his main punisher:

If you meet a debater in action, a man of few who is certainly not your equal, your heart is not aggressive against him because of your weakness. Place him on the ground, and he will punish himself. Do not answer him to relieve your heart, do not wash your heart because of him who opposes you. Miserable is the one who hurts a man of few. We want to act according to what you want and you will strike it with the disapproval of the big ones' (Ptahhotep, 20)

These rules of conversation are the rules of wisdom, of logical thought, in other words the rules of reason and science. In Maxim 11 of his teaching, Ptahhotep stresses the necessity to live and act in conformity of reason, called by Blacks of Ancient Egypt, the Heart. Reason, the Heart, is the path of the truth and good life. Ptahhotep says:

Follow your heart the time of your existence, do not commit excess to what has been prescribed, do not shorten the time to follow the heart. To waste his moment of action is the abomination of the *ka*. Do not hijack your daily action too much for the maintenance of your house. Advance things follow my heart; things will not benefit the careless. (Ptahhotep.....)

Ptahhotep celebrates the virtues of living a rational life, a life governed by the thought, the heart rather than the stomach or passions. The rightness of the

heart affects the body and the community. The rational man, the ones acting according to the principles of the heart, will live a good and respectful life, full of admiration, benedictions and love. However, he who listens to his stomach, obeys to passions will gain hate and reprobation. Either his mind nor his body will develop. The path of the truth belongs to the heart (reason) and the path of error belongs to the stomach (passions). Let us listen to Ptahhotep in Maxim 14:

If you are in the company of people, get allies as a trustworthy man who reaches the heart; he who reaches the heart is he who does not circumvent the language in his belly. He will become a man who commands himself, a possessor of good thanks to his behavior. May your name be good without you talking about it. Your body will be nourished, your face will turn to your loved ones, and you will be offered what you did not know. The heart of him who hears his belly disappears; he will arouse disdain instead of love for him. The heart will be bare, and his body will not be anointed. The one with the big heart is a gift of god, the one who obeys his belly obeys the enemy (Ptahhotep....).

In Maxim 38, Ptahhotep defends, once again, the power of reason when the late regulates the discourse and it is informed by the senses of sight and hearing:

The knowing is wise because of what he knows, and the noble because of his way of acting. Let his heart regulate his tongue, let his lips be fair when he speaks, his eyes see, his ears delight in hearing what is useful to his son. He who acts righteously is free from lies (Ptahhotep, 20...)

Praise of intelligence and criticism of the marvelous

From the antiquity, African thought has given great value to intelligence and reflection. The tales and myths of traditional Africa confirm this rationalist orientation of the African spirit. Generally, African traditional thinkers use natural symbolism to express to their ideas. This symbolism often involves animals through which the thinker speaks to either promote the values of intelligence, reflection and prudence as the best guide in the life, or condemn mysticism, revelation, stupidity and brute force when they take the lead in the human conduct. In African oral traditional literature, Kulu-the-Turtle, Leuk-the-Hare, Guizo-the-spider usually represent the party of reason, intelligence, cunning, while Ze-the-Panther or Bouki-the-Hyena represent the party of stupidity and ignorance. The first are guided only by themselves and they trust only their reflection whereas the second are governed by instincts and they tend to believe into supernatural causes and miracles which expose them to error and deception.

For example, Leuk-the-Hare came in tears announcing the death of the king and his intention to succeed the throne. Facing the disapprobation of the assembly, he claimed: "The king is dead, but his soul is still alive. Let us go to his tomb, I am sure the soul will give me reason". But before going to the king's tomb, Leuk-the-Hare had taken care to arrange a deal with the Squirrel. The Squirrel spoke, and the assembly was convinced that it was the soul of the king who was

sopoken. Leuk-the-Hare became the king. Another tale is the ones about the conflict that opposed Ze-the-Panther and Kulu-the-Turtle. Any portion of land that Kulu wanted to cultivate, Ze claimed it was his. Weary of war, Kulu-the-Turtle appealed to the judgment of the Ancestors. Two graves were dug. Kulu-the-Turtle had the Rat-Palms dig a corridor from his grave to his house. On the day, she was thrown into her grave and immediately reached her home by the corridor, while Ze was well and truly buried. Kulu-the-Turtle came back to the others with, she claimed, news and gifts from the Ancestors! All the land in dispute was awarded to him (Towa, 1979: 33-34).

The last tale magnifying the power of intelligence over superstition and foolishness is about the conflict that opposed Kulu-the-Turtle and Ndoé-the-Eagle. To escape a commitment to Kulu-la-Tortue, Ndoé-l'Aigle built a small nest at the top of a large cheese and sent by Kosso-le-Perroquet this message to Kulu: " Tell Kulu that I came to build my home where nothing can happen to me. Kulu, upon receiving this message, thinks deeply to find an answer to the challenge. He prepared a rope for the glue and asked his wife to put it all in a package in which she would lock her up too. Kosso would give the package to Ndoé with the following message: "You have built your house where nothing can ever happen to you, know that, on my side, I built my home where nothing will ever exceed me". In fact, Kulu transported by Kosso landed at Ndoé dumbfounded. Carelessly pointing out to his host the inadequacy of his offspring, he offered him a small rite of fecundity, consisting in having his wings covered with glue. The ritual contained a prohibition, only one: " When I have coated your wings with this remedy, 'said Kulu,' do not spread them out any longer. If you spread them, you will die, as well as all your family ". Ndoé and his family complied with Kulu's orders, who could quietly put the glue on their wings; and when the glue had dried up and they were now unable to use their wings, Kulu exterminated them to the last. This tale is also explicit on the fact that supernatural and magical thought are a field where foolishness and falsity do flourish. The African traditional thinker underlines constantly the unlimited power that the intelligence confers, while recognizing that no one is perfect and does not exhaust the wisdom (Towa, 1979: 34-35).

In summary, very surprisingly, Chinese classical thought and black African thought, whether antic or traditional, have a lot in common. Through the antic elaborations of Confucius and Ptahhotep, we see that the two philosophical traditions share the same defense of rationality as the only path of truth and knowledge. To know, reason does not operate alone, reason is accompanied by the activity of organs of sense like the sight and the hearing which inform the thought and help the formation of judgement. Using a modern language, we can say that both Confucius and Ptahhotep are empiric rationalist thinkers. Adding the symbolic thought of the traditional African thinkers through their myths and tales, it appears that the two philosophical traditions of China and Africa show together a strong condemnation of ignorance and warn against the illusions of the body, passions and language which is not trained to truth. Both philosophical traditions pose humility and curiosity as the condition of science and consider that wisdom is the goal of human existence. They both consider that intelligence,

though supreme guide of life, is not infallible. Wisdom and knowledge are unlimited.

2 - Ethics and politics

Another aspect of Confucius philosophy is the rationalism of his ethical and political conceptions which are based on the notions of *virtue*, *harmony* and *filial piety*. On this field, striking similarities with the African classical philosophy remain through notions like *Mâat* in the Ancient Egypt.

Virtue and self-cultivation

Virtue is the key concept of Confucius philosophy and is exposed in *The Great Learning*. Confucius explains that the book is about how to “illustrate the illustrious virtue; to renovate the people; and to rest in the highest excellence” (Confucius, 2...: 1). As the highest value, the supreme excellence consists into “calmness”, a “calm unperturbedness”, a “tranquil repose” which are unreachable without a “careful deliberation” (Confucius, 2...: 1). This serious and attentive deliberation is the roots of everything, it is the beginning and the end. From the outset, Confucius lays the rational foundation for the virtue that derives from the activity of critical thought. Rationality leads to morality. This activity of critical reflection leading to morality has a name: self-cultivation. As the starting point of virtue and the root of everything, Confucius underlines that the regulation of the person leads to the regulation of the family, the State, the Kingdom and the word. Conversely, the regulation of the world supposes the regulation of the Kingdom, the regulation of the State, the regulation of the family and, finally, the well regulation of the person. Confucius used here two models of reasoning which are induction and deduction.

What about the regulation of the person?

The regulation of the person lays on the cultivation of the self. This self-cultivation begins, according to Confucius, by the rectification of the heart. The cultivation of the person supposes the change by the person of the disposition of his heart. That change cannot be done without a certain purification of the mind, operation that requires to make the thoughts sincere. If one wants to cultivate his personality in order to attain the moral excellence, he should first have sincere thoughts. Confucius said: “Wishing to cultivate their persons, [people seeking virtue] first rectified their hearts. Wishing to rectify their hearts, they first sought to be sincere in their thoughts” (Confucius, 2...: p. 1). The notion of *sincerity* is capital in Confucianism, because it means the rejection of self-deception and evil. Confucius constantly opposed two categories of man, the mean man, attracted by the evil, and the superior man, attracted by the beauty of the action and thoughts. Only one thing makes possible the sincerity of thoughts and the rightness of the heart: introspection and rational vigilance. Confucius claims: “The superior man must be watchful over himself when he is alone” (Confucius, 2...: 2).

The mean man doesn't have that force to examine his own mind by his own and to adjust correctly his behavior. He is a man of trouble, whereas the superior man is full of mastery, calm and "self-enjoyment". In the absence of the superior man, the man engaged in the self-cultivation, the mean man will use each kind of evil to attack him and to intimidate people; but before the superior man "he instantly tries to disguise himself, concealing his evil, and displaying what his good. The other beholds him, as if he saw his heart and reins" (Confucius, 2...: 2). Confucius establishes here the ethical superiority of virtue over evil. This superiority lays on the fact that virtue is obtained after a long exercise of meditation and self-meditation, reflection and self-reflection through which thoughts become sincere and pure. According to Confucius, sincerity is what people and nations revere the most. He can say: "What ten eyes behold, what ten hands point to, is to be regarded with reverence" (Confucius, 2...: 2). Virtue and sincerity, there are the true dignity of men and nations. Let us listen to Confucius again: "Riches adorn a house, and virtue adorns the person. The mind is expanded, and the body is at ease. Therefore, the superior man must make his thoughts sincere" (Confucius, 2...: 2).

Virtue and the regulation of the family

Once the heart is rectified, pure and ruled by sincerity and good thoughts, therefore the self-cultivated person can pretend to the regulation of his family. Indeed, how could he regulate his family if he cannot regulate himself, meaning if he cannot master his passions, control the excesses of his body, his mind, his words? How can man regulate his family if he cannot turn the back to his fears, distress, affective complaisance and subjective inclinations? Busy to day to day self-renovation, he can teach to his relatives the routes of virtue. Confucius is clear on that matter: "The regulation of one's family depends on the cultivation of his person" (Confucius, 2...: 4). Confucius is aware that partiality may result of human's compassion, affection, preference, awe and reverence. He points clearly out that "there are few men in the world who love, and the same time know the bad qualities of the object of their love, or who hate and yet know the excellence of the object of their hatred" (Confucius, 2...: 5). Only the cultivated man with clear mind and right thought is able of such balance and objectivity. To obtain that balance, the man of virtue should follow strict principles in the relation with the relatives. These principles are: *filial piety*, *fraternal submission*, *kindness*, and *benevolence*. According to filial piety, the son should serve his father; following the principle of fraternal submission, the elders and superiors should be served by the youngers and inferiors; the principle of kindness requires the whole family to be treated nicely by the father; and benevolence is the necessity to not be treated with violence and brutality. This is how the family will be regulated by a self-cultivated man.

The *Confucian Analects* opens by remarkable definitional considerations on filial piety and fraternal submission as the foundation of all virtuous practice. Hence can we read:

They are few who being filial and fraternal, are fond of offending against their superiors. There have been none, who, not liking to offend against their superiors, have been fond of stirring up confusion [...] Filial piety and fraternal submission! – are they not the root of all benevolence actions? (Confucius, 1893: 1).

Confucius enumerates the principles of self-cultivation, principles of duty and virtue, which are the same than the principles of filial piety and benevolence: faithfulness and sincerity; equality in friendship; acceptance and abandonment of faults. The key point in filial piety is to serve his parents. Confucius teaches that “while a man’s father is alive, look at the bent of his will; when his father is dead, look at his conduct. If for three years he does not alter from the way of his father, he may be called filial” (Confucius, 1893: 4). Later, Confucius makes precisions: “Mang Î asked what filial piety was. The Master said, “It is not being disobedient” (Confucius, 1893: 7). What does it mean? “That parents, when alive, be served according to propriety; that, when dead, they should be buried according to propriety; and that they should be sacrificed to according to propriety” (Confucius, 1893: 7). The serving of parents, whether alive or dead, with propriety, that is filial duty. Confucius stresses particularly on the fact if “the filial piety nowadays means the support of one’s parents” (Confucius, 1893: 8), this support should be accompanied by reverence. Filial piety is the care of parents with propriety, reverence and cheerful countenance, alive or dead. In the same manner, “parents are anxious lest their children should be sick” (Confucius, 1893: 7). They care of them with cheerful countenance. This is the reason why their education to virtue should be strict and based of filial piety. Confucius concludes: “A youth, when at home, should be filial, and, abroad, respectful to his elders. He should be earnest and truthful. He should overflow in love to all and cultivate the friendship of the good. When he has time and opportunity, after the performance of these things, he should employ them in polite studies” (Confucius, 1893: 6).

Virtue and the regulation of the State and Kingdom

It is only once the principles of filial duty are well respected within the family and form the heart of his stability and harmony that they can be extended to the governance of the State. They form the core qualities of a good ruler. *The Great Learning* of Confucius says: “In order rightly to govern the State, it is necessary first to regulate the family” (Confucius, 2....: 4). The reason is that: “It is not possible for one to teach others, while he cannot teach his own family” (Confucius, 2....: 4). He who regulates well his family will regulate well the State. Confucius states: “From the loving example of one family a whole State becomes loving, and from its courtesies the whole state becomes courteous while, from the ambition and perverseness of the One man, the whole state may be led to rebellious disorder” (Confucius, 2....: 4). The sovereign cannot require to his people to be excellence if he himself is not morally excellent. For Confucius, when the ruler, as father, a son, and a brother, is a model, when he rules his family with sincerity, then the people will imitate him and love him.

In *Confucian Analects*, it is said: “He who exercises government by means of virtue may be compared to the north polar star, which keeps its place and all the

stars turn towards it" (Confucius, 1893: 6). Confucius is convinced that governed by laws, people seek to avoid punishments and develop no feeling of shame and goodness; but governed by virtue, "they will have the sense of shame, and moreover will become good" (Confucius, 1893: 6). The people will obey the virtuous and upright ruler, and will not obey the vile, mean and unjust ruler: "Advance the upright and set aside the crooked, then the people will submit. Advance the crooked and set aside the upright, then the people will not submit" (Confucius, 1893: 11).

The person well cultivated and daily renovated, the family regulated by filial piety, fraternal submission, kindness and benevolence, the State regulated on the same model of duty, therefore the kingdom will be happy and peaceful. According to Confucius, "the making of the whole kingdom peaceful and happy depends on the government of his State" (Confucius, 2...: 5). The sovereign will treat his elders like they deserve to be treated, he will treat compassionately the youngers and the poor, then the people will do the same to him. To achieve that goal of making the kingdom perfect, "he may regulate his conduct" (Confucius, 2...: 5). In fact, an important basis of Confucianism is that: do not do others you would not like him to do you:

What a man dislikes in his superiors, let him not display in the treatment of his inferiors; what he dislikes in inferiors, let him not display in the service of his superiors; what he hates in those who are before him, let him not therewith precede those who are behind him, let him not bestow on the left; what he hates to receive on the left, let him not bestow on the right" (Confucius, 2...: 5).

We assist here to the extension of the principle of self-cultivation and filial piety at the level of the Kingdom. The Sovereign should be careful in his conduct. He will choose one minister, plain and sincere, with a simple, upright mind. For Confucius, "virtue is the root; wealth is the result" (Confucius, 2...: 6). *The Doctrine of the Mean* recapitulates the Confucius nine standard rules that should guide the good sovereign in the government of the kingdom:

All who have the government of the kingdom with its states and families have nine standard rules to follow: the cultivation of their own characters; the honoring of men of virtue and talents; affection towards relatives; respect towards great ministers; kind and considerate treatment towards the whole body of officers; dealing with the mass of people as children; encouraging the resort of all classes of artisans; indulgent treatment of men from a distance; and kind cherishing of the princes of the states. (Confucius, 1893: 11)^b.

Harmony and the doctrine of the Mean

In Confucius, virtue is a state of tranquility, calmness, the absence of troubles and tensions in the body and in the mind. What the duty brings to man is the excellence by which he is said a *superior man*. Man following the Path of duty, which is the law of Nature, the superior man, the man with self-reflection, the self-cultivated and rational man lives in a state of perfect *Harmony* and

Equilibrium. By his vigilance, he avoids and ignores extremities in his conduct, words or thoughts, whether joyful or sadness, anger or kindness, stirring or pleasure. The superior man is virtuous because he is not submitted to the dictatorship of passions. In *The Doctrine of the Mean* it is written:

The path [of duty] may not left for an instant. [...] Therefore, the superior man is watchful over himself, when he is alone. While there are no stirring of pleasure, anger, sorrow, or joy, the mind may be said to be in the state of Equilibrium. When those feelings have been stirred, and they act in their due degree, there ensues what may be called the state of Harmony. This Equilibrium is the great root from which grow all the human actions in the world, and this Harmony is the universal path which they all should pursue. Let the state of equilibrium and harmony exist in perfection, and a happy order will prevail throughout heaven and earth, and all things will be nourished and flourish" (Confucius, 1893: 1)^b.

The superior man, the man of virtue and duty stays in the middle, he is the man of the mean, the man of harmony because harmony consist to hold firmly the contraries and to maintain them in state of equilibrium: Confucius says: "The superior man embodies the course of the Mean; the mean man acts contrary to the course of the Mean" (Confucius, 1893: 1)^b. He pursues: "The superior man's embodying the course of the Mean is because he is a superior man, and so always maintains the Mean. The mean man man's acting contrary to the course of the Mean is because he is a mean man, and has no caution" (Confucius, 1893: 1)^b. Few people are able of this Harmony consisting is standing in the Mean, most of the people cannot choose the middle, they lack the energy, the forbearance and the gentleness to maintain the extremes till the end. On the contrary, "the superior man cultivates a friendly harmony, without being weak. – How firm is he in his energy! He stands erect in the middle, without inclining to either side. – How firm is he in his energy!" (Confucius, 1893: 3)^b. Harmony of contraries, friendly harmony and reciprocity between the opposites, rejection of destructive conflict, this is the path of duty and knowledge. Besides sincerity, the principle of reciprocity is of great importance to understand the doctrine of harmony that Confucius finally recapitulates again in four major principles which are themselves principles of filial piety:

To serve my father, as I would require my son to serve me [...]; to serve my prince as I would as I would require my minister to serve me [...]; to serve my elder brothers as I would require my younger brother to serve me [...]; to set example in in behaving to a friend, as I would require him to behave to me [...]. Earnest in practicing the ordinary virtues, and careful in speaking about them (Confucius, 1893: 5)^b.

Instructions to Vizier and the principle of Mâat

If similarities can be drawn between Confucianism and doctrines of Ancient Greece like Socratism, Platonism, Epicureanism or Stoicism, it is crucial to notice how much the same similarities exist with the African tradition of thought in the thematic of ethics and politics.

A text of Ancient Egypt perfectly illustrates this accordance. It is entitled *Instructions given to Vizir Rekhmiré* (-1550-1292 B.C), written in the XVIII dynasty under the reign of Pharaoh Thoutmosis II. In other words, the text is a thousand years older than the precepts of Confucianism and presents the vision developed by the ancient Negro-Africans about a public space governed by the principle of harmony carried by *Mâat*, Truth-Justice. The text says that it is not an easier task to be a Vizier, a Judge, because you should pay attention to make things conform to law and to what is right for the people. Hence, justice can be insured for each man:

Do you see, being vizier is not something sweet and agreeable, it is even sometimes bitter like gall [...] Complainants from the South and the North, from the whole country will come... You will make sure that all things are done according to the law; also, in accordance with their law, ensuring justice for every man (Lalouette, 1984: 182-184).

The task of the judge consists to the strict respect and application of law, knowing that law itself is just. The judge should be just. Besides, his visage should be known to all, so that he will act openly, and his actions will be known to all. Justice doesn't obey to the principle of secrecy; it is a public process submitted to debate and deliberation. Anyone who feels aggrieved by a court decision has the right to complain. In order to avoid such a situation, the judge must act impartially, that is, only in accordance with the law. Impartiality is the duty of judge, and only the impartiality and righteousness of his judges give stability to the kingdom and reverence to the king:

Consider this sentence which is in the Book of Memphis and which says: "To revered king, Vizier respectful of the laws ..." [Keep also] of what was said of the vizier Khety, to know that it injured his relatives for the benefit of others [...] But it is the abomination of God that the partiality [...] Consider the one you know in the same way as the one you do not know, the one who is close to you by relatives like the one who is far from your home (Lalouette, 1984: 182-184).

To the judge, the text preaches listens, patience, weighting, moderation, benevolence and gentleness. They are the necessary complements of righteousness, truth and justice. It also advises the judge not to be excessively feared, not to be feared beyond the limits of law, for otherwise he will be seen as a wicked man:

Do not dismiss a plaintiff without paying attention to his words (...) Do not get angry with a man wrongly; only be angry with him who deserves it. Inspire fear so that we are afraid of you; it is a (true judge) whom one dreads. but, do you see, the dignity is to practice justice; and if a man is dreaded (excessively), the opinion of the people will be that there is in him something bad, and one will not say of him: he is a man (Lalouette, 1984: 182-184).

Millennia before Confucius, the black Africans of Egypt considered equity as the fundamental base of civil society and public space. Here, equity means the

respect of laws and balance as well. That balance and equilibrium is due to *Maât*, the principle of Truth and Justice, the supreme Law which regulates the universal harmony of the world, nature, society, State and morality. The practice of judge should obey to this law of harmony in each action: in one side he will accord himself to Truth, and in another side, he will follow Justice. The text concludes: "See, therefore, the scribe-in-chief of the vizier "Scribe of Truth-Justice" [...] As for the room in which you will give audience, there is in it a "large room", called "of the two Maât ", where you will make your decisions" (Lalouette, 1984: 182-184).

In fact, in Ancient Egypt, when the soul of the deceased commits his journey for eternity, he presents himself before the God Osiris with the scale carrying Maât, the Truth and Justice. There, like in this other text of Ancient Empire, the soul pleads his case and claims his purity:

I did not do any evil to any man.
I did not make my family unhappy.
I did not do villainy in the abode of truth.
I did not have any acquaintance with the evil. I did not hurt.
I did not do, as leader of men, never work on the task. My name has reached the boat of supremacy, my name has reached the dignities of supremacy, abundance, and commandments; there have been neither fearful nor poor, unhappy, or unhappy.
I did not do what the gods hate.
I did not mistreat the slave by his master.
I did not make you hungry.
I did not cry.
I did not kill.
I did not order to kill treacherously
I did not lie to any man.
I have not plundered the provisions of the temples.
I have not diminished the substances consecrated to the gods.
I did not remove the loaves or the strips of the mummies. "I have not fornicated. "I have not committed a shameful act with a priest of my religious district.
I have neither overfilled nor decreased supplies.
I did not exert pressure on the weight of the scale.
I did not defraud the weight itself of the scales. -I did not move the milk away from the infant's mouth.
I did not take control of the cattle in their pasture.
I did not catch the birds of the gods.
I did not fish for corpses.
I did not repel the water at the time of the flood.
I did not divert the course of a channel.
I did not extinguish the flame at its time.
I did not defraud the gods of their offerings of choice.
I did not repulse the cattle of the divine property.

I did not stand in the way of a god in his outings in procession. I am pure, pure, pure ... There will be no evil against me in this Hall of Truth, since I know the names of the gods who are with you in the Hall of Truth. So, deliver me from them (Pierret, 1882: 369-372).

Here lays the importance of morality, justice and harmony in ancient Egypt, moral themes that will be found a few centuries later in Confucianism.

The Teachings of Sanéné and Kontron

The Mande Charter, an extraordinary text written in the Empire of Mali in the 13th century, extends in medieval times the African tradition of moral virtue and social justice inherited from ancient Egypt and so close to Confucianism. Founded by Soundjata Keita in 1236, Empire of Mali was certainly, with China, the most advanced and cultured nation in the world in the Middle times, while it is more and more admitted that the Malians, remarkable navigators, reached the American coast long centuries before Christopher Columbus. With an impressive sense of anticipation, the Malians proclaimed the universality of human life and the intangibility and inviolability of human body:

The children of Sanéné and Kontron declare: all human life is a life.

It is true that a life appears before another life,

But a life is not “older”, more respectable than another life,

Just as one life is not superior to another life. (Tata Cissé, Sagot-Duvaouroux, 2003)

The consequence of the proclamation of the metaphysical equality of human beings is the recognition of their social equality which is guaranteed by law:

The children of Sanéné and Kontron declare: all life being a life, all wrong done to life requires reparation.

Consequently, let no one take his neighbor for free;

Let no one harm his neighbor;

May no one martyrize his fellow man.

The *Charter* reaffirms the old African and Confucian exigency of filial piety, reciprocal loyalty in friendship, care of relatives, reverence, love and kindness for parents, education of children, benevolence for family:

The children of Sanéné and Kontron declare:

Let each one watch over his neighbor;

Let everyone venerate his parents;

That everyone educates his children;

That everyone provides for the needs of family members.

Most interestingly, the Charter, condemns starvation, banishes physical punishments and puts an end to slavery:

The children of Sanéné and Kontron declare:

Hunger is not a good thing;
Nor is slavery a good thing;

.....

There is no worse calamity than these things,
In this world.

....

War will never destroy villages to take slaves;
That is to say that no one will now place the bit in the mouth of its like,
To sell it;
Nobody will be beaten in Mandé either,
A fortiori put to death, because he is the son of a slave.

More than five hundred years before French Revolution, *The Charter of Mandé* concludes with a formidable declaration of the universal rights of man to freedom, equality and dignity:

As a result, the children of Sanéné and Kontron declare:

Everyone now has their own person,

Everyone is free to act, in respect of the "forbidden", the laws of the homeland.

Such is the oath of the Mandé,

At the address of the ears of the whole world. (Tata Cissé, Sagot-Duvaurox, 2003).

This declaration attests to the modernity of the African spirit before foreign invasions. At the same time, it reminds how far the comparison between African philosophy and other conceptions, like those from Asia, specifically China can go. Other sources like those from Ancient Egypt or African traditional tales show that both traditions of China and Africa share notions like filial virtue, filial piety, respect for elders and parents, benevolence, harmony in the soul and the government, truth and justice in the laws.

3 - Cosmogonies, cosmology and philosophy of nature

Let us end this comparison study between Confucius and African philosophical spirit by rapid remarks on philosophy of nature and origins in both traditions of thought. Interesting convergences could come out from such theoretical enterprise.

Confucius and the triadic conception Sky-Earth-Man

According to a study published by the French-Chinese philosopher A. Cheng, the true character of Confucianism is the establishing of a perfect correspondence between three elements: the Sky, the Earth and Man.

According to A. Cheng, unlike the West, there is no supra-nature, a world of ideal essences which would be the metaphysical foundation of the material world. Before reality, Chinese tradition gives attention to humility and harmony instead of opposition and the quest of Being. Naturalism and pragmatism are the normal orientation of Chinese mind which recognizes a center in everything, but a center born from the original breath, *qi*, and founded on the harmony interaction between the three elements of Sky, Earth and Man. In Confucianism, the balance between the three is necessary to the stability and permanence of everything. This balance is the object of the doctrine of the Mean. The Mean penetrates human hearts and Harmony rules the movements of the Sky and the Earth. Respect the laws of each of them, this is wisdom. The wise man doesn't speculate on the nature of the Sky, "he does not compete with the works of Heaven. Heaven has its reasons, the Earth has its resources, Man has his political order, thus forming with the first two a triad. But he is wrong if he does not respect the foundations of this triad" (Cheng quotes *Xunzi*, 1983: 14).

A. Cheng discovers this emergence of Man in the cosmos and the birth of Chinese humanism in IIIth century BC. Henceforth, Man is the center of the universe, the Middle, but not in a way where he is the commander in chief; he follows the Path of Harmony and balance within things, the Path of the Sky and the Path of the Earth. The three are interdependent, they are interconnected as clearly shown in the *Sancai*, the "Three Powers" (Cheng, 1983: 15): the Sky engenders things accordingly with the nature and destiny that they dispose potentially or virtually; hence everything in the three orders (Sky, Earth, Man) obeys to a principle of harmony and necessity. The Confucian dominant in the interpretation of *Sancai* engages that cosmologic process are rational, intelligible to man who can conform his conduct to them. As the Middle between Sky and Earth, Man is also full of humility before them, proud is a mortal danger for him. Confucianism consists in accomplishing the ways of the universe, and not influencing and bending them. the effort of man is to go in the same direction as that of the cosmic forces with which he has a relation of collaboration. A. Cheng thus reveals in Confucianism a phenomenon of correspondence between the cosmic world and the human world, even a phenomenon of anthropologization of the cosmos and cosmologization of man (Cheng, 1983: 18-19).

The technomorphous demiurge in Mvett cosmogony

The principle of harmony in the cosmos, the term-term co-relation between man and nature, as well as the refusal of a God who creates the world according to his will alone, are certainly points peculiar to Confucianism, which is found strangely in African systems. Let us illustrate this observation with the cosmogony of *Mvett* sang by the Fang, a people of Central Africa, about the origins of the world. According to the Fang, at the beginning, there is the Nothingness, *Eyo*; then it engenders by his own force *Akii-Ngos*, copper-egg which became bigger and bigger and exploded in a series of beings engendering *Minkut-Mi-Akii*, les nuages, which himself engendered *Biyema Yema Mi-Nkut*, which engendered Zama mebege, which engendered Kara Mebege, etc. We

notice that the explosion of the Primitive egg is made near a forge producing a fire in four mathematic angles and before the technician armed with his hammer. The first thing with this cosmogony is that Being is not an ex-nihilo creation, but it is a process consist to put in form the pre-existent material; like in Chinese tradition, African culture ignores the idea of an omnipotent and omniscient God. Secundo, the plan of production of the beings is rational, because it obeys to mathematical principles, it is an intelligible process like in Confucianism. Tertio, like in Chinese tradition, in African traditions the formation of cosmos is often made in presence of man; man, with his intelligence and practical activity, represents the heart of the cosmos. But like in Confucianism, he follows the law of nature and obey them. He is a part of cosmos and lives in adequate correlation with the nature. In Africa and as well in China, we have specific form of naturalism and realism.

CONCLUSION

Confucianism appeared two thousand and five years ago in China. That philosophy developed epistemological, moral, political and cosmological principles founded on self-culture, rationality, virtue, filial piety, benevolence, harmony and balance. In knowledge, ethical conduct, government activity, social life or the functioning of cosmos, Confucius prescribed to follow the Path of the Mean, the Middle, Equilibrium. The same principles are easily noticeable in African philosophy and systems from ancient black Egypt to traditional African cosmogonies passing by great text of Medieval era. In the same manner that Chinese, Africans also stress on values like reason, kindness, respect and reverence for the parents, justice and equilibrium in government, social life and cosmologic process. For ancient Egyptians, for example, Maât is the supreme law regulating the harmony of things, beings and humans. Africa and China civilizations are both founded on the principle of Harmony. These convergences between the two oldest civilizations in the world should be underlined, better explored and deepened for a better understanding in the new era of China-Africa cooperation. Although the geographical distance, the two cultures share important common values. Know them and expose them will open new perspectives for scientific research. The challenge is consists in reshaping the geography of reason and enlarging the frontiers of knowledge for a community of shared destiny between China and Africa.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Cheng, A., (1983), « De la place de l'homme dans l'univers : la conception de la triade Ciel-Terre-Homme à la fin de l'antiquité chinoise », in *Extrême-Orient, Extrême-Orient*, pp. 11-22.
- Cissé, T., Sagot-Duvaurox (2003), *La Charte du Mandé. La déclaration mandingue des droits de l'homme*.

Confucius, - *The Great Learning*.

The Analects, or Confucian Analects, translated J. Legge.

The Doctrine of the Mean

Diop, C.A., (1954), *Nations nègres et Cultures*. Paris; Presence Africaine

Lalouette, « Instructions données au vizir Rekmirê »

Pierret, P., (1888), *Livre des morts des Anciens Égyptiens*, d'après le papyrus de Turin et les Manuscrits du Louvre, par Paul Pierret, conservateur, du musée égyptien du Louvre, Ernest Leroux éditeur, Paris , 1882, pp.369-372. Ptahhotep,

Towa, M., (1979), *L'Idée d'une philosophie négro-africaine*, Clé, Paris.

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Ideological Cleaning: Why the New Brazilain Government Combats the General History of Africa?

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INTRODUCTION

The paper presents a brief reflection on two moments in Brazil's history (1960 and 2003). Moments in which Africa entered in the national political agenda strictly in terms of economic interests of the Brazilian business community. However, the predominant discourse in both periods was about the "brother peoples" synthesized in the phrase: "a rediscovery of Africa and a reunion of Brazil with its roots".

The difference between the two periods is precisely that the rediscovery and re-encounter with Africa, at present, is a historical construction of the Brazilian Black Movement, anchored on the General History of Africa as a foundational theme. What the new regime is trying to deconstruct when attacking Affirmative Action for Blacks is the kind of solidarity triggered by the re-encounter with the part of Afro-Brazilian history still denied today in the Brazilian educational system curricula.

1 - Redefining the place of Africa in Brazil: from economic use to recognition of cultural contribution

The beginning of the twenty-first century brought with it, in the Brazilian and Latin American case, a (significant) significance of the place of Africa in the imagination of economic and political elites, it must be recognized that this process was already in progress since the early 1960s.

It is worth mentioning the important book / essay by José Honório Rodrigues (1961) entitled "Brazil and Africa: new horizon", which in the literature on the subject is considered a landmark by repositioning the importance of the African continent, especially the former Portuguese colonies, in the context of changes in international relations that were opening up to the process of decolonization of the African continent. Fernandes, for example, in critically reviewing the book,

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although he does not share the author's political optimism regarding the importance he attributes to the position of Jânio Quadros in proposing a new policy for the African continent, recognizes the contribution of the author and draws our attention to, among others, three aspects of the book / essay that interest us here, namely: the first when Rodrigues analyzes the mutuality of Brazilian and African contributions; the second, when the author refers to the memory of historical-cultural formation (the meaning of African cultures in the formation of the Brazilian people), the geographic position (mediated by the South Atlantic that Brazil and the African continent bear) and, finally, the political aspect at the time of disintegration of the European domain and the field of possibilities that opened in that context if Brazil were not distant from the destiny of Africa.

Fernandes's remarks were based on the observation that Brazil had only sucked Africa out of human contingents and was not even in a position to constructively take advantage of the cultural values of which they (the Africans) were carriers (O Estado de São Paulo, January 27 of 1962, p.10, Literary Supplement).

Since then, the challenge has been an approach with the African continent that, in addition to economic, political, transnational and geopolitical factors, establishes new bases of understanding of Africa permanently recreated in Brazil and in the Americas, which can be known and recognized in its richness of expressions.

2 - The Role of the UNESCO 1950 Project

A central concern of the emerging United Nations Educational, Scientific and Cultural Organization (UNESCO), since its foundation on 16 November 1945, was how to find solutions and successful experiences in relation to ethnic and racial problems.

Racism gained visibility through the results of the war, in particular the consequences of fascism and Nazism within Europe itself. It is worth noting that the questions surrounding the continuity of colonialism in Africa and Asia were the result of the struggle by the colonised peoples themselves.

Brazil was one of the countries chosen as an example of harmonious race relations in the early 1950s. The results of the UNESCO survey are well known, and the claims made by black organisations throughout the twentieth century demonstrate that the Brazilian "racial democracy" propaganda can at best be interpreted as a successful myth. There are other versions not emphasised by the official histories that take into account the experience of the various peoples and countries in South and Central America (Latin America) where the so-called mestizo, blended, syncretic, creole, hybrid, etc. societies are to be found. These show how the elites have developed and operationalised a discursive ideological logic of proximity and similarity, in contrast to societies operating ideologies that emphasise distance and cultural differences, as is the case of the United States.

Another version usually omitted is described in detail in a book by Abdias do Nascimento (2002) entitled "*O Brasil na mira do Pan-Africanismo*"¹, in which the author describes the history of rejection of the black population in the country and the trajectory of what he calls the "genocide" of black Brazilians. The Brazilian racial situation was also denounced in an Open Letter dated 1966 addressed to the First World Festival of Negro Arts held in Dakar, Senegal².

3 - Africa is within Us: The New context between 1988 and 2014

The demands of the black movement in Brazil began to be partially institutionalised in the country's political agenda through law no. 7716, which became effective on 5 January 1989³. On 9 January 2003, at the beginning of President Luiz Inácio Lula da Silva (Lula)'s first term in office, law no. 10,639 was passed, which amended the Lei de Diretrizes e Bases (LDB) – the law on the guidelines and bases for national education – introducing the obligation to teach Afro-Brazilian and African history and culture as part of the country's elementary education. Two other important laws were no. 12,288 of 20 July 2010⁴, and no. 12,711 of 29 August 2012⁵.

On the whole, the new legal framework has partially responded to the demands of a series of social struggles developed by the black population since the establishment of the Brazilian republic in 1889. Relevant milestones of this period, as set out in the literature on the subject, are the emergence of the black press in the first two decades of the twentieth century, the *Frente Negra*

¹ Africanism is a system of thought that is built on a strong belief in the existence of a specific African way of life and way of being, feeling and thinking in the global world, its origins have been reframed through social movements and doctrines such as Pan-Africanism, Negritude, Cultural Nationalism, Afrocentrism, African Path, etc. It has, either directly or indirectly, constructed epistemic and ideological perspectives that focus not only on the definition and meaning of Africa and Africanness, but also on the imaginative possibilities available to reposition Africa's contribution in global and transnational terms.

² The letter can be found in full in the book's appendix, between pages 321 and 332 of the second edition (2002).

³ Law 7,716 defines crimes resulting from racial prejudice. The legislation establishes the penalty of imprisonment for those who have committed acts of discrimination or prejudice on the grounds of race, colour, ethnicity, religion or national origin. This sanction enacts the section of the Federal Constitution that makes racism an indefeasible crime not subject to bail, after stating that all citizens are equal without discrimination of any nature. The law has become known as *Caó* in honour of its author, Deputy Carlos Alberto de Oliveira. As of 5 January 1989, anyone guilty of discrimination in denying an individual access to public service positions or refusing to hire workers in a private company must be imprisoned for two to five years.

⁴ Establishing the Racial Equality Statute. In its preliminary provisions, article 1 of the said statute states that it is "intended to guarantee the black population effective equal opportunities, defence of individual, collective and diffuse ethnic rights and the fight against discrimination and other forms of ethnic intolerance."

⁵ Law no. 12,711/2012 guarantees that 50% of enrolments per course, per cohort, in the State system (Universities and Institutes of Education, Science and Technology), will be reserved for students who have carried out the whole of their studies in the State secondary system, either through regular or youth and adult education courses. Through its third article, the law ensures that 50% of places for every course and cohort, in each institution, will be filled by students who have declared themselves black, mixed race or indigenous, the proportion of which should at least be equal to that of black, mixed race and indigenous students in the population of the unit of the Federation where the institution is located, according to the last census by the Brazilian Institute of Geography and Statistics (IBGE). <http://portal.mec.gov.br/cotas/perguntas-frequentes.htm>.

Brasileira (Brazilian Black Front) of the 1930s, the *Teatro Experimental do Negro* (Black Experimental Theatre) in the 1940s and the resurgence of the *Movimento Negro Organizado* (Organised Black Movement) in 1978. It is important to note that activities were carried out during this period that sought to secure subsidies to guide public authority actions. These included conferences, congresses and the creation of associations, with different objectives, generally concerned with the full integration of the black population in society at large.

What all these organisational initiatives have in common is the central demand for more education for this population. Actions were indeed instigated to this end using the meagre resources available to the black community. However, the demand for more education accompanied important social changes. For example, until the Second World War, integrationist tendencies could be observed among leaders within the black community, with a distancing from their African origins. During the post-war period, the independence of several states on the African continent, the American black movement and its civil rights demands and, in the case of Brazil, the conclusion of the national segment of the Unesco project related to São Paulo, were all indicative of a climate of social change that impacted upon the black population of African origin. This conditioned their possibilities of social ascension in a context of profound social transformations, characterised by the situation of São Paulo as an emerging urban industrial society.

The laws and constitution of a normative field, as mentioned above, thus go beyond the limits of the sphere of education to become part of the overall agenda for the political struggle of the Brazilian black population. From the mid 20th century, through numerous forms of organisation, this population called for the recognition of the contribution of African cultures in forming Brazilian society. The cycle that ended with the presidential sanction of law 10,639/2003 brought out the contradictions hidden behind the supposed racial democracy and, at the same time, confirmed the Brazilian black movement as an important political force in the transnational agenda encapsulated by the African diaspora in the Atlantic community.

Munanga (2002; 2000; 2000), for example, bringing together 100 years of bibliographic output on Brazil's black population, between 1900 and 2000, in two volumes covering approximately 1300 pages, makes the following observation: *"Studies of the black population really became more diverse in the 1950s. There was a move from seeing this population in a purely historiographical sense - through trafficking, slavery and abolition - or a purely biological sense - in terms of physical differences and as producers of a differentiated culture - to regarding this as a social issue subject to sociological analysis within the anti-racist discourse of the time."* (Munanga, 2000:9)

The displacement observed by Munanga (2000) has gained new contours since the emergence of what the Brazilian literature refers to as "new social movements" during the process of democratic opening, i.e., with the black population being mobilised to join associations, paving the way for new forms of organisation, along with the resumption of previous ones. The dissemination of

the social and political agenda centred, for example, on the constitution and expansion of human rights, began to significantly shape the demands of Brazilian civil society groups from the 1980s. In analysing certain developments of the actions and social struggles of the Brazilian black movement, I argue that these went beyond national borders, becoming part of the rubric of a movement clamouring to participate in a transnational black African agenda.

Reference to the transnational agenda during this new period was mainly, but not exclusively, related to the so-called re-Africanisation process of Bahia. At the time, this process was attributed to the Afro-Bahian carnival blocks, such as *Ilê Aiyê* (1974) and *Olodum* (1979)⁶. More recently, it has also been linked to the participation of bodies from the black movement in the process of preparing the Brazilian delegation to the Durban conference (resulting in the official recognition by the Brazilian government of the existence of racism in the country). Another important factor was the approval by the National Education Council (Resolution 001/2004) of the National Guidelines for Race Relations Education and the Teaching of Afro-Brazilian and African History and Culture, as a result of the presidential sanction of law no. 10,639-2003, which amended law 9394-1996: *Diretrizes e Bases da Educação Nacional (LDBN)* - the law on the guidelines and bases for national education - making the provisions set out in the aforementioned guidelines mandatory.

The constitution of a legal framework establishing the obligatory incorporation of Afro-Brazilian and African history and culture in the school curriculum, from primary level, is at the centre of the political disputes fomenting the debate around Africa's place in the nation. Past and present tensions are being unravelled with regard to how Africans, and their descendants, should be considered in the history of the country and, consequently, in school curricula.

4 - The Curriculum from a Black Decolonial Perspective

The amendment of the *Lei de Diretrizes e Bases*, Law 9394/96, by articles 26 A and 79 B of Laws 10,639/03 and 12,645/08, introducing the obligatory teaching of Afro-Brazilian, African and indigenous history, not only meant that this theme could be institutionalised in Brazilian education, but also led to a series of actions to produce educational material, train teachers and conduct diagnostic

⁶ The 1970s were a time of great cultural, political and behavioural transformations in various parts of the world. The black population of Salvador, influenced by the Black Power movement, reinvented new ways of affirming their identity. Although persecuted by the religious intolerance of the authorities, the *candomblé terreiros* were important arenas in this process, with strong, characteristic traces also found in the Afro carnival blocks. Salvador's black population already participated in great numbers in samba schools, *afoxés* and the Indian blocks. 1974 saw the creation of the first African carnival block founded in Bahia, *Ilê Aiyê*, created in Curuzu, Liberdade. For the first time, a carnival guild was clearly expressing its protest against racial discrimination in the lyrics of its songs, at the same time strongly valuing African aesthetics, culture and history. Other Afro blocks also emerged in the same decade, including *Mutuê* (1975), *Olodum* and *Malê Debalê* (1979), all formed by residents of poor neighbourhoods such as Liberdade, Itapuã and Pelourinho. "We are crazy Creoles / We are really fly / We have thick hair / We are black guys" (music by Paulinho Camafeu sung in the first edition of *Ilê Aiyê* (1974), portraying the influence of the Black Power movement on the Afro carnival blocks).

evaluations. Perhaps one of the most important elements in this process was the inflection all these changes allowed in the Brazilian curriculum.

More than an alternative curriculum, this accumulation of educational production, whether through the official channels or created by male and female activists from the black movement, inside or outside of educational institutions, can be understood as a black Brazilian decolonial perspective of the curriculum.

The role of the black population in Brazilian society could be considered as the key element in questioning schools and curricula on how colonialism and the issue of race was (and still is) handled. Part of the political process developed by the black movement to denounce racism was the revelation that Brazilian educational institutions and their curricula referred to a Eurocentric framework of knowledge. A colonial framework.

Real-life individuals thus lie behind every action initiated as part of the Brazilian political and historical process of fighting racism. These black men and women have dedicated (and are often still dedicating) part of their lives and their time to epistemological and political activism to reveal hidden racism.

The actions of these individuals throughout the history of Brazilian education came to a head in the first decade of the 21st century following the 2001 Durban Conference, in South Africa, with Brazil recognising the existence of racism and racial inequalities before an international audience and becoming a signatory to the Durban Action Plan. Since then, the Brazilian State has committed to implementing Affirmative Actions in an institutionalised way, in a wide range of sectors that include education. This political inflection has led to the aforementioned laws 10,639/03, 11,645/08, 12,288/10, 12,711/12 and 12,990/14. Much more than simply legislation committed to guaranteeing political and educational rights for black Brazilians, these are affirmative action policies that aim to correct the historical inequalities impacting upon the black population. They pave the way for the construction of a series of reparation policies that are still being discussed in Brazil.

5 - Ideological Cleansing: The place of African General History in the political agenda of the new Brazilian government

The threat to end the public policy of Affirmative Action for Blacks and Indigenous Peoples in Public Universities lies in a project to contain the superior formation of a new generation of academics and intellectuals with a distinct and conscientious vision of the importance of their ancestral origins. Hence my hypothesis for Brazil of the President Jair Bolsonaro and Minister of Education Ricardo Vélez, the General History of Africa is considered ideological indoctrination and as such should be excluded, even it hasn't been adequately implemented in our system of education. So, the question is: What is happening in Brazil?

For the descendants of Africans, judging by the speeches of the new elected President, the history of our ancestors is with the days counted in the few educational establishments in which the History of Africa has come true.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Gomes Nilma Lino (Org). *Práticas pedagógicas de trabalho na perspectiva da Lei 10.639/03*. Brasília, MEC, 2012.
- Goncalves E. S., Petronilha Beatriz Barbosa, Lúcia Maria de Assunção (Orgs) 1997 *O pensamento negro em educação no Brasil*. São Carlos, EdUFSCAR.
- Maldonado Torres, Nelson. 2007 Sobre la colonialidad del ser: contribuciones al desarrollo de un concepto. In: Castro Gomez, S. And Grosfoguel, R. (Orgs.) *El giro decolonial*. Reflexiones para una diversidad epistémica más allá del capitalismo global. p. 127-167. Bogotá: Universidad Javeriana Instituto Pensar, Universidad Central, IESCO, Siglo del Hombre Editores.
- Munanga, K. 2000; 2002 *Cem Anos e Mais de Bibliografia sobre o Negro no Brasil*. Brasília: Fundação Palmares, vol. 1 e 2. Geismar
- Geismar, Peter. Fanon. Buenos Aires. Granica Editor. 1972 [Colección Hombres Del tiempo]
- Gordon, L. 2015 *What Fanon Said: A Philosophical Introduction to His Life and Thought*. A Fordham University Press Publication.
- Macey, D. 2000 *Frantz Fanon: A Life*. London: Granta Books.
- Reis, Raissa Brescia dos 2012 *Négritude em questão: das multiplicidades e conceitualizações do movimento por ocasião do Primeiro Congresso Internacional de Escritores e Artistas Negros (1956)*. *Temporalidades Revista de História*. Vol. 4, n. 2.
- Santos, Natália Neris da Silva 2015 *A voz e a palavra do Movimento Negro na Assembleia Nacional Constituinte (1987/1988): um estudo das demandas por direitos*. Dissertation (Masters) - São Paulo Law School, Getulio Vargas Foundation.
- Segato, R. L. 1998 The Color-blind Subject of Myth; or, Where to find Africa in the nation, *Annual Review of Anthropology* 27.
- Silva, M.A.M 2013 Frantz Fanon e o ativismo político-cultural negro no Brasil: 1960/1980. *Estud. Hist.* Rio de Janeiro, 26 (52):369-390. <http://dx.doi.org/10.1590/S0103-21862013000200006>
- Silva, M.A.M da 2013 A descoberta do insólito: literatura negra e literatura periférica no Brasil (1960-2000).
- Silva, T.T. 2009 *Documentos de identidade: uma introdução às teorias do currículo*. Belo Horizonte: Editora Autêntica.
- Silverio, V. R. 2012 Há algo novo a se dizer sobre as relações raciais no Brasil contemporâneo? *Educ. Soc., Campinas* 33(120):891-914.
- Silverio, V. R. 2015 Relações étnico-raciais e educação: Entre a política de satisfação de necessidades e a política de transfiguração. *Reveduc – Federal University of Sao Carlos*.

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Part II- Cultural Heritage: Forms, Management, and Protection

Managing the Diversity of a Continent: Balancing Africa's Rich Heritage with Development Needs

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INTRODUCTION

Africa is endowed with diverse and rich cultural and natural heritage. From snowcapped mountains, great rivers, tropical forests and savannas, hominid sites, rock art, modern architecture and townscapes, memory of slavery and colonial heritage to cultural landscapes and sacred sites, Africa is a continent of plenty. With a long history of interaction including with the other parts of world, the continent is also rich in intangible heritage, including hundreds of languages, music, dance, traditions and rituals unique to it.

With its rich natural resources including gas and oil, forest products and minerals, the changing lifestyles and global interaction including through social media the protection of some of these rich heritages, tangible and intangible and including some world heritage have become a challenge as conflicting interests occur on the landscape and within the various communities. This is more so as governments try to balance benefits of conservation and development with the two often seen as in conflict.

This chapter looks at some of the rich African's heritage, tangible and intangible, movable and immovable, their potentials as well as the challenges faced (Abungu 1994, 1998, 2004, 2005). It interrogates the notion of inherent conflicts between heritage management and development in Africa with a view towards reaching a middle ground of win-win situation. This topic is relevant to China as the country is one of the largest investors in the African continent and would obviously prefer to see developments that do not negatively impact on the cultural heritage of Africa. To the contrary, one would envisage it promoting developments that enhance existing rich cultural and natural heritage, something that at theoretical level has already been demonstrated by China sponsoring international conferences on heritage and development in Africa.

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1 - Setting the Record

Africa is endowed with great wealth in terms of its cultural and natural heritage. Comprising 54 nation states the diversity of the heritage is extraordinary. From snow capped mountains, great rivers, tropical forests and savannas lands, hominid sites and rock art, large-scale ecosystems to modern architecture, and from the memory of slavery and colonial heritage to cultural landscapes and sacred sites, Africa is a continent of plenty. Its location in relation to the rest of the world has for a long time made it a melting point of cultures through human interactions, leading to cultural productions, consumption and transfer to other parts of the world. The seas surrounding the continent have never been a hindrance to these interactions; to the contrary, they have provided bridges with other parts of the world creating fluid boundary less interaction of peoples, goods, ideas, traditions and even religions and beliefs. Africa is also the cradle of humankind, hosting the earliest evidence of hominids dating from 7 million years ago to the present.

There is no doubt that humanity originated from Africa with overwhelming evidence that are found in numerous countries within the continent. The earliest evidence comes from Chad in the form of a hominin skeleton popularly referred to as Toumai that dates to 7 million years ago and has features of an upright walking apeline individual. Olorin or Millennium man follows this from Kenya at 6 million years ago. After this, the continent's contribution to the origins of humanity is evidenced by numerous human like finds from Ethiopia, Eritrea, Kenya, Tanzania, Malawi, South Africa, Zambia, Morocco, among others. Skeleton remains in the form of Peking man evidence the spread of Homo erectus to Asia including China around two million years ago and some finds in Java, Indonesia among other places. Similarly the movement of modern man to these places and to Europe does have origins in Africa and some of the earliest found of the same come from Morocco and Ethiopia. This origins and migration of humanity from the African continent to other continents is probably one of the greatest contributions the Africa has made to the world, as "all humans" can be considered "Africans".

With this long history of interaction including with the outside world, the continent is rich in both tangible and intangible heritage. Despite its experience with slavery and slave trade as well as colonization the continent has continuously rose from these challenges to take its rightful place in the global arena. Today, the continent of Africa is a host to all kinds of religions, cultures, faces, norms and traditions, providing a truly global arena with countries that exhibit true rainbow nations.

In terms of religion, while nearly all religions of the world can be said to be professed in Africa, both Islam and Christianity widely practiced. Islam introduced in the continent in the early 7th century immediately after it's founding, is today widely practiced in the continent. While it is acknowledged that Islam is the majority religion north of the Sahara, an African region that is often detached from the continent and ascribed to the "Arab World" or "Middle East", what is not

commonly acknowledged especially in the Western scholarship is that Islam is probably the most professed religion/faith today in Africa south of the Sahara. However Islam and its practice have been influenced by the settings and traditions within the continent but that has also in turn shaped and influenced greatly the social, political and economic developments where it is practiced.

It can be said that some of the great heritage resources, particularly in terms of the development of urban landscapes with their attendant architectural properties have also benefitted from practices and traditions associated with the practice of the Islamic religion. Ranging from the trans-Saharan trade and the enlightened settlements and religious and educational centres such as Timbuktu in West Africa to the Swahili Towns along the East African coast Islam molded in African setting has played a greater role. This role has also been seen in language, music and other traditional practices.

Christianity on the other hand (apart from Ethiopia and Egypt both, which professed it centuries ago), has seen a dramatic and substantial growth in the last two hundred years mostly through colonialism and evangelization. However like Islam, Christianity in Africa has also been influenced greatly by indigenous practices and belief. Christianity like Islam has also influenced the African education systems, means of communication (English and French) and other cultural practices and norms.

For centuries considered a continent of extraction and exploitation, this giant landmass, with its rich and diverse heritage, peoples and multitude of resources is today re-interrogating and repositioning itself as a major player in the international arena. No-longer an observer on its own affairs, waiting for guidance from outside and ceding the responsibility of representing itself to "others", the continent and its peoples today are demanding a right to speak for themselves in matters that touches on the African continent, its people and its future.

The saying "Not for me without me" and "if you do it for me without me you are against me" could not have come at such a right time. It is in this spirit of self-determination that the African renaissance and the African future with its diversity are grounded. Nothing is clearer on this than the African Union Agenda 63 that recognizes Africa's heritage as part and parcel of its development agenda. It sees an African guided by its cultural heritage and proud of itself as the ultimate goal, a dream that has been set by none other than the Heads of States from the continent. Whether this is realized is another issue.

It is important that our international friends, colleagues and collaborators whom we welcome to share with us on the heritage of the continent in all its forms ranging from research, education, and development to commerce understand that things are changing. From the villages, the NGO forums, communities, politicians to intellectuals, the recognition of the power of heritage both as a resource and a negotiating tool is today obvious. This is also true in the sense of heritage as a developmental resource that can act as catalyst as well as driver

for development (Abungu 1994, 1998, 2004, 2005, 2008, 2012, Abungu and Abungu 2009).

It is this realization and the attempt on the part of the implementers of development policies in the various African states to utilize the heritage to create wealth, promote development and reduce poverty among the citizenry that at times has come into conflict with heritage conservation in many African countries. Conservation principles applied worldwide are still deeply embedded in Western thinking that still conserve for the sake of conservation. The conservation practices are based on principles that are often Eurocentric, people unfriendly and at times seen to be of double standards, inherently opposed to any change or addition.

For example while in Africa, some of the heritage are supposed to serve their purposes, “die” and disappear, the Western approach is often to preserve for what is referred to as “posterity” with emphasis on authenticity and integrity. This often means no change to the heritage and everything is frozen in time and space. The Museum as an institution does exactly this.

Authenticity and integrity according to many African, Asian and South American societies does not imply freezing objects or heritage in time and space. It could be flexible and integrity and authenticity can also be determined by change. There is no better example of this than the Nara Declaration that has now become an acceptable standard instrument in the heritage world. It recognizes the fragility of material, accepts replacement of the same while deeply retaining the intangible meanings and significance of the heritage. This process of change in material and continuity in meaning and significance is expressed in the management and conservation of the religious temples in Japan among others.

This change and continuity notion is also reflected in the UNESCO 2003 Convention on the Intangible Cultural Heritage of Humanity, a convention that has its origins from non-Western world and carries the spirit of communities. Unlike the 1972 UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, the 2003 Convention put the power and responsibility of heritage conservation in the hands of communities rather than the state. Its language recognizes change and continuity as part of heritage conservation and therefore talks of “safeguard” rather than “conserve” or “preserve” heritage. The thinking and underpinning principles of the 2003 UNESCO convention, is therefore in sync with the thinking of the non-Western world including the continent of Africa. This explains the popularity of this convention within the developing world, where community roles and responsibilities are still recognized.

To the contrary the protection of immovable and tangible heritage of humanity is quite complex as it is strictly guided by the 1972 UNESCO Convention that has its roots in the Venice Charter, a profoundly Eurocentric document grounded on the Western thinking of heritage conservation.

In this chapter, it is considered that the perceived inherent conflict between heritage conservation and development, especially in the developing world is a result of the conflicting understanding and interpretation of the international conventions on heritage, and the concepts of authenticity and integrity as understood in the different regions of the world. More so this is further aggravated by the national needs and political interplay depending on the degree of economic developments in the various regions of the world. Thus in societies where resources are still in their raw forms and the majority of the population are graded below poverty line, the pleasure of conserving heritage for its own sake is unattainable. The continent of Africa, with its immense heritage resources, can still be classified as underdeveloped and every resource counts when economic consideration is in place.

2 - Heritage of diversity: balancing development and conservation of tangible heritage in Africa

Heritage in all its forms and nature and irrespective of where it is located is a human resource that is rich but also fraught with contestations. Issues of heritage conditions, ownership, and use, have over the last few years been a matter of great debate and discussions, attracting the attention of not only guardians and practitioners but also academia that continues to debate and write on the subject as well as its wider role, especially in relation to communities (Abungu 2018). Heritage dialogue is therefore a dynamic subject with political, social, and economic dimensions that touch on peoples' lives in various ways, (rights, use and ownership); today heritage and heritage discourse have a direct bearing on power relations not only between peoples, class, institutions, but also on how different parts of the world relate to one another.

While heritage may be relatively local in its placing, nature and its understanding, heritage and heritage sites are also attracting the global attention of various stakeholders and defining power relations between individuals, communities, NGOs, States Parties etc. Heritage and heritage places are not innocent entities but can be places of contestations, for economic resources, multi-vocality, rights, with powerful but conflicting or non-conflicting interests (ibid). This nature of heritage and the attention it attracts at different levels can and does explain the reasons why the question of heritage benefits, especially at local level, is at the core of global conservation strategies today.

When bestowed with world heritage status through the UNESCO 1972 "Convention Concerning the Protection of the World Cultural and Natural Heritage" the properties inscribed gain international prestige. While this is the case the inscription however, comes, with responsibilities and often with restrictions on access and use, both by the states parties to the convention, as well as for the communities that see these as their properties. World Heritage status bestows on a local heritage (that includes those heritage that have been owned and used by local communities) what is referred to as "Outstanding Universal Value". Such heritage then becomes one of humanity creating a collective responsibility for its management and upkeep as well as its policing.

Perceived as special places or properties they attain a privileged position to be managed for what is referred to as posterity. This takes place even if such an arrangement does not embed obvious and immediate economic benefit to the surrounding communities and as such making such consideration often of secondary nature.

Due to its appealing nature as a prestigious nomination bestowing a country with accolades as host of unique heritage of humanity, and often supported by bodies whose interests are much more concerned with nature/culture conservation rather than the people associated with these heritage, many African countries found themselves in the past allocating huge chunks of landmasses within the states for conservation purposes. While this is noble in relation to nature/culture preservation including matters of climate change and sustainable environment, these early listing often did not plan the future and emerging needs of the surrounding communities and, the state. In actual sense some of the areas delineated for conservation were swaths of land, forest, water and wildlife that were considered remote and of no use.

Today however, new technologies have demonstrated that many of the hitherto large areas that were considered of natural beauty or of limited potentials in Africa are actually areas of multiple resources with at times huge deposits of minerals and gas/oil, creating situations of conflicting economic interest in many of such properties. Thus conservation for biodiversity and for conservation's sake faces great challenges in a continent of huge needs and want in areas of abundant untapped resources. The conflicting needs of various interest groups make many African heritages including world heritage properties on the continent to be no longer just places of admiration and enjoyment. To the contrary some are now considered potential economic nodes irrespective of economic practices catapulting the discussion of the roles of heritage properties to the fore, especially in relation to their continued conservation. The discussions have naturally evolved into one on the role of heritage and heritage places' role to the local communities and the need for balancing conservation with development to meet the ever-emerging and increasing expectations. The development and applicability especially of the UNESCO 1972 world heritage convention in the heritage resource rich, economically attractive and fast-changing African continent has far reaching implications today. It is not uncommon to note that nearly a half of all the major world heritage properties; both cultural and natural have issues of conservation and development. The list includes among others, the Omo Valley in Ethiopia with its rich hominid fossils, the Lake Turkana and its Basin, in Kenya, the Swahili towns of Lamu and Zanzibar, Ngorongoro and Selous in Tanzania, Virunga National Park in DRC, Mapungubwe in South Africa, Mount Nimba in Guinea and Ivory Coast, the Rainforests of Central Africa and Cameroon. All these are considered under threat due to various economic developments that range from deforestation, dam building and water extraction, mining, irrigation, to port building and town/urban renewal and regeneration projects.

3 - The African Scenario: World Heritage

While Africa has the least number of sites on the world heritage list, it has the most on the list of world heritage in danger due to various reasons ranging from conflicts, lack of adequate or proper management to what is perceived as conflicting developments within the properties. With some of the largest landmasses listed for their outstanding universal value from a nature perspective, some of these properties have inherent challenges. While many of these properties were considered for listing decades ago for their beauty and/or species diversity, with some even considered at the time pristine wilderness, today in a quickly technologically changing world, some of these properties have been shown to possess deposits of rare and highly demanded natural resources (including minerals), making them attractive to developers, especially the extractive industries.

Population growth has also led to areas, previously not considered suitable for habitation, to be targeted for the same. While some of the heritage places recognized for their long-term architectural and town planning achievements that have led to population concentration and development of centralized metropolis with attendant political power structures, religious and cultural achievements are now under intense pressure for change due to population growth, migration as well for upgrade of utilities and facilities. While embedded in the Western conservation principles of minimal interference that restricts new developments, human needs demand for change and use. The political class with the need to appease the voting masses have a role to choose whether to provide services for the communities and buy their allegiance or to conservation and lose their constituency. Any move to change the status quo is however in conflict with the principle conservation principles such as that of a "no go zone" for mining in nature sites where "human footprints" are also considered harmful to nature. On a continent long in want and in wait of "development" the sheer presence of the natural resources, irrespective of location, is seen as one of the answers to development needs and to the uplifting of the peoples' living standards. This has subsequently led to the questioning of 'rightful' use of states parties' resources for advancement of their interests and those of their citizens. In a world of new and useable technology and alternative sources of funding and partnerships, the conflict between development and conservation can only be seen to be starting. This is more so if principles of conservation of heritage are cast in stone with no flexibility of taking into account the diversity of our understanding of conservation, authenticity and integrity from a local perspective.

With divergent views, opinions and interests, at different levels many of the world heritage properties in Africa with emerging alternative resources are under scrutiny. The rest of world's need for raw materials, especially from Africa, has not ameliorated the situation with the discussion moving away from "conservation and development" to "conservation or development". It is partly in response to the emerging challenges accompanied by these new and greater expectations in a world where communities are demanding for their rights and resources, a world that highly prioritize human rights issues, that the debate on conservation and

sustainable development has become imperative. There is no better place than Africa to reflect on this. In addition there is not a better alternative than the Peoples' Republic of China to engage with Africa in discussing these issues, as China today is one of the greatest investor in the continent and partner to many states in Africa. The ideal situation would be one where the two (conservation and development) are not mutually exclusive but take place in a mutually beneficial way, mindful of the surrounding communities within the heritage areas, as well as being resources that can be sustainably tapped by the states. This however has not been the case practically and despite the various discussions and attempts, so far including conferences held in Africa and supported by among other the Peoples' Republic of China heritage conservation and development still appear to be opposed to one another.

There is obviously no one solution to achieving such a state of compromise and inclusivity; to realize this however, and especially in the case of the African continent there is no doubt for a new approach of true understanding and partnership between all stakeholders, including researchers and intellectuals with consideration for the long -term interests of all (Abungu 2008, 2012, Abungu and Abungu 2009). Often researchers tend to critic what is happening and hardly give opinions and suggestions as to the most appropriate solutions. At best they call for the engagement of communities and benefits to the same from the heritage resources; however they rarely provide how this should done or even the role of development that is so necessary for the community benefits. It is suggested that in a continent of such diversity and rich resources there is need to open up new avenues and create approaches that respect the needs of people and heritage by embracing multi-vocality to heritage practices in Africa. This approach needs to take into consideration the historical and current realities of the continent, one that is still deeply characterized by inequality and want; that utilizing the opportunities available, while respecting the very heritages that have been protected and conserved by communities over generations for the benefit of humanity. Thus any solutions to the reduction of the inherent conflict between heritage conservation and development in Africa must be grounded in dialogue with open options including that respect age-old knowledge systems of the communities.

Africa must also embrace science and new technology in protecting as well as exploiting its resources. With all its resources and potentials Africa is a continent of today and not the tomorrow as the future is now. It is important for Africa to embrace partnerships that bring benefits. However those benefits must also be rooted in ethics and respect for Africa's perspectives of how it wants to move to the future. It is important to imagine a future that is grounded in the heritage and knowledge of the past, in its sufferings as well as achievements. One that is inclusive, innovative, people centered and that respect the needs of heritage as well peoples' well-being.

CONCLUSION: LEARNING FROM THE PAST, THINKING THE FUTURE

From the discussion above it is clear that Africa is a continent with great and diverse heritages. It is also clear that Africa has potential for heritage protection and use by many that go beyond the boundary of the continent. For years however Africa's heritage resources has had to depend on others from outside to determine what it is supposed to be, to grade it and to conserve it by any means necessary including those that do not respect the guardians and their knowledge and ways of doing things. In short Africa's heritage has hardly benefitted its communities as often these communities are seen as the problem and hindrance to conservation. The question that lingers to the present is conservation by whom and for whose benefit?

It is imperative to understand that in Africa, nature and culture are intertwined. The two have been and are valued, protected and managed as one while at the same time they have often been used in, one way or the other. Some of the cultural landscapes that are perceived to be sacred also have some of the richest biodiversity including medicinal plants. Among these are the Kaya Sacred Forests found on the coast of Kenya that are today listed as world heritage property under the 1972 UNESCO convention as well as an Element of Humanity under the 2003 UNESCO convention. It is often through use that sustainable management is achieved as there are strict regulations on the exploitation that allow not only for regeneration but also for future planning. Thus, underlying every societal norm, there has been the concept of the responsible and sustainable use of resources for the benefit and upkeep of communities (Abungu 2018). It is therefore no surprise that communities expect continued gainful relationships with their heritage properties even after they are recognized for their outstanding significance and listed as heritage of humanity.

The tendency however to exclude and disempower communities in the management and use of their heritage, a colonial relic, or to commence developments without them is not only unpopular but also counter-productive to conservation efforts as well as to development on the continent. For example the tendency to apply the top down approach of conservation governance where communities are perceived to permanently ignorant of the needs of their heritage and require guidance and mentoring from the learned is counterproductive and today attract negative reception of "not for us without us". The exclusive management of heritage by professionals at the expense of communities that is the common norm rather than enticing and cementing the bond between communities and their heritage, creates apathy and hatred that at times led to destruction of the very heritage all proclaim to have interest on. Thus when new initiatives are suggested in the name of development with quick potential benefits irrespective of their effects on the now alienated properties, these developments tend to gain credence with the long-suffering communities. This calls for the need, as a first step to re- establish the broken relationships (bonds) between people and their heritage as well as respect to the communities and their knowledge on the part of professional, researchers and developers. While the act

of conserving Africa's heritage in the face of rapid developments and population increase may appear an ambitious and challenging task the work must be done. It is imperative that that even the intellectual community must start to move beyond inventory, research and interpretation of the heritage, to new and applicable goals that go beyond short-term gains.

The best conservation strategies will be those that address long-term sustainable development with tangible benefits to the local communities who for centuries have protected and passed over these heritages to the present generations intact. The question of whether heritage can be used sustainably for development must become a non-issue; instead what matters is how heritage can become driver for sustainable development and community benefit. That is the only way to ensure the health and safety of the heritage of Africa and its peoples. To realize this require a concerted and effective efforts by all the diverse stakeholders working together at the local, national and international levels without forgetting that the ultimate owners are those living with the heritage and who for centuries have cared and nurtured it to the present.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Abungu, G.H.O. 1994. Islam on the Kenyan coast: an overview of Kenyan coastal sacred sites, in D. Carmichael et al. (ed.) *Sacred sites, sacred places*: 152-62. London: Routledge.
- Abungu, G.H.O 1998. City states of the East African coast and their maritime contacts, in G. Connah (ed.) *Transformations in Africa*: 204-18. Leicester: Leicester University Press.
- Abungu, G.H.O 2004. Democratising museums and heritage: ten years on. *South African Museums Association Bulletin* 30.
- Abungu, G.H.O 2005. Africa and its museums: changing of pathways?, in B. Hoffman (ed.) *Arts and cultural heritage law for the 21st century*: 386-93. Cambridge: Cambridge University Press.
- Abungu, G.H.O 2008. Universal museums: new contestations, new controversies, in M. Gabriel & J. Dahl (ed.) *Utimut: past heritage - future partnerships: discussions on repatriation in the 21st century*. Copenhagen: International Work Group for Indigenous Affairs.
- Abungu, G.H.O 2012. Africa's rich intangible heritage: managing a continent's diverse heritage, in M. L. Stefano et al. (ed.) *Safeguarding intangible heritage*. Boydell & Brewer.
- Abungu, G.H.O. and L. Abungu. 2009. *Lamu: Kenya's enchanted island*. New York: Rizolli.

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Museum of Black Civilizations: Time is Running Out

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INTRODUCTION

The Museum of Black Civilizations is above all the expression of a need specific to a specific and precise historical context. Its origin is rooted in the emergence of Negritude movement confronted with the Western denial of Black Civilizations legacies, technologies and cultural histories., Faced with theoretical constructs that defined humans experiences through “soon to be obsolete” racial categories in the early twentieth century, Black activists and intellectuals initiated common transcontinental strategies shaped through series of pan-African meetings. They include the Pan-African Conference in London (23-25 July 1900), the Pan-African Congress in Manchester (15-21 October 1945) and the Accra Conference (15-22 April 1958). In addition to these politically charged demonstrations against inequality, the two Congresses of Black Writers and Artists (Paris 1956 and Rome 1959) mark the birth of discourses that add a cultural and artistic dimension to these already global dynamics.

1 - A few reference points

The initiator of this Museum of Black Civilizations, the first President of the Republic of Senegal Léopold Sédar Senghor, had a grand vision of culture. For him the project « ...was conceived in the spirit of defense, illustration and understanding of the meaning of the values of civilizations of the black world and to concretely apply the fundamental option taken by Senegal not to consider "development" as exclusive search for increase in income per capita ». With the recent recognition of human development indices, it can be said that he was and is still right.

After this evaluation, the matter was referred to UNESCO in 1972. With that commitment, the following decisive actions were taken:

- a mission by Pedro Ramirez Vasquez, Mexican architect and builder of the National Museum of Anthropology in Mexico City.

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- the involvement of Professors Jean Gabus, Director of the Neuchâtel Museum and Georges Henri Rivière, Director General of ICOM.
- the creation of a commission for the creation of the Museum of Black Civilizations by decree of 25 September 1976.
- the appointment of Professor Jean Gabus as Technical Advisor to the Government of Senegal for the Project Museology.
- the presentation of the preliminary draft and model of the Mass Plan to President Senghor on 29 April 1977;
- a first study of the project resulted in an estimate of a total cost of 1,185,000,000,000 F CFA.

At the end of this process, the Rebeuss site was selected to host a Cultural Forum that would bring together the major cultural facilities to be built over the next ten (10) years, including the museum. Unfortunately because of the imposed IMF-World Bank policy of structural adjustment, the project was shelved and abandoned in the early 1980s. It will be resumed in the early 2000s with a search for financing, finally obtained from the People's Republic of China for a total amount of approximately USD 30,000,000 which also covers an esplanade of 10,000 M2.

2 – Designing the Contents

Designed in the 1970s with the best experts of the time, the initial project could not of course be carried out as designed initially. It had to be revisited by integrating the elements of the context. This was the mission of the International Prefiguration Conference. Held in July 2016, this meeting can be considered as the founding moment of the Museum of Black Civilizations in the sense that it will determine its positioning in relation to the typology of existing museums around the world. After more than five days of debate, experts from all over the world finally took strong action to frame the positioning of the Museum of Black Civilizations. We knew what it shouldn't be, which was a big step.



Fig. 7.1. The museum of black civilizations

- The MCN will not be an ethnographic museum, because ethnography is the study of the other, an otherness that the black world cannot accept to define itself.
- The MCN will not be an anthropological museum, because it is in its name that the humanity of the black world has been denied.
- The MCN will not be a chromatic museum, because it is not the museum of the black but that of the black civilizations through the history from Toumaï to our days.
- The MCN will not be a subordinate museum, because its vocation is not to copy a model but to embody a vision.

Based on these considerations, exhibition design workshops were organized in March 2018. Their purpose was to define the content of the inaugural exhibitions. The work carried out by the workshops led to the definition of the orientations that constitute the guiding and programmatic line of all the exhibitions that have been designed around the celebration of Humanity. One of the programmatic choices of the workshops was to renounce the so-called permanent exhibitions. It was considered that they would be simplistic because they could in no way reflect the diversity of cultural expressions in the black world. It would also be a major inconvenience to interfere with the dynamic vocation of the museum. Indeed, it is in the constant renewal of its exhibitions that the MCN will truly represent Black civilizations in their diversity and dynamics.

Due to these guidelines, the title chosen for the inaugural exhibitions can be declined as follows: "African civilization: the continuous creation of humanity" and it is in this general sense that the content of the inaugural exhibitions must be understood.



Fig. 7.2. View of the exhibition Africa, cradle of humanity

Africa is the cradle of humanity, it is well known and no one ever thinks of challenging it again. To arrive at this evidence, it took decades of effort by scientists from Africa and elsewhere to explore the "Moon landscape" of the Riff valley and the depths of the Chadian desert in search for the fossilized remains of our distant ancestors. "Toumai" and "Lucy", recognized as the precursors of all Humans.

They are witnesses to the inexorable march of the human race towards more humanity, more technicality and above all more ambition. The trajectory of humankind is a string of ever-increasing challenges, but always met. Summarizing this exceptional state of mind, President Senghor will say in his opening speech at the VI Pan-African Congress held in Dakar in 1967 that "Homo sapiens dominates his entire environment with his freedom".



Fig. 7.3. No to sharia law in Timbuktu

Africa's many contributions to Human heritage, some of which are still much discussed, are recalled and the arguments in their favor clearly explained. This corpus, which is not based on any ideological bias, is a simple duty of truth. For the inauguration, it was decided to focus on the iron and steel industry, whose invention has taken humanity a giant step forward. Africa has not only been the cradle of humanity. It was also a space of invention and creativity where Humans, from their exceptional observation abilities, were able to understand their environment and invent, on a daily basis, the instruments essential to their lives and development. Whether it is the domestication of plants, animals, fire control or the invention of iron and steel, Africa has, like other continents, but sometimes well before them, enabled humanity to take giant steps forward.

The great diversity of African civilizations and the expressions that accompany them could not all be mentioned in the inaugural exhibition, which was not intended to do so. The newest aspect of this sequence will undoubtedly be Egypt, an African civilization, but also black for a very long time. But Africa has not only created, it has also received and received a lot. The result has been the development of true civilizations of the encounter that, in many ways, are confusing in their singularities. Whether it is languages, architecture or religions, African appropriations are striking by their originality. We have chosen to deal here with "African appropriations of Abrahamic religions". Islam in its Sufi, resistant or even brotherly forms, is not mimicry but an affirmation of a singularity in the shared faith. The same is true of Christianity, from Lalibela in Ethiopia to Keur Moussa in Senegal, and many other churches.



Fig. 7.4. Appropriations of the Abrahamic religions

In the register of encounters, some were particularly violent. This was the case with the slave trade and colonization. The Trans-Saharan and Atlantic treaties left deep traces and had a considerable impact on the evolution of the continent. If Africa has missed a significant turning point, which will weigh heavily on the course of its history, it is the steel revolution of the late 13th and early 14th centuries that allowed Europe to access massive iron and steel production thanks to the invention of indirect reduction, already known in China a few centuries earlier. Previously, Africa had a technical level equivalent to that of Europe with the practice of direct solid phase reduction. The iron bar, one of the products of the indirect reduction, will be the reference currency for transatlantic trade. Submerged by the colossal offer of conquering Europe, which has just reached the Americas with a phenomenal demand for manpower that had ended by annihilating the Indians, Africa will be the miraculous solution for the new

masters of the world. Taking the consequences of indirect steelmaking, Europe will literally flood the continent and impose the iron bar and products derived from the European technical complex in all areas of crafts. Against these products, the slave powers will embark men, women and children who will fill the holds of slave ships. This bloodletting, unprecedented, added to the trans-Saharan trade, will empty Africa of his most able arms and his most ingenious minds. Weakened by four centuries of enslaved trade, although valiant, African military resistance to the colonial conquest was to be defeated one after the other.

This was the beginning of another cycle of painful deprivation, slavery in the home, following the abolition of slavery by the major European powers. Like a reed, the continent had folded but not broken, the resistance had never stopped. They will be diverse, varied and armed, because pacification, so much desired, will never be complete. These resistances were also cultural because Africans never gave up their plural and religious identities with great messianic figures who embodied both armed and spiritual resistance. It has also resulted in a diaspora with exceptional capacities for resistance and resilience. The globalization of negritude is therefore a groundswell that, across the oceans, has created a community identity that, more than resistance, is an essential actor in redefining the paradigms of the globalized world. Encounters too, but in a completely different register, that of the dialogue of masks where the plurality of postures can hide an unsuspected proximity in the messages conveyed. Here, masks from all continents will wander, in unison, to celebrate otherwise improbable encounters, in line with the vision of a museum that is widely open to modernity and pays particular attention to contemporary production.



Fig. 7.5. Black women and knowledge production

Now Africa, which is another theme addressed by the inaugural exhibition, is an intellectual, artistic and political commitment to give meaning to the Time of

Africa, which is also the time of the future of our humanity. Contemporary artists from Africa and the diaspora have made significant contributions to this section. The section devoted to the Dialogue of Masks from Africa, Oceania, Europe, China and Indonesia was an exceptional moment of encounter that validated the first choice not to create a chromatic institution. Finally, it is worth noting the effort made to promote the great figures of Africa and the diaspora, with particular emphasis on "Women and knowledge production".

CONCLUSION

In summary, the Museum of Black Civilizations opening exhibitions attest for a distancing from the traditional museological practices currently in use in Africa. These practices generally essentialized ethnographies and froze Africans experiences in past bubbles. Whatever the scientific value of such practices may have been, that science was the science of the other with cultural alterity and remoteness showcasing the « colonized » as sort of sub-humans, colonial exhibitions turning African beliefs, religious practices, and ancestors shrines into mere art objects. It is therefore not surprising that such museums failed to attract African audiences.

The paradigmatic shift initiated by the Museum of Black Civilizations is to abandon such a « rear-view » culture. It does certainly not mean that the past has to be forsaken, but instead has to be addressed and interrogated to better understand the present, prepare the future with confidence, through explorations of Africans and people of African descent « contemporaneities »

COMPETING INTERESTS

Author has declared that no competing interests exist.

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Cultural Heritage's Value in African Sustainable Development

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INTRODUCTION

Over the past half century, our understanding of development has shifted from economic growth to economic viable, social equitable, and environmental bearable, so-called “sustainable development”. The United Nations (UN) has launched 17 sustainable development goals (SDGs) by 2030 (UN 2015), three of which relate to sustainable tourism. The latter is not a new category of tourism but a new ethic to guide tourism. World Heritage, including Cultural Heritage, Natural Heritage, and Mixed Heritage, especially Cultural and Mixed heritage properties, link closely with local communities' development and become tourist attractions with physical stability, historical continuity, archeological authenticity or aesthetic harmony. Cultural Heritage begins with capital letters in this paper indicating it as the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage.

The chapter introduces: 1) - an overview of Africa's Cultural Heritage; 2) - explains why Africa's Cultural Heritage is significant for sustainable development from a theoretical perspective, based on relevant UN documents; 3) – highlights the challenges faced by all stakeholders: African governments, local communities, tourist agencies, national and international visitors, etc., on how to enhance the value of Africa's Cultural Heritage through tourism; 4) - analyzes potential value of Africa's Cultural Heritage, as a driver and resource for sustainable development; and finally, 5) – concludes with the economic, social, and environmental value of Cultural Heritage in African sustainable development.

1 - Overview of Africa's Cultural Heritage Properties

In 1972, the *Convention Concerning the Protection of the World Cultural and Natural Heritage* (usually known as the World Heritage Convention, November 23, 1972) was adopted by the General Conference of United Nations Educational, Scientific and Cultural Organization (UNESCO) at its 17th session in Paris (ICOMOS, Appendix A). The birth of World Heritage Convention is related to save Nubian monuments, the temples of Ramses II at Abu Simbel and the

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Sanctuary of Isis on Philae Island in particular, from the construction of the Aswan High Dam (UNESCO, Nubian Monuments from Abu Simbel to Philae) during the 1960s and 1970s.

Since the first list of 12 World Heritage properties issued in 1978, the number of World Heritage properties have reached 1,092, including 845 Cultural Heritage properties (845C), 209 Natural Heritage properties (209N) and 38 Mixed Heritage properties (38M) by now. In the UNESCO's World Heritage List, the share of Africa's World Heritage, including North Africa, has fallen from 25% in 1978 to 13% at present. Among the first 12 World Heritage properties, there were three from Africa: Lalibela Rock-Hewn Churches (C) and Simien National Park (N) in Ethiopia, and the Island of Gorée (C) in Senegal. It is "a masterpiece of human creative genius" (UNESCO, Criteria i) that 11 churches of Lalibela were made of one single rock and witnessed the outstanding example of the country's Christian architecture in the 13th century. The churches' location, in the name of the contemporary king, Lalibela, has been regarded as Ethiopian Christian (Eastern Orthodox) shrine, while the Island of Gorée is tangibly associated with the Atlantic slave trade in the world history (UNESCO, Criteria vi).

Created by human beings and represented by a monument, group of buildings, site, or landscape with historical, archaeological, aesthetical, anthropological and ethnical value, every Africa's Cultural Heritage can serve as a cultural carrier, through which local communities can "directly" touch on the historical memory and perceive their predecessors. Local community "encompasses all of the people" who "inhabit a defined geographical entity, ranging from a continent, a country, a region, a town, village or historic site" (APEC 2010: 21). Therefore, any protection and development project of Africa's Cultural Heritage cannot separate from its surrounding human and natural environment.

Overview of Africa's World Cultural Heritage

From July 2018 to the present, 89C, 47N, and 7M have been on the UNESCO World Heritage List and distributed in 42 African countries (UNESCO, World Heritage List). Almost every Africa's World Heritage properties are tourist attractions. Yet the paper focuses particularly on Africa's Cultural and Mixed Heritage properties that link with local communities. As the Mixed Heritage (7M) meets the criteria of both Natural Heritage and Cultural Heritage, it is considered in the Cultural Heritage in this chapter.

Africa's Cultural Heritage properties are distributed, by the similarity of their main characteristics, in North Africa, East-South Africa, and Centre-West Africa regions. In North Africa, there are 36 Cultural Heritages and 1 Mixed Heritage in 7 countries. The most remarkable heritage is Egyptian pyramids, which ranked the top among the seven wonders of the ancient world, and then the masterpieces of the Nile civilization, including temples, tombs, frescos and reliefs in Thebes, Nubia and Meroe. On the Tassili Plateau, a Mixed Heritage, in Algeria and the Acacus Mountains in Libya, prehistoric rock paintings recorded climate change, animal migration, and the evolution of human life in Sahara. The both

sites might be joined together, extending to Tibesti Mountains and Ennedi Plateau in Chad, to become the most spectacular rock arts in the world. In addition, the heritage properties of Carthage, ancient Rome, and Berber dynasties in the Maghreb area make North Africa's Cultural Heritage unique, while the ancient Greek culture, the Christian holy lands, and Arab medinas add brilliance to this region's Culture Heritage.

In East-South Africa, 34 Cultural and 3 Mixed Heritage (2M are transnational heritage between Lesotho and South Africa) properties are distributed in 15 countries, among which the most important is the site of human fossils. Together with the natural environment, they feature Africa as the cradle of humankind. Moreover, the wide range, quantity and quality of rock paintings are remarkable. Most of rock paintings, hidden in hard-to-reach places for ritual uses, were made by San people ancestors (formerly known as Bushmen).

In Centre-West Africa, 19 Cultural (2C are transnational between Gambia and Senegal) and 3 Mixed Heritage properties are distributed in 12 countries. Among them, there are the medieval towns and archaeological sites, such as Timbuktu in Mali that has witnessed the prosperity of trans-Saharan trade, many of the castles and forts associated with the Atlantic slave trade, such as St. George's d'Elmina in Ghana, and several unique landscapes representing local tradition, the Land of Dogons in Mali for example (Pan 2017, 2018).

In summary, North Africa's Cultural Heritage properties demonstrate the replacement and evolution of civilizations at different stages, East-South Africa's ones prove the longest history of human activities on earth, and Centre-West Africa's ones illustrate a multicultural convergence or coexistence. These Cultural and Mixed Heritage properties combine "Africa attributes" with "world attributes". The former, created by local people's ancestors with native characteristics, can be represented by the monolithic churches and the earthen huts with thatched roof in Lalibela, while the latter, resulted in the linkage with other continents, can be represented by the Atlantic slave trade monuments and the surrounding European-style buildings on the Island of Gorée.

2 - Africa's World Cultural Heritage and Sustainable Development

Before the first oil crisis in 1973, some people of insight had realized the limits of natural resources (Meadows 1972). The *Declaration of the United Nations Conference on the Human Environment* (known as the Stockholm Declaration 1972) called upon governments and peoples "to exert common efforts for the preservation and improvement of the human environment, for the benefit of all the people and for their posterity". This is the origin of sustainable development concept that focused on environment then. However, any development cannot be separate from population. In 1974, the "World Population Year" designed by the UN and the first global summit on population or the third conference of UN on Population and Development (UNPD) was held in Bucharest (Romania). Although developed countries and developing countries had different views on population issues, such as rapid population growth that is a cause of impediment

to development or a consequence of underdevelopment, a consensus reached concluded that development is related to populations sharing the limited resources (*World Population Plan of Action* 1974).

Tourism, as one of human rights and activities, has an impact on society and its development. The United Nations World Tourism Organization (UNWTO) issued the *Manila Declarations* focusing on social impact of tourism (UNWTO 1980). The *Tourism Bill of Rights* and the *Tourist Code* was adopted at Sofia conference (Bulgaria) in 1985. Both documents stated that everyone has right to access to holidays and to freedom of tourism. However, tourism may have positive and/or negative effects on society. To ensure the positive impact on society, "the States Parties should 'integrate states' tourism policies with their overall development policies at all levels..." (Article III, b). Tourism is, therefore, incorporated into development. Due to a large populations sharing limited resources, environment preservation is put on priority. The UN Conference on Environment and Development (UNCED), known as the Earth Summit, was held in Rio de Janeiro (Brazil, 1992). This Summit established the Committee of Sustainable Development (CSD) as a follow-up mechanism. Sustainable development is defined as the capacity to meet "the needs of the present without compromising the ability of future generations to meet their own needs" (UN documents) at World Commission on Environment and Development (1987). After the concept of sustainable development was put forward, its content has been enriched constantly. Tourism was included in the strategy of sustainable development at the first World Conference on Sustainable Tourism in the Island of Lanzarote (Spain, 1995). The conference adopted the *Charte for Sustainable Tourism*. "Sustainability" is ranked the first of 18 criteria of tourism with meaning of "ecologically bearable in the long term", "economically viable", "ethically and socially equitable for local communities" (*Charter for Sustainable Tourism* 1995: Declaration).

Two years later, *Agenda 21 for the Travel and Tourism Industry* integrated tourism and sustainable development. The *Agenda* stated that tourism, as the world's largest industry, has the potential "to bring about sustainable environmental and socioeconomic improvements and to make a significant contribution to the sustainable development of the communities and countries in which it operated" (WTO 1997, Part I: 4). So far, community sustainable development has received attention from the tourism industry that combines population, environment and development. Following the above *Charter* and *Agenda*, the *Global Code of Ethics for Tourism* (GCET) was adopted as Resolution A/RES/406(XIII) at the 13th UNWTO's General Assembly in Santiago (Chile, 1999). This intends "to promote an equitable, responsible and sustainable world tourism order, whose benefits will be shared by all sectors of society..." (UNWTO 1999: 6). Tourism becomes a new approach to the purpose of the Earth Summit. Since entering the new century, the international community has realized that tourism can bring economic benefits to local communities. In 2002, the "World Summit on Sustainable Development" held in Johannesburg (South Africa) and mentioned the economic, environmental and sociocultural three dimensions as key elements of sustainability (UN 2002:1). This intension can be

translated into (social) equitable, (economic) responsible, and (environmental) sustainable tourism as the above GCET. Finally, tourism has been clearly written into the 17 Sustainable Development Goals (SDGs) by 2030 that, following the 8 Millennium Development Goals (MGDs), was adopted by the UN's General Assembly on September 25, 2015. Sustainable tourism may contribute to Goal 8 "on decent work and economic growth", Goal 12 "on responsible consumption and production", and Goal 14 "on Life below Water" (*Tourism for Development* 2018, Vol. I: 22). The prerequisite is that policies, management and implementation of tourism should be line with the SDGs.

Sustainable Tourism and Africa's World Cultural Heritage

Sustainable tourism is a concept derived from sustainable development, but also a result of the Rio Earth Summits. Its development is defined to meet "the needs of present tourists and host regions while protecting and enhancing opportunity for the future. "...economic, social, and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems" (WTO 1997, Part I: 30). Sustainability is the core of sustainable tourism that focuses on local communities' development. Being the closest to the World Heritage places, local communities can act as the heritage's guardian or destroyer. Thus, the *Charter* (1995) called for tourism to consider its effect on both the cultural heritage and the traditions of the local community. The 4th Article of *GCET* (1999), "Tourism, a user of the cultural heritage of mankind and a contributor to its enhancement", indicated the relationship between tourism and cultural heritage. Sustainable tourism is, therefore, consistent with sustainable development. Mr. Koïchiro Matsuura actively promoted the participation of local communities in the protection of cultural heritage during his tenure as Director-General UNESCO (1999-2009). It is likely an experience of Japanese that can spread to the world, like 3Rs (Reduce, Reuse, and Recycle) spreading to Africa, especially to Kenya. The 2003 *Convention* includes, first of all, the concept of community participation (Labadi 2012:144-145). The heritage-centric tourism and local communities' involvement become more significant in sustainable development. Mogao Caves conference, organized by Asia-Pacific Economic Cooperation (APEC, 2009), is the most important to link sustainable tourism with World Heritage and local communities for these reasons: the conference's place, Mogao Caves (on the World Heritage List in 1987), is World Cultural Heritage in China first of all; Secondly, the conference described the relationship between World Heritage and sustainable tourism by two-way: World Heritage offers a tourism destination, while tourism offers a value of World Heritage and "a means to realize community and economic benefits through sustainable use" (APEC 2010: 15); Thirdly, the conference proposed 9 principles intended to be adopted and embraced by all stakeholders involved in tourism associated with the World Heritage places (APEC 2010: 19-20). Contribution to local communities' development is one of tourism principles that needs all stakeholders' cooperation.

In 2016, the first *Africa Sustainable and Responsible Tourism Charter* was adopted by African tourist ministers in Marrakech. This Charter launched 6

principles, of which principle 2 focused on preserving the Cultural Heritage and the local identity (UNWTO 2016a: 5). Cultural and heritage tourism is regarded as “a catalyst for both identity production and consumption” (Keitumetse 2016: 19). Although it is difficult to maintain a balance between heritage conservation and tourist consumption, heritage-centric tourism has still potentials to bring sustainable development to local communities.

In summary, before the 21st century, sustainable tourism was focused on World Heritage's conservation. After entering in the 21st century, international organizations have noted the rapid development of tourism and its potential for local communities' development, thereby combining sustainable tourism with SDGs. World Cultural Heritage places are tourist destinations that can generate tourism-related jobs, industries, and revenue for the youth in Africa. Many African governments have taken account of tourism as a means to get rid of poverty. Yet they do not realize thoroughly World Cultural Heritage is one of important tourist resources.

3 - Challenges for Africa's World Cultural Heritage in Practice

Under the guide of sustainable tourism charter or principles, every individual heritage has a potential to drive economic growth through tourism. Africa's Cultural Heritage is, therefore, regarded as the hope of bringing wealth in the Least Developed Countries (LDCs) such as Mali. “Old town of Djenné” was listed by the UNESCO as world cultural heritage in 1988. Its archaeological site, Djenné-Djeno, bears a pre-Islamic civilization and architectural group of buildings illustrate a significant historic period (UNESCO, World Heritage List; Criteria iii & iv).

Dutch Housing Restoration Project in Djenné (Mali)

Dutch Housing Restoration project was funded by the Dutch government between 1994 and 2004. The task of the project was to restore some representative houses. The choice of houses to be restored was made by the Dutch project team and the Malian Cultural Mission, approved by the *Comité de pilotage* (made up of local leaders, representatives of masons, local associations, and development committees) and the *Comité scientifique* (made up of the Malian ministries involved, the Cultural Mission, UNESCO, the National Museum and the Institut des Sciences Humaines in Bamako, architects, the Dutch Embassy, and the National Museum of Ethnology, presided over by the Dutch Minister of Culture)(Joy 2012: 66-70; 218). This is a sustainable development project because it aimed to create a physical archive of the town for future generation, but also bring jobs directly to local people, including masons, carpenters, and tile-makers, etc. In theory, this cultural project could bring economic benefits to local people. In other words, the project of Cultural heritage preservation targets SDGs. However, the project lacked of transparency in choosing which houses could be restored, who could decide the choice, and what kind of material could be used in restoration, etc., while local people lacked self-determination during its implementation. Two years later, a riot broke out in

Djenné and discouraged the project of Cultural Heritage's protection and tourism development. Although the riot was the direct result of the Grand Mosque restoration project, the earlier Dutch Housing Restoration Project had planted seeds for local communities' discontent. Consequently, the significance of the Cultural Heritage, including "historical significance, archaeological significance and experiential significance" (Manders 2012: 11) was lost in the eyes of tourists and the local communities. It has not brought benefits to local ordinary people who are still living in extreme poverty today.

Dahshur World Heritage Site for Community Development (Egypt)

Dahshur is a part of Memphis and its Necropolis property listed in world (cultural) heritage in 1979. It is the home to two of Egypt's oldest and best-preserved pyramids, the Bent and Red Pyramids, built by the founder of the fourth dynasty, Pharaoh Sneferu (2680-2656 BCE). The Dahshur World Heritage project for community development was launched by the Egyptian government and five United Nations agencies (UNWTO, UNDP, ILO, UNESCO, and UNIDO) between 2009 and 2013 in support of "tourism-based sustainable development, cultural and ecological management, and opportunities for revenue generation" (UNWTO 2018b: 13). "National and international partners from the tourism, cultural heritage and natural heritage sectors came together" for the first time to work with the local communities (UNWTO 2018b: 13). The project also provided the population with technical training and expertise in small business development. Women who increased the number of trainees from 10% to 40% accounted for 25% of microfinance beneficiaries (UNWTO 2018b: 16).

This project was successful in drawing public and private partners' attention. The Ministry of Tourism allocated \$3 million to infrastructural construction and \$250,000 to tourist center, while private sector demonstrated its interest in building two eco-lodges. Over 3,500 local community members received training in tourism-related activities, such as tour guides, horse-cart drivers, languages, handicrafts, and so on, which "contributed to enhance job opportunities in the creative industries and cultural tourism" (UNWTO 2018b: 16). Local community-owned and operated MSMEs (Micro, Small and Middle-sized Enterprises) were created through microfinance. However, the Egyptian Revolution happened in early 2011 caused unrest in subsequent years after the overthrow of Mubarak's authoritarian regime (1981-2011). The tourism industry was hard hit. This was the biggest lesson during implementation of this project. Meanwhile, the key to success and the biggest experience is that mobilizing communities is in fact "more important than developing tourism infrastructure or services" (UNWTO 2018b: 17).

Challenges for Africa's Cultural Heritage

The first challenge is from local communities, the closest friends to the Cultural Heritage. Their participation is crucially important for preservation of the Cultural Heritage and sustainable development. The main caused for the 2006 Djenné riot was the lack of transparency, "... the population and the masons had not

been informed about the project" (Joy 2012:120). This riot caused the failure of the centennial reconstruction of the Grand Mosque celebration, the most remarkable symbol of Djenné, and the cancellation of the festival on the national Independence Day (September 22) in 2007 (Joy 2012: 120-125). The failure illustrated the importance of local participation and empowerment. How to empower local participants? The key is the full participation of local people that benefit of the project rather than outsiders or foreigners.

The second challenge is from the country's instability. The Dahshur project was successful because of the communities' participation. The aim of the project is to develop local community through heritage-centric tourism and tourism-based sustainable development. With the outbreak of the Egyptian revolution, coupled with attacks by Islamic extremists from time to time, the tourism industry suffered losses. Mali encountered similar political instability between 2012 and 2013. Under the troubles of coup d'état and country's division, the country's two Cultural Heritage properties, that is, Timbuktu and the Tomb of Askia, were threatened by extremist groups and thus listed as endangered World Heritage in 2012.

The third challenge is from serious infrastructure and equipment shortage that manifests itself in two forms based on my own experience in Mali in 2011: on the one hand, the departure and arrival time of long-distance was always uncertain. All long-distance buses had to be repaired several times on the road because they were too old and overload. This happened when I went to Mopti and Gao from Bamako. On the other hand, there was no timetable for departures, self-employed drivers having to wait for their vehicle to fill up before departing. This happened when I went to Djenné and Timbuktu from Mopti and Douenza respectively. The shortage of infrastructure was also reflected in the roads and basic needs including water, electricity, and accommodation in all Cultural Heritage places of Mali. There was no road to Timbuktu. Only 4 wheel-drive vehicles could cross the desert, but it still could not avoid being stuck in the sand. In this case, it used to take several hours to move again. In Mauritania, the road from Nouakchott to Walata was also very bad when I passed by in 2014. So was from Kaolack to the Stone Circles of Senegambia in Senegal in 2016. In reality, due to geographical isolation, several Africa's Cultural Heritage places are still very difficult to reach.

The fourth challenge is from insecurity. This results from political instability, but significantly affects heritage tourism. Since 2013 and despite political stability in Mali, the Old Town of Djenné was listed as endangered in 2016 because of the spread of insecurity (UNESCO 2016). Wherever I visited in Mali, I met with few tourists. Local tour guides argued that the country was much safer than their neighbors, but few tourists would like to take a risk to visit Timbuktu and Gao. My colleagues at Bamako University, Malian friend at the Agency of Environment and Development, and the Chinese Ambassador warned me not to go there. Although I did not find any danger in 2011 tension peaked at Timbuktu town in 2014. In my visit experience I felt quite safe only with local people.

The fifth challenge is from poverty. The desertification of tourism has deepened local communities' poverty so that they cannot afford to protect heritage properties. As soon as I arrived at Bouctou hotel, tour guides and local peddlers came one after another because I was only one guest in the hotel. They wanted to guide me to see the city or sell some crafts to me.

In order to address poverty, tourism development is worth promoting. Africa's Cultural Heritage properties can be tourist destinations. In practice, the development of tourism cannot be separated from administrative management, local communities' hosting, and travel agencies' organization. Without political stability and security, tourism will recede and dries up. In contrast, if Cultural Heritage can be protected by local communities, it can attract tourists and display its values, such as Islamic learning center in Timbuktu and traditional architecture in Djenné. The result is that it can promote economic development, achieve peace and gain respect from visitors.

4 -Value of Africa's Cultural Heritage for Sustainable Development

Despite of the above challenges, Africa's Cultural Heritage is a resource of sustainable development for local communities and a destination for sustainable tourism.

Value of Africa's Cultural Heritage for Local Communities

In 2002, the President Nelson Mandela remarked in his speech "What do we conserve for, if not humanity" to the Park Conference in Johannesburg. His words were interpreted in two ways: "Firstly, conservation is the responsibility of all; but secondly, conservation for its own sake without human benefit may not meet its goals" (Abungu 2018: 19). Every Cultural Heritage has outstanding universal value (OUV), the most important criterion for being selected in the World Heritage List. Combining "Africa attributes" and "world attributes", Africa's Cultural Heritage carry historical memory and cultural value. unique or universal. In North Africa, Amazigh's villages, such as the Ksra of Ait-ben-Haddou in Morocco and the Ghadamès town in Libya, are representative of the African attributes. The Ksra (Plural Ksour) has illustrated a typical habitat of Amazigh against windy sand in the Saharan hinterland, while Ghadamès has still retained the traditional architecture of Amazigh facing the challenge of desertification. In East-South Africa, African attributes are highlighted by ancient human fossils and rock paintings. They "bear a unique testimony to a cultural tradition or to a civilization which is living, or which has disappeared" (UNESCO, Criteria iii). The disappeared civilization still lives in the historical memory of contemporary people through the heritage properties. In Centre-West Africa, despite early exposure to Western culture, some local cultures have been preserved, such as the traditional architecture of Asante people in Ghana, Osun-Osogbo sacred grove of Yoruba people in Nigeria, and so on. The former is built with native materials such as soil, wood and straw, while the latter symbolizes a traditional religion.

Every Cultural Heritage has either historical or current connection with local communities whose role cannot be neglected in all projects of heritage conservation. How to make the heritage-related project done by the local communities and train the skills of them is a priority for their contribution to sustainable development. Without local communities' participation, there is neither meaning of heritage nor meaning of sustainable development. The Tomb of Askia in Gao (Mali), as a *Community heritage*, is a physical element that symbolizes the identity of local people. The heritage place is where many ethnics (Tuareg, Moroccan, Songhay, etc.) encountered in the long-term history (Yattara 2018: 183-184). It is the powerful emperor of Songhai Empire, Askia the Great who brought together an identity of all ethnic groups. The identity is symbolized by his "Tomb" (a mosque indeed). In 2012, it was listed in Danger because of turmoil of Mali. Local communities used traditional mechanisms including meeting, pardon and reconciliation for peace (Yattara 2018: 184). "Dialogue is essential to negotiate conflicting values, and to demystify conservation" (APEC 2010: 13). Under the dialogue and social cohesion, the Heritage becomes an instrument to recall the memory of the empire, but also a privileged space of prevention and resolution of conflicts for the promotion of peace and security, which is a prerequisite for any development (Yattara 2018: 185). The Heritage was not destroyed during the occupation of religious extremist groups. It is descendants of Askia the Great who, living around the Heritage, have played an important role in the protection of it. The example of the Tomb of Askia is not alone. Sukur Cultural Landscape has suffered more serious attacks, while local community reconstruct it under national agency and UNESCO's support (Sham 2018: 164). Considering the Sahel-Saharan area, one of the most dangerous areas, if all Cultural Heritage properties can be connected like as historical trans-Saharan routes, they can bring peace to local communities through normal trade, migration, and tourism. In short, for local communities, Africa's Cultural Heritage can unite people, strengthen their identity, and maintain their traditions, but also can resist external attacks and bring peace and development.

Values of Africa's Cultural Heritage for Tourism Development

For sustainable tourism, "it is necessary to explore thoroughly the application of internationally harmonized economic, legal and fiscal instruments to ensure the sustainable use of resources in tourism" (*Charter for sustainable tourism*). As tangible, intellectual and spiritual resources, World Cultural Heritage properties are "among the most popular and heavily promoted visitor and tourist attractions in many countries" (APEC 2010: 18). With ecological, economic, and social value, Africa's Cultural Heritage remains a huge potential resource for tourism that is rising as a promising sector. Application of the Cultural Heritage in tourism can be one of fiscal instruments to transform Africa's industrial structure. The latter is the AU's target in its *Agenda 2063: the Africa We Want* (2015). In reality, many African countries, including the LDCs, appeared obviously growth of the tourism shares in GDP since the 21st century (Tourism Data for Africa 2014; UNWTO 2016b). For the LDCs, tourism is a key sector of export and growth (UNWTO EIF, ITC 2016: 2), but also a key service sector (UNWTO, EIF, ITC 2016: 4). The Gambia, for example, one of the LDCs, developed tourism actively

soon after its independence in 1965 with sunshine, sand, and sea (3S). Yet its most famous and attractive place is Juffureh, a small village, which is a part of the World Cultural Heritage, Kunta Kinteh Island (also known as James Island) and Related Sites. The village is known to the world by Alex Haley's best-selling novel, *Roots* (1976) and then by its television series of the same name (1977). This village has become "a pilgrimage site" for African diaspora who search their roots, because their ancestors were removed by the slave trade brutally (Ceesay 2018: 93). Based on it, a kind of root-seeking tourism was rising then and keeping on today. Tourism "accounts for 22% of the Gambia's GDP, employing more than 125,000 people directly and indirectly" (Ceesay 2018: 93). Despite tourism growth, its economic benefits are uncertain to trickle down to the local communities. For sharing the economic benefits from heritage-centric tourism, "capacity building is important to provide adequate skills and confidence in traditional and local knowledge and practices." (APEC 2010: 13).

Africa's Cultural Heritage properties record the originality of African people, but also record their exchanges with other cultures. Its uniqueness shows Africa's contribution to world civilization, while its universality illustrates African people's involvement in world history. Associating with Cultural Heritage properties, tourism can contribute "to the long-term sustainability of their heritage values and sense of place, while generating cultural and socio-economic benefits to the local population and surrounding region (APEC 2010: 18). The example of the Gambia provides an example that Cultural Heritage can service for tourism development. If we take into consideration all similar Cultural Heritage properties in Africa, a dozen of castles in Ghana, the Island of Gorée (Senegal), Cidade Velha (Cabo Verde), Mbanza Kongo (Angola) on the Atlantic Ocean, together with the Island of Mozambique (Mozambique), Stone Town of Zanzibar (Tanzania), Kilwa (Kenya), and Le Morne Cultural Landscape (Mauritius) on the Indian Ocean, they are unique witness of global slave trade in World History (Pan 2017). Now they are able to serve for 3S tourism, a kind of blue economy, that is a part of sustainable development.

Values of Africa's Cultural Heritage for Visitors

For non-African visitors, the most attractive of Africa's Cultural Heritage properties are those with African uniqueness, such as rock paintings both in Sahara and in Southern Africa. Yet they are often very difficult to reach. Moreover, those Cultural Heritage properties with world attributes are also very attractive. Africa's world attributes are embodied in the multicultural convergence or coexistence of cities, buildings, and sites. World attributes have been most reflected in Rabat (Morocco), that combines ancient Rome, medieval local Amazigh and Islamic Arabs, and Modern French cultures. It is "an outstanding example of a type of building, architectural or technological ensemble which illustrates significant stages in human history" (UNESCO, Criteria vi). This Heritage attracted large number of tourists from Europe, Arabian Peninsula, and also China and America. Swahili culture is a crystallization of Islamic and Native African cultures, with imprints of Persians, Indians, and Europeans. Swahili culture is distributed along the East African coast from Mogadishu (Somalia) in

the north to Sofala (today's Beira, Mozambique) in the south, and to the upper Congo river in the west. Lamu Old Town (Kenya) has been inhabited for over 700 years is the oldest and best-preserved Swahili settlement (UNESCO, World Heritage List). Besides Islamic character, Swahili is an open and inclusive culture. Visitors, including tourists, scholars, officials, investors, and so on, can appreciate and enjoy it. The arrival of national and international visitors can increase the visibility of Africa's Cultural Heritage properties through photos and reports, promote the development of local tourism, and increase local employment and communities' revenue through shopping and other consumption. Meanwhile, visitors also need pay attention to their manner when they arrive at heritage places, including respect for Africa's World Heritage, local people and their customs. Moreover, visitors can promote local new industries, including crafts, catering and another services development by their needs. All these need a good management and capacity building.

The African Union (AU), through its *Agenda 2063*, expressed its aspirations in the future that is an "integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the international arena" (*Agenda 2063* 2015: 1), among which culture and heritage were cited (Aspiration 5). To use the Cultural Heritage as new resource of wealth, the Africa World Heritage Fund (AWHF) organized a discussion of "living with World Heritage in Africa" (Johannesburg, September 2012), trying to find ways of harmonizing heritage conservation and sustainable development (Abungu 2018: 20). Given that many Cultural Heritage places are difficult to reach, visitors also have a potential to drive infrastructure improvement. International cooperation is needed, while visitors including potential investors are most important. In short, the value of Africa's Cultural Heritage for local community, tourism development, and visitors are consistent with the SDGs.

CONCLUSION

Despite many challenges, Cultural Heritage properties affirm the richness of the African continent, but also illustrate the enormous potential of Africa to use its own resources to drive its own developmental agenda. For sustainable development involves economic, sociocultural, and environmental dimensions, Africa's Cultural Heritage can contribute to it through all stakeholders' dialogue and cooperation. In the economic aspect, Cultural Heritage properties are often tourist attractions with African attributes and world attributes. They can contribute to tourism development. As an economic sector, tourism is a tertiary industry, an inclusive industry, which can create a decent job for local people and increase revenue of local communities, but also can provide a responsible consumption and production. It has contributed to African services exports and thus has a potential to transform African economic structure. African tourism has shown rapid and inclusive growth so that developing tourism with a focus on Africa's World Cultural Heritage is both the core of sustainable tourism and a means of achieving SDGs. In the sociocultural aspect, every Cultural Heritage can show local history, customs, celebrations, and beliefs, etc. through local communities' involvement. Africa's Cultural Heritage, with its OUV of continuity, uniformity, and

stability, can bring identity to the local communities, but also bring peace to them through dialogue. The engagement of local communities can contribute to the sustainable use of heritage resources for the communities' development.

In the environment aspect, every Africa's Cultural Heritage is a physical representation of African diversity culture and historic value within a defined place. In addition to the most attractive of Natural Heritage sites in Africa, Cultural Heritage properties are Pan-African assets. To achieve economic transformation and gain respect of the world is the goal pursued by African countries and people. Although not every Africa's Cultural Heritage property is so much attractive, Africa has its advantage to shape several groups of Cultural Heritage properties, such as visiting from Abu Mena (Egypt) to Robben Island (South Africa) to enjoy African cultural diversity, Swahili settlements or Trans-Saharan routes to experience cultural convergence, or Rock Art in Sahara and in southern Africa to understand Africa's splendid history and culture.

Linking Africa's Cultural Heritage properties with these vertical and horizontal lines, couple with Africa's coastal and islands' Cultural Heritage properties mentioned earlier, this can take advantage of Africa's geographical environment, but also can contribute to Africa's blue economy and sustainable development. However, this cannot be carried on by one of African countries. As common cultural assets of the world, the international cooperation around Cultural Heritage tourism is one of viable ways of sustainable development. Africa's Cultural Heritage can connect all the continent through sustainable tourism and bring peace and sustainable use to Africans. Tourism can revive African assets, while the key of tourism development and heritage conservation is local communities' participation.

In summary, tourism is a new approach to the SDGs and sustainable tourism is one of the SDGs, while Africa's Cultural Heritage is a soul of tourism and one of resources for tourism. The value of Africa's Cultural Heritage can reflect in sustainable development through tourism, while local communities are the most important driver and implementer. Connecting all World Cultural Heritage properties in Africa through tourism can pave a way of peace and sustainable development.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Abungu, George Okello (2018), African heritage and its sustainable Development (UNESCO 2018: 17-23).
- Agenda 2063: the Africa We Want* (2015, September), Popular Version, African Union Commission, <https://www.un.org/en/africa/osaa/pdf/au/agenda2063.pdf> [Accessed on April 5, 2019].

- APEC (Asia-Pacific Economic Cooperation, 2010), *Report to APEC on the international workshop: Advancing Sustainable Tourism at Cultural and Natural Heritage Sites* (Mogao Caves World Heritage Site, China 26-29 September 2009). Singapore: APEC Tourism Working Group, December 2010.
- <https://apec.org/Publications/2010/12/Advancing-Sustainable-Tourism-at-Cultural-and-Natural-Heritage-Sites-Mogao-Caves-World-Heritage-Site> [Accessed on February 19, 2019]
- Ceesay, Baba (2018), Revamping a heritage tourism destination for more sustainable growth (UNESCO 2018: 93-97).
- Charter for Sustainable Tourism*, adopted by the World Conference on Sustainable Tourism (WCST) , Lanzarote, 27-28 April 1995, <http://www.prm.nau.edu/prm300/charter-for-sustainable-tourism.htm> [Accessed on March 11, 2019].
- Declaration of the United Nations Conference on the Human Environment* (1972, June 5-16), Stockholm. https://www.soas.ac.uk/cedep-demos/000_P514_IEL_K3736-Demo/treaties/media/1972%20Stockholm%201972%20-%20Declaration%20of%20the%20United%20Nations%20Conference%20on%20the%20Human%20Environment%20-%20UNEP.pdf [Accessed on April 3, 2019].
- ICOMOS (International Council on Monuments and Sites), *Tourism Handbook for World Heritage Site Managers*, Appendix, pp.79-93. <https://www.icomos.org/publications/93touris12.pdf> [Accessed on February 21, 2019].
- Joy, Charlotte (2012) , *The Politics of Heritage Management in Mali: From UNESCO to Djenné* (London and New York: Routledge Taylor & Francis Group) .
- Keitumetse, Susan Osireditse (2016), Heritage Enterprising: Cultural Heritage and Sustainable Tourism in Southern Africa, in *African Cultural Heritage Conservation and Management: Theory and Practice from Southern Africa*. Springer. Chapter 1, pp.1-21.
- https://www.researchgate.net/publication/305214415_African_Cultural_Heritage_Conservation_and_Management_Theory_and_Practice [Accessed on February 13, 2019].
- Labadi, Sophia (2012), *UNESCO, Cultural Heritage, and Outstanding Universal Value: Value-Based Analyses of the World Heritage and Intangible Cultural Heritage Conventions*. Altamira Press.
- Manders, Martijn R., Hans K. van Tilburg and Mark Staniforth (2012) , *Unit 6. Significance Assessment* (Bangkok, UNESCO) . <http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/images/630X300/UNIT6.pdf> [Accessed on March 20, 2019].
- Meadows, Donella H., Jørgen Randers, Dennis L. Meadows and Williams W. Behrens, *The Limits to Growth: A Report for the Club of Roma's on the Project of Predicament of Mankind* (New York: Universe Books, 1972).
- Pan, Huaqiong (January 2017-December 2018). Column: Africa's World Cultural Heritage Tour, *China Investment* (African Version), monthly issue.

- Sham, Anthony and Luka Gezik (2018) , Sukur : from conflict to reconstruction (UNESCO 2018: 162-165).
- Tourism Bill of Rights and the Tourist Code* (1985, September 17–26), <http://www.univeur.org/cuebc/downloads/PDF%20carte/67.%20Sofia.PDF> [Accessed on March 11, 2019].
- Tourism Data for Africa* (2014), <http://tourismdataforafrica.org/flanlab/tourism-direct-contribution-to-gdp> [Accessed on March 22, 2019].
- UN (1992, October 12) E/CN.3/1993/14, Tourism Statistics. <https://unstats.un.org/unsd/statcom/27th-session/documents/doc93/1993-14-TourismStats-E.pdf> [Accessed on March 12, 2019].
- UN (2002, August 26-September 4, Johannesburg, South Africa) A/CONF.199/20, *Report of the World Summit on Sustainable Development*, New York: United Nations Publication.
- UN (2015), *Transforming our world: the 2030 Agenda for Sustainable Development*, <https://sustainabledevelopment.un.org/post2015/transformingourworld> [Accessed on January 20, 2019].
- UN Documents (1987) , *Our Common Future* (Brundtland report) , Chapter 2: Towards Sustainable Development, UN World Commission on Environment and Development (WCED) <http://www.un-documents.net/ocf-02.htm#I> [Accessed on February 25, 2019].
- UNESCO, World Heritage List, <https://whc.unesco.org/en/list/&order=region> [all Cultural Heritage mentioned in this paper can be opened for further reading].
- UNESCO, The Criteria for Selection, <https://whc.unesco.org/en/criteria/> [Ten criteria in total: i, ii, iii, iv, v, vi for selecting cultural heritage, vii, viii, ix, x for selecting natural heritage].
- UNESCO (2012) , *World Heritage and Sustainable Tourism Programme*, <https://whc.unesco.org/uploads/activities/documents/activity-669-7.pdf> [Accessed on February 19, 2019].
- UNESCO (2016, July 13), Mali's Old Towns of Djenné on List of World Heritage in Danger, <https://whc.unesco.org/en/news/1520/> [Accessed on March 25, 2019].
- UNESCO (2018), *World Heritage Convention, Sustainable Development Goals*, World Heritage for Sustainable Development in Africa (Paris: UNESCO). <https://unesdoc.unesco.org/ark:/48223/pf0000261283/PDF/261283mul.pdf.multi> [Accessed on March 26, 2019].
- UNWTO (1980, September 27- October 10), *Manila Declaration on World Tourism*. <http://www.univeur.org/cuebc/downloads/PDF%20carte/65.%20Manila.PDF> [Accessed on February 25, 2019].
- UNWTO (1999, October 1) , *Global Code of Ethics for Tourism* (Santiago, Chile) <http://cf.cdn.unwto.org/sites/all/files/docpdf/gcetpassportglobalcodeen.pdf> [accessed on February 27, 2019].
- UNWTO (2015), *Tourism in Africa: A Tool for Development* (Madrid, UNWTO).
- UNWTO (2016a, November 10), *Africa Sustainable and Responsible Tourism Charter*,

- http://cf.cdn.unwto.org/sites/all/files/pdf/african_sustainable_and_responsible_tourism_charter_fv2.pdf [Accessed on February 18, 2019].
- UNWTO (2016b), *Supporting Tourism for Development in Least Developed Countries*. Madrid.
- UNWTO, EIF (Enhanced Integrated Framework), and ITC (International Trade Centre) (2016), *Supporting Tourism for Development in Least Developed Countries* (Geneva and Madrid), <https://www.e-unwto.org/doi/pdf/10.18111/9789284418350> [Accessed on July 11, 2018].
- UNWTO (2018a), *Tourism for Development*, Volume I: Key Areas for Action. Madrid.
- UNWTO (2018b), *Tourism for Development*, Volume II: Success Stories. Madrid.
- World Population Plan of Action (1974, August 29-30), http://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/E_CONF.60_19_Plan.pdf [Accessed on March 25, 2019].
- WTO, WTTC, Earth Council (1997), *Agenda 21 for the Travel and Tourism Industry: Towards Environmentally Sustainable Development*. (WTTC, London). E-book: Part I <https://www.e-unwto.org/doi/pdf/10.18111/9789284403714.1> & Part II <https://www.e-unwto.org/doi/pdf/10.18111/9789284403714.2> [Accessed on March 18, 2019].
- Yattara, Aldiouma (2018), Le Tombeau des Askia de Gao, un espace de prévention et de résolution des conflits (UNESCO 2018: 182-185).

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Part III- Anthropological Perspectives

The Origin and Dispersal of Yamnaya Steppe Ancestry Inferred from Ancient Genomes

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INTRODUCTION

The 1100-kilometre long Caucasus mountain ranges extend between the Black Sea and the Caspian Sea, bounded by the rivers Kuban and Terek in the north and Kura and Araxes rivers in the south (Fig. 9.1). The rich archaeological record suggests extensive human occupation since the Upper Palaeolithic (Adler DS, et al., 2014, Pinhasi R, et al., 2013, Lordkipanidze D, et al., 2013). A Neolithic lifestyle based on food production began in the Caucasus after 6000 calBCE (Helwing B, et al., 2017). As a region rich in natural resources such as ores, pastures and timber, the Caucasus gained increasing importance to the economies of the growing urban centers in northern Mesopotamia (Kohl P, Trifonov V., 2014 and Stein GJ 2012). The 4th millennium BCE archaeological record points to the presence of the Maykop and Kura-Araxes Bronze Age (BA) cultural complexes in the region (Fig. 9.1, Supplementary Note 1). The Maykop culture is well known for its large and rich burial mounds, especially at the eponymous Maykop site in today's Adygea. They reflect emergence of a new system of social organization (Kohl P., 2007), while the Kura-Araxes is found on both flanks of the Caucasus mountain range, attesting to a connection between north and south (Kohl P, Trifonov V., 2014).

THE RESEARCH PROBLEM

Contact between the Near East, the Caucasus, the Steppe and central Europe is documented as early as the 5th millennium BCE (Govedarica B., 2004, Lazaridis I, et al., 2016 and Mathieson I, et al., 2018) both archaeologically and genetically. This increased in the 4th millennium BCE along with the development of new technologies such as the wheel and wagon, copper alloys, new weaponry, and new breeds of domestic sheep (Benecke et al., 2017). Such contact was critical in the cultural (Reinhold S, et al., 2017) and genetic formation of the Yamnaya complex on the Eurasian Steppe – with about half of BA Steppe ancestry thought to derive from the Caucasus (Jones ER, et al., 2015). In the 3rd millennium BCE,

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increased mobility associated with wheeled transport and the intensification of pastoralist practices led to dramatic expansions of populations closely related to the Yamnaya (Anthony DW, Brown DR., 2011, Anthony DW, 2007 and Frachetti MD., 2012), accompanied by the domestication of horses (Librado P, et al., 2016) allowing more efficient keeping of larger herds. These expansions ultimately contributed a substantial fraction to the ancestry of present-day Europe and South Asia (Haak W, et al., 2015, Allentoft ME, et al., 2015 and Narasimhan VM, et al., 2018). Thus, the Caucasus region played a crucial role in the prehistory and formation of Eurasian genetic diversity.

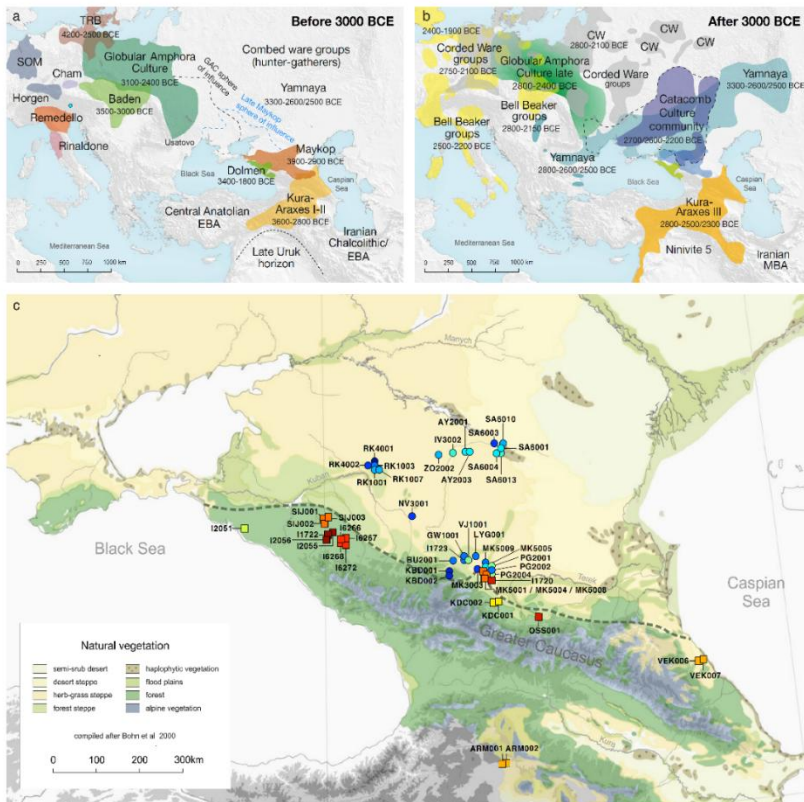


Fig. 9.1. Sites and archaeological cultures in Caucasus mentioned in this study

The extensive movements of Yamnaya people across the Steppe were suggested to be associated with the spread of some of Indo-European languages and material culture. The Yamnaya related Steppe ancestry contributed to 75% of the ancestry of Late Neolithic Corded Ware people from Germany. This steppe

ancestry also persisted in central Europeans until at least 3,000 years ago, and is ubiquitous in present-day Europeans (Haak W, et al., 2015). It is, however, currently not clear if and when the Eastward expansion of the Yamnaya and Afanasievo related population reached Xinjiang, the most eastern province of China. Xinjiang, geographically located in northwestern China, has long been one of the most well-known major crossroads of contact between the East and the West. The Silk Road located in the heart of the Xinjiang province documents the intensive connections between the East and the West since the Han dynasty (207 BCE–220 CE). Another well-known example is the Tocharian language, which is an extinct branch of the Indo-European language family, but was found on the northern edge of the Tarim Basin, in southern Xinjiang during the first millennium AD. The origin of the Tocharian speakers has been long debated.

This study investigates when and how the genetic patterns observed today were formed and test whether they have been present since prehistoric times by generating time-stamped human genome-wide data. We were also interested in characterizing the role of the Caucasus as a conduit for gene-flow in the past and in shaping the cultural and genetic makeup of the wider region. This has important implications for understanding the means by which Europe, the Eurasian steppe zone, and the earliest urban centers in the Near East were connected. We aimed to genetically characterize individuals from cultural complexes such as the Maykop and Kura-Araxes and assessing the amount of gene flow in the Caucasus during times when the exploitation of resources of the steppe environment intensified, potentially triggered by the Late Chalcolithic/Early Bronze Age (ca. 4000-3000 BCE⁵) cultural and technological innovations. Lastly, since the spread of steppe ancestry into central Europe and the eastern steppes during the early 3rd millennium BCE was a striking migratory event in human prehistory (Haak W, et al., 2015 and Allentoft ME, et al., 2015), we also retraced the formation of the steppe ancestry profile and tested for their influences on the populations in northwest China.

MATERIALS AND METHODS

In the Caucasus: The 107 Samples from archaeological human remains were collected and exported under a collaborative research agreement between the Max-Planck Institute for the Science of Human History, the German Archaeological Institute and the Lomonosov Moscow State University and Anuchin Research Institute and Museum of Anthropology (permission no. № 114-18/204-03).

Xinjiang: Both dental and petrous bones (n=11) from Shirenzigou cemetery (Xinjiang, China) were chosen for DNA screening. The samples were excavated between 2005 and 2007, and were dated both on archaeological context and C14 by accelerator mass spectrometry (AMS).

DNA was extracted and next-generation sequencing libraries prepared from samples in three dedicated ancient DNA laboratories at Jena, Jilin and Boston. Samples passing initial QC were further processed following the established

protocols for DNA extraction and library preparation 73, 74. Fourteen of these samples were processed at Harvard Medical School, Boston, USA following a published protocol by replacing the extender-MinElute-column assembly with the columns from the Roche High Pure Viral Nucleic Acid Large Volume Kit to extract DNA from about 75mg of sample powder from each sample. All libraries were subjected to partial ("half") Uracil-DNA-glycosylase (UDG) treatment before blunt end repair. We performed in-solution enrichment (1240K capture)²⁷ for a targeted set of 1,237,207 SNPs that comprises two previously reported sets of 394,577 SNPs (390k capture) and 842,630 SNPs, and then sequenced on an in-house Illumina HiSeq 4000 or NextSeq 500 platform for 76bp either single or paired-end. The sequence data was demultiplexed, adaptor clipped with leehom75 and then further processed using EAGER76, which included mapping with BWA (v0.6.1)⁷⁷ against human genome reference GRCh37/hg19, and removing duplicate reads with the same orientation and start and end positions. To avoid an excess of remaining C-to-T and G-to-A transitions at the ends of the reads, three bases of the ends of each read were clipped for each sample using trimBam. We generated "pseudo-haploid" calls by selecting a single read randomly for each individual at each of the targeted SNP positions using the in-house genotype caller pileup Caller.

In Jilin, the DNA was extracted following a silica based protocol. Firstly, the teeth samples were subject to bleach (10%) treatment for around 10 min and the petrous bones were wiped also with 10% bleach to exclude any potential contaminations. Then both the teeth and petrous bones were exposed to UV for 10 min on each side and 50mg of bone powder was incubated in 900ul digestion buffer (0.5 M EDTA, 15mg/ml Proteinase K and 83.3ul ddH₂O) at 37°C for 18 hours. The supernatant was then concentrated using a Amicon-30kDA Filter Units after which DNA was extracted by using MinElute silica spin column (Qiagen) according to the manufacturer's instruction. DNA was then eluted in 100ul preheated (60°C) TET buffer (1M Tris-HCl, 0.5M EDTA and 10% Tween-20). Libraries were prepared by using a blunt-end ligation protocol (Meyer & Kircher, 2010) with minor corrections that Bst DNA Polymerase (New England BioLabs) was replaced by Q5 High-Fidelity DNA Polymerase. Finally, the amplified products were purified with Agencourt AMPure XP beads (Beckman Coulter) and libraries were qualified with Agarose Gel Electrophoresis (Thermo Fisher Scientific) and Qubit (Thermo Fisher Scientific). For those passed the qualification processes were further sequenced on an Illumina Hiseq X10 platform.

RESULTS

Principal component analysis (PCA) and ADMIXTURE analysis were performed to assess the genetic affinities of the ancient individuals qualitatively (Fig. 9.2) and followed up quantitatively with formal f - and D -statistics, *qpWave*, *qpAdm*, and *qpGraph*. Based on PCA and ADMIXTURE plots we observe two distinct genetic clusters: one cluster falls with previously published ancient individuals from the West Eurasian steppe (hence termed 'Steppe'), and the second clusters with present-day southern Caucasian populations and ancient Bronze Age

individuals from today's Armenia (henceforth called '*Caucasus*'), while a few individuals take on intermediate positions between the two. The stark distinction seen in our temporal transect is also visible in the Y-chromosome haplogroup distribution, with R1/R1b1 and Q1a2 types in the *Steppe* and L, J, and

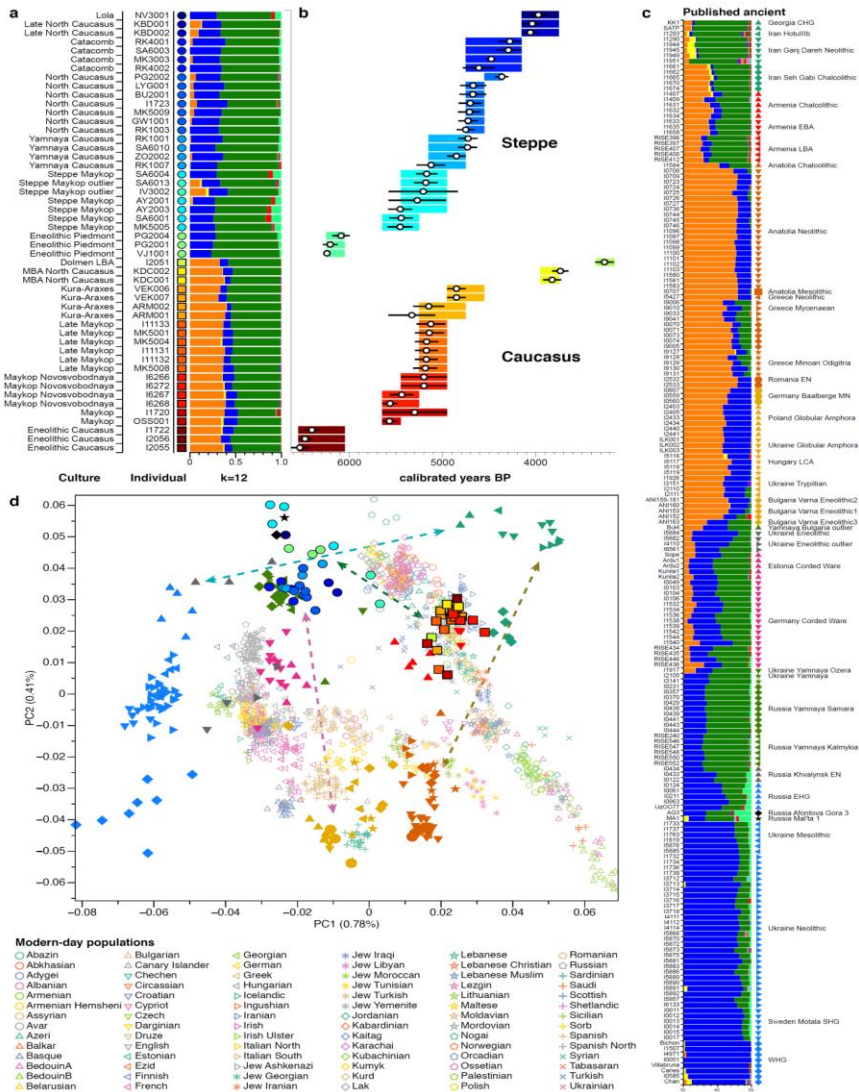


Fig. 9.2. ADMIXTURE and PCA results, and chronological order of ancient Caucasus individuals

G2 types in the *Caucasus* cluster. In contrast, the mitochondrial haplogroup distribution is more diverse and almost identical in both groups. Four individuals from mounds in the grass steppe zone, who are archaeologically associated with the 'Steppe Maykop' cultural complex, lack the Anatolian farmer-related (AF) component when compared to contemporaneous Maykop individuals from the foothills. Instead they carry a third and fourth ancestry component that is linked deeply to Upper Paleolithic Siberians (maximized in the individual Afontova Gora 3 (AG3) and Native Americans, respectively, and in modern-day North Asians such as North Siberian Nganasan).

Evidence for interaction between the *Caucasus* and the *Steppe* clusters is visible in our genetic data from individuals associated with the later Steppe Maykop phase around 5300-5100 years ago. These 'outlier' individuals were buried in the same mounds as those with steppe and in particular Steppe Maykop ancestry profiles but share a higher proportion of AF ancestry visible in the ADMIXTURE plot and are also shifted towards the *Caucasus* cluster in PC space (Fig. 9.2D). This observation is confirmed by formal *D*-statistics (Steppe Maykop outlier, Steppe Maykop; X; Mbuti), which are significantly positive when X is a Neolithic or Bronze Age group from the Near East or Anatolia. By modelling Steppe Maykop outliers successfully as a two-way mixture of Steppe Maykop and representatives of the *Caucasus* cluster, we can show that these individuals received additional 'Anatolian and Iranian Neolithic ancestry', most likely from contemporaneous sources in the south. We estimated admixture time for the observed farmer-related ancestry individuals using the linkage disequilibrium (LD)-based admixture inference implemented in ALDER, using Steppe Maykop outliers as the test population and Steppe Maykop as well as Kura-Araxes as references. The average admixture time for Steppe Maykop outliers is about 20 generations or 560 years ago, assuming a generation time of 28 years.

In principal component space Postneolithic individuals (Samara Eneolithic) form a cline running from EHG to CHG (Fig. 9.2D), which is continued by the newly reported Eneolithic steppe individuals. However, the trajectory of this cline changes in the subsequent centuries. Here we observe a cline from Eneolithic_steppe towards the *Caucasus* cluster. We can qualitatively explain this 'tilting cline' by developments south of the Caucasus, where Iranian and Anatolian/Levantine Neolithic ancestries continue to mix, resulting in a blend that is also observed in the *Caucasus* cluster, from where it could have spread onto the steppe. The first appearance of 'Near Eastern farmer related ancestry' in the steppe zone is evident in Steppe Maykop outliers. However, PCA results also suggest that Yamnaya and later groups of the West Eurasian steppe carry some farmer related ancestry as they are slightly shifted towards 'European Neolithic groups' in PC2 (Fig. 9.2D) compared to Eneolithic steppe. This is not the case for the preceding Eneolithic steppe individuals. The 'tilting cline' is also confirmed by admixture f_3 -statistics, which provide statistically significant negative values for AG3 as one source and any Anatolian Neolithic related group as a second source. Detailed exploration via *D*-statistics in the form of $D(\text{EHG, steppe group; X, Mbuti})$ and $D(\text{Samara_Eneolithic, steppe group; X, Mbuti})$ show significantly negative *D* values for most of the steppe groups when X is a member of the

Caucasus cluster or one of the Levant/Anatolia farmer-related groups. In addition, we used f - and D -statistics to explore the shared ancestry with Anatolian Neolithic as well as the reciprocal relationship between Anatolian- and Iranian farmer-related ancestry for all groups of our two main clusters and relevant adjacent regions. Here, we observe an increase in farmer-related ancestry (both Anatolian and Iranian) in our *Steppe* cluster, distinguishing the Eneolithic steppe from later groups. In Middle/Late Bronze Age groups especially to the north and east we observe a further increase of AF ancestry consistent with previous studies of the Poltavka, Andronovo, Srubnaya and Sintashta groups and reflecting a different process not especially related to events in the Caucasus.

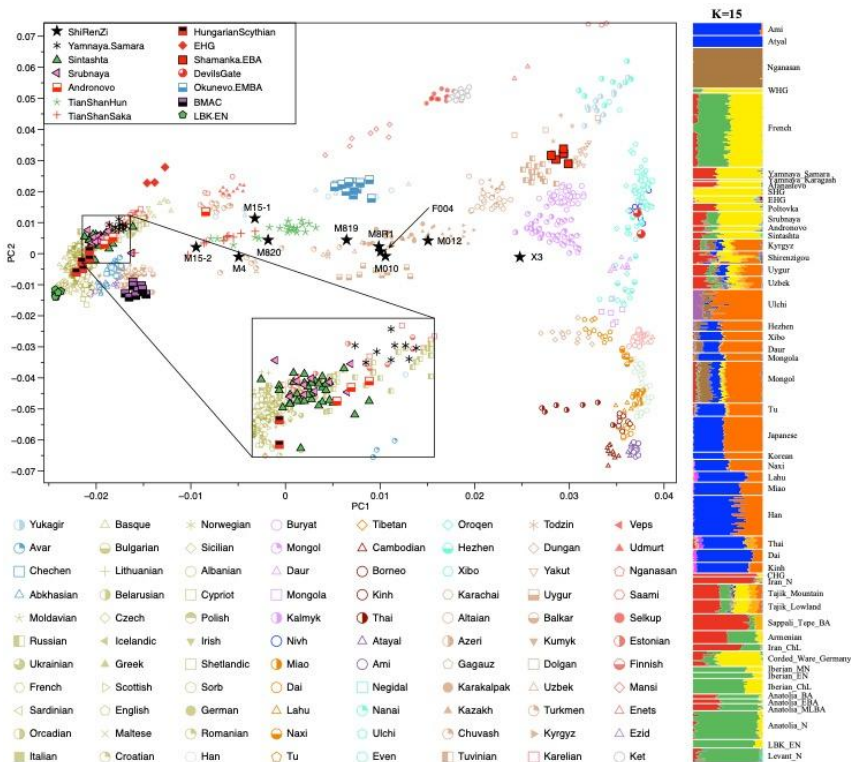


Fig. 9.3. PCA and ADMIXTURE Analysis for Shirenzigou samples

We projected the ancient data in this study as well as the published ancient data onto the first two components defined by a set of selected present-day Eurasians from the Human Origins dataset.

In Xinjiang samples (Fig. 9.3), we applied a formal admixture test using f_3 -statistics in the form of $f_3(\text{Shirenzigou}; X, Y)$ where X and Y are worldwide populations that might be the genetic sources for the Shirenzigou individuals. We observed the most significant signals of admixture in the Shirenzigou samples when using Yamnaya_Samara or Srubnaya as the West Eurasian source and some Northern Asians or Korean as the East Eurasian source. We also plotted the outgroup f_3 -statistics in the form of $f_3(\text{Mbuti}; X, \text{Anatolia_Neolithic})$ and $f_3(\text{Mbuti}; X, \text{Kostenki14})$ to visualize the allele sharing between population X and Anatolian farmers. The Steppe_MLBA populations including Srubnaya, Andronovo and Sintashta were shifted towards farming populations compared with Yamnaya groups and the Shirenzigou samples. The observation is consistent with ADMIXTURE analysis that Steppe_MLBA populations have an Anatolian and European farmer related component that Yamnaya groups and the Shirenzigou individuals do not seem to have. The analysis consistently suggested Yamnaya related Steppe populations were the better source in modelling the West Eurasian ancestry in Shirenzigou. We continued to use qpAdm to estimate the admixture proportions in the Shirenzigou samples by using different pairs of source populations, such as Yamnaya_Samara, Afanasievo, Srubnaya, Andronovo, Bustan_BA/Sappali_Tepe_BA (BMAC culture) and Tianshan_Hun as the West Eurasian source and Han, Ulchi, Hezhen, Shamanka_EN as the East Eurasian source. In any cases, Yamnaya, Afanasievo, or Tianshan_Hun always provide the best model fit for the Shirenzigou individuals, while Srubnaya, Andronovo and Bustan_BA/Sappali_Tepe_BA only work in some cases. The Yamnaya_Samara/Afanasievo related ancestry ranges from ~ 20% to 80% in different Shirenzigou individuals, consistent with the scattered distribution on the East-West cline in the PCA. In the PCA, ADMIXTURE, outgroup f_3 -statistics as well as f_4 -statistics, we observed the Shirenzigou individuals were closer to the present-day Tungusic and Mongolic-speaking populations in northern Asia than to the populations in central and southern China, suggesting the northern populations might contribute more to the Shirenzigou individuals.

DISCUSSION

Data from the Caucasus region cover a 3000-year interval of prehistory, during which we observe a genetic separation between the groups in the northern foothills and those groups of the bordering steppe regions in the north (i.e. the 'real' steppe). We have summarized these broadly as Caucasus and Steppe groups in correspondence with eco-geographic vegetation zones that characterize the socio-economic basis of the associated archaeological cultures. An interesting observation is that Eneolithic Samara and Eneolithic steppe individuals directly north of the Caucasus had initially not received AF gene flow. Instead, the Eneolithic steppe ancestry profile shows an even mixture of EHG- and CHG ancestry, suggesting an effective cultural and genetic border between the contemporaneous Eneolithic populations, notably *Steppe* and *Caucasus*. Due to the temporal limitations of our dataset, we currently cannot determine whether this ancestry is stemming from an existing natural genetic gradient running from EHG far to the north to CHG/Iran in the south or whether this is the result of

Iranian/CHG-related ancestry reaching the steppe zone independently and prior to a stream of AF ancestry, where they mixed with local hunter-gatherers that carried only EHG ancestry. All later steppe groups, starting with Yamnaya, deviate from the EHG-CHG admixture cline towards European populations in the West. We show that these individuals had received AF ancestry, in line with published evidence from Yamnaya individuals from Ukraine (Ozera) and Bulgaria (Mathieson I, et al. 2018). In the North Caucasus, this genetic contribution could have occurred through immediate contact with *Caucasus* groups or further south. An alternative source, explaining the increase in WHG-related ancestry, would be contact with contemporaneous Chalcolithic/EBA farming groups at the western periphery of the Yamnaya distribution area, such as Globular Amphora and Cucuteni–Trypillia from Ukraine, that have been shown to carry AF ancestry (Mathieson I, et al. 2018).

Archaeological arguments are consonant with both scenarios. Contact between early Yamnaya and late Maykop groups is suggested by Maykop impulses seen in early Yamnaya complexes. A western sphere of interaction is evident from striking resemblances of imagery inside burial chambers of Central Europe and the Caucasus, and similarities in geometric decoration patterns in stone cist graves in the Northern Pontic steppe, on stone *stelae* in the Caucasus, and on pottery of the Eastern Globular Amphora Culture, which links the eastern fringe of the Carpathians and the Baltic Sea. This overlap of symbols implies a late 4th millennium BCE communication and interaction network that operated across the Black Sea area involving the Caucasus, and later also early Globular Amphora groups in the Carpathians and east/central Europe. The role of early Yamnaya groups within this network is still unclear. However, this interaction zone pre-dates any direct influence of Yamnaya groups in Europe or the succeeding formation of the Corded Ware and its persistence opens the possibility of subtle gene-flow from farmers at the eastern border of arable lands into the steppe, several centuries before the massive range expansions of pastoralist groups that reached Central Europe in the mid-3rd millennium BCE.

Based on the ADMIXTURE and qpAdm analysis, we conclude that the western Eurasian ancestry in the Shirezigou individuals was most-likely related to Yamnaya without significant evidence of European farmer related gene flow that is present in later Steppe_MLBA populations. The Yamnaya-related steppe ancestry has been described as a mixture of Eastern- and Caucasus hunter-gatherers from the Pontic-Caspian steppes, dating to 3,300–2,600BCE, which eventually spread further to the Altai region in the East in the form of people associated to the Afanasievo Culture. The same population likely migrated to Europe in the West contributing substantially to present-day Europeans along with the spread of some of the Indo-European languages. In the following millennia, the Altai region was characterized by the local Bronze Age Andronovo culture. The Andronovo people were genetically closely related to Late Bronze Age Sintashta and Srubnaya people with significant evidence of European farmer related ancestry. Our results suggest that the Yamnaya/Afanasievo related ancestry expanded further south through the Dzungarian Basin into the northern slope of the Tianshan Mountains in Xinjiang since at least the second millennium

BCE and thus support the “Steppe hypothesis” for the early peopling of Xinjiang. A potential direction of future research is the generation of genome data from ancient individuals from the Tarim Basin to see if the Steppe related ancestry had come across the geographic barrier and spread to the south of the Tianshan mountains. Our analysis might thus provide direct evidence for the steppe-related eastern spread of Indo-European languages, notably the arrival of the Tocharian branch of Indo-European in the Tarim basin. The Tocharian languages are known from manuscripts from 500 - 800 CE, found south of the Tianshan Mountains, in the north central and eastern reaches of the Tarim Basin. The relationship between these languages is commonly explained by divergence from a common ancestor, Proto-Tocharian, which must have preceded the attested languages by more than a millennium, probably dating to the middle 1st millennium BCE. Peyrot Michaël, Peyrot (2018) pointed out that proto-Tocharian is not more closely affiliated with Indo-Iranian than with any other branch of Indo-European and that it therefore cannot be related to the Indo-Iranian Sintashta and Andronovo cultures. As the homeland of Proto-Tocharian seems to be situated south of the Tianshan Mountains, future research should determine to what extent the Tianshan has served as a geographic barrier for the ancient Steppe gene flow.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Adler DS, et al. Early Levallois technology and the Lower to Middle Paleolithic transition in the Southern Caucasus. *Science* 345, 1609-1613 (2014).
- Pinhasi R, et al. New chronology for the Middle Palaeolithic of the southern Caucasus suggests early demise of Neanderthals in this region. *Journal of Human Evolution* 63, 770-780 (2012).
- Lordkipanidze D, et al. A complete skull from Dmanisi, Georgia, and the evolutionary biology of early Homo. *Science* 342, 326-331 (2013).
- Helwing B, et al. The Kura projects: New research on the later prehistory of the southern Caucasus. In: *Archäologie in Iran und Turan* (eds). Dietrich Reimer Verlag (2017).
- Kohl P, Trifonov V. The Prehistory of the Caucasus: Internal Developments and External Interactions. In: *The Cambridge World Prehistory* (eds Renfrew C, Bahn P). Cambridge University Press (2014).
- Stein GJ. The Development of Indigenous Social Complexity in Late Chalcolithic Upper Mesopotamia in the 5th-4th Millennia BC - An Initial Assessment. *Origini* 34, 125-151 (2012).
- Kohl P. *The Making of Bronze Age Eurasia* Cambridge University Press (2007).
- Govedarica B. *Zepterträger, Herrscher der Steppen: Die frühen Ockergräber des älteren Äneolithikums im karpatenbalkanischen Gebiet und im Steppenraum Südost- und Osteuropas.* von Zabern (2004).
- Lazaridis I, et al. Genomic insights into the origin of farming in the ancient Near East. *Nature* 536, 419-424 (2016).

- Mathieson I, et al. The genomic history of southeastern Europe. *Nature*, (2018).
- Benecke N, Becker C, Küchelmann HC. Finding the Woolly Sheep. Meta-analyses of archaeozoological data from Southwest-Asia and Southeast-Europe. *e-Forschungsberichte* 1, 12-18 (2017).
- Reinhold S, et al. Contextualising Innovation: Cattle Owners and Wagon Drivers in the North Caucasus and Beyond. In: *Appropriating innovations: entangled knowledge in Eurasia 5000-1500 BCE*, Papers of the Conference (eds Maran J, Stockhammer PW). Oxbow Books (2017).
- Jones ER, et al. Upper Palaeolithic genomes reveal deep roots of modern Eurasians. *Nat Commun* 6, 8912 (2015).
- Anthony DW, Brown DR. The Secondary Products Revolution, Horse-Riding, and Mounted Warfare. *J World Prehist* 24, 131-160 (2011).
- Anthony DW. *The Horse, the Wheel, and Language: How Bronze-Age Riders from the Eurasian Steppes Shaped the Modern World*. Princeton University Press (2007).
- Frachetti MD. Multiregional Emergence of Mobile Pastoralism and Nonuniform Institutional Complexity across Eurasia. *Current Anthropology* 53, 2–38 (2012).
- Librado P, et al. The Evolutionary Origin and Genetic Makeup of Domestic Horses. *Genetics* 204, 423–434 (2016).
- Haak W, et al. Massive migration from the steppe was a source for Indo-European languages in Europe. *Nature* 522, 207-211 (2015).
- Allentoft ME, et al. Population genomics of Bronze Age Eurasia. *Nature* 522, 167-172 (2015).
- Narasimhan VM, et al. The Genomic Formation of South and Central Asia. *bioRxiv*, (2018).
- Michaël, Peyrot (2018). Early Indo-Europeans on the steppe: Tocharians and Indo-Iranians. *Nature* 557(Suppl. Section 2: Linguistic history of the steppe), 10-14.

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Genetics and African Historiography: Limitations and Insights

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INTRODUCTION

Genetics and genomics are increasingly employed in studies which construct chronological narratives treated as a form of history, or used to comment on the ancestry of living groups which is then viewed in some historical fashion which might sometimes be viewed as “origins” a term with various possible meanings and problems (Bloch 1953). Ancient DNA has also been deployed in such situations despite poor (and inadequate) sample sizes in general, and gain their greatest legitimacy when species level i.e. macro-evolutionary questions are being examined. Here the major concern involves questions about human populations for which there is some notion of identity, if only geographical, and in general there will be no further mention of human evolutionary history in the usual sense. Many studies on Holocene populations have been carried out. The data for such work in the past were often and still are in some situations morphological and morphometric observations, which can still be useful given that ancient DNA (aDNA) work is in its infancy. Molecular studies include understanding the phylogeny of genetic variants or lineages themselves versus a concern with the populations in which they are found.

CURRENT PERSPECTIVES AND DEVELOPMENTS

More recently there has been the development of what could be called the field of historical genetics (de Chadarevian 2010, Egorova 2010) which addresses narrower historical questions that fall outside the definition of “evolutionary” work in the classic sense, although microevolution secondary to gene flow and genetic drift is implicitly involved. Great fanfare has been given to the idea that genetic investigations are more authoritative or important and offer the final solution to certain historical questions. The studies range in their focus. One example is exploring whether or not in a given region food production was more likely spread by population migration (called demic diffusion) or the migration of ideas. The mechanism of the spread of language families (or language change) has similarly been explored with genetic analyses in order to attempt to understand to what degree there was population movement versus language shift—the adoption of a

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language family by a different population. Some have even attempted language classification. Genetic patterns in living populations have generally been used to make these analyses. Given the complexity of human interaction and contingencies such work always has to be reviewed carefully. In fact historians (and historically oriented archaeologists) have been skeptical of this kind of work (de Chadarevian 2010, Egorova 2010) for a variety of reasons, including the perception that geneticists view their work as more important or authoritative, even though their discipline acts in a service role when the issue is historical questions. The advent of aDNA studies, once sample sizes become adequate, should also help in some of these questions with the understanding that human social and biological interactions, and population definitions, cannot be reduced to DNA and positivism has to be avoided. Obviously not all or most human interactions, or social actors, will be recoverable with DNA; indeed, perhaps no one aDNA sample will be representative unless the question involves species level evolutionary or basic systems biology issues.

Other historical questions addressed by geneticists have included population histories which focus on ancestral identities, migrations and admixture at the individual and populations levels, with populations being defined or described in various ways, leading to units which are not really equivalent. Still other studies are more descriptive, provide basic information, and catalogue the variation in groups where there has been known interaction. None of this kind of work is without problems. Sample size and representativeness will likely for some time to come be a problem in such studies, even if old paradigms and ideas are successfully avoided—which requires a strong knowledge of the history of ideas. Statistical analyses, heavily relied upon in much of this work, are not without problems and different results are possible depending on initial assumptions, sample size, sample representativeness, and methods. Biases can be built into algorithms.

Non-macro-evolutionary genetic history/historical genetics as in some sense a “new” kind of history has not yet been fully subjected to the kinds of philosophical treatment given on the one hand to paleontology, and the other hand to text based history—where scholars debate how much the past can really be known in some complete sense and attempt to identify the effect of bias in description, interpretation and explanation (McCullagh 2000). There is not yet a claimed or identifiable well-developed historiography, in the sense of methodology of historical genetics or “genetic history” work which ironically, is not often published in history journals (de Chadarevian 2010, Egorova 2010).

It is worthwhile exploring some of the genetic historically oriented work in non-evolutionary studies written about African populations. It is important to remember that various biases that employ some form of biological determinism or racism are a part of the history of ideas regarding Africa and Africans. Some ‘historical genetic’ studies focus on examining data to assess possible population interactions and the genetic structure of populations, others on the molecular aspects of the evolution of lineages, and still others on the use of genetics in exploring questions or issues posed or previously addressed by historians,

linguists and/ or archaeologists. African as used here describes populations whose first historically biocultural attested identities emerged in Africa (from Algeria to Zimbabwe) with some African antecedent, and is not based on typological or “racial” notions as constructed in some colonial discourses.

The problem of explanation is of more than passing interest. The terms nomothetic and idiographic are often used to contrast different kinds of explanation (Trigger 1978). Explanation in science is called nomothetic and said to be based on general or universal laws or principles, which usually excludes acceptable explanations in history and perhaps most social sciences. In history explanation is generally said to be contingent, and based on interconnected causal moment-to-moment events and described with the term idiographic. These are not necessarily mutually exclusive in that different levels of explanation are possible for some events (e.g. both gravity and missteps in hand placement could be said to ‘explain’ why a free hand mountain climber plunges to death).

The interest in genetics is often embedded in ideas about identity, which is a multilayered construct. Many populations will have a diversity of lineages as indicated by male or female lineage DNA. Individuals may have varying ancestries which may not match their current social or ethnic identities. It is important to remember that a culturally defined group could change language and gain different ancestry over time, unless social rules deny group inclusion to the descendants of such mating. A biologically defined group can change culture or languages. Languages can and have been adopted by new populations. These permutations depend on social or sociopolitical rules. An easy to understand example is the contrast between being a *citizen* of a Native American nation (in the US) and being of Native American biogeographical ancestry. In the past some people of solely African descent were citizens of certain Native American nations (e.g. Chickasaw) and were in that sense Indians without having any native American biogeographical ancestry. This may be the source of some confusion when some legacy Afro-North Americans of middle passage origin said/say, based on family oral histories, that they have Indians in the family tree but have no Native American ancestry based on ancestry testing. Another example is illustrated by the Garifuna, a native American group in the Caribbean who were described as being “typical” Indians in physical appearance during the initial European contact phase, but did not have this expected somatic norm when visited centuries later by western scholars. What happened is that while retaining their language and culture (ethnicity) they had intermarried extensively with escaped captured west Africans, thus altering their historical somatic norm (see Crawford 2006).

In the current world—a continuation of European colonialization in much of its social practice and thinking in scholarship and some societies—a range of circumstances have led to variation in group definitions and understandings based on what can be called the social reaction to phenotype or reported ancestry.

MATERIALS AND METHODS

The material for this review are cases taken from the literature and issues in African history which have either used genetics or have a genetic implication. The methods primarily involve examining the claims by critically examining the DNA evidence and presented explanations in a contextual manner that avoids the pitfalls of a facile positivism or ahistorical hermeneutic. The issue is the interpretation. (The lab techniques are broadly accepted although the sampling may often be problematic at varying levels.) The analyses focus on how useful, at least by implication, genetic data are in explaining the claims made in the paper. The bias is here is accepting Franz Boas observation that culture, language and biology ("race" in his terminology) have no intrinsic or causal connections. They may be casually connected, even strongly so, due to social practices, but can and have been disrupted. The quest for a tight fit between genes, languages and culture is a throwback to the 19th century. Examining data for parallel patterns with no assumption of intrinsic linkages is acceptable in some types of questions but positive correlation is never the same as causation.

Here the leading question involves the idea of idiographic explanations in questions of non-evolutionary population history. When should genetics, if ever, lead a narrative? When should genetics be interpreted in pre-existing frameworks as determined by historical linguists, historians or archaeologists? How can synthesis be achieved without circularity? It is accepted that due to racism, apartheid, and the Nazi experience that even the suggestion of looking at biology/genetics in historical questions of identity and society is suspect to many people, scholars included, and that position is respected (de Chadarevian 2010).

If the question/problem is strictly biological then genetics/biological theory should define the paradigm of the work. Strictly archaeological, cultural or linguistics questions would set out the limiting parameters in interpretation in those kinds of studies. If there are research questions that foundationally involve an entanglement of disciplines then the role of each discipline has to be defined to obtain reciprocal illumination. Social practice can influence aspects of biology(see e.g. Harrison et al. 1970). The presence and frequency of a particular sickle cell variant far outside of its expected geographical area may lead to various questions e.g.s.: 1) what is the proximate source of the gene (social identity of the population) and how and when did it get there, 2) does natural selection or the number of founders primarily explain the frequency, and 3) has the frequency likely been the same over time?

The 'cases' to be presented here are either from the recent literature or represent longstanding conceptual issues in African studies.

Case 1: On Y-chromosome distributions in Sudanese Populations

Hassan et al. (2008) published a multidisciplinary article on Y chromosome distributions in various populations of the Sudan. The information provided material for the inference of the influences on the Sudanese writ large, as well as

subgroups, any one of which would have been interesting. The Y chromosome is inherited father to son without recombination and is generally useful in assessing migrations (van Oven et al. 2014, Trombetta et al. 2015). A sample of Fulani was included; although this group was not the main concern of the paper interesting things were said which illustrate how claims based solely on DNA can be misleading. One suggestion made, based on frequency of 15% of a variant of haplogroup R1, was that the Fulani as a *group* had come from SW Asia. This was not a major focus of the paper but is worth discussing due its place of publication, possibility of being cited, and to past theories that made the Fulani a part of the Hamitic taxon, which was a part of Seligman's (1930) overturned Hamitic hypothesis (see Greenberg 1963)—which included migration from Asia. The Hamitic hypothesis posited that the Hamites were a population speaking Hamitic languages who brought a particular phenotype, language and culture to Africa.

The statement about Asian origins is not supported by other data ('total evidence'): historical linguistics, or known patterns of Fulani movements across the Sahel from western to eastern Africa, and other genetic data examined (Keita et al. 2009). More parsimoniously, the relatively high frequency of an R haplogroup in the Sudanese sample is explicable by interactions with Arab pastoralists in the Sahel/Sahara who could have been assimilated into Fulani communities after losing their herds, or as being a part of the background of Saharan/sahel peoples. The Fulani speak a language of the subgroup of Niger-Congo languages which is similar to others in the Senegambia region and acknowledge this area as a homeland. There is no evidence for ancient Fulani communities in SW Asia. The R haplogroup, which apparently originated in SW Asia, has a presence in various circum-saharan populations, as is often described as having come to Africa in a "back migration." This circum-saharan distribution is more plausibly explained by the interactions in the Green Sahara and subsequent population interactions as the Sahara became more arid. DNA in this case indicates something about a part of the ancestry of some Fulani, more specifically the sample studied. It is not present in all Fulani. A lineage may gain new mutations unique in a new homeland, allowing a distinction to be made from the original parent.

Other Sahel populations have some ancestry from SW Asia based on R (R-V88), specifically Chadic speakers. Some have postulated that R (R-V88) marks a southward migration of Chadic speakers (Cruciani et al. 2010) through the desert, but it is not clear if they are suggesting that the macro-language family (i.e. Afroasiatic) came from Asia, versus the lineage. The mtDNA lineages of Chadic speakers show an east African connection (Cerny et al. 2004). This combination of findings illustrates the value of a critical historiography. It is likely that a series of complex interactions that can be explained in terms of climate and population interaction explain the findings which for some do not conform to a simple picture of expected congruence. Linguistic criteria indicate that Afroasiatic arose in Africa and that its earliest speakers were hunters and gatherers, not food producers, which is essentially a consensus view (Ehret et al. 2004). Genetic analyses designed to explore one version of the Nostratic

hypothesis, which postulates Afroasiatic being brought into Africa by food producers—i.e. demic diffusion—is not supportable (Barbujani and Pilastro 1993). Nostratic is a superfamily often placed in or near Anatolia by its proponents. If Nostratic is a valid taxon, which is contested then Afroasiatic apparently is analytically more interpretable as a sister than member (Ruhlen 1987).

All subpopulations of an ethnic group, especially one as far flung as the Fulani would predictably be variable with genetic drift accounting for some difference in subpopulations as was suggested for the Western Apache some time ago (Kraus and White 1956). Sociological and geographical factors that lead to differential gene flow into a culturally defined population could lead to such variation (Benedict 1972, Harrison and Boyce 1972, Hiorns et al. 1969, Harrison et al. 1970, Harrison 1984). The complexity of the Fulani, or that of any Sahel/Saharan group should not be surprising. Populations are better understood as ensembles or processes in situations where there has a long complex social and ecological history involving migration and interaction. A given ethnic group may have multiple ancestries from peoples with different ethnicities, but not evince any cultural impact from the interactions.

Case 2: On correlations between languages and genes/populations

Correlations have long been observed between languages and genes/populations, with constructions of trees that often mirror this (e.g. Cavalli-Sforza 1991). However as is well known a biologically defined population could change language and one defined linguistically could change genetically via mate exchange. New populations can emerge and others become extinct. Some congruence between genes and languages is not surprising due to the linguistic continuity between parents and children, geographical restriction of groups, social endogamy restricting out-marriage, but also the ways in which recent populations have come to densely occupy territory in such a way as to make correlations very likely. Obviously extinct language languages and language families get missed in any such analysis. Different genetic systems may also give different results at least at some level. Languages are not encoded in genes; nor do genes “cause” language family affiliation.

The adoption of language by other than original speakers, as noted previously, is called language shift (Ruhlen 1987). In Africa various examples are well known which need no reference: the adoption of Arabic by peoples in the Nile Valley from the Mediterranean to Khartoum, the shift to Arabic by some Berber speakers which has led in some cases to a change in identity, the use of Phoenician, by an unknown number of people in the Maghreb after the founding of Carthage who were of local, not Levantine descent, the adoption and use of KiSwahili (and English) (personal observation) by some segments of current East African groups with the concurrent loss of their own ethnic languages.

The correlation of genes/ancestry with language in some studies has led some researchers to use the genetic data to classify the language families themselves

(Baker et al. 2017). Specifically Baker et al. (2017) for Africa suggest that Omotic is not Afroasiatic based on the genetics of current speakers. This is problematic because fundamentally linguistic classification should be done with linguistic criteria. Most linguists accept Omotic as a member of Afroasiatic based on standard criteria (Ehret pers. comm). Some scholars do reject this affiliation, but based on linguistic grounds which is theoretically appropriate as opposed to genetic or archaeological data. Baker et al. (2017) are interested in showing that ancestry not “race” correlates with languages but they go further than this; the use of one set of biological traits over another in assessing ancestry might be debated by some. However, the strength of current observable ancestry and language correlation does not negate a fundamental rule about the procedure of classification. Baker et al. (2017) also raise the minority idea that Afroasiatic arose in the Near East, again based on genetic associations of current speakers and some ideas about dating and not linguistic principles related to the region of greatest diversity, lexical and other linguistic evidence as well as other considerations. Languages can spread among genetically diverse groups, and to suggest otherwise is to recapitulate 19th century ideas about “race” and culture. When should genetics be allowed to lead or dictate the narrative: this is the question to which a critical scholarship is led based on an awareness of historiography and science/microevolutionary paradigms—and the sociology of knowledge.

Conceptually the idea that biological traits could be used to exclude membership of a language family in a linguistic taxon is reminiscent of other and older debates about membership in Afroasiatic and African peoples. Chadic was once resisted by some researchers to be included in Afroasiatic not due to linguistic criteria, but to the external phenotype of its speakers; in short they were deemed to be ‘too black’ for lack of a better phrase (see Ruhlen 1987, Newman 1980). The parallel being made here is that biological traits, whether they be genomic or external phenotypes, were being employed to make or influence a linguistic classification as opposed to linguistic criteria being used for this purpose. Another example is that of the pastoral Fulani who, because of their phenotype were classified as Hamites, as being from Asia, and said to speak a Hamitic (now Afroasiatic) language (Seligman 1930). Greenberg (1963) showed that their language was Niger-Congo, and as noted there is no evidence that they immigrated to Africa, as he pointedly indicates the criteria for linguistic classification.

Case 3: On the Origins of Pharaonic Egypt Population

The “origin” of the population in the Egyptian Nile Valley has long been of interest, with ‘origin’ usually being expressed in terms of geography and/or of the received racial schema and sometimes racial ideology. The origin of the population, thought of in this manner, has also been tied to a notion of culture, with the idea that the culture was transported with the people affixed to their “racial” identity. Various kinds of evidence and models have been used to assess the peopling of the Nile Valley which has been inhabited since the Paleolithic. The Nile Valley’s location in Africa—in the northeastern Sahara,

being essentially a linear oasis--places Egypt near the crossroads of three continents. It is also continuous with the rest of Africa via the Sahara and the Nile Valley's southern reaches.

An ancient DNA (aDNA) study of mummies from the site of Abusir el-Meleq in northern Egypt (the Fayum province), and dated from the New Kingdom to Roman dynastic Egypt, was recently carried out (Schueneman et al. 2017). The sample was constructed from individuals dated across the latest periods of ancient Egyptian history and included 90 mtDNA lineages but only three whole genomes—so the Y chromosome lineages of most individuals is not known. Various statistical approaches were used including Bayesian analysis. The aDNA results were compared with living Egyptians and one sample of “sub-Saharan” (SSA) Africans, specifically from the ethnolinguistic group called Yoruba from Nigeria. The aDNA results were said to be primarily Eurasian. The conclusion, in summary, was that the “Egyptian” population was “Eurasian” and assimilated more SSA people in the post-Roman period due to the “Muslim” slave trade. The results and conclusion are reported in such a fashion as to suggest the broad interpretation that the ancient Egyptians *from all times including the founding periods and places within the Nile Valley* came from Semitic speaking areas within Asia (the Near East). The authors did offer a caveat, namely that the results may have been different if they had sampled from near the southern border of Egypt but this is not emphasized sufficiently. Southern Upper Egypt is locale of the emergence of the antecedents of dynastic culture. There are several problems with this study from a historiographic and methodological point of view which render its conclusions—and their perception—problematic. The study conclusions illustrate several broad issues of concern which invite further discussion. These relate primarily to interpretation and samples. Space does not permit a fuller discussion.

This conclusion suggests a view that the African Nile Valley and its people was simply an extension of southwest Asia, amplified by a description of Egypt—the whole country--as being an “isthmus”, a term which could only be used in northeastern Africa to refer to the Sinai peninsula. The conclusion by extension also has the effect, for some readers, of suggesting that ancient Egyptian culture was not of Nilotic African origin, i.e. did not primarily *emerge* in the valley from local developments and ideas and shows no connections with other Africans. The conclusions have been used by those of Eurocentric and frankly racist persuasions to suggest that ancient Egypt is not a part of African historiography. This is reminiscent of theories like the well-known invalidated Dynastic Race thesis which attributed the core of dynastic Egyptian culture to migrants Asia, but even in that theory there were pre-existing local people in the valley. However, even if true, the migration of SW Asians or their presence, at this time cannot be connected to the founding of ancient Egypt and otherwise problematic as to the locale.

The authors do not offer alternative hypotheses or narratives, for their findings. The historical work on Egypt for this and earlier periods indicates a massive interaction with and biocultural assimilation of migrants coming from SW Asia,

with women being a prominent component of migrants—and with names not always being a guide to origins (see Baines 1996, 2016, Lilyquist 2003, Meier 2000, Redford 1986, Saretta 2016, Schneider 2010, Warburton 2003). The findings in fact for Abusir el-Meleq offer a possible clue that it has a unique story to tell as an enclave within late dynastic Egypt, but this is not considered; rather there is a switch to a kind of identity interpretation for all of Egypt.

There is a question about the nature of the samples: are they representative of all of Egypt across time and space. As noted the events of history of the period of samples are not used, rather we are left with the impression (in spite of the caveat) that the findings would hold for any periods and place in Egypt, a large generalization. The authors have sampled from one end of the range of a geographical population which is covered by the term ‘Egyptian’ but its representativeness can be questioned; work on other populations has shown how mating patterns and geography can lead to a genetic sample being unrepresentative of the entire group, something known for quite some time (see Kraus and White 1956). The DNA data are not fully discussed in terms of their geographical distribution and debates about their places of origin. In some sense the sample is what is called a *convenience sample* which should automatically lead to a suite of questions about representativeness. The “SSA” sample, from the Yoruba, is being used as what is called a *proxy sample* and treated as though it can represent all of what they call “sub-Saharan Africa” in spite of the large body of literature that documents the variation in tropical Africa (which actually also includes a part of the Sahara). In fact strictly speaking their results can only apply to the Yoruba in a non-racial schema on which they are silent. So it could be said that they have only analyzed Yoruba admixture in post Roman Egypt! The Yoruba cannot be said to represent all of infra-Saharan or tropical African peoples.

The “population” framework of the study seems to be a sub-saharan (SSA) African vs Eurasian dichotomy, which could easily be interpreted as a black vs white dichotomy in the traditional racial approach to human variation which treated human variation as being composed of fundamental and foundational units (Keita and Kittles 1997). In fact sometimes the authors limit the notion of African to “SSA” in their discourse; significantly they do not identify an indigenous/endogenous Nile Valley, Saharan or other NE population for comparison purposes. The major issue of concern here is not about SSA ancestry in ancient Egypt but rather the failure to present alternative explanations for the findings. The work is ahistorical. The caveat about sampling from the southern part of the country is not further discussed which is problematic, and the issue is more than about geography because a range of populations from southern regions would be needed to make a valid comment. There is no in depth discussion of the implications of this idea. The Yoruba are the wrong SSA sample—permitting this model for a moment—to be used in such an analysis unless one is specifically ascertaining Yoruba influence. It has to be noted that there is a range of indigenous African variation, even “sub-Saharan”—and that the SSA-Eurasian dichotomy is insufficient to explain critical modern evolutionary

thinking—although there is a persistence of racial thinking which can be found in a range of work.

Schueneman et al's (2017) data themselves indicate a pre-Roman "SSA" influence. The DNA results are from both mtDNA and the Y chromosome, the female and male lineages respectively. Only three Y chromosome lineages were recovered. Two of these were from the J haplogroup and one from the E haplogroup (specifically defined by M78). The J haplogroup is generally accepted as originating in SW Asia (Cruciani et al. 2007), and the E including this variant in Africa (Cruciani et al 2004, 2007, Trombetta et al. 2011, Cruciani et al. 2007). This specific E haplogroup originated in the northeastern quadrant of Africa (contrary to Schueneman et al. 2017) and likely in tropical Africa (between the tropic latitudes). It is found in significant frequencies in Egypt today (e.g. >70% in Adaima) (Crubezy 2010) as are other Y variants of African origin (see summary in Keita 2005). The mtDNA is from 90 individuals some of which are of the M1 haplogroup whose origins may or may not have been Africa, but which does have daughter variants that did emerge in Africa and predate Islam in origin (e.g.s. M1a1, M1a1i, M1a2a) (Pennarun et al. 2012). The authors seem to suggest that all M1 variants come from Asia. The ultimate place of origin, vs place of longest residential history, may not be the same; in theory rapid migration of people bearing the original haplogroup may change the locale of longest history. Other variants are from SW Asia. The ethnic identity of the proximate group that transmits a genetic variant may not be from the region where it ultimately originated because the variant has passed through various populations.

Analyses from New Kingdom Amarna and Theban mummies using published STR data indicate a tropical African element in their ancestry (Gourdine et al. 2019, under review).

Pharaoh Ramesses III had the haplogroup E1b1a (Hawass 2012) which emerged in Africa and is carried by most tropical Africans. These findings falsify the emphasized aspect of the taxonomic hypothesis of Schueneman et al (2017). The issue is not the data or the bodies of the people with the described lineages in the study. Rather it is how and when they got there to Egypt. Leaving aside the "African" lineages it can be noted that Schneider (2010) describes large influxes of foreigners in Egypt during various periods in Egypt; the impression is that more came from the Levant than Nubia (Smith personal communications)—a question not investigated in the study. There was longstanding contact between northern Egypt and SW Asia. Some Levantine peoples were settled in northern Egypt by the kings in later periods. The peopling of Egypt from the Green Sahara also has to be factored before the predynastic begins. The Neolithic in Egypt is not a simple case of demic diffusion. Near Eastern domesticates were integrated into a foraging strategy of Nilotic strategy (Wetterstrom 1993). A mass migration of farmers which would have left Egypt speaking a Semitic language, given that agriculture had started some 2000 years earlier in the Levant, apparently among Semitic speaking people. The authors do mention some interactions with Europeans and the Near East with migration, but do not see this as a possible

source of the people. Genetic modelling has shown that targeted migration of 1-5% per generation to a group or region can change gene frequencies notably in the time period from the first contact of Nile Valley peoples with the Near East (see Cavalli-Sforza 1991, Boyce et al. 1971, Harrison 1984 and Hiorns et al. 1977, and Hiorns et al. 1969 for models of migration/gene flow and the chronology of resultant changes in end populations).

There is no one way to be an African or even a “sub-Saharan” African. The study uses a Yoruba sample in its comparisons with modern Egyptians. It treats the Yoruba, a group once taxonomically classified as “True Negro” (Seligman 1930), as a proxy variable for all of infra-Saharan Africa which is problematic considering modern evolutionary thinking and the observation that there is great diversity within Africa, but also the finding greater variation within SSA than between SSA and ‘Eurasians’ (Yu et al. 2002). While today, at least in scientific circles there is usually no talk of the “True Negro” there are other stereotypical notions. There is a popular notion of what a “real” African looks like (as noted by Hiernaux 1974), now apparently transferred to molecular biology. Such a perspective denies the complexity and reality of human life. A Yoruba sample is used this way in many studies and this is deeply troubling. A true evaluation of “sub-Saharan” input foundationally or in later times would have to include a wider geographical range of samples that are informed by an evolutionary model. The idea of “sub-Saharan” would seem to have been calibrated to fit certain models about human variation. The Yoruba hold no special place in the biogeography of infra-Saharan Africa or tropical Africa. In this instance there is a tradition, although not necessarily old, of seeing certain Africans as “the African” which is arbitrary and not rooted in evolutionary models. Methodologically it would be appropriate to use a range of populations. What is often forgotten, and made little use of, is that some of the variation labelled SW Asian would likely have been held in common with some continental African groups. The migration of early humans out of Africa would have left some populations with aspects of their genome that would have been similar to those that emigrated as is known from the M168 marker that defines most of the male lineages from within and outside Africa. The implications of this overlap for other systems is rarely utilized.

The trope of the trans-saharan slave trade has been too often used to explain genetic variants in various places, suggesting that some Africans had no agency. However, there are other explanations for genetic overlap in terms of population genesis, such as migration from the Green Sahara and models that accept African historical complexity. In addition there were east Africans in the earliest Islamic armies to leave Arabia. The history is richer than stereotypes.

The mummy genomes study's results can be interpreted in ways other than suggesting a settlement history of the Nile Valley without indigenous or endogenous Africans—the latter meaning populations whose micro-evolutionary histories, cultures and identity emerged in Africa. The longstanding interaction of northern Egypt with SW Asia from the Old Kingdom onwards would be sufficient to construct a more credible idiographic explanation. The DNA findings in this study were put before people and history. There was no consideration of chain

migration or assortative mating, no integration of the known history of the later periods, Egyptian practices of assimilation, etc. Had the authors taken the position that the historical information about known contacts would form the framework, DNA would have aided in the construction of the narrative about degree the social interactions at Abusir el-Meleq. Such a narrative is far more cautious than suggesting that the results speak to the “origins” of settling of the Egyptian Nile Valley in all places at all times. Marc Bloch (1953) warned about the “idol” of “origins” and its meaning as either ‘beginnings’ or ‘causes’—with all of their attendant problems, and due to the cross contamination of these meanings “worse still a beginning which is a complete explanation”. The attribution given to the Egyptians based on the Eurasian haplotypes—divorced from history—is a form of the fallacy of affirming the consequent. This genomes paper seems to suggest a singular near eastern/Semitic origin/identity for Egypt which is not born out by a review of all of the evidence.

Case 4: Possible insights from Genetics/Genomics

Genetic diversity has been observed to be positively correlated with social complexity (Beals and Kelso 1974). This could have various reasons. These would include an increase in population size, the amalgamation of different populations with political centralization, or some combination of these. Van Dorp et al. (2019) found an increase in diversity in those identifying ethnically as Kuba in the Democratic Republic of Congo. The Kuba are presumed from the Kuba Kingdom which flourished two centuries ago. Genetic analyses indicate that the Kuba were more similar to groups sampled from surrounding areas (in all directions) than those groups were to each other. This increase in genetic overlap with multiple populations suggested to the researchers that this reflected processes involved in the formation of the Kuba state/kingdom.

This observation may be useful in understanding aspects of the populations of other African states/kingdoms that still exist such as Ashanti, Kano and Benin City. It would be interesting also to examine groups, the Masai, Borana, with social systems that may have another kind of complexity such as those with age sets, in order to compare relative levels of genetic diversity. The statistical analyses may permit an examination of what happened to groups during famines and other ecological disasters, as well as give a profile on practices of the assimilation of others during warfare.

Another place where genetic data are useful has to do with received ideas about group boundaries. The idea of classification generally means obtaining a result in which all objects under review are classified, and that the resulting groups are mutually exclusive. The nature of human diversity makes this impossible in obvious ways: for example one’s own sibling may not be a correct or complete tissue match for a transplant, but a stranger from a group with different biogeographical ancestry may be a perfect match. This situation is well known. However, in such cases the genealogical markers such as mtDNA may clearly indicate a long separation of some ancestors and reflect in some sense the differentiation already appreciated. The study of Africa has long been divided into

populations conceptualized as disconnected, “racially” different, and only occupying the same continent. The data of the new genetic studies read from a different perspective indicate for some perhaps an “unexpected” pan-Africanism. The Y chromosome genealogical tree shows that the P2 variant is father to two lineages that connect the men of all of Africa’s regions (Trombetta 2011), although not necessarily the majority of members of all of their populations. One line of descent is defined by what is classically called M215/35 and accounts for the majority or plurality lineages in men from the Horn up through Egypt and over to Morocco. The other sub-sublineage is defined by M2 (or V38/M2) and is carried by most men in tropical Africa but also by Pharaoh Ramesses III as noted earlier. The P2 ancestor and its sons are located deep within the E haplogroup and emerged long after modern humans left Africa (Trombetta et al. 2011). It arose in eastern tropical Africa. While the Y chromosome is only a small fraction of DNA this does not negate the deep time genealogical relationship that it shows, one that connects African men across linguistic, phenotypic, geographical, and population boundaries.

CONCLUSION

DNA studies obviously can add to studies of evolution at various levels. Purely biopopulation questions in theory will benefit the most from input from DNA studies. It is important to remember that gene flow between populations will also render problematic simplistic interpretations of biological connections between populations. For many historical questions in Africa and other places DNA will most likely be of best service in assisting with idiographic explanations based on non-genetic frameworks. Genetics/genomics likely will rarely, if ever, have the lead role in the construction of historical narratives.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Baker, JL, Rotimi, C., Shriner, D. 2017. Human ancestry correlates with language and reveals that race is not an objective genomic classifier. *Scientific Reports* 7:1572 DOI:1038/541598-02701837-7.
- Baines J. 1996. Contextualizing Egyptian representations of society and ethnicity. In: Cooper JS and Schwartz GM (eds). *The Study of the Ancient Near East in the Twenty-First Century*. Indiana: Eisenbrauns, pp. 339-384.
- Baines J. 2016. On Egyptian elite and royal attitudes to other cultures, primary in the late Bronze Age. In: Bartoloni G. and Biga M., Bramanti A. (eds) *Not Only History*. Indiana: Eisenbrauns, pp.127-145.
- Baines J. 2002. Burial and the dead in ancient Egyptian society. *J. Soc. Arch.* 2:5-36.

- Barbujani G and Pilastro A. 1993. Genetic evidence on origin and dispersal of human populations speaking languages of the Nostratic macrofamily. *Proc Natl Acad Sci, USA* 90: 4670-73.
- Beals, KL, Kelso, AJ. 1974. Genetic variation and cultural evolution. *American Anthropology* 77: 566-678.
- Benedict, B. 1972. Social regulation of fertility. In Harrison, GA and Boyce, AJ, *The structure of Human Populations*. London: Oxford University Press, pp. 73-89.
- Bloch M. 1953. *The Historian's Craft*. New York: Vintage Books.
- Boas F. 1940. *Race, Language and Culture*. Chicago: Univ of Chicago Press.
- Boyce, AJ, ed. 1984. *Migration and Mobility, Biosocial Aspects of Human Movement*. Symposia of the Society for the Study of Human Biology, Volume XXIII. London and Philadelphia: Taylor and Francis.
- Crawford M. 2006. Forward. In: Madrigal L. *Human Biology of Afro-Caribbean Populations*. Cambridge: Cambridge University Press, pp. xi-xiv.
- Crubezy E. 2010. Le peuplement de a vallee du Nil. *Archeo-Nil* 20:25-42.
- Cruciani, F., LaFratta, R., Trombetta, B., et. al. 2007. Tracing past human male movements in northern/eastern Africa and Western Eurasia: New clues from Y chromosomal haplogroups E-M78 and J-M12. *Mol Biol Evol* 24:1300-1311.
- De Chadarevian S. 2010. Genetic evidence and interpretation in history. *Biosocieties*
- Egorova Y. 2010. DNA evidence? The impact of genetic research on historical debates. *Biosocieties* 5: 348-356.
- Greenberg, J. 1963. *The Languages of Africa*. Bloomington: Indiana University Press.
- Harrison, GA., Boyce, AJ. 1972. Migration, exchange, and the genetic structure of populations. In Harrison, GA and Boyce, AJ, *The Structure of Human Populations*. London: Oxford University Press, pp. 128-145.
- Harrison, GA, Hiorns, RW, Kuchemann, CF. 1970. Social class relatedness in some Oxfordshire parishes. *J. Biosor Sci* 2:71-80.
- Harrison, GA., Boyce, AJ, ed. 1972. *The Structure of Human Populations*. London: Oxford University Pres.
- Harrison, GA. 1984. Migration and population affinities. In Boyce AJ, *Migration and Mobility, Symposia of the Society for the study of Human Biology*. Volume XXIII. London: Taylor and Francis, pp. 57-68.
- Hassan, HY, Underhill, PA, Cavalli-Storza, LL, Ibrahim, M. 2008. Y chromosome variation among Sudanese: Restricted gene flow, concordance with language, geography, and history. *Amer J. Phys Anthro* 137:316-323.
- Henneberg M, Kobusiewicz M, Schild R and Wendorf F.1989. The early Neolithic Qarunian burial from the northern Fayum Desert (Egypt). In: Krzyaniak L and Kobusiewicz M (eds), *Late Prehistory of the Nile Basin and the Sahara Vol 2, Studies in African Archaeology*. Poznan: Poznan Archaeological Museum, pp. 181-196.
- Hiorns, RW, Harrison, GA, Boyce, AJ, Kuchemann, CF. 1969. A mathematical analysis of the effects of movement on the relatedness between populations. *Ann Hum Gen* 32: 237-250.

- Hiorns, RW, Harrison, GA. 1977. The combined effects of selection and migration in human evolution. *Man* 12: 438-445.
- Kuchemann, CF, Boyce, AJ, Harrison, GA. 1967. A demographic and genetic study of a group of Oxfordshire villages. *Human Biology* 36: 327-338.
- Keita, SOY. 2005. History in the interpretation of the pattern of p49a,f TaqI RFLP Y- chromosome variation in Egypt: A consideration of multiple lines of evidence. *Amer J of Hum Biol* 17(5):559-567.
- Keita, SOY, Kittles, R. 1997. The persistence of racial thinking and the myth of racial divergence. *American Anthropology* 99: 534-544.
- Keita, SOY, Jackson, FLC, Borgelin, L, Maglo, K. (2010) Commentary on the Fulani, an addendum to Hassan et al 2008. *American Journal of Physical Anthropology* 141: 665- 667.
- Kraus, BS, White, CB. 1956. Microevolution in a human population: A study of social endogamy and blood type distributions among the Western Apache. *American Anthropology* NS 58:1017-1043.
- Lilyquist C. 2003. *The Tomb of Three Foreign Wives of Thutmosis III*. New York: Metropolitan Museum of Art.
- Meier S.A. 2000. Diplomacy and international marriages. In: Cohen R and Westbrook R (eds), *Amarna Diplomacy, the Beginnings of International Relations*. Baltimore: The Johns Hopkins University Press, pp. 165-173.
- Newman, P. 1980. *The Classification of Chadic within Afroasiatic*. Leiden: Universitaire Pers.
- Oliver, DL, Howells, WW. 1957. Micro-evolution: Cultural elements in physical variation. *American Anthropology* 59:965-977.
- Saretta, P. 2016. *Asiatics in Middle Kingdom Egypt*. London: Bloomsbury Academic.
- Schuenemann, VJ., Peltzer, A., Welte, B. et. Al. 2017. Ancient Egyptian mummy genomes suggest an increase of sub-Saharan ancestry African ancestry in post-Roman periods. *Nature Communications* 8:15694. DOI:10.1038.
- Schneider, T. 2010. Foreigners in Egypt. In Wendrich, W (ed.) *Egyptian Archaeology*. Oxford: Blackwell, pp. 143-163.
- Seligman, CG. 1930. *The Races of Africa*. London: Oxford University
- Thieme FP. 1952. The geographic and racial distribution of the A-B-O and Rh blood types and tasters of pTC in Puerto Rico. *Am. J. Human Genet.* 4: 94-112.
- Trombetta, B., D'Antanasio, E., Massaia, A., et. Al. 2015. Phylogeographic refinement and large-scale genotyping of human Y chromosome haplogroup E provide new insights into the dispersal of early pastoralists in the African continent. *Genome Biology Evolution* 7(7): 1940-1950.
- Trombetta, B, Massaia, A, Destro-Bisol, G., et. al., 2011. A revised root for the human Y chromosomal phylogenetic tree: The origin of patrilineal diversity in Africa. *Cell* 88(6):814-818.
- Van Dorp L, Lowes S, Weigel JL et al. 2019. Genetic legacy of state centralization in the Kuba Kingdom of the Democratic Republic of Congo. *Proc. Natl Acad Sci* 116(2): 593-598.
- Van Oven M, van Geystelen, A, Kayser, M., et. Al. 2014. Seeing the wood for the trees: A minimal reference phylogeny for the human Y chromosome. *Human Mutation* 35(2):187- 191.

- Warburton D. 2003. Love and war in the late Bronze Age: Egypt and Hatti. In: Matthews R and Roemer C (eds), *Ancient Perspectives on Egypt*. London: University College London Press, pp. 76-100.
- Wetterstrom, W. 1993. Foraging and farming in Egypt: the transition from hunting and gathering to horticulture in the Nile Valley. In Shaw, T. Sinclair, P., Andah, B., Okpoko, A., editors, *The Archaeology of Africa: Food, Metals and Towns*. New York: Routledge, pp. 165-226.
- Yu N, Chen F-C, Ota S, et. al. 2002. Larger genetic differences within Africans than between Africans and Eurasians. *Genetics* 161: 269-274.

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Early Human Lithic Technologies: Multiple Technical Histories from Africa to East Asia

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INTRODUCTION

Human evolution is narrowly linked with technical evolution since the very beginning. For decades it was commonly assumed that from a new hominin species came new cognitive abilities, leading to technological innovation. This hypothesis is no longer sustainable nowadays, seeing the large amount of new archaeological evidence. Besides attributing one culture for one species, the question of hominin dispersals out of the African continent is also largely debated.

Although it is still difficult to establish a clear scenario for hominin dispersals in the Old world, we can now propose several models for explaining the question of technical emergence and technological evolution. Here we discuss the question of technical convergence and multiple technical histories, by crossing the archaeological evidence from the Early Stone Age throughout East Africa, Mediterranean Europe and Eastern Asia, the geographic areas where Oldowan lithic assemblages are common.

Lithic assemblages, taken as a whole system containing stone tools, knapping techniques and their evolution are an important matter to understand local technical evolution. This evolution is ruled by many factors, such as environment adaptations (climate variability, raw material availability and access), technical traditions, that can be seen as a co-evolution with hominin species and populations.

THE EARLIEST TECHNOLOGIES IN AFRICA

Apart from Lomekwi 3 at 3.39 Ma, considered by the authors by preceding the Oldowan and named *lomekwian* (Harmand et al., 2015; Hovers, 2015), the earliest evidence of the technical phenomenon appears at Gona, northern Ethiopia at 2.6 Ma (Semaw, 2000). From 2.6 Ma until 2.2 Ma, early evidences of

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stone tool production appear in several geological formations of northern Ethiopia and the border between southern Ethiopia and Northern Kenya (Fig. 11.1). In the north, Gona EG-10 and EG-12 delivered an early evidence of stone tool production, at 2.6 Ma (Semaw, 2000). The localities A.L. 666 and A.L. 894, Hadar Formation, Afar Depression, also delivered stone artifact at 2.5 Ma (Roche et Tiercelin, 1980; Hovers et al., 2002). In the Hata Member of the Bouri Formation, in the Middle Awash valley, dated at 2.5 Ma, bones with cut marks were found, but no stone tools (Asfaw et al. 1999; de Heinzelin et al., 1999) (Fig. 11.1).



Fig. 11.1. Map of Oldowan sites in Africa

The Turkana Basin, at the border of Ethiopia and Kenya, also provided numerous occurrences. In the lower Omo Valley, the Members E and F of the Shungura Formation provided several localities dated around 2.3 Ma where stone tools were found (Chavaillon, 1976; Delagnes et al., 2011). In the Lokalelei Member of the Nachukui Formation, in West Turkana, northern Kenya, three sites provided stone artifacts, at Lokalalei 1, 1α and 2C, dated at 2.34 Ma (Roche et al., 1999; Delagnes et Roche, 2005) (Fig. 11.1). Fejej Fj-1, in southern Ethiopia (de Lumley et Beyene, 2004), dated around 1,9 Ma (Chapon et al., 2011) delivered a numerous quartz assemblage. The KBS Member of the Koobi Fora Formation,

East Turkana, northern Kenya, provided numerous sites (Isaac, 1997), as well as KS-1 to 3, Kanjera South Formation, in southwestern Kenya (Plummer et al., 1999; Braun et al., 2008; 2009). Several sites from the Bed I of Olduvai Gorge in Tanzania (Leakey, 1971; Mora and de la Torre, 2005) are also emblematic from this period (Fig. 11.1). Oldowan evidences are also documented in Gauteng, South Africa, at Swartkrans (Kuman 2007; Kuman and Field 2009) and Sterkfontein around 2.2-2 Ma (Clarke, 1994; Kuman and Clarke, 2000) (Fig. 11.1).

In Northern Africa the site complex of Ain Hanech (Setif region, Algeria) delivered three Oldowan sites dated at 1.8 Ma: Ain Hanech, Ain Boucherit and El Kherba (Sahnouni et al., 1997; Sahnouni et al., 2002) (Fig. 11.1). The site of Ounjougou in Mali is the only Oldowan site known in stratigraphy. An Oldowan-like industry has been discovered in the lower levels, very similar to Ain Hanech (De Weyer, 2017) (Fig. 11.1). Unfortunately, it is impossible to date the sediments older than 150 ka (Tribolo et al., 2015), so the age of this assemblage is unknown.

EUROPEAN MODE 1

The earliest hominin settlements in Europe was highlighted by the site of Dmanisi (Fig. 11.2) in the Caucasus (Georgia), dated to 1.81 Ma (de Lumley et al., 2005; Lordkipanidze et al., 2007). The lithic assemblage is very similar to the African Oldowan, composed on flakes and simple cores mostly. There is still a remanent debate in Europe about the route taken by early hominins to join Europe. One consider they passes through the Caucasus, based on Dmanisi site (de Lumley et al., 2005), while others suggest passing through the Gibraltar Detroit, using the evidence of hominin presence in Northern Africa since at least 1.08 Ma in Ain Hanech (Sahnouni et al., 1999; 2002). This question has not been resolved yet, but as a matter of facts, all the archaeological evidence for the early settlement in Europe is located in Western Europe, close to the Mediterranean circum.

In Spain, in the Guadiz-Baza Formation, the sites of Fuente Nueva 3 and Barranco Leon (Orce, Andalousia, Fig. 11.2) have delivered a numerous lithic industry dated to 1.3 Ma ((Turq et al., 1996 ; Toro et al., 2003; 2010). The assemblages are composed of cores and small flakes, with occasional retouch, showing Oldowan-like features. Like in Ain Hanech, small flakes are produced mostly on flint pebbles, whereas heavy-duty percussive tools are made on limestone (Barsky et al., 2016). In Northern Spain, into the Franco-Cantabrian karst formation lie the exceptional stratigraphic sequence of the Sierra de Atapuerca (Fig. 11.2), where several Lower Pleistocene sites were discovered. The site of Sima del Elefante delivered *Homo sp.* Remains associated with Mode 1 (Oldowan-like) industry, dated to 1.2 Ma (Carbonell et al., 2008; Ollé et al., 2013; de Lombera-Hermida et al., 2015). At Gran Dolina, a rich lithic assemblage was discovered, dated to 0.8 Ma (Carbonell et al., 1999 ; Ollé et al., 2013).

In France, two Lower Pleistocene sites are recorded in the Mediterranean area. The site of Bois-de-Riquet at Lézignan-la-Cèbe (Fig. 11.2) has been excavated

recently and researchers have discovered a small lithic assemblage composed of basalt flakes and flint and quartz fragments, associated with basalt unmodified pounding tools, in a rich fossil accumulation (US2), dated to 1.1 Ma (Bouguignon et al., 2016). The Vallonet cave (Fig. 11.2) also provided a rich lithic assemblage dated to 1 Ma (de Lumley et al., 1988). In France center, the site of Pont-de-Lavaud (Fig. 11.2) provided some flaked pebbles dated to 1.1 Ma (Despriée et al., 2011).

In Italy, the Lower Pleistocene is known in two sites, Pirro Nord, in Puglia, Southern Italy (Fig. 11.2), dated to 1.5-1.4 Ma (Arzarello et al., 2009, 2012, 2016) and Ca Belvedere di Monte Poggiolo (Fig. 11.2) dated to 1 Ma (Peretto et al. 1998, Arzarello & Peretto, 2010, Arzarello et al., 2016).

VARIABILITY AND DIVERSITY IN THE OLDOWAN MODE 1 TECHNOLOGICAL COMPLEX

The Oldowan / Mode 1 technical complex is not homogeneous. Under this name, a huge variability is hidden, and several hypotheses were proposed to explain this diversity. In this paper we will try to give an overview of the different hypotheses and compare the African Oldowan with the Mode 1 in China to highlight the technical universals and local specificities involved in the history of techniques.

Oldowan / Mode 1 stone tool technology

The Early Stone Age industries are composed of "low-elaborated" flakes and artifacts such as pebbles or blocks made by one-sided or two-sided removals that produce a continuous cutting edge (typically called choppers and chopping-tools), as well as polyhedrons, sub-spheroids and spheroids. This set refers to the assemblages prior to the appearance of the bifaces and cleavers, tools that characterize the Acheulean. Nevertheless, this type of industry continues during the following periods, associated with the new tools. This type of debitage involves an understanding of the principles of hard rock fracturing, which involve the mass of the hammerstone and the percussion angle necessary for the production of a conchoidal fracture. The cores are pebbles or blocks of raw material, which are knapped on one or more faces in short series of flakes. The most common knapping technique is freehand hammer percussion. The use of bipolar percussion on anvil is attested in many deposits, often used to cut pebbles of small dimensions, or presenting specific reactions to size, such as quartz for example. (de Lumley & Beyene, 2004 ; Mgeladze et al., 2011 ; de la Torre et al., 2004). Mary Leakey (1971) proposed a chronological division based on Beds I and II of the Olduvai sequence: the classical Oldowan dated between 1.85 Ma and 1.65 Ma, consists of cobbles, flakes and hammering and grinding tools; the Developed Oldowan A (DOA), which sees an increase in the intensity of flake debitage and the proportion of spheroids, dated between 1.65 Ma and 1.53 Ma; the Developed Oldowan B (DOB), between 1.53 Ma and 1.2 Ma, with a regression of the number flakes per core, and especially the appearance of shaped tools, as well as the proportion of spheroids that remains important.

Glynn Isaac (1976) considered both Oldowan and Developed Oldowan as a single entity called Oldowan Industrial Complex. Some authors also argue that Developed Oldowan sites should be included as part of the Early Acheulian (de la Torre et al., 2005). Braun and Harris (2003; 2009) highlighted a variability depending on the occupation context of several sites of KBS and Okote Member of Koobi Fora. Other researchers have also proposed to group the sites older than 1.9 million under the term PreOldowan, by pointing out the smaller number of sites and the less diversified nature of the tools, notably the absence of large percussion tools (Roche, 1996, 1999, Lumley & Beyene, 2004, Lumley et al., 2009). The analysis of Lokalalei 2C sites in West Turkana, Kenya, dated at 2.34 Ma (Delagnes & Roche, 2005) and Kanjera South, near Lake Victoria, Kenya, between 2.3 and 1.9 Ma (Braun et al., 2008, 2009; Plummer & Bishop, 2016) has shown that a significant level of technical knowledge is present even in the oldest sites, and today we speak more generally of Oldowan techno-complex, as proposed by Isaac (1976).



Fig. 11.2. Map of Mode 1 sites in Europe

The variability of the recorded lithic complexes is the result of many factors, the most frequently cited being the site occupation context and the availability and quality of raw material. Studying the Koobi Fora KBS industry (1.8-1.65 Ma), authors have proposed the "*Least effort strategy*" model (Toth, 1982, 1985, 1987; Schick, 1994), with reference to raw material savings (use of local raw material,

whatever its quality) and debitage ("opportunistic" debitage with the sole search for a cutting edge, without control of the debitage). The theory of the least effort strategy is based on the idea that Mode 1 technologies cannot be regarded as traditions comprising a set of defined rules and tool design, since they consist only of applying simple principles of percussion. (Schick, 1994). Some authors contest this interpretation (Reti, 2016; De Weyer, 2016). Joseph Reti (2016) proposed an experimental study of this hypothesis by studying the DK site at Olduvai Gorge. Taking the least effort strategy as a null hypothesis, he found that the results obtained by experimentation did not correspond to the reduction strategies observed on the DK site. His study shows a planning of the debitage from the stage of selection of the blocks of raw materials, and a management of the nucleus during the phase of reduction. Hominin techno-economic behaviors have also been studied in West Turkana, particularly at the Lokalelei 2C site (Harmand, 2005, 2009). Lokalelei 2C is dated at about 2.34 Ma. The raw material used is a phonolite of good quality for knapping, found in the form of pebbles at about 50 meters from the site with other raw materials of lower quality, as rhyolite for example. On some phonolite pebbles more than 50 flakes per core have sometimes been knapped. The authors conclude that hominins of Lokalelei 2C probably knew the reactions of the different types of rock at knapping, and mostly used phonolite to produce their tools (Delagnes & Roche., 2005; Harmand, 2009).

The question of raw material availability is presented as the main factor in the variability of the Oldowan assemblages. On most sites, the selected raw materials are local, and sometimes of poor quality. However, several authors have demonstrated a selection of the best raw materials available in the surrounding space, such as in Hadar (Hovers, 2012). In Kanjera South, the groups brought back a substantial portion of the raw materials of more than 10 km (Braun et al., 2008, 2009). Some of the quartz materials used on Olduvai Gorge DK site also come from at least 8 km (Blumenschine et al., 2003). In order to understand and describe how raw material quality influences tool production, De Weyer (2016) compared production systems and tools produced at three sites with different raw material choices. Fejej, with an assemblage composed almost exclusively of quartz, Koobi Fora with a use of the local basalt, and DK, composed of quartzite and basalt, and also some pieces in quartz (Fig. 11.1). This work highlighted a selection of precise and different technical criteria on each site, according to the raw materials. The debitage system is also adapted to the raw material worked. At Koobi Fora, knapping methods are said to be single-flake oriented, with the research of a suitable angle to produce flakes, without predetermination of large series of flakes. The cores are quickly exhausted as the angles disappear. At Fejej, the selection of pebbles with a large flat surface makes it possible to produce series of flakes on the same core, and long continuous series are observed from the natural striking platform created by the plane surface. At Olduvai, the methods change according to the raw material worked. Quartzite pebbles are produced using the same recurrence methods as in Fejej, while flake-by-flake strategy is used on basalt pebbles. Thus, this work demonstrates the knowledge of the reactions of the materials to the size and the adaptation of the methods according to the selected raw materials. On the other

hand, the analysis of the tools produced shows that whatever the raw material and the method used, the categories of tools produced do not vary much. At Olduvai, there are similar tools made on different rocks.

The archeological record in Europe shows many similarities with the Oldowan. The assemblages are made on local raw materials and the classic raw material adaptation is observed.

The Italian sites are made on flint, and Monte Poggiolo show very specific features, with a preparation of the flaking surface to produce convergent flakes. In this assemblage, we observed very few retouch, but more planning in the production phase, leading to produce whole flakes with technical criteria present without needing retouch (De Weyer, 2016; Arzarello et al., 2016).

The assemblage of Bois-de-Riquet is composed by a majority of unmodified pebbles showing use-wear percussion marks. This can be attributed to the site specificity, as the level US2 is a carnivore den where hominin came to collect meat while no carnivore was there (Bourguignon et al., 2016). The variability observed within the Oldowan Industrial Complex appear more complex, and not only the fact of geographical constraints. We may conclude that hominin groups were able to adapt to their environment for raw material procurement, and that they performed a strong selection based on their knowledge and specific choices that may be different from one site to another. Then, lithic assemblages may be considered as significant cultural traits, or at least witness different technical traditions (De Weyer, 2016). This diversity should also be investigated in Chinese Early Stone Age assemblages. Indeed, many Lower Pleistocene sites are located in China, and the different context give a good opportunity to question the technical variability in other contexts than Eastern Africa.

EARLIEST ASSEMBLAGES IN EASTERN ASIA, A NEW PLAYER IN THE GAME OF TECHNOLOGICAL EMERGENCE

The earliest Asian assemblages are all located in China, at Longgupo, Renzidong, Lantian and the Nihewan basin. Three sites were dated more than 2 Ma, making them the earliest evidence of hominin technologies outside Africa. These assemblages also overlap all paleoanthropological evidence. It is then by lithic assemblages that the earliest dispersals are documented. Although the chronological gap between Africa and Europe is huge for the emergence of stone tool technologies, it has been demonstrated that lithic assemblages follows the same basic trends: local raw materials, small flake orientated production, few heavy-duty shaped tools. In China, the technological variability is rather different. The site of Longgupo (Fig. 11.3) was discovered in 1984 (Huang, 1986). It is located at Wushan, Chongqing Municipality, south of the crossing of the Three Gorges of the Yangtze, in the Miaoyu Basin. Three excavation campaigns have been led, directed by Pr. Huang W.B. for the first and second (Huang & Fang, 1991; Huang et al., 1995; Huang & Zheng, 1999), and Pr. Boëda E. and Pr. Hou Y.M. for the third one (Hou et al., 2006; Boëda & Hou, 2011). This site delivered mandibula fragments first attributed to a hominid (Huang et al., 1995) but the

attribution has been debated (Schwartz & Tattersall, 1996; Ciochon, 2009). Some remains of *Gigantopithecus blacki* contributed to spread doubt, and it is still impossible today to know which species made the stone tools (Wei et al., 2014). The stone-tools modification, though debated at the beginning, has been clearly established and constitutes the earliest record of the hominid presence in Eastern Asia. The sequence has been recently dated to 2,5-2,2 Ma for the Lowest Member and 1,8-1,5 Ma for the Upper Member (Han et al., 2015; Huang et al., 2015). More than 1500 artefacts were uncovered from the different field seasons led by several teams (Huang et al, 1995; Hou et al., 2006; Boëda & Hou, 2011). The authors highlighted a short stone tool modification strategy. The hominins selected their raw materials on purpose and only modified the cutting edge. On the other hand, a huge techno-functional variability is suggested, meaning that unless a short and effective reduction sequence, the tool diversity was huge (Boëda & Hou, 2011). The main raw material used is local limestone, collected in the form of pebbles or fragmented blocks. However, 10% of the tools are produced on exogenous materials (lava, chert) absent from the vicinity of the site. Their provenience has not been identified. These tools arrived on the site already knapped. It is made of pebbles tools and big retouched flakes. The production methods in Longgupo are based on the shaping of cutting edges on pebbles. The material consists mainly of pebbles with transverse or lateral cutting edge. Some products from bipolar percussion on anvil have also been identified and can be retouched. The particularity of the site of Longgupo is to include a lithic industry almost entirely oriented on the shaping of pebbles. While these objects are known in Africa, their proportions are always anecdotal, and these tools come in addition to a tool-kit mainly consisting of flakes from the debitage. In addition, this technical system is observed continuously on 41 archaeological levels. These data make this site a unique case, hardly comparable with other Chinese sites but also with African assemblages. The raw material can be invoked as a factor of this technical otherness. The selected limestone pebbles are indeed very hard at knapping, and the choice of shaping can be considered as a cultural response to this natural constraint (Boëda & Hou, 2011). The site of Renzidong (Anhui, Central China, Fig. 11.3) seems most conducive to comparison, because of its chronological proximity to Longgupo (Gao et al., 2005). This is a sinkhole that seems to have trapped animals that hominins would come to recover, or at least consume. The site has yielded numerous faunal remains and an important lithic industry (Jin et al., 2000; 2009). Although the data still needs to be published in details, Boëda & Hou (2011) were able to make some observation on the assemblage. The lithic industry seems to be composed of shards debited on local raw materials, with a preferential use of blocks of pyrite, but one also finds chalcedony, chert and limestone. Some pebble tools are also mentioned. The Renzidong industry may have characteristics common to Oldowan sites in Africa, particularly in the proportions of flake tools compared to cobbles, but more detailed publications will be required to carry out systematic comparison work.

The site of Shangchen (Fig. 11.3) is located at the southern margin of the Chinese Loess Plateau in the area of Lantian, Shanxi province. This site was discovered recently and delivered a very long sequence dated to 2.12 to 1.26 Ma

(Zhu et al. 2018). The lithic assemblages are not numerous (82 flaked pieces and 14 unmodified stones), they were found in 11 layers through the sequence, including more than 2 Ma layers. The raw materials are mostly quartzite of different types and quartz, collected at the foothills of the Qinling Mountains, according to the authors (Zhu et al., *op.cit.*). From all the flaked pieces, including cores, flakes and flakes fragments, 34 pieces are retouched, a high number compared to the whole set. *Débitage* patterns show simple recurrent series of flakes. The assemblage looks orientated to the production of small tools that allow comparison with Oldowan African sites. This assemblage is the earliest that share the same technical characters with East African assemblages and this technology keeps going on through the sequence. This site is an important discovery in China, and show similarities with the rich Nihewan basin.

The Nihewan Basin (Fig. 11.3) is located in northern China, 300 km west of Beijing. These are the highest latitudes in which lower Pleistocene hominin occupations were found, the same as Dmanisi in Georgia (Gabunia et al., 2000). Many sites were discovered between 1.7 and 1 Ma, indicating a recurrent presence of hominin groups in the region, though the area was under high climatic variations. Denell and colleagues (2013) studied the climatic data from the Lower Pleistocene record and concluded that those occupations may have been short and seasonal, due to very cold temperature during glacial episodes. Nonetheless, many sites have yielded numerous assemblages, both with fauna and lithics. Liu and colleagues (2013) summarized the technological data of eight major sites, Majuangou (Li and Xie, 1998; Xie and Li, 2002a,b), Xiaochangliang (You et al., 1979; Huang, 1985; Chen et al., 1998, 2002; Li, 1999; Zhu et al., 2001), Dachangliang (Pei, 2002; Deng et al., 2006), Banshan (Wei, 1994; Zhu et al., 2004), Donggutuo (Li and Wang, 1985; Wei, 1985; Hou et al., 1999), Feiliang (Xie et al., 1998; Zhu et al., 2007), Huojiadi (Feng and Hou, 1998) and Xujiapo (Wei et al., 1999). According to the authors (Liu et al., 2013), for those localities, the raw material exploitation is quite similar. The main raw material used is chert, distributed along the basin through failures and cracks along a Brescia fault. The chert is only available under small fragments though, so the cores are small. Although the authors argue that Majuangou III site is composed of at least 90 % of this chert, other researchers have noticed a larger raw material diversity in this site especially, with the use of other materials collected in alluvial accumulations close to the site, leading to select bigger pebbles than on the other sites (Boëda & Hou, 2011). Apart from this site, most of raw material procurement is focused on the selection of small chert fragments from the fracture belts close to the sites (Pei & Hou, 2001). Raw material procurement in the Nihewan basin is then almost exclusively local. Concerning the technology, Liu and colleagues (2013) sorted out three “degrees of sophistication” in the Lower Pleistocene assemblages. First corresponds to a free hand hammer percussion debitage system leading to produce few tool types, with very retouched pieces and almost no pebble tools. The site of Majuangou III is representing this category. Second degree still involves hard hammer flaking, and also bipolar debitage. Small tools were produced on flakes, with a diversity of tool types and retouch pieces. Xiaochangliang is the most relevant site for this category. Third stage is composed of the same characteristics than the previous category, and also more

prepared cores such as the Donggutuo core described by Hou (2000), a prismatic core prepared to produce series of small elongated flakes. This site is naturally representing this category.

Majuangou III is the oldest site known to date in the Nihewan basin. Dated at 1.66 Ma (Zhu et al., 2004), it is an open-air site, one level of which has yielded several hundred artifacts.

A full analysis of the Majuangou lithic industry is difficult as the detailed data are not published. According to a quick study, Boëda & Hou (2011) describe an industry consisting mostly of flakes made from a variety of raw materials from alluvial pebbles and small blocks of chert.

The core reduction process consists in producing small series of flakes from a natural convex surface selected on the blocks. The flakes are used as produced and sometimes slightly retouched.

The authors emphasize the very different production systems between Longgupo and Majuan-gou, and conclude that they are different evolutionary lineages, proposing the hypothesis of two distinct technica.

The site of Xiaochangliang, dated at 1.4 Ma (Zhu et al., 2001; Li et al., 2008; Ao et al., 2011), has yielded nearly 2000 artifacts after several excavation campaigns between the 1990s (Chen et al., 1999). The vast majority of the material is produced on nodules or small blocks of chert (96, 7%). Chert artefacts have two possible sources, one from a nodular or stratified outcrop and the other from pyroclastic rocks, mainly with asymmetric and sub-angular breccias of chert, dolomite, limestone, and quartzite (Yang et al., 2016). The technological study carried out on the materials revealed two debitage methods to produce small flakes. First a classic debitage by small series of removals, to obtain flakes with regular characters. When the cores are too small to be knapped by freehand hammer percussion, bipolar debitage is observed, in significant proportions (30% of the cores, Yang et al., 2016). The authors attribute this use of the bipolar debitage as an adaptation to the morphologies of chert block fragments, of small dimensions and sometimes difficult to knap freehand (Fig. 11.3). The retouched pieces are not numerous (n=45), but they give useful information. 38% are made on whole or broken flakes, 13.3% are on bipolar cores or splinters, and others are on angular fragments. Scrapers compose the majority of the tool-kit, but notches and other pieces without regular patterns were observed (Yang et al., 2016). The retouch tools indicate that the blanks were not produced to be standardized, and that the confection phase is the more important stage of tool making. This pattern is very similar to small tool industries in Eastern Europe during the Mid Pleistocene transition, described in Bilzingsleben in Germany or Vertesszolos in Hungary for example (Rocca 2016). The diversity of flaking methods and the use of uncontrolled methods like bipolar percussion make sense here, as the main objective is to get small pieces without special technical criteria. Those criteria will be created by the retouch phase.

The site of Donggutuo was discovered in 1981 and has been excavated through several campaigns during the 1990's. It has yielded thousands of artefacts and is one of the richest assemblages in the Nihewan basin. Dated to 1.1 (Ma Singer et al., 1999; Hilgen et al., 2012). The material has been described by several authors (Wei et al., 1985; Hou, 2008; Yuan et al., 2011; Wei 2014), and a debate emerged on the degree of conceptualization and technical skills on the site. Free hand hammer percussion was identified, as well as bipolar percussion. Authors also described finely retouched flakes (Wei et al., 1985; Schick et al., 1991). Besides to this classical technical set for the region, Hou (1999) noticed and described prepared cores at Donggutuo, which consist in a preparation of a wedge shaped debitage surface to obtain series of small elongated flakes (Hou, 2000; 2003). This interpretation has been contested by other researchers, claiming they could be a variant of the classic cores found in the site (Chen, 2003; Xie et al., 2006). Other proposed that they could be the result of bipolar reduction (Wei, 2014). Though still debated, the wedge-shaped cores show a preparation that was not observed earlier in the Nihewan basin. The elongated flakes can be retouched to get pointed pieces (Fig. 11.3). Notched pieces and borers are also documented. The retouch pieces are all made on flake blanks (Yang et al., 2017). The Donggutuo lithic assemblage is displaying another kind of knapping strategy to take advantage of the raw material constraints. Though in Xiaochangliang the knappers produced any possible blanks and then used retouch to make their tools, in Donggutuo the cores show steps for the preparation of technical criteria that are determining the morphology and the shape of the flakes produced. The core preparation to obtain elongated flakes is unique to Donggutuo in the Nihewan basin at this period.

DISCUSSION

The Early Stone Age in China gives a new perspective on the notion of variability of the early lithic industries. In Africa, the selected raw material plays an important role in the debitage methods employed. From a good knowledge of the raw material knapping reactions, the hominins selected the type of raw material and adopt a method adapted to produce the flakes they wanted. Although the retouch rate is not very high, the technical criteria defined by the debitage make it possible to obtain a diverse range of flakes, which offers the possibility to use these flakes directly as tools, and sometimes to retouch them to obtain specific cutting edges. If the raw material determines how to produce these tools, the common tool-kit remains relatively the same in all sites. The presence of heavy-duty tools to use the mass comes in addition to a tool-kit based on small flakes with fine cutting edges. Thus, in East Africa, the raw material constraints are balanced by an understanding of the reactions to knapping of each material, and the choices of raw material constitute a cultural act, or at least a technical tradition. This idea can also work on several Chinese sites, including Longgupo and Majuangou. The lithic industry of Longgupo, based on the creation of a cutting edge by shaping pebbles is unique and persists on 41 archaeological levels, between 2.5-2.2 and 1.8-1.6 Ma. The choice of shaping can be considered as a technical solution to the hardness of the limestone used. This choice of shaping is not found in other assemblages and echoes bifacial shaping

systems that will develop in East Africa from 1.7 Ma (Lepre et al., 2011; Beyene et al., 2013). The Longgupo industry is not bifacial at all, but the choice of the “all-shaped-strategy” is the same type of technical option that will prevail during the Acheulean, especially in the Bose Basin in southern China (Xie & Bodin, 2007).

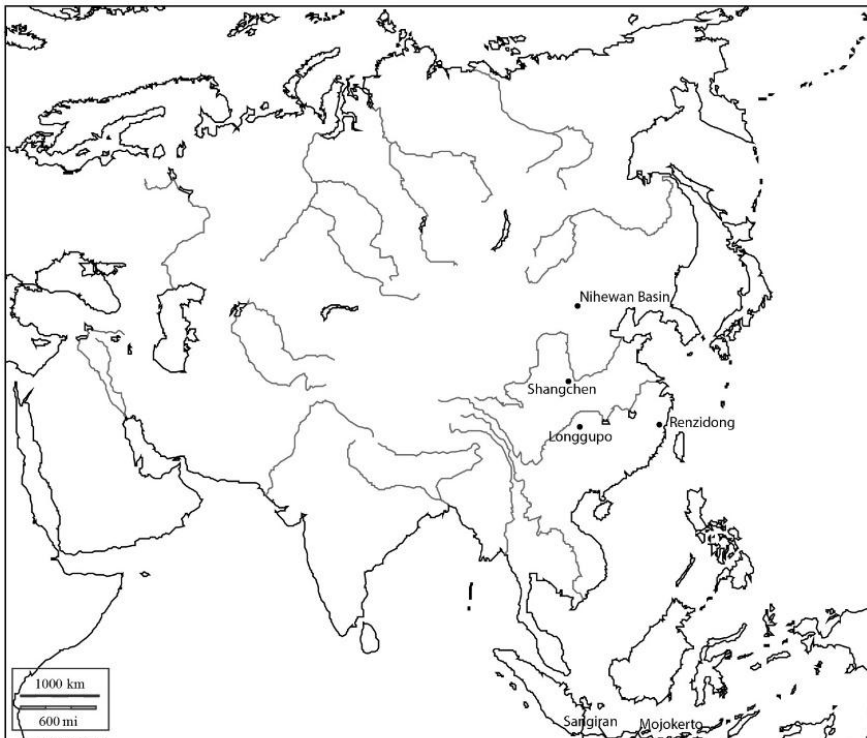


Fig. 11.3. Location of Asian Early Pleistocene sites

The characteristics of the lithic assemblage of Majuangou III seem similar to the technical systems of the African Oldowan. The choice of alluvial pebbles to obtain large flakes, and chunks of chert to make the small ones correspond to the same management of the constraints related to the raw materials as on the Oldowan sites, as for example DK at Olduvai (de la Torre & Mora 2005, De Weyer, 2016). The same kind of technological trend can be observed at Shangchen, with the selection of pebbles to produce short series of flakes, then retouched to create the tool kit. The characteristics of the lithic assemblage of Majuangou III seem similar to the technical systems of the African Oldowan. The choice of alluvial pebbles to obtain large flakes, and chunks of chert to make the small ones correspond to the same management of the constraints related to the

raw materials as on the Oldowan sites, as for example DK at Olduvai (de la Torre & Mora 2005, De Weyer, 2016).

The same kind of technological trend can be observed at Shangchen, with the selection of pebbles to produce short series of flakes, then retouched to create the tool kit. However, a different phenomenon is observed when comparing the technical choices of Xiaochangliang and Donggutuo. Indeed, on these two sites, the almost exclusive use of the same blocks of chert highlights the differences in raw material management. In Xiaochangliang, the recurrent use of bipolar percussion allows to obtain numerous small flakes and fragments, without controlling the products obtained. The retouching phase is thus preponderant in the tool confection and can vary a lot. This kind of adaptation to the raw materials, though more recent, is also documented in Central Europe, at Bilzingsleben and Vertezolos, where stone fragments were selected and retouched to make tools (Rocca, 2016).

In Donggutuo, the technical option is different, since we observe a control of the flake morphology by a preparation of the core, leading to produce standardized blanks for future tools. Another comparison with Europe is possible, looking at the assemblage of Ca Belvedere di Monte Poggiolo (Peretto et al., 1998; De Weyer, 2016). Then, how to define the variability of Early Stone Age lithic industries? What is the inherent part of natural constraints, and what is that of culture, of tradition?

The African Oldowan shows a regularity and continuity relying on tool confection. Variability can be seen in production methods depending on raw material choice. Outside Africa, in Europe and Eastern Asia, raw material constraints lead to a multiplicity of technical systems to produce stone tools. The interesting fact is that those systems are not continuous and do not develop chronologically. They much more indicate environment adaptations than technical evolutions. This multiplicity can be seen as technical traditions that are adapted to the environment through time.

CONCLUSION

By considering the technical fact by an anthropological approach based on the analysis of hominin stone tool assemblages, it is possible to highlight a diversity that is too often hidden by reductive and general descriptions of the lithic industries. The comparison between two rich areas such as East Africa and China gives new key for understanding cultural diversity at the very beginning of the history of techniques. Detailed analyses of the technical criteria, taking into account the phase of selection, production and retouch, highlight both recurrences and otherness, that is to say technical universals and cultural specificities all over the world since the earliest stone tool making. This diversity is also very similar when the Early Acheulian spreads in Western Europe, South East Asia or in Northern China. Lithic technology illustrates human diversity and technical traditions from the very beginning of humanity and more research should be carried on the local evolution of techniques during the Pleistocene.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Ao H, Deng C L, Dekkers M J, Liu Q S, Qin L, Xiao G Q et al. Astronomical dating of the Xiantai, Donggutuo and Maliang Paleolithic sites in the Nihewan Basin (North China) and implications for early human evolution in East Asia. *Palaeogeography Palaeoclimatology Palaeoecology*. 297: 129–137.
- Arzarello M. & Peretto C. 2010 Out of Africa: The first evidence of Italian peninsula occupation, *Quaternary International* 223–224, 65–70.
- Arzarello M., De Weyer L. & Peretto C. 2016 The first European peopling and the Italian case: peculiarities and “opportunism”, *Quaternary International* 393, 41-50.
- Arzarello M., Pavia G., Peretto C., Petronio C. & Sardella R. 2012 – Evidence of an Early Pleistocene hominin presence at Pirro Nord (Apricena, Foggia, Southern Italy): P13 site, *Quaternary International* 267, 56–61.
- Arzarello M., Marcolini F., Pavia G., Pavia M., Petronio C., Petrucci M., Rook L., Sardella R. 2009 – L’industrie lithique du site pléistocène inférieur de Pirro Nord (Apricena, Italie du Sud) : une occupation humaine entre 1,3 et 1,7 Ma, *L’Anthropologie* 113, 47–58.
- Asfaw B., White T., Lovejoy O., Latimer B. & Simpson S. 1999 – *Australopithecus garhi*: A New Species of Early Hominid from Ethiopia, *Science* 284, 629–634.
- Beyene Y., Katoh S., WoldeGabriel G., Hart W., Uto K. Sudo M., Kondo M., Renne P.R., Suwa G. & Asfaw B. 2013 – The characteristics and chronology of the earliest Acheulean at Konso, Ethiopia, *Proceedings of the National Academy of Sciences* 110 (5), 1584–1591.
- Blumenshine R.J., Peters C.R., Masao F.T., Clarke R.L., Deino A.L., Hay R.L., Swisher C.C., Stanistreet I.G., Ashley G.M., McHenry L.J., Sikes N.E., van der Merwe N.J., Tactikos J.C., Cushing A.E., Deocampo D.M., Njau J.K. & Ebert J.I. 2003 - Late Pliocene Homo and hominid land use from western Olduvai Gorge, Tanzania. *Science*, 299, 1217-1221.
- Boëda E. & Hou Y.M., 2011a – Étude du site de Longgupo - Synthèse, *L’Anthropologie* 115 (1), 176–196.
- Bourguignon L., Crochet J.-Y., Capdevila R., Ivorra J., Antoine P.-O., Agustí J., Barsky D., Blain H.-A., Boulbes N., Bruxelles L., Claude B., Cochard D., Filoux A., Firmat C., Lozano-Fernández I., Magniez P., Pelletier M., Rios-Garaizar J., Testu A., Valensi P. & De Weyer L. 2016 – Bois-de-Riquet

- (Lézignan-la-Cèbe, Hérault): A late Early Pleistocene archaeological occurrence in Southern France, *Quaternary International*, 393, 24-40.
- Braun D.R., Plummer T., Ditchfield P., Ferraro J.V., Maina D., Bishop L.C. & Potts R. 2008 – Oldowan behavior and raw material transport: perspectives from the Kanjera Formation, *Journal of Archaeological Science* 35, 2329-2345.
- Braun D.R., Plummer T.W., Ditchfield P.W., Bishop L.C. & Ferraro J.V. 2009 – Oldowan technology and raw material variability at Kanjera South, In: Hovers E., Braun D.R. (Eds.), *Interdisciplinary Approaches to the Oldowan*, Dordrecht, Springer, 99–110.
- Carbonell E., Bermúdez de Castro J.M., Parés J.-M., Pérez-González A., Cuenca-Bescós G. Ollé A., Mosquera M., Huguet R., van der Made J., Rosas A., Sala R., Vallverdú J., García N., Granger D.E., Martínón-Torres M., Rodríguez X.-P., Stock G.M., Vergès J.-M., Allué E., Burjachs F., Cáceres I., Canals A., Benito A., Díez C., Lozano M., Mateos A., Navazo M., Rodríguez J., Rosell J. & Arsuaga J.L. 2008 – The first hominin in Europe, *Nature* 452, 465–469.
- Chavaillon J. 1976 – Evidence for the technical practices of early Pleistocene hominids, Shungura Formation, Lower Omo Valley, Ethiopia, In: Coppens Y., Howell F.C. Isaac G.L. & Leakey R.E.F. (Eds.), *Earliest Man and Environment in the Lake Rudolf Basin*, Chicago, University of Chicago Press, 565–573.
- Chen C. The Early Pleistocene Lithic Assemblage and Human Behaviors in Nihewan Basin. Shanghai:Xuelin Press; 2003. pp. 422-447.
- Chen, C., Shen, C., Chen, W.Y., Tang, Y.J., 1998. Excavation of the Xiaochangliang site at Yangyuan, Heibei. *Acta Anthropologica Sinica* 18 (3), 225e239.
- Chen, C., Shen, C., Chen, W.Y., Tang, Y.J., 2002. Lithic analysis of the Xiaochangliang industry. *Acta Anthropologica Sinica* 21 (1), 23e40.
- Ciochon, R., 2009. The mystery ape of Pleistocene Asia. *Nature* 459, 910e911.
- Clarke R.J. 1994 – The significance of the Swartkrans *Homo* to the *Homo erectus* problem, *Courier Forschungs-Institut Senckenberg* 171, 185–193.
- De Weyer 2016 – *Systèmes techniques et analyse techno-fonctionnelle des industries lithiques anciennes. Universaux et variabilité en Afrique de l'Est et en Europe*. PhD Dissertation. Université Paris Ouest Nanterre La Défense, 411p.
- De Weyer L. 2017 – An Early Stone Age in Western Africa? Spheroids and polyhedrons at Ounjougou, Mali, *Journal of Lithic Studies*, vol 4, Nr1. DOI: <https://doi.org/10.2218/jls.v4i1>
- Delagnes A. & Roche H. 2005 – Late Pliocene hominid knapping skills: The case of Lokalalei 2C, West Turkana, Kenya, *Journal of Human Evolution* 48, 435–472.
- Delagnes A., Boissérie J.-R., Beyene Y., Chuniaud K., Guillemot C. & Schuster M. 2011 – Archaeological investigations in the Lower Omo Valley (Shungura Formation, Ethiopia): New data and perspectives, *Journal of Human Evolution* 61 (2), 215–222.

- Dennell RW. The Nihewan Basin of North China in the Early Pleistocene: Continuous and flourishing, or discontinuous, infrequent and ephemeral occupation. *Quatern Int.* 2013; 295(438):223±236.
- Feng, X.W., Hou, Y.M., 1998. Huojiadi e a new Palaeolithic site found in NihewanBasin. *Acta Anthropologica Sinica* 17 (4), 310e316.
- Gabunia L.K., Vekua A.B., Lordkipanidze D., Swisher C.C., Ferring R., Justus A., Nioradze M., Tvalcrelidze M., Antón S.C., Bosinski G., Jöris O., de Lumley M.-A., Maisuradze G. & Mouskhelishvili A. 2000 – Earliest Pleistocene hominid cranial remains from Dmanisi, Republic of Georgia: taxonomy, geological setting, and age, *Science* 288, 1019–1025.
- Gao X., Wei Q., Shen C. & Keates S. 2005 – New Light on the Earliest Hominid Occupation in East Asia, *Current Anthropology* 46, 115–120
- Han F., Bahain J.-J., Deng C., Boëda E., Hou Y., Wei G., Huang W., Garcia T., Shao Q., He C., Falguères C., Voinchet P. & Yin G. 2017 – The earliest evidence of hominid settlement in China: Combined electron spin resonance and uranium series (ESR/U-series) dating of mammalian fossil teeth from Longgupo cave, *Quaternary International*, 434 A, 75-83.
- Harmand S. 2005 – Matières premières lithiques et comportements techno-économiques des Homininés plio-pléistocènes du Turkana occidental, Kenya, Thèse de Doctorat de l'Université de Paris X-Nanterre.
- Harmand S. 2009 – Raw material and economic behaviours at Oldowan and Acheulean in the West Turkana region, Kenya, In: Adams B. & Blades B. (Eds.), *Lithic Materials and Paleolithic Societies*, Oxford, Blackwell Publishing, 3–14.
- Harmand S., Lewis J.E., Feibel C.S., Lepre C.J., Prat S., Lenoble A., Boës X., Quinn R.L., Brenet M., Arroyo A., Taylor N., Clément S., Daver G., Brugal J.-P., Leakey L., Mortlock R.A., Wright J.D., Lokorodi S., Kirwa C., Kent D.V. & Roche H. 2015 – 3.3-million-year-old stones tools from Lomekwi 3, West Turkana, Kenya, *Nature* 521, 310–315.
- de Heinzelin J., Clark J.D., White T.D., Hart W.K., Renne P.R., WoldeGabriel G., Beyene Y. & Vrba E.S. 1999 – Environment and behavior of 2.5-million-year-old Bouri hominids, *Science* 284, 625–629.
- Hou, Y.M., 1999. Expecting two-million-year-old human remains in the Nihewan Basin, North China. *Quaternary Sciences* 1, 95.
- Hou, Y.M., 2000. Donggutuo lithic industry of the Nihewan Basin, North China. PhD dissertation of the Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, pp. 1e112.
- Hou, Y.M., 2003. Naming and preliminary study on the category of the “Donggutuo core”. *Acta Anthropologica Sinica* 22 (4), 279e292.
- Hou, Y.M., 2008. The “Donggutuo core” from Donggutuo industry of Lower Pleistocene in the Nihewan Basin, North China and its indication. *L'Anthropologie* 112 (3), 457e471.
- Hou, Y.M., Li, Y.H., Huang, W.B., Xu, Z.Q., Lu, N., 2006. New lithic materials from level 7 of Longgupo Site. *Quaternary Sciences* 26, 555-561 (in Chinese with English abstract).
- Hou, Y.M., Wei, Q., Feng, X.W., Lin, S.L., 1999. Re-excavation at Donggutuo in the Nihewan Basin, North China. *Quaternary Sciences* 19 (2), 139e147.
- Hovers E. 2015 – Archaeology: Tools go back in time, *Nature* 521, 294–295.

- Hovers E., Schollmeyer K., Goldman T., Eck G.G., Reed K.E., Johanson D.C. & Kimbel W.H. 2002 – Late Pliocene archaeological sites in Hadar, Ethiopia, *Paleoanthropology Society Abstracts, Journal of Human Evolution* 42 (3), A17.
- Huang W.B., Ciochon R., Gu Y., Larick R., Fang Q., Schwarcz H.P., Yonge C., de Vos J. & Rink W.J. 1995 – Early *Homo* and associated artifacts from Asia, *Nature* 378, 275–278.
- Huang, W., Ciochon, R., Gu, Y., Larick, R., Fang, Q., Schwarcz, H., Yonge, C., de Vos, J., Rink, W., 1995. Early *Homo* and associated artifacts from Asia. *Nature* 378, 275–278.
- Huang, W.-B., 1986. An analysis of the Karst Cave and Mammalian Fauna in Three Gorges, Changjiang River. *Geographical Research* 5 (4).
- Huang, W.B., Fang, Q.R., 1991. Wushan Hominid Site. Ocean Press, Beijing, 230pp. (in Chinese with English abstract).
- Huang, W.B., Zheng, S.H., 1999. Résumé de l'analyse des fossiles vertébrés. In: Huang, W.W., Fang, Q.R. (Eds.), *Wushan Hominid Site*. Ocean Press, Beijing, (en Chinois), pp. 135–149.
- Huang, W.W., 1985. On the stone industry of Xiaochangliang. *Acta Anthropologica Sinica* 4 (4), 301e307.
- Huffman F., Shipman P., Hertler C., de Vos J. & Aziz F. 2005 – Mojokerto skull discovery, East Java, *Journal of Human Evolution* 48, 321–363.
- Isaac G.L. 1976 – Plio-Pleistocene artifacts assemblages from East Rudolf, Kenya, In: Coppens Y., Howell F.C., Isaac G.L. & Leakey R.E. (Eds.), *Earliest Man and Environments in the Lake Rudolf Basin: Stratigraphy, Paleoeecology and Evolution*, Chicago, University of Chicago Press, 552–564.
- Jin C.Z. & Liu J.Y. 2009 – Paleolithic Site - the Renzidong Cave, Fanchang, Anhui, China, Beijing, Science Press, 439 p.
- Jin C.Z., Dong W., Liu J.Y., Wei G., Xu Q. & Zheng J. 2000 – A Preliminary Study on the Early Pleistocene Deposits and the Mammalian Fauna from the Renzi Cave, Fanchang, Anhui, China, *Acta Anthropologica Sinica* 19 (Suppl.), 235–246.
- Kuman K. & Clarke R.J. 2000 – Stratigraphy, artifact industries and hominid associations for Sterkfontein, Member 5, *Journal of Human Evolution* 38, 827–847.
- Kuman K. & Field A.S. 2009 – The Oldowan industry from Sterkfontein caves, South Africa, In: Schick K. & Toth N. (Eds.), *The cutting edge, new approaches to the archaeology of Human origins*, Bloomington (Indiana), Stone Age institute publication series, 151–169.
- Kuman K. 2007 – The Earlier Stone Age in South Africa: site context and the influence of cave studies, In: Pickering T.R., Schick K. & Toth N. (Eds.), *Breathing Life into Fossils: Taphonomic Studies in Honor of C.K. (Bob) Brain*, Bloomington (Indiana), Stone Age Institute Press, 181–198.
- Leakey M.D. 1971 – Olduvai Gorge, Volume 3: Excavations in Beds I and II, 1960-1963, Cambridge, Cambridge University Press.
- Lepre C.J., Roche H., Kent D.V., Harmand S., Quinn R.L., Brugal J.-P., Texier P.-J., Lenoble A. & Feibel, C.S. 2011 – An earlier origin for the Acheulian, *Nature* 477, 82–85.

- Li H, Yang X, Heller F, Li H. High resolution magnetostratigraphy and deposition cycles in the Nihewan Basin (North China) and their significance for stone artifact dating. *Quaternary Res.* 2008; 69: 250– 262.
- Li YX. On the progressive of the stone artifacts from the Xiaochangliang Site at Yangyuan, Hebei. *Acta Anthropol Sinica.* 1999; 18(4): 241–254.
- Li, J., Xie, F., 1998. Excavation report of a lower Palaeolithic site at Majuangou. In: Hebei Province Institute of Cultural Relics (Ed.), *Archaeological Corpus of Hebei*. Oriental Press, Beijing, pp. 30e45.
- Liu Y, Hou YM, Ao H. Analysis of lithic technology of Lower Pleistocene sites and environmental information in the Nihewan Basin, North China. *Quatern Int.* 2013; 295: 215±222.
- de Lombera-Hermida A., Bargalló A., Terradillos-Bernal M., Huguet R., Vallverdú J., García-Antón M.-D., Mosquera M., Ollé A., Sala R., Carbonell E. & Rodríguez-Alvarez X.-P. 2015 – The lithic industry of Sima del Elefante (Atapuerca, Burgos, Spain) in the context of Early and Middle Pleistocene technology in Europe, *Journal of Human Evolution* 82, 95–106.
- Lordkipanidze D., Jashashvili T., Vekua A., Ponce de León M.S., Zollikofer C.P.E., Rightmire G.P., Pontzer H., Ferring R., Oms O., Tappen M., Bukhsianidze M., Agusti J., Kahlke R., Kiladze G., Martinez-Navarro B., Mouskhelishvili A., Nioradze N. & Rook L. 2007 – Postcranial evidence from early *Homo* from Dmanisi, Georgia, *Nature* 449, 305–310.
- Lordkipanidze D., Ponce de León M.S., Margvelashvili A., Rak Y., Rightmire P., Vekua A. & Zollikofer C.P.E. 2013 – A Complete Skull from Dmanisi, Georgia, and the Evolutionary Biology of Early *Homo*, *Science* 342, 326–331.
- de Lumley H. & Beyene Y. (Eds.) 2004 – Les sites préhistoriques de la région de Fejej, Sud-Omo, Ethiopie, dans leur contexte stratigraphique et paléontologique, Paris, Editions Recherche sur les Civilisations.
- de Lumley H., Barsky D. & Cauche D. 2009 – Les premières étapes de la colonisation de l'Europe et l'arrivée de l'Homme sur les rives de la Méditerranée, *L'Anthropologie* 113, 1–46.
- de Lumley H., Nioradzé M., Barsky D., Cauche D., Celiberti V., Nioradzé G., Notter O., Zvania D. & Lordkipanidze D. 2005 – Les industries lithiques préoldowayennes du début du Pléistocène inférieur du site de Dmanissi en Géorgie, *L'Anthropologie* 109, 1–182.
- de Lumley M.-A. & Lordkipanidze D. 2006 – L'Homme de Dmanisi (*Homo georgicus*), il y a 1 810 000 ans, *Comptes Rendus Palevol* 5, 273–281.
- Mgeladze A., Lordkipanidze D., Moncel M.-H., Despriée J., Chagelishvili R., Nioradze M & Nioradze G. 2011 – Hominin occupations at the Dmanisi site, Southern Caucasus: Raw materials and technical behaviours of Europe's first hominins, *Journal of Human Evolution* 60 (5), 571–596.
- Mora R. & de la Torre I. 2005 – Percussion tools in Olduvai Beds I and II (Tanzania): Implications for early human activities, *Journal of Anthropological Archaeology* 24 (2), 179–192.
- Pei, S.W., Hou, Y.M., 2001. Preliminary study on raw materials exploitation at Donggutuo site, Nihewan Basin, North China. *Acta Anthropologica Sinica* 20 (4), 271e281.

- Pelegrin J. 1991 – Les savoir-faire : une très longue histoire, *Terrains* 16, 106–113.
- Plummer T., Bishop L., Ditchfield P. & Hicks J. 1999 – Research on Late Pliocene Oldowan Sites at Kanjera South, Kenya, *Journal of Human Evolution* 36, 151–170.
- Plummer, T. and Bishop, L.C. - 2016 Oldowan hominin behavior and ecology at Kanjera South, Kenya. *Journal of Anthropological Science* 94: 29-40.
- Qian F. & Zhou G.X., 1991 – Quaternary Geology and Paleoanthropology of Yuanmou, Yunnan, China, Beijing, Sciences Press.
- Rasse, M., Huang, W.B., Boëda, E., 2011. The site of Longgupo in his geological and geomorphological environment. *L'Anthropologie* 115, 23-39.
- Reti, J. 2016 - Quantifying Oldowan stone tool production at Olduvai Gorge, Tanzania, *PLoS ONE* 11(1): e0147352. doi: 10.1371/journal.pone.0147352
- Rightmire G.P., Lordkipanidze D. & Vekua A. 2006 – Anatomical descriptions, comparative studies and evolutionary significance of the hominin skulls from Dmanisi, Republic of Georgia, *Journal of Human Evolution* 50, 115–141.
- Rocca R. 2016 - Depuis l'Est ? Nouvelles perspectives sur les premières dynamiques de peuplement en Europe, *L'Anthropologie*, 120, 3, 209-236.
- Roche H. & Tiercelin J.-J. 1980 – Industries lithiques de la formation plio-pléistocène d'Hadjar, Ethiopie (campagne 1976), In: Leakey R.E. & Ogot B.A. (Eds.), *Pre-Acheulean and Acheulean cultures in Africa. Proceedings of the 8th Panafrican Congress of Prehistory and Quaternary Studies*, Nairobi, 194–199.
- Roche H. & Tiercelin J.-J. 1980 – Industries lithiques de la formation plio-pléistocène d'Hadjar, Ethiopie (campagne 1976), In: Leakey R.E. & Ogot B.A. (Eds.), *Pre-Acheulean and Acheulean cultures in Africa. Proceedings of the 8th Panafrican Congress of Prehistory and Quaternary Studies*, Nairobi, 194–199.
- Roche H. 1996 – Remarques sur les plus anciennes industries en Afrique et en Europe, *XIII^{ème} Congrès UISPP, Colloquia 4*, Forlì, Italie, 53–63.
- Roche H., Delagnes A., Brugal. J.-P., Feibel C., Kibunjia M., Mourre V. & Texier P.-J. 1999 – Early hominid stone tool production and technological skill 2.34 Myr ago in West Turkana, Kenya, *Nature* 399, 57–60.
- Sahnouni M., Hadjouis D., van der Made J., Derradji A.-e.-K., Canals A., Medig M. & Belahrech H. 2002 – Further research at the Oldowan site of Ain Hanech, North-eastern Algeria, *Journal of Human Evolution* 43, 925–937.
- Sahnouni, M., Schick, K., & Toth, N. 1997, An Experimental Investigation into the Nature of Faceted Limestone “Spheroids” in the Early Palaeolithic. *Journal of Archaeological Science*, 24: 701-713.
- Sartano S. 1961 – Notes on a new find of a *Pithecanthropus* mandible, *Publikasi Teknik Seri Paleontologi* 2, 1–51.
- Sartano S., 1982. Characteristics and chronology of early man in Java, In: de Lumley H. (Ed.), *L'Homo erectus et la place de l'Homme de Tautavel parmi les Hominidés fossiles. 1er Congrès International de Paléontologie Humaine*, Nice, 491–533.

- Schick K.D. 1994 – The Movius line reconsidered, In: Corruccini, R.S. & Ciochon, R.L. (Eds.), *Integrative Paths to the Past*, New Jersey, Prentice-Hall, 569–596.
- Schick, K., Toth, N., Wei, Q., Clark, J. Desmond, Etler, Denis A., 1991. Archaeological perspectives in the Nihewan Basin, China. *Journal of Human Evolution* 21, 13e26.
- Schwartz J.H. & Tattersall I. 1996 – Whose teeth? *Nature* 381, 201–202.
- Semaw S. 2000 – The world's oldest stone artefacts from Gona, Ethiopia: their implications or understanding stone technology and patterns of human evolution between 2.6-1.5 million years ago, *Journal of Archaeological Science* 27, 1197–1214.
- Swisher C.C., Curtis G.H., Jacob T., Getty A.G., Suprijo A. & Widiastomo 1994 – Age of the earliest known hominids in Java, Indonesia, *Science* 263, 1118–1121.
- Toro I., de Lumley H., Barsky D., Celiberti V., Cauche D., Moncel, M.-H., Fajardo B. & Toro M. 2003 – Las industrias líticas de Barranco Leon y Fuente Nueva 3 de Orce. Estudio técnico y tipológico. Las cadenas operativas. Analisis traceológico. Resultados preliminares, In : Toro I., Agustí J. & Martínez-Navarro B. (Eds.), *El Pleistoceno inferior de Barranco Leon y Fuente Nueva 3, Orce (Granada), Memoria científica campañas 1999–2002*. Junta de Andalucía, Consejería de Cultura, Arqueología.
- Toro-Moyano I., de Lumley H., Barrier P., Barsky D., Cauche D., Celiberti V., Grégoire S., Lebègue F., Mestour B. & Moncel M.-H. 2010 – *Les industries lithiques archaïques de Barranco León et de Fuente Nueva 3, Orce Guadiz-Baza, Andalousie*, Paris, CNRS Editions.
- de la Torre I. 2004 – Omo revisited: evaluating the technological skills of Pliocene hominids, *Current Anthropology* 45, 439–465.
- de la Torre I. & Mora R. 2005 – Technological strategies in the Lower Pleistocene at *Olduvai* Beds I & II, Liège, ERAUL.
- Toth N. 1982 – The stone technologies of early hominids at Koobi Fora, Kenya: an experimental approach, Ph. D. Dissertation, University of California at Berkeley.
- Toth N. 1985 – The Oldowan reassessed: A close look at early stones artifacts, *Journal of Archaeological Science* 12 (2), 101–120.
- Toth N. 1987 – Behavioral inferences from Early Stone Age artifact assemblages: an experimental model, *Journal of Human Evolution* 16, 763–787.
- Tribolo, C., Rasse, M., Soriano, S., & Huysecom, E. 2015, Defining a chronological framework for the Middle Stone Age in West Africa: OSL ages at Ounjougou (Mali). *Quaternary Geochronology*, 29: 80-96. doi:10.1016/j.quageo.2015.05.013
- Turq A., Martínez-Navarro B., Palmquist P., Arribas Herrera A., Agustí J. & Rodríguez-Vidal J. 1996 – Le Plio-Pléistocène de la région d'Orce, province de Grenade, Espagne : bilan et perspectives de recherche, *Paléo* 8, 161–204.
- Wei G.B., Huang W.B., Chen S.K., He C.D., Pang L.B., Wu Y., 2014, Paleolithic culture of Longgupo and its creators, *Quaternary International* 354, 154-161.

- Wei Q. 1994 – Banshan Paleolithic site from the lower Pleistocene in the Nihewan Basin in northern China, *Acta Anthropologica Sinica* 13, 223–238.
- Wei, Q., 1985. Palaeolithics from the Lower Pleistocene of Nihewan Basin in the North China. *Acta Anthropologica Sinica* 4 (4), 289e300.
- Wei, Q., Hou, Y.M., Feng, X.W., 1999. Stone artifacts from Xujiapo in the Nihewan Basin. *Longgupo Prehistoric Culture* 1, 119e127.
- Worm H.U. 1997 – A link between geomagnetic reversals and events and glaciations, *Earth and Planetary Science Letters* 147, 55–67.
- Wu X.Z. 2000 – Longgupo mandible belongs to ape, *Acta Anthropologica Sinica* 19, 1–10.
- Xie F., Li J. & Liu L. 2006 – *The Nihewan Paleolithic Culture*, Shijiazhuang, Huashan Literature Publishing House.
- Xie, F., Li, J., 2002a - Nihewan Majuangou site. In: State Administration of Cultural Heritage (Ed.), *Major Archaeological Discoveries in China in 2001*. Culture Relics Publishing House, Beijing.
- Xie, F., Li, J., 2002b - Characteristics of the stoneware in Majuangou site. *Wenwuchunqiu* 1e6 (3), 19.
- Xie, F., Li, J., Cheng, S.Q., 1998. Excavation report of the Feiliang site. In: Hebei Province Institute of Cultural Relics (Ed.), *Archaeological Corpus of Hebei*. Oriental Press, Beijing, pp. 1e29.
- Xie G.M. & Bodin E. 2007 – Les industries paléolithiques du bassin de Bose (Chine du Sud), *L'Anthropologie* 111, pp 182-206.
- Yang SX, Hou YM, Yue JP, Petraglia MD, Deng CL, Zhu RX. The lithic assemblages of Xiaochangliang, Nihewan Basin: Implications for Early Pleistocene hominin behaviour in North China. *PLoS ONE*. 2016; 11(5): e0155793.
- Yang S-X, Petraglia MD, Hou Y-M, Yue J-P, Deng C-L, Zhu R-X (2017) The lithic assemblages of Donggutuo, Nihewan basin: Knapping skills of early pleistocene hominins in North China. *PLoS ONE* 12(9): e0185101.
- You, Y.Z., Tang, Y.J., Li, Y., 1979. The discovery of Xiaochangliang site and its significance. *Chinese Science Bulletin* 24 (8), 365e367.
- Yuan BY, Xia ZK, Niu PS. 2011. *Nihewan Rift and Early Man*. Beijing: Geology Publishing House.
- Zhu R.X., Potts R., Xie F., Hoffman K.A., Deng C.L., Shi C.D., Pan Y.X., Wang H.Q., Shi R.P., Wang Y.C., Shi G.H. & Wu N.Q. 2004 – New evidence on the earliest human presence at high northern latitudes in northeast Asia, *Nature* 431, 559–562.
- Zhu R.X., Zhisheng A., Potts R & Hoffman K.A. 2003 – Magnetostratigraphic dating of early humans in China, *Earth Sciences Reviews* 61, 341–359.
- Zhu, R., Hoffman, K., Potts, R., Deng, C., Pan, Y., Guo, B., Guo, Z., Yuan, B., Hou, Y., Huang, W., 2001. Earliest presence of humans in northeast Asia. *Nature* 413, 413e417.
- Zhu, R.X., Deng, C.L., Pan, Y.X., 2007. Magnetostratigraphy of the fluvio-lacustrine sequences in the Nihewan Basin and its implications for early human colonization of Northeast Asia. *Quaternary Sciences* 27 (6), 922e943.

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Late Pleistocene Societies of Northwestern Africa: Technology and Lifeways

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INTRODUCTION

During the Last Glacial Maximum (LGM) which falls into the MIS2 Isotope Stage, the archaeological record in Northwestern Africa has known a global tendency toward microlithisation as was the case for the other Mediterranean technocomplexes such as Upper Paleolithic of Europe (Strauss 2001), Late Paleolithic of Egypt (Leplongeon 2017) and Early Epipaleolithic of the Levant (Belfer-Cohen and Goring-Morris 2002). In Northeastern Africa, a number of microlithic industries which are attested by the presence of small chipped stone artefacts on diminutive blanks such as Kubbanian and Fakhurian appeared in the Nile Valley and Nubia just before the Last Glacial Maximum around 21 ka BP. These regional variants are characterized by the profusion of backed bladelets notably with Ouchtata retouch, as well as the microburin blow technique used for shaping geometric microliths. The climatic improvement between 16 ka BP and 10 ka BP lead to the appearance of other microlithic industries such as Sébekien, Silsilien and Afian which have witnessed the emergence of a wide exploitation of natural resources in particular wild cereals (Close and Wendorf 1986). Human occupations are characterized by seasonal base-camps related to fishing and mammal hunting activities such as auroch, hartebeest, dorcas gazelle, hare and hippopotamus (Vermeersch and Van Neer 2015). The sites were probably seasonally occupied by groups that already had a territorial and social organization as evidenced by the presence of two large cemeteries dated between 12 ka BP and 10 ka BP at Djebel Sahaba in Nubia.

In Northwestern Africa, Late Pleistocene industries are also denoted by their tendency toward microlithisation and include Iberomaurusian of the Maghreb (Pallary 1909), Southern Tunisian bladelets of Tunisia (Gragueb 1983) and Eastern Oranian of Cyrenaica (Mc Burney 1967); this last seems to be deeply related to the Dabban and might strongly result from a local development (Lucarini and Mutri 2014). Whilst the Dabban is a peculiar tradition of Cyrenaica, the definition of Eastern Oranian has been used to indicate Pleistocene culture found in Cyrenaica (Mc Burney 1967), with clear reference to the Iberomaurusian (Western Oranian). Both Iberomaurusian and Eastern Oranian were

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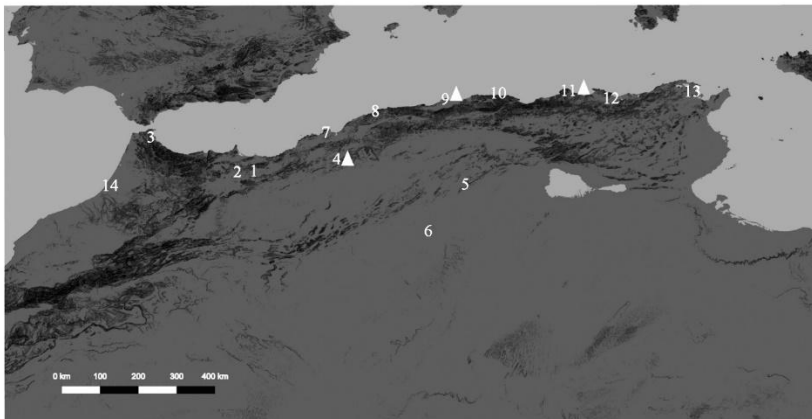
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concentrated at the coastal zone of the Maghreb and Cyrenaica in the period between 25 ka and 12 ka cal BP (e.g. Barich et al. 2006; Barker et al. 2012; Linstädter et al. 2012; Barton et al. 2013; Douka et al., 2014), while Southern Tunisian bladelets technology has proliferated in Southern boundaries of Tunisia (Vernet and Aumassip, 1998).

This chapter focuses on the role of Late Pleistocene societies in Northwestern Africa (Maghreb) labelled Iberomaurusian. It examines the implications of the adoption of microlithic technologies in adaptive adjustment to changing environmental conditions and the socio-ecological transformations that took place during the Late Glacial Maximum and the Late Glacial.

GEOGRAPHICAL EXPANSION AND ORIGINS

The latest Paleolithic industries across Northwestern Africa (Maghreb) have traditionally been labeled as “Iberomaurusian” which describes a group of microlithic assemblages that appear to be largely focused on the coastal zone of North Africa between 25 and 12 ka cal BP (e.g. Barich et al. 2006; Barker et al. 2012; Linstädter et al. 2012; Barton et al. 2013; Douka et al. 2014). The Iberomaurusian has a wide geographical extension expanding from Morocco to the littoral of Tunisia where a limited number of sites occurs due to the subsidence pattern. The extension of this culture in the Southern margins would not exceed the Saharan Atlas, while this culture is well attested in the Moroccan shores of Strait of Gibraltar and in the entire Atlantic coast of Morocco, particularly in the region of Rabat-Casablanca (Fig. 12.1).



1. Taforalt 2. Ifri n'Baroud, Ifri n'Ammar 3. Hettab 2, Kef el Hammar 4. Columnata
5. El Hamel, Es Sayar, El Onçor 6. El Haouita 7. Abri Alain 8. Cap Tenes 9. Rassel 10. Courbet Marine
11. Tamar Hat, Afalou Bou Rhummel, Taza I. 12. Ain Khiair 13. Ouchtata 14. El Harhoura 2

Fig. 12.1. Location of sites mentioned in the text

The oldest occurrence so far recorded of the Iberomaurusian is from Tamar Hat rockshelter in Northeastern Algeria ca. 25 ka cal BP (Hogue and Barton, 2016), a deep stratified site which covers the entire duration of the Iberomaurusian culture (Saxon et al., 1974). This is also the earliest appearance of the Late Pleistocene microlithic technologies in North Africa during a period which follows a prolonged aridity concomitant with the Greenland Stadial 3 or Heinrich 2 Event (Cacho et al., 1999). Interestingly, the earliest known appearance of the Iberomaurusian is close in time to the haplogroups U6a and M1 which are considered as markers for autochthonous Maghreb ancestry and dated at ca. 24 ka BP (Van de Loodrecht et al., 2018). Published results on ancient human DNA from Taforalt (Morocco) dated ca. 15 ka cal BP provide evidence on the affinity of the Earliest Iberomaurusian populations in the Maghreb with Early Holocene Natufians, suggesting connection between Africa and the Near East (Van de Loodrecht et al., 2018). Furthermore, these results reject the hypothesis of a potential Epigravettian gene flow from Southern Europe. However, further systematic comparisons based on detailed technological studies of lithic assemblages are needed to strengthen the genetic results.

TECHNOLOGY

In Northeastern Africa, the Middle Paleolithic (Middle Stone Age) is followed by an Upper Paleolithic (Early Later Stone Age) blade industry identified at Nezlet Khater in Upper Egypt (Vermeersh, 2010) and at Haua Fteah in Cyrenaica where it is known as Dabban from about 46 ka BP (Douka et al., 2014). In Northwestern Africa, the situation is less clear and the Upper paleolithic (Early Later Stone Age) blade industries are not well known. The Upper Paleolithic assemblages seem to be represented by a relatively poor number of assemblages different from the Dabban and they rather correspond to a Middle Stone Age (MSA) characterized by non-Levallois-flake-based industries such as those identified at Taforalt cave in Morocco (Barton et al., 2013) which disappear around 24.5 ka cal BP leaving an estimated 1900-year hiatus with the oldest Late Pleistocene microlithic technologies “Iberomaurusian industries”. Unfortunately, the nature of the transition between the two techno-complexes Middle Stone Age (MSA) and the Iberomaurusien (LSA) remains very little documented in published data from Algeria, such as Cap Tenès (Lorcin, 1961-62), Sidi Said (Betrouni, 1997) and Taza (Medig et al., 1996). Besides, there is no Middle Stone Age record preceding the earliest Late Pleistocene microlithic industries at Tamar Hat rockshelter.

The typical techno-typological pattern of the Iberomaurusian lithic assemblages is characterized by microlithic tools which are dominated by large quantities of backed bladelets often made using the microburin-blow technique (Camps, 1974). The inventory of the tool classes also includes endscrapers (mostly with ochre stains), truncations, notches, borers/perforators, burins, splintered pieces and rare geometric microliths which are exclusively segments (Fig. 12.2A). The bone industry is poorly developed (Fig. 12.2B) and is mainly represented by alenas, points and “tranchets” (Camps-Fabrer, 1966). The industry on animal hard material production is not common and bone industry is rarely decorated,

while the techniques of bone shaping are little approached in the literature (Merzoug, 2012).

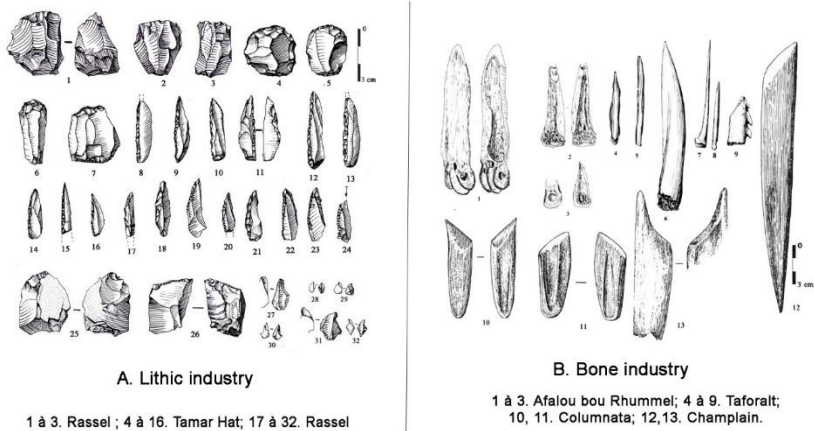


Fig. 12.2. Iberomaurusian lithic and bone industry

Camps (1974) subdivided the Iberomaurusian into three successive phases basing on the first radiocarbon dates and type-counts of retouched tools in which the backed bladelets are dominant over tool classes. This subdivision was rejected by Brahim (1969, 1970, 1972) and Aumassip (1979) who conceived a pattern independent from chronological periods leading to the identification of regional groups, while Close (1977, 1978, 1981, 2002) who employed lithic attribute analysis on Late Pleistocene lithic industries of North Africa assumed that the variability is principally determined by stylistic or traditional factors which are the only mean to identify social groups.

The reconsideration of the radiocarbon dating from well-stratified cave sequences such as Taforalt, Ifri n'Amman and Ifri el Baroud in Morocco allowed to enhance the knowledge on Iberomaurusian periodization and to support the assumption of a potential relationship between climatic events and human occupations (Mikdad and Eiwanger, 2000; Barton et al., 2005; Bouzouggar et al., 2008; Linstädter et al., 2012). The Iberomaurusian culture is subdivided into early and late phases and the transition between these two phases would have occurred around 16-15 ka cal BP (Linstädter et al., 2012; Barton et al., 2013). Early Iberomaurusian is linked to relatively dry environmental conditions and occurs in well stratified sequences, while late Iberomaurusian seems to be related to wetter climatic conditions and is characterized by deposits of ashy sediments and midden layers containing large quantities of burnt shells of terrestrial land snail (Bouzouggar et al., 2008; Linstädter et al., 2012; Barton et al., 2013).

The recent technological analyses carried out on Late Pleistocene microlithic technologies, most of which rely on the concept of “chaîne opératoire”, provided a more accurate picture of the technical behavior of human groups and emphasized on the main role that climate change played in behavioral changes and territorial occupations (eg., Lucarini and Mutri, 2014; Sari, 2012, 2014; Hogue and Barton, 2016; Poti, 2017). A recent technological study carried out for the first time on early and late Iberomaurusian lithic assemblages in Algeria focused on diachronic conceptual patterns in microliths production and shed light on inter-assemblage disparities between early (Tamar Hat and Rassel) and late Iberomaurusian (Columnata) lithic assemblages, notably in core reduction strategies and produced blanks (Sari, 2012, 2014).

In all studied sites, the choice of human settlements depends on the proximity of the natural resources which supply the lithic raw material and the game, while the non-local lithic materials are accessory exploited and supplied during displacement of task groups. The existence of parallel patterns in lithic raw material procurement indicates relatively reduced mobility and greater resource access to territories which are seasonally exploited by semi nomadic populations who returned periodically to the same place (Sari, 2014).

The levels of microliths production and use are likely to be determined by variation in both the environmental setting and the way in which resources are procured and processed (Sari, 2012, 2014). The earliest Iberomaurusian assemblages are characterized by the high standardization of the microliths produced through an elaborately core reduction strategy using mineral soft hammer percussion, while small narrow bladelets and very small incurvate bladelets are produced from Burin/carinated endscraper-like cores. Small bladelets are frequently retouched by semi abrupt/ouchtata retouch and shaped into pointed microliths. Mouillat points obtained using microburin-blow technique are well represented. By contrast, an expedient débitage oriented towards the production of elongated bladelets using mineral soft hammer percussion is implemented in the upper occupations of Tamar Hat at the end of the Late Glacial Maximum (Sari, 2012, 2014). The variation in core reduction strategies and size ranges of backed bladelets might be explained by new adaptations facing to palaeoenvironmental changes. Saxon (Saxon et al., 1974, p. 73; Saxon, 1975) has noticed the intensification of the exploitation of marine resources such as Pisces and Marine mollusca beginning from the upper occupations of Tamar Hat at the end of the Late Glacial Maximum. The economic shift also coincides with the appearance of specialized activities related to animal bone and deer antler processing which indicate a significant change in the nature and intensity of site use (Sari, 2012; Sari and Kim, 2017).

As for the Late Iberomaurusian, the populations produced different blanks from differentiated “chaînes opératoires” and the objectives were no more primarily intended to produce regular bladelet blanks. The populations managed to produce their toolkits using non standardized blanks ultimately saving energy and time in raw material procurement. Besides, mineral soft hammer percussion, a technique systematically used during early Iberomaurusian in the production of

regular blanks during plein débitage, was implemented at Columnata through a different technical processing in the aim to produce thick blanks. Furthermore, the morphotypes of microliths do not show noticeable similarities between early (Tamar Hat, Rassel) and late Iberomaurusian (Columnata) in which robust arched-backed microliths are well represented. The presence of diagnostic impact fractures on microliths of early and late Iberomaurusian is a clear evidence of their use in composite projectile technology (Sari, 2012, 2014).

SETTLEMENTS AND SUBSISTENCE

The microlithic industries in Northwest Africa appeared during a cool and arid period which has witnessed an expanding steppe and declining forest cover; average annual precipitation was not more than 500 mm and temperatures were as low as 3-4°C (Lubell et al., 1984). The increase of temperatures and precipitations from 15 k -14 ka BP and up to 12 ka BP has led to an intensification of the forest cover to higher heights. The climatic improvement witnessed a proliferation of the Iberomaurusian occupations which are well preserved mainly in rockshelters along the coastal zones. The occurrence of sheltered well-stratified Iberomaurusian sites which yielded an abundant archaeological record within the same territory reinforces the assumption of relatively sustainable seasonal occupations (Merzoug, 2005, Douka et al., 2014). During the period between 12,5 ka and 11,7 ka BP corresponding to the recent Dryas of Europe, the western Mediterranean experienced an arid and cold climate during which human occupations become scarce. The industries are peculiar to the terminal phase of the Iberomaurusian and the settlements are usually open air sites in southern inland areas such as El Hamel (Tixier, 1954), El Haoûita (Estorges et al., Aumassip, 2001), Columnata (Brahimi, 1972), el Onçor (Heddouche, 1977) and Es Sayar (Amara, 1977). These sites are small short-term base camps lying on Aeolian formation near springs and steady flow which favored the human installation (Rognon, 1987). This raises the question of migration to the southern regions as already suggested by many authors (Lubell et al., 1984; Barich and Garcea, 2008; Barton et al. 2013; Cancellieri et al., 2016).

Up to now, very few modern studies provide detailed evidence for the animal component of the diet. The major source of animal protein appears to have been Barbary sheep, with evidence for a variety of other animals (eg., Klein et Scott, 1986; Merzoug, 2005). One modern study provides detailed evidence of subsistence strategies from Tamar Hat rockshelter (Merzoug, 2005; Merzoug et Sari, 2008) which is a butchering and consumption Iberomaurusian site regularly frequented in late autumn and early winter. Human groups practiced selective hunting directed primarily towards Barbary sheep, while the other taxa such as Algerian Megaceroides (*Megaceroïdes algericus*), wild boar (*Sus scrofa*) and few antelopes were seldom hunted. Whole carcasses were brought to be butchered and eaten at the site. Overall, human groups observed the same subsistence strategies and shared the same culinary practices (Merzoug, 2005, 2017). However, this is tempered by the documented variability between coastal and

inland assemblages. The diet also includes fish and both land and marine mollusks (Saxon et al., 1974; Merzoug, 2017).

During early Iberomaurusian, the subsistence strategy relied on selective hunting of Barbary sheep; though, an orientation towards marine resources is observed. With the post-glacial climatic improvement that has led to rising lake levels and the accessibility of shorelines, Late Iberomaurusian populations have shifted to fisheries resources, as evidenced by the occurrence of fish remains in coastal sites. In inland sites, Late Iberomaurusian groups expanded their subsistence pattern to small (ungulate taxa) and very small game (lagomorphs) along with freshwater shellfish harvesting (Merzoug, 2005, 2017). This economic pattern was also reported for other Late Pleistocene societies of Northern Africa. Several authors reported that the economy of human groups based on hunting wild species of which Barbary sheep is the most hunted animal and gathering wild vegetable resources along with a large consumption of marine and terrestrial gastropods is substantially intensified during the late Iberomaurusian of the Maghreb concomitantly with Greenland Interstadial 1 (Lindstädter et al., 2012; Barton et al., 2013; Campmas et al., 2016; Morales, 2018).

The presence of grinding stones most with ochre stains suggest that innovations in subsistence getting technologies were underway in coastal sites to prevent from food shortages when colder and drier conditions prevailed (Saxon et al., 1974). Recent archaeobotanical study on paleobotanical taxa recorded at few Moroccan sites reveals that following the climatic improvement of ca. 15 ka cal BP, the Iberomaurusian populations tended toward a preference for thermal processing of wild plants rich in carbohydrate and fats (Morales, 2018). Yet, evidence of botanical exploitation is still relatively limited due to the lack of systematic sampling and analysis of plant remains in other Iberomaurusian sites. The subsistence pattern of the Iberomaurusian populations of Northwestern Africa incorporated a significant component of wild plant foods which was associated with high frequencies of oral pathologies. The analysis of the oral pathology from occupational deposits dated between 15 ka and 13,7 ka cal B.P at Taforalt in Morocco reveals an exceptionally high prevalence of caries (51,2% of teeth in adult dentitions), comparable to modern industrialized populations with a diet high in refined sugars and processed cereals (Humphrey et al., 2014).

ART AND SOCIAL RELATIONSHIP

Art might have played a crucial role in the social network of the Iberomaurusian populations. The ornamental beads are mainly represented by shells naturally or intentionally perforated such as scallop valves, dental teeth and lamellibranches which are well represented at Rassel (Brahimi, 1970), while at Haua Fteah, terrestrial molluscs were perforated with straight perforators (Hill et al., 2015). Perforated pebbles and other engraved pebbles on schist or soft pebbles have been found in the western part of the Maghreb (Collina-Girard et al., 1997). Ochre stains are well attested on lithic and bone remains as well as on skeletons which shows that this material was integrated into the domestic and symbolic

activities of these populations as well as mortuary customs of the Iberomaurusian populations.

A fragment of modeled fired clay figurine representing a horn-shaped piece of Barbary sheep and dated securely at ca. 20.2 ka BP was recovered at the lower occupations of Tamar Hat (Saxon et al., 1974; Farbstein et al. 2012, p. 11). Yet, this fragment was not found alongside a developed ceramic technological tradition. It is only with the late Iberomaurusian of Afalou bou Rhummel at around 13-11 ka BP that a developed modeled clay technological tradition (reminiscent of the lonely clay figurine of Tamar Hat) appeared alongside intensified human burials and evolving microlithic tools such as aiguillons droits, Ain Keda and Chacal points associated to triangles and segments (Hachi, 1987, 1996, 2006; Hachi et al., 2002).

The improvement in climatic conditions during Greenland Interstadial 1 lead to the Iberomaurusian groups expansion and their sedentism, as they began to repeatedly frequent the same favorable territories and establishing cemeteries (Barton et al., 2013). Most of the human remains of the Iberomaurusian groups labelled "Mechta Afalou" were found buried caves or sheltered sites such as Taforalt, Columnata and Afalou sites. The latter having delivered the oldest human burial at 14910 ± 180 BP. The presence of these cemeteries implies the existence of residential camps regularly reoccupied during the season most conducive to the exploitation of local resources (Hachi, 2006; Barton et al., 2013).

These populations practiced tooth avulsion applied mainly to the upper central incisors without discrimination by sex or age which would have modified cranial and mandibular morphology (Hadjouis, 2002). According to Aoudia (2013), the mortuary customs of these human groups testifies to the existence of true collective burials in the bottom of the shelters or at the foot of the cliffs where dozens of individuals were buried there in contracted position. In addition, the development of a funerary structure of stones and the deposition of bony ankles of Barbary sheep are all practices that characterize Iberomaurusian populations. These populations would also have practiced complex funerary rites on a minority by applying a complex treatment which requires a long apprenticeship and is closely related to violent deaths involving cutting the corpse, staining and covering the bone with a coating (Aoudia, 2013).

THE BECOMING OF THE IBEROMAURUSIAN SOCIETIES

With the onset of the Holocene, the Iberomaurusian culture was supplanted by a new techno-complex known as Capsian, during a period in which the climate was favorable with an increase in temperatures, humidity and vegetation cover at high altitudes (Lubell et al., 1984). Lubell has assumed the idea of the continuity of the population and questioned the validity of the morphological approach carried out on Iberomaurusian and Capsian human remains previously used in the anthropological studies (Lubell et al., 1984). This author suggests that following

the postglacial climatic improvement, late Iberomaurusian populations would have adopted new settlement areas and a new culture known as Capsian.

The implication of cultural and biological continuity between the Iberomaurusian and Capsian populations is also supported by other indicators, such as the exploitation of wild plants and snails, tooth evulsion and craniofacial and dental morphology (De Groote et al., 2018). Besides, Capsian and Iberomaurusian populations have had in common few peculiar and complex mortuary practices dedicated to a minority of individuals which is a strong evidence on the Iberomaurusian cultural transmission within the Capsian culture (Aoudia, 2013, p.425).

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Author has declared that no competing interests exist.

REFERENCES

- Amara, A. (1977). Le gisement Es Sayar, Bou Saada. *Libyca*, 25, 59-71.
- Aoudia-Chouarki, L. (2013). *Pratiques funéraires complexes: réévaluation archéo-anthropologique des contextes ibéromaurusiens et capsien (Paléolithique supérieur et Epipaléolithique, Afrique du Nord-Ouest)* (Unpublished PhD thesis). Université Bordeaux 1, Bordeaux.
- Aumassip, G. (1979). *Le bas Sahara dans la Préhistoire*. Thèse de Doctorat ès sciences, Aix-en-Provence.
- Aumassip, G. (2001). *L'Algérie des premiers Hommes*. Paris, éd. Maison de l'Homme, 221 p.
- Barich, B. E., Garcea, E. A. A., & Giraudi, C. (2006). Between the Mediterranean and the Sahara: The geoarchaeological reconnaissance in the Jebel Gharbi, Libya. *Antiquity*, 80, 567-582.
- Barich, B.E. & Garcea, E.A.A. (2008). Ecological Patterns in the Upper Pleistocene and Holocene in the Jebel Gharbi, Northern Libya: Chronology, Climate and Human Occupation. *African Archaeological Review*, 25(1-2), 87-97.
- Barker, G., Bennett, P., Farr, L., et al. (2012). The Cyrenaican Prehistory Project 2012: The fifth season of investigations of the Haua Fteah cave. *Libyan Studies*, 43, 115-136.
- Barton, R.-N.-E., Bouzouggar, A., Collcutt, S.-N. , Gale, R., Higham, T.-F.-G., Humphrey, L.-T. , Parfitt S.-A., Rhodes, E., Stringer, C.-B., & Malek F., (2005). The Late Upper Palaeolithic Occupation of the Moroccan

- Northwest Maghreb during the Last Glacial Maximum. *African Archaeological Review*, 22, 77-100
- Barton, R. N. E., Bouzouggar, A., Hogue, J. T., Lee, S., Collcutt, S. N., & Ditchfield, P. (2013). Origins of the Iberomaurusian in NWAfrica: New AMS radiocarbon dating of the Middle and Later Stone Age deposits at Taforalt Cave, Morocco. *Journal of Human Evolution*, 65, 266-281.
- Belfer-Cohen, A., & Goring-Morris, N. (2002). Why microliths? Microlithization in the Levant. In R.G. Elston., Kuhn, S.L. (Eds.), *Thinking Small: Global Perspectives on Microlithization* (pp. 57-68). Archaeological Papers of the American Anthropological Association, Arlington 12.
- Betrouni, M. (1997). Le paléokarst de Sidi Saïd. « Aspects chronoculturels ». In J.M., Fullola, & Soler, N. (eds.), *El Món Mediterrani Despres del Pleniglacial (18.000–12.000 BP)* (pp. 101-112). Girona, Museu d'Arqueologia de Catalunya.
- Bouzouggar, A., Barton, R.-N.-E., Blockley, S., Bronk-Ramsey, C., Collcutt, S.-N., Gale, R., Higham, T.-F.-G., Humphrey, L.-T., Parfitt, S., Turner, E., & Ward, S. (2008). Reevaluating the Age of the Iberomaurusian in Morocco. *African Archaeological Review*, 25, 3-19.
- Brahimi, C. (1969). L'industrie lithique de l'abri de Tamar Hat (petite Kabylie). *Libyca*, 17, 93-99.
- Brahimi, C. (1970). *L'Ibéromaurisien du littoral de la région d'Alger*. Mémoire du C.R.A.P.E., 23, Alger.
- Brahimi, C. (1972). Deux campagnes de fouilles à Columnata (1969 et 1971) ». *Libyca*, 20, 496-101.
- Cacho, I., Grimalt, J.-O., Pelejero, C., Canals, M., Sierro, F.-J., & Flores, J.-A. (1999). Dansgaard–Oeschger and Heinrich event imprints in Alborán Sea paleotemperatures. *Paleoceanography*, 14 (6), 698-705.
- Campmas, E., Chakroun, A., & Merzoug, S. (2016). Données préliminaires sur l'exploitation de la malacofaune marine par les groupes ibéromaurisiens de l'abri Alain (Oran, Algérie). *PALEO*, 27, 83-104.
- Camps-Fabrer H. (1966). *Matériaux et art mobilier dans la préhistoire nord-africaine et saharienne*. Mémoire du C.R.A.P.E. n° 5, Alger, 557 p.
- Camps, G. (1974). *Les civilisations préhistoriques de l'Afrique du Nord et du Sahara*, Paris, Doin, 375 p.
- Cancellieri, E., & Di Lernia, S. (2016). Re-entering the central Sahara at the onset of the Holocene: A territorial approach to Early Acacus hunter-gatherers (SW Libya). *Quaternary International*, 320, 43-62.
- Close, A. E. (1977). *Identification of style in lithic artefacts from North East Africa*. Cairo: Mémoires de l'Institut d'Égypte, 61, S.O.P. Press.
- Close, A.-E. (1978). The identification of style in lithic artefacts. *World archaeology*, 10 (2), 223-237.
- Close, A. E. (1981). The Iberomaurusian sequence at Tamar Hat. *Libyca*, 28-29, 69-103.
- Close, A.E. (2002). Backed bladelets are a foreign country. In R.G. Elston and Kuhn S.L. (Eds.), *Thinking Small: Global Perspectives on Microlithization* (pp. 30-44). Archaeological Papers of the American Anthropological Association, Arlington 12.

- Close AE, Wendorf F. (1986). North Africa at 18 000 BP. In Gamble C, Soffer O. (ed.), *The world at 18 000 BP*, Vol. 2, Low latitudes, Unwin Human, London, p. 41-56.
- Collina-Girard, J, Cremades, M, Lavaure, N. (1997). Analyse microscopique d'une pendeloque ibéromaurusienne gravée (abri de l'Ain Aghbel), Maroc oriental. *Antiquités africaines*, 33, 9-18.
- De Groote, D., Morales, J., Humphrey, L. (2018). Oral health in Late Pleistocene and Holocene North West Africa. *Journal of Archaeological Science Reports*, 22, 392-400.
- Douka, K., Jacobs, Z., Lane, C., Grün, R., Farr, L., Hunt, C., Inglis, R. H., Reynolds, T., Albert, P., Aubert, M., Cullen, V., Evan, H. E., Kinsley, L., Roberts, R. G., Tomlinson, E. L., Wulf, S., & Barker, G. (2014). The chronostratigraphy of the Haua Fteah cave (Cyrenaica, northeast Libya). *Journal of Human Evolution*, 66, 39-63.
- Estorges, P., Aumassip, G., Dagherne, A. (1969). El Haouita, un exemple de remblaiement fini-wurmien. *Libyca*, 17, 53-91.
- Farbstein, R., Radic, D., Brajkovic, D., Miracle, P.T. (2012). First Epigravettian Ceramic Figurines from Europe (Vela Spila, Croatia). *PLoS ONE*, Volume 7, Issue 7, e41437.
- Gragueb, A. (1983). *Ibéromaurusien et industries à lamelles en Tunisie : (étude d'après les collections E.G. Gobert du musée du Bardo. Tunis. Thèse de 3^{ème} cycle* Préhistoire, Protohistoire et Anthropologie des pays européens et Africains, Aix-Marseille 1, 2 vol, 517 p.
- Hachi, S. (1987). *Les cultures de l'Homme de Mechta El Arbi. Le gisement d'Afalou Bou Rhummel (massif des Babors, Algérie): les niveaux supérieurs -13000-11000 BP*. Thèse de Doctorat 3^{ème} cycle. Université d'Aix-en-Provence.
- Hachi, S. (1996). L'Ibéromaurusien, découverte des fouilles d'Afalou. *L'Anthropologie*, 100 (1), 77-87.
- Hachi, S. (2006). Du comportement symbolique des derniers chasseurs Mechta-Afalou d'Afrique du Nord. *Comptes Rendus Palevol*, 5 (1/2), 439-440.
- Hachi, S., Fröhlich, F., Gendron-Badou, A., de Lumley, H., Roubet, C., & Abdessadok, S. (2002). Figurines du Paléolithique supérieur en matière minérale plastique cuite d'Afalou Bou Rhummel (Babors, Algérie): premières analyses par spectroscopie d'absorption infra-rouge. *L'Anthropologie*, 106 (1), 57-97.
- Hadjouis, DJ. (2002). Les hommes du Paléolithique supérieur d'Afalou Bou Rhummel (Bejaia, Algérie). Interprétation nouvelle des cinétiques cranio-faciales et des effets de l'avulsion dentaire. Malformations crâniennes, troubles de la croissance, anomalies et maladies alvéolo-dentaires. *L'Anthropologie*, 106, 337-375.
- Heddouche, A. (1977). Le gisement Epipaléolithique d'El Onçor près de Bousaada. *Lybica*, 25, 73-84.
- Hill, EA, Hunt, CO, Lucarini, G, Mutri, G, Farr, L, Barker, G. (2015). Land gastropod piercing during the Late Pleistocene and Early Holocene in the Haua Fteah, Libya. *Journal of Archaeological Science*, 4, 320-325.

- Hogue, J. T., & Barton, R. N. E. (2016). New radiocarbon dates for the earliest Later Stone Age microlithic technology in Northwest Africa. *Quaternary International*, 413, 62-75.
- Humphrey, L.T., De Groote, I., Morales, J., Barton, N., Colcutt, S., Bronk Ramsey, C., Bouzouggar, A. (2014). Earliest evidence for caries and exploitation of starchy plant foods in Pleistocene hunter-gatherers from Morocco. *Proceedings of the National Academy of Sciences of the United States of America*, 111 (3), 954-959.
- Klein, RG, Scott, K. (1986). Re-analysis of faunal assemblages from the Haua Fteah and other late quaternary archaeological sites in Cyrenaican Libya. *Journal of Archaeological Sciences* 13, 515-542.
- Leplongeon, A. (2017). Technological variability in the Late Palaeolithic lithic industries of the Egyptian Nile Valley: The case of the Silsilian and Afian industries. *PLoS ONE*, 12(12): e0188824. <https://doi.org/10.1371/journal.pone.0188824>.
- Linstadter, J., Eiwanger, J., Mikdad, A., & Weniger, G. C. (2012). Human occupation of Northwest Africa: A review of Middle Palaeolithic to Epipalaeolithic sites in Morocco. *Quaternary International*, 274, 158–174.
- Lorcin, J. (1961-62). La station préhistorique du cap Ténès. *Lybica*, 9 (10), 9-58.
- Lubell, D. (1984). Paléoenvironnement and Epi-Paleolithic economies in the Maghreb (ca. 20000 to 5000 BP). In J-D., Clark, & BRANDT S.-A. (Eds.), *From hunters to farmers: the causes and consequences of food production in Africa* (pp. 41-56). Berkeley, University of California press.
- Lucarini, G., & Mutri, G. (2014). Microlithism and landscape exploitation along the Cyrenaican Coast between the Late Pleistocene and the Holocene: A matter of continuity. In K., Boyle, R.J., Rabett, & C.O., Hunt (Eds.), *Living in the landscape. Essays in Honour of Graeme Barker* (pp. 109-120). Cambridge: McDonald Institute Monographs, University of Cambridge.
- McBurney, C.B.M. (1967). *The Haua Fteah (Cyrenaica) and the stone age of the South East Mediterranean*, Cambridge university press, 404 p.
- Medig, M., Meier, R., Sahnouni, M., Derradji, A. (1996). Découverte d'un crâne humain dans les niveaux ibéromaurusiens de la grotte de Taza 1, Jijel, Algérie. *Comptes Rendus de l'Académie des Sciences de Paris*, série II a (323), 825-831.
- Merzoug, S. (2005). *Comportements de subsistance des Ibéromaurusiens d'après l'analyse archéozoologique des mammifères des sites de Tamar Hat, Taza1 et Columnata (Algérie)* (Unpublished PhD thesis). Muséum national d'Histoire naturelle de Paris. France.
- Merzoug, S. (2012). Essai d'interprétation du statut économique du *Megaceroides algericus* durant l'Ibéromaurusien dans le massif des Babors (Algérie). *Quaternaire*, 23(2), 141–148.
- Merzoug, S. (2017). Les comportements de subsistance en Afrique du Nord-Ouest durant la transition Pléistocène supérieur/Holocène : entre homogénéité et variations stratégiques. *L'Anthropologie*, 121 (1-2), 189-203.
- Merzoug, S., & Sari, L. (2008). Re-examination of the zone I material from Tamar Hat (Algeria): Zooarchaeological and technofunctional analyses. *African Archaeological Review*, 25 (1-2), 57-73.

- Mikdad, A., & Eiwanger, J. (2000). Recherches préhistoriques et protohistoriques dans le Rift Oriental (Maroc). Rapport préliminaire. *Beitrage zur Allgemeinen und Vergleichenden Archäologie*, 20, 109-167.
- Morales, J. (2018). The contribution of botanical macro-remains to the study of wild plant consumption during the Later Stone Age and the Neolithic of north-western Africa. *Journal of Archaeological Science: Reports* (2018), <https://doi.org/10.1016/j.jasrep.2018.06.026>.
- Pallary, P. (1909). Note sur un gisement paléolithique de la province d'Oran, *Bulletin du Comité des Travaux Historiques et Scientifiques*, 341-342.
- Potì, A. (2017). *Technical Change and Environmental Change in the Iberomaurusian: A Case Study from Ifri El Baroud, Morocco* (Unpublished PhD thesis). University of Cologne, Germany.
- Rognon, P. (1987). "Late Quaternary Climatic Reconstruction For The Maghreb (North Africa)", *Palaeogeography, palaeoclimatology, Palaeoecology*, 58, p. 11-34.
- Sari, L. (2012). *L'Ibéromaurisien, culture du Paléolithique supérieur tardif. Approche technologique des productions lithiques taillées de Tamar Hat, Rassel et Columnata (Algérie)* (Unpublished PhD thesis). University of Paris X-Nanterre, France.
- Sari, L. (2014). Technological change in Iberomaurusian culture: The case of Tamar Hat, Rassel and Columnata lithic assemblages (Algeria). *Quaternary International*, 320 (1), 131-142.
- Sari, L., & Kim, K.J. (2017). Lithic Economy and Specialized Activities Among the Iberomaurusian Populations of Tamar Hat Rockshelter (Northeastern Algeria). *African Archaeological Review*, 34, 543-556.
- Saxon, E. C., Close, A., Cluzel, C., Morse, V., & Shackelton, N. J. (1974). Results of recent investigations at Tamar Hat. *Libya*, 22, 49-91.
- Saxon, E.C. (1975). *Prehistoric economies of the Israeli and Algerian littorals: 18 000–8000 BP. Ph. D. dissertation*, Cambridge University, Jesus College.
- Straus, L.G. (2001). Africa and Iberia in the Pleistocene. *Quaternary International*, 75, 91-102.
- Tixier, J. (1954). Le gisement préhistorique d'El-Hamel. *Libya*, 2, 78-120.
- Van de Loodrecht, M., Bouzouggar, A., Humphrey, L., Posth, C., Barton, N., Aximu-Petri, A., Nickel, B., Nagel, S., Talbi, E., Abdeljalil El Hajraoui, M., Amzazi, S., Hublin, J.-J., Pääbo, S., Schiffels, S., Meyer, M., Haak, W., Jeong, C., & Krause, J. (2018). *Pleistocene North African genomes link Near Eastern and sub-Saharan African human populations. Science*, 360 (6388), 548-552.
- Vermeersch PM. (2010). Middle and Upper Palaeolithic in the Egyptian Nile Valley. In EAA Garcea (Ed.), *South-eastern Mediterranean Peoples Between 130,000 and 10,000 Years Ago*, Oxbow Books, Oxford and Oakville, pp. 66-89.
- Vermeersch PM, Van Neer W. 2015. Nile behaviour and Late Palaeolithic humans in Upper Egypt during the Late Pleistocene. *Quaternary Science Reviews*, 130, 155-167.
- Vernet, R., & Aumassip, G., (1998). *Le Sahara et ses marges: paléoenvironnements et occupation humaine à la Recherche Inter-Africain en Archéologie*.

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Burial Protocols, Megaliths Production, and Ancestor-Hood in Ancient Senegambia (ca. 1450 BCE – 1500 CE)

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INTRODUCTION

The Senegambian megaliths zone is located in the westernmost part of West Africa, in Senegal and the Gambia. The river Gambia and Saloum 120 to 150 km apart mark its southern and northern boundaries (Fig. 13.1). It is stretched on 250 km west-east, approximately from the cities of Kaolack to Tambacounda (Gallay 2006, Gallay et al 1982, Holl & Bocoum 2006, 2013, 2017, Holl et al 2007, Martin & Becker 1984, Thilmans et al 1980). The area measures some 33,000 square kilometers with megalithic monuments concentrated along water courses. They attracted scholarly interest as early as the mid-19th century, with sustained research efforts from the Colonial period (Duchemin 1904, Jouenne 1930) to the present (Thilmans et al 1980, Gallay et al 1982, Gallay 2006, Gallay and Laporte 2013).

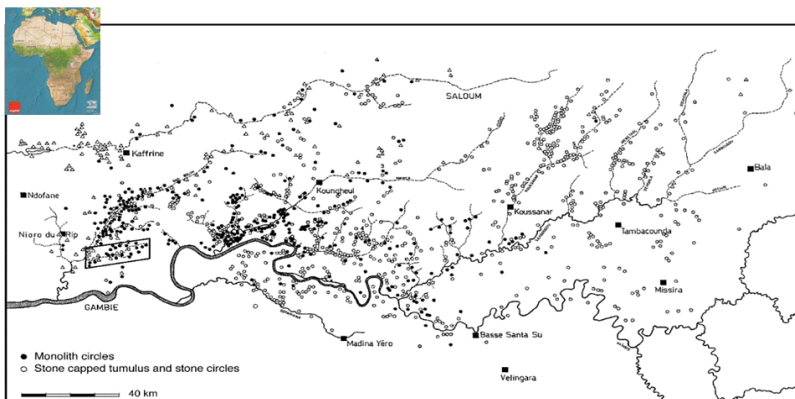


Fig. 13.1. Map of the Senegambian megalithic zone

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THE RESEARCH PROBLEM

Despite its relatively long research history a handful of monuments were excavated in a few cemeteries scattered all over the megaliths zone. Most of the excavated sites are concentrated in the center and west, in Senegal as well as the Gambia. None of the cemeteries located in the east, from Fatick to Tambacounda, has ever been tested. Thilmans et al (1980) excavated a series of megalithic monuments in four cemeteries: Tiekene-Boussoura, Sine-Ngayene, Kodiam and Sare-Dioule and suggested an outline for the expansion of megalithism in the Senegambia. According to his scenario, megalithic construction emerged around 200 BCE at Tiekene-Boussoura in the central part of the Senegambian megalithic zone. It expanded west to reach Sine-Ngayene, Ker-Batch and Wassu between ca. 600 and 1200 CE, with in a latter development eastward dated to ca 1400 – 1600 AD documented at Kodiam and Saré-Dioulé. According to Thilmans et al (1980), Gallay et al 1982, Gallay (2006), Gallay and Laporte (2013), the practice of single to multiple primary burials, -with mass-graves and possibly human sacrifices - was the predominant norm.

The processes that generated Senegambian megalithism have not been investigated. The expansion of mixed-farming communities in an area of good agronomic potentials with dense hydrographic networks of three rivers, the Sine, the Saloum, and the Gambia, could have played a crucial role in the genesis of megalithism. Were these new practices borrowed down-the-line from one local community to the next – stimulus diffusion – or were they carried as a “cultural package” by groups migrating from a central core area – demic diffusion --? A differential combination of both processes may have taken place but why did megalithism emerged in the first place?

The Sine Ngayene Archaeological Project (SNAP) designed in 2001 addressed the issues raised above within a well delineated regional framework. A small eastern tributary, the Petit-Bao-Bolon drainage, measuring 32 kilometers long (East – West) and 20 -10 kms wide (North – South), was selected as study area (Fig. 13.2). This paper focuses on the variability and causes of the burial protocols implemented in the investigated study area (Holl and Bocoum 2017).

MAPPING THE LANDSCAPE: DISTRIBUTION PATTERNS OF THE CEMETERIES

The study area was inhabited by “hamlet-based-societies” in scattered “domestic groups”. Habitations sites were preferentially located on the shores of the Petit-Bao-Bolon river, on the gentle slope between the upper and the lower terraces. These hamlets are “socially consecrated” contexts for the perpetuation of the megaliths-builders’ communities, people moving according to actual customs and standards. In other words, “the house - [in this case the hamlet, the compound] - both in its physical and institutional form provides a spatial concretization of the sibling relation.... The sharing of the same ancestors and food that characterizes

sibling relations is both realized and manifested spatially through cohabitation (Retsikas 2007: 978).

The regional distribution of megalithic monuments reveals the existence of two distinct “cultural” entities: The Western province along the Grand-Bao-Bolon with earthen tumuli and the Eastern province with a broader assortment of monuments, and Sine-Ngayene as the largest and central cemetery (Fig. 13.2). Each of the recorded cemeteries appears to be part of a coherent territorial unit measuring 4 to 5 kilometers in maximum diameter. The excavated monuments and cemeteries show the selected localities to present a relatively thick sedimentary deposit. The laterite crust was not reached in any of the tested monuments, with some excavated down to more than 2 m below the surface at Sine-Ngayene, Ngayene-II, and Santhiou-Ngayene.

Quarry sites are difficult to find. The recorded cases show that each significant cemetery had a quarry in its close vicinity. The laterite used for the production of monoliths, rounded blocks, and slabs used in the construction of megalithic monuments was also the main source of iron ore.

The small but perennial Petit-Bao-Bolon river was very likely the ancient “lifeline” of the study area. The river provided the inhabitants with water, aquatic resources, and, through the use of dugouts, an access to local, regional, and inter-regional exchange networks. Pottery, fish, and smoked or dried mollusks from the Saloum delta were probably carried in dugouts all over the river Saloum, Gambia, Grand-Bao-Bolon, Petit-Bao-Bolon, and other drainages.

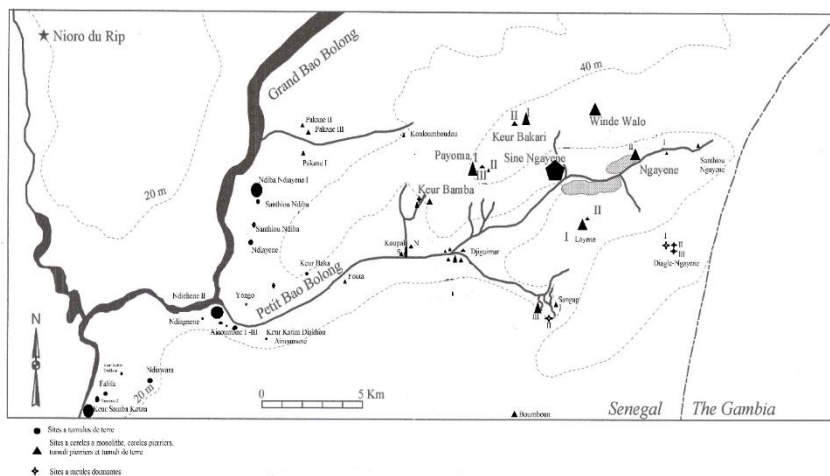


Fig. 13.2. Distribution patterns of the Petit-Bao Bolon study area megalithic cemeteries

Most of the recorded cemeteries from the Eastern province are located on the upper terrace, the prime agricultural lands. The Petit-Boa-Bolon valley is generally delineated by a laterite escarpment. Wildlife, fuel, and additional construction materials were accessible in the remaining part of the territories. One can hypothesize each hamlet site-catchment to have included the dwelling facilities, surrounded by a close gardens ring, then the cultivated fields and plots left to fallow, and finally, the river and its shore on the one hand, the “bush” on the other, with collective grazing land open to all (Chisholm 1979, Haggett 1973). Demography, fields cultivation/fallow cycles, new land clearing, as well as the sustained exploitation of wild resources, may have generated differential dynamics of actual hamlets catchments. Some may have been expanding while others were shrinking, with people moving within and between hamlets.

In summary, the regional distribution of the Petit-Bao-Bolon megalithic cemeteries presents a remarkable mortuary landscape (Gillespie 2002, Arnold 2002, Klaus 2008, Holl 1993), “While not usually considered material culture in the same sense as grave goods, the mortuary landscape must be taken into account in the decoding of the syntax and vocabulary of death in past societies” (Arnold 2002: 130). In final analysis and in most cases of good ethnographic observation, the loci of burial establish genealogies of places linking descendants to the land (Gillespie 2002).

FEATURES DIVERSITY AND BURIAL PROTOCOLES

In significant contrast to the dwelling installations built with perishable materials, cemeteries were consecrated landmarks with stone “monuments” erected to last. The tested cemeteries, Sine-Ngayene, Ngayene-II, and Santhiou-Ngayene, selected according to their location and rank-size position, differ considerably in size and number of monuments. They are set at approximately 5 kilometers from one to the next along the Petit-Bao Bolon river (Fig. 13.2). Sine-Ngayene, the largest cemetery measures a little more than 50 ha in surface extent, with 116 earthen tumuli and 52 monolith-circles (Fig. 13.3). Ngayene-II, five kilometers further east, contains 42 monuments spread over 1.25 hectares. The recorded monuments belong to five variants: 21 stone-circles, 7 monolith-circles, 3 stone-ringed tumuli, 2 stone-tumuli, 8 earthen tumuli, with in addition, the remains of a shelter burnt floor. And finally, Santhiou-Ngayene, 5 kilometers further east of Ngayene-II and at the headwater of the Petit-Bao-Bolon, has eighteen recorded monuments, 3 monolith-circles and 15 stone-circles, distributed over 3,000 m².

The range of mortuary practices recorded in the Petit-Bao-Bolon drainage is the material manifestations of ancient Senegambian mortuary programs, ie. patterned and socially codified ways the living deals with the lifeless body of a deceased community member. They include three main successive sequences, each with its related rituals. (1) The funerals, as the final rite of passage, deal with the exit of the deceased from this terrestrial life and entry to the next one. (2) The interment in an especially built facility located, in this case, in a consecrated space of a cemetery. (3) And finally, the performance of “maintenance” rituals,

like offerings and libations, inscribed in a ritual calendar and geared to “please” and support the deceased.



Fig. 13.3. Aerial view of Sine Ngayene large Megalithic cemetery

The Funerals

Very few of what happens during the funerals is likely to enter the archaeological record. The deceased is prepared for burial and some of these ceremonies may have taken place in the cemetery itself within a dedicated and well delineated ceremonial space. Such ceremonial spaces appear to have been integrated in the layout of the three tested cemeteries.

Part of the ceremonial space from Sine-Ngayene cemetery was excavated. It is singled out by a series of two short standing monoliths (Fig. 13.4). This space is semi-circular, open in the south/southwest, and measures approximately 50 m in diameter. Beside the two short standing monoliths, the excavation shows two successive levels. The lower and early level dated to 1306 – 1400 CalCE (ISGS-6229) includes a crushed large clay vessel, a fire pit, a series of smaller

potteries, and a circular platform built with laterite blocks (Fig. 13.4). The upper and later level is made exclusively of partially exposed circular gravel platforms.

Ngayene-II cemetery has a relatively large clay vessel buried in upside-down position between monument 17 and T-04, in a ceremonial space, 50 m in diameter opening to the south. The cemetery of Santhiou-Ngayene also has a large open clay vessel buried in upside down position along the southeast flank of monument 6 at the gravity center of the cemetery. It is located along the west flank of a 45 m long and 15 m wide quadrangular central open space. One can but guess about the nature of the ceremonies and rituals performed in the open spaces recorded at Sine-Ngayene, Ngayene-II, and Santhiou-Ngayene cemeteries. They were very likely the loci for part of the funerals rituals.



Fig. 13.4. Different features of Sine-Ngayene Ceremonial space for funeral rituals

VARIABILITY OF BURIAL INSTALLATIONS

In general, the initial preparations of the burial installations take place in parallel to the funerals. There are two major parallel paths after the funerals, one leading to final primary interment and the other opening on the longer and more ritually elaborate secondary burial. Depending on their degrees of elaboration, the construction of burial installations can last for quite a long time. The recorded burial monuments are all circular in shape and range from simple earthen tumulus to monolith-circle, some combined with an earthen tumulus (Fig. 13.5). The amount of construction material, labor, and skills invested in these burial monuments vary significantly.

Earthen tumuli, the simplest burial monuments, are made of two components: a more or less shallow grave pit capped with an earthen mound. Most of the recorded earthen tumuli are eroded or were leveled by agricultural activities (Fig. 13.5).

Stone-circles are next in the scale of elaboration (Fig. 13.5). They are comprised of: a more or less deep burial shaft, a perimeter generally built with one or many laterite slabs and/or blocks courses, and possibly an earthen mound that was not preserved.

Stone-ringed tumuli are made of a perimeter wall with several laterite blocks courses built with dry-masonry techniques (Fig. 13.5). In this case, laterite was quarried and shaped into blocks measuring on the average 0.40 m long, 0.30 m wide and 0.20-0.30 m thick. These blocks are adjusted and fit in the wall without mortar.

Stone-tumuli are earthen tumuli capped entirely with rounded laterite blocks (Fig. 13.5). They include a grave-pit, an earthen mound, and a laterite blocks dome. In some of the observed cases, the dome is made of blocks set in concentric circles.

And finally, monolith-circles are the most elaborate and labor intensive burial monuments (Fig. 13.5). They consist of a deep burial shaft, a circle with varying number of standing monoliths, 1/3 of their length set in the ground. No evidence of a circular trench was recorded so far, suggesting that each monolith required a distinct pit. The quarrying and shaping of monoliths of different size and shape required considerable technical and observational skills. These stone-workers were probably organized into guilds with systems of apprenticeship. The transportation of the monoliths from the quarries to the cemeteries was essentially team-work requiring more organizational skills than raw force. The same applies to the erection of the monoliths around the burial shaft.

In general, most of the burial monuments have a series of accompanying “headstones”, standing or collapsed monoliths of varying size and shape set along their east flank. The sequences involved in the construction of a burial monument start with the preparation of the grave-pit, followed by the interment, back-filling, and mounding, then the construction of a circle made of laterite blocks, or a perimeter wall, or a mound, or a stone dome, or a circle of monoliths. Finally, the installation of the headstones closes the cycle of the monument construction. The interment protocols implemented in all these monuments vary considerably. Some are used for the burial of a single individual and others are the repository of re-assembled skeletal remains of many individuals.

What are the reasons for such variations? Did they result from distinct clan/lineage affiliations, specific age-set membership, or a combination of both? The absence of babies and young children remains from the monuments excavated so far (Gallay et al 1982, Gallay 2006, Holl and Bocoum 2006, Holl et al 2007, Laporte et al 2007/9, Thilmans et al 1980) suggests that they were buried elsewhere. This points to the fact that they did not yet achieved the status of full social membership. The youngest individuals recorded in the monolith-circles from Tiekene-Boussoura (Thilmans et al 1980) are 9 to 12 years old, the age of the first significant rite of passage beside the name-giving ceremony. It is

thus likely that initiation was a mandatory requirement for eligibility to be buried in a cemetery.

Two single primary burials located in the central part of the cemetery are documented at Sine-Ngayene. SN-T-01 dated to 848 - 992 CalBCE (ISGS-7227). contains iron weaponry and other prestige items pointing to “warrior identity”. SN-T-02, is dated to 647 – 769 CalCE (ISGS-6228) with a rich assortment of items of personal adornment in alloyed copper, and a string of small fish vertebrae at the ankle (Fig. 13.6).

1 - A stone-ringed tumulus



2 - An earthen tumulus



3 - A stone-circle



4 - A monolith-circle



5 - Partially preserved stone tumulus



Fig. 13.5. Variability of burial monuments

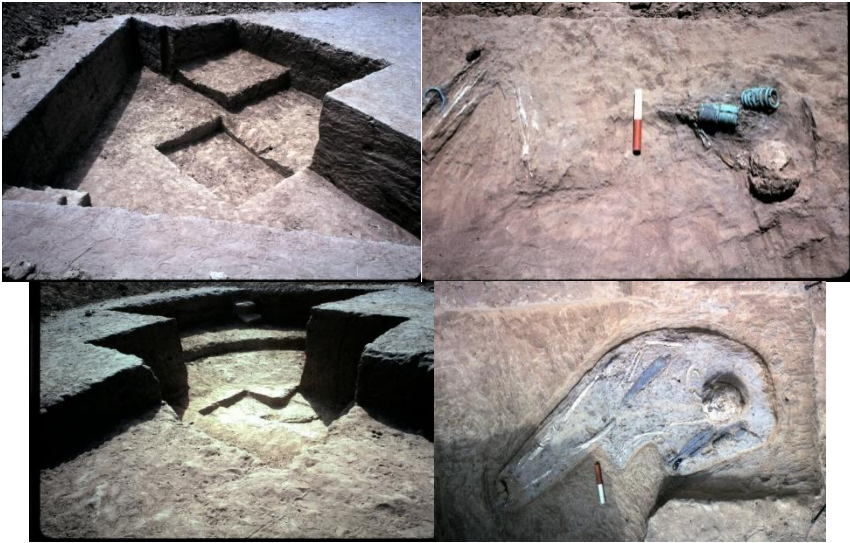


Fig. 13.6. Sine-Ngayene single primary burials

The sample of primary burials from Ngayene-II is larger. It is made of 5 monuments containing the remains of 11 individuals in total. Monument T-01 contains the remains of a 20-30 years old young adult male. Monument T-02 in the center-east of the cemetery has the remains of a 40 - 50 years old adult male wearing an alloyed copper arm-ring at the left wrist buried with two dogs.

Monument T-05 and 20 are stone-ringed tumuli. The former contains the poorly preserved skeletal remains of an adult of unknown age and sex. The latter, Monument 20 has the superimposed remains of five adult individuals of unknown sex and age buried sequentially at the feature center.

Monument T-07 consists of two collapsed headstones located at 15 m east of the triple burial with very poorly preserved remains of three individuals, two adults, probably male and female of unknown age, and one adolescent. One the deceased was wearing an alloyed copper arm-ring.

A very narrow range of options was selected in the burial protocols implemented in the primary burials. The orientation of the deceased, or more precisely the position of the head, is confined in the East-South quadrant of the compass, with 7 individuals (SN-T-01, SN-T-02, T-01, T-07 (3 cases), 20 (individual 1)) oriented East-West, 4 individuals (T-02, T-05, 20 (individual 2 and 3)) oriented South-North, and finally, 2 individuals (20 (individual 4 and 5)) oriented Southeast-Northwest. Two modes are clearly dominant as far as the position of the body is concerned: lateral left decubitus recorded in 7 instances (SN-T-02, T-02, T-07 (3 occurrences), and 20 (individual 4 and 5) was by far the preferred position. It is followed by dorsal decubitus documented in 4 cases (SN-T-01, 20 (individual 1,

2, and 3), and finally, combined dorso-lateral right (T-05) and dorso-lateral left (T-01) with one occurrence each.

The general poor state of preservation precludes a more ambitious analysis of the recorded skeletal remains. The processed data suggest nonetheless that primary interments, whether simple or multiple, may have been predominantly used for the final burial of pre-adult and young adult with possibly outstanding achievements.

MULTI-STAGES BURIAL PROTOCOLS

As far as the treatment of the deceased bodies is concerned, multi-stages interment takes place in three successive steps. 1- the interment in a “interim” grave; 2 - the re-opening of the “interim” grave for the collection of the whole or parts of the skeleton; and finally, 3 - the final re-burial of the selected remains in a definitive burial monument.

The “interim” burial features

A number of enigmatic megalithic monuments, previously un-recorded anywhere else, were excavated. They are generally large stone-circles, totally empty or containing clustered or scattered human skeletal remains, along with varying number of clay vessels and metal artifacts. No such monument was found at Sine-Ngayene. However, considering the large size of the site and the minute portion of the excavated sample, this absence, interesting as it is as will be argued below, is not necessarily an evidence of absence of “interim” graves in this site. The excavations of Ngayene-II and Santhiou-Ngayene cemeteries have brought to light this interesting facet of the implemented mortuary practices.

Ten such monuments used as “interim” graves were excavated, 4 at Ngayene-II and 6 at Santhiou-Ngayene. All Ngayene-II specimens, are located in the central part of the cemetery, along the edge of the “ceremonial space. With an unusually large proportion of “interim” graves and its location near the source of the Petit-Boa-Bolon river, Santhiou-Ngayene appears to have been used as a critical node in the Petit-Bao-Bolon drainage ritual landscape. It was partly a transitory cemetery, very likely open to people belonging to the different hamlets scattered in the Petit-Bao-Bolon drainage. Selected skeletal remains collected from the “interim” graves were probably taken later to major cemeteries like Sine-Ngayene for final interment. The absence of “interim” graves in stone-circles from Sine-Ngayene makes sense if read from the perspective outlined above.

Low frequency single episode secondary interments

Low frequency single episode secondary interments contain the selected bones of 1 to 7 individuals buried at once. Such burials are concentrated at Ngayene-II. They are distributed into 1 earthen tumulus, 12 stone-circles, and 2 monolith-circles, clustered predominantly in the south and southwest of the cemetery.

In summary, two kinds of monument, small-size stone-circles and monolith-circles, were used for the final interment of selected remains of 1 to 7 seven individuals. Iron and copper artifacts as well as large clay vessels were found in many of these burials but none was associated with evidence for offerings.

Low frequency multiple episode secondary interments

SN-52, the northernmost monolith-circle 150 m away from the other monuments of Sine-Ngayene, is the only monument recorded to have been used for multiple low frequency secondary interments. The earlier and deeper burial episode at 1.10-1.40 m contains the skeletal remains of at least three individuals, associated with 2 iron spearheads, 2 iron arm-rings, 1 iron dagger, 1 carnelian and 1 glass bead scattered among the bones. The later and higher burial level at 0.80-0.90 m includes the remains of at least two individuals with an iron spearhead, a glass bead, and a sea-shell (*Conus conus*). Six poorly preserved offering vessels were found in the headstone zone.

Medium frequency single and multiple episode secondary interments

Two cases of medium frequency monuments with a minimum number of individuals represented ranging from 8 to 9 were recorded, one at Ngayene-II and the other at Santhiou-Ngayene. In the first monument from Ngayene-II, the skeletal remains of at least 9 individuals were buried in a single episode at the center of the monument in a pile exposed at 1.40 to 1.60 m below the surface. In the second, the northernmost monolith-circle from Santhiou-Ngayene, the recorded human remains were arranged into three successive interment episodes. The earliest contains the remains of at least three individuals recorded at 1.30-1.40 m below the surface. The second, with the remains of at least 4 individuals, was exposed at 1.00-1.20 m. And finally, the third, with probably the bones of a single individual, was found at 0.60-0.90 m.

Two kinds of monuments were used for medium frequency secondary interments, a stone-circle for a single episode at Ngayene-II and a monolith-circle/tumulus for three successive burial episodes at Santhiou-Ngayene.

High frequency single and multiple episode secondary interments

Large quantities of human remains were recorded in five monolith-circles at Ngayene-II and Sine-Ngayene. Three from Ngayene-II were used for single episode secondary interments. The remaining two, monument 31 from Ngayene-II and SN-27 from Sine-Ngayene, are high frequency multiple episode secondary burials.

Monument 26, 27, and 28 are all located in the central part of Ngayene-II cemetery. The first, monument 26, dated to 1173 – 1264 CalCE (Dak-1462), measures 4 m in diameter, built with 19 monoliths and 5 headstones. The burial pit was dug down to 1.80 m below the surface and contains the remains of at least 36 individuals. The recorded grave-goods are distributed into 8 iron

spearheads, 2 iron finger rings, 2 copper arm-rings, and finally, 1 copper finger ring. The bone pile set in the center of the monument is circular in shape and measures 1.4 m in diameter and 0.90 m in maximum thickness.

The second, monument 27, at the gravity center of the cemetery has a single very large headstone. It measures 4.5 m in diameter, built with 15 bulky monoliths, dated to 748 – 930 CalCE (ISGS-6225). The grave shaft was dug down to 1.60 m below the surface and contains a large 2 m in diameter and 0.60 m thick bone pile, with at least 33 individuals represented. 11 small bowls used as offering vessels were found in the headstone zone between the headstone and the circle perimeter (Fig. 13.7). The grave-goods found throughout the bone deposit consist of 3 iron spearheads, 1 iron knife, 1 copper arm-ring, and 1 glass bead.

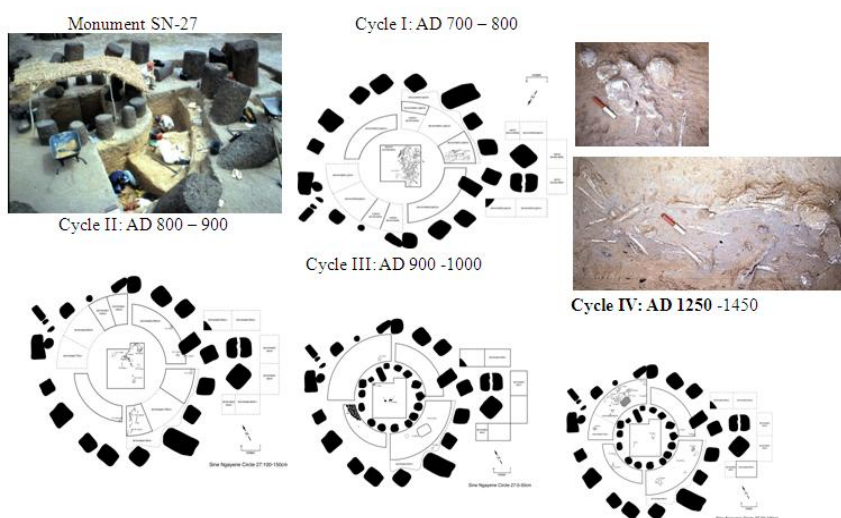


Fig. 13.7. Shifting use of Monument SN 27, the central twin-circle from Sine-Ngayene cemetery

The third, monument 28, dated to 1301 – 1393 CalCE (ISGS-6221) is built with 15 laterite monoliths without headstone, and measures 5 m in diameter. The burial pit was dug down to 1.80 m below the surface contains a 1.5 m in diameter and 0.80 m thick bone pile with the skeletal remains of at least 50 individuals. The recorded grave-goods consist exclusively of 11 iron spearheads.

Monument SN-27 and 31, at Sine-Ngayene and Ngayene-II respectively, are very elaborate archaeological monuments used for multiple secondary interments. SN-27, by far the most elaborate and intriguing megalithic construction of the Petit-Bao-Bolon drainage, is the central monument of Sine-Ngayene cemetery (Fig. 13.7). It is a double monolith-circle, measuring 9.50 m in

maximum diameter with both circles built with 32 monoliths and two massive headstones. The exposed archaeological deposit measures 2 m in thickness resulting from four cycles of use dated from 727 – 911 CalCE (ISGS-5297) to 1337 – 1427 CalCE (ISGS-A0333). The use history of this monument is particularly complex and cannot simply be presented as a series of successive episodes (Holl et al 2007, Holl & Bocoum 2006, 2013, 2017). In fact, beside the earliest bone pile at the bottom of the monument, cluster of human skeletal remains were more plausibly buried in discrete episodes within each of the second to the fourth use-cycles. The bone pile from episode 1 contains the remains of at least 20 individuals associated with 5 iron spearheads, 4 copper arm-rings, 1 iron arm-ring, and 2 undetermined iron artifacts. Cycle II deposit includes the remains of at least 10 individuals associated with 1 iron spearhead. Their bones may have been buried at different times, raising the possibility of 10 distinct episodes. The same situation applies to Cycle III and IV deposits with at least 8 individuals represented associated with 8 clay vessels in the former and 2 individuals with 4 clay vessels, 2 copper rings, and 7 glass beads in the latter. In summary, monument SN-27 contains the skeletal remains of at least 40 individuals buried in at least 20 distinct episodes.

Monument 31 is located in the central eastern part of Ngayene-II. Despite heavy trees disturbances, it was still the most elaborate monolith-circle of the site, built with 22 thin, elongated, and cylindrical shaped monoliths and 2 parallel rows of 5 and 7 headstones. The burial shaft was dug down to 2.10 m below the surface. It contained the remains of at least 37 individuals distributed in three interment episodes. The earliest burial episode, recorded at 1.40 to 2.10 m is made of the skeletal remains of at least 35 individuals associated with 14 iron spearheads, 4 copper arm-rings, 1 iron arm-ring, and 2 undetermined iron artifacts fragments. Interment episode 2, at 0.90 m includes an adult mandible. And finally, burial episode 3, documented at 0.50 – 0.70 m, contains a series of adult limb bones that may have belonged to the same individual.

The largest concentrations of human skeletal remains are found in monolith-circles, the most labor-intensive monuments of the Senegambian megalithic zone. Their burial shafts are generally deeper, ranging from 1.60 to 2.10 m below the surface, and contain the remains of at least 33 to 50 individuals associated with a broad range of grave-goods.

Combined primary and secondary interments

Three combined primary and secondary interments, all in monolith-circles, were recorded at two of the tested cemeteries. One, monument 29 possibly a single episode monument to be discussed below, is found at Ngayene-II and the remaining two, monument 2 and 3, single and multiple episodes interments are located in Santhiou-Ngayene cemetery.

Monument 29 in the central eastern part of Ngayene-II measures 3.8 m in diameter built with 18 cylindrical and elongated monoliths and 5 headstones. The burial shaft was dug down to 1.80 m below the surface and contains three

distinct sets of human remains. Two are primary interments of adult individuals located along the central west-east axis of the monument. One, still wearing a copper finger-ring and associated with an iron spearhead, is oriented south-north, facing east. The other, oriented west-east and facing north, had the legs bones re-arranged. The secondary burial consists of a 0.50 m in diameter bone pile located in the northwest of the monument. It is made of six skulls and a number of limb bones associated with an iron spearheads. Finally, two poorly preserved clay offering vessels were found in the monument headstone zone.

Monument 29 contains the remains of at least 8 individuals arranged into three sets. All the remains were found and exposed at the same depth, 1.80 m below the surface. However, this does not automatically mean that they were buried simultaneously. Each of the recorded sets was very likely a distinct interment event coordinated to be at the same depth. The re-arrangement of burial 2 legs bones to make room for the secondary burial bones pile points to two successive interments events that took place in around 720 – 894 CalCE (ISGS-6220). Two deceased adult individuals were buried first along the central axis of monument 29. After a certain time of unknown length, parts of the bones from burial 2 were removed to make room for a secondary interment including the remains of at least six adult individuals.

Monument 2 and 3 are located along the east flank of Santhiou-Ngayene cemetery. Monument 2, the single episode burial monument, measures 4.50 m in diameter, built with 16 cylindrical shaped and elongated monoliths and two impressive headstones. The burial shaft was dug down to 1.60 m below the surface and contains the remains of at least 26 individuals arranged in a 0.60 m thick bone pile. The bones were accumulated on an adult body in what appears to have been a simultaneous interment. The body at the bottom of the bone pile was buried in dorso-lateral left decubitus, oriented south-north with legs slightly flexed, facing west, with extended arms. Grave-goods consist of five iron spearheads found throughout the bone pile and 28 offering vessels arranged in three superimposed layers were recorded in the monument's headstone zone.

Monument 3, a few meters north of the previous one, is a multiple episode interments monument. It measures 5 m in diameter, built with 10 bulky monoliths and two large headstones. The burial shaft dug down to 2 m contains the remains of at least 23 individuals arranged into three successive interment episodes. Interment episode 1 is documented at 1.80 – 2 m; episode 2 at 1.60 – 1.70 m; and finally, episode 3 at 1.20-1.50 m. The latter episode is topped by two primary burials of 20-30 years old adult females. They were buried in dorso-lateral left decubitus, oriented south-north, facing west, legs tightly flexed, with arms extended along the body. The recorded grave-goods are distributed into 1 iron spearhead, 3 copper rings, 1 copper arm-rings, and 1 undetermined iron artifact. The grave-pit was partly back-filled and a tortoise shell (*Testudo* sp.) deposited 0.20 m above the bone pile. Finally, 30 offering vessels were found in the monument's headstone zone.

All the monuments discussed in this section included 2 to 30 clay offering vessels in their headstone zone. In addition, four out of the five primary burials recorded in these combined primary and secondary interments monuments present strong similarities in the position of the deceased bodies. They were laid in dorso-lateral left or right decubitus, oriented south-north, the legs slightly or tightly flexed, facing west or east (1 case), with extended arms. There was very probably, a prescribed way of handling the bodies of the deceased buried in this symbolically charged and ritually intensive mortuary program. Each of the excavated monument has at least one iron spearhead. With 28 and 30 specimens, Santhiou-Ngayene monument 2 and 3 have by far the largest amounts of clay offering vessels ever recorded in the Senegambian megalithic zone. They also present an interesting contrast in the represented grave-goods: monument 2 assemblage is made exclusively of 5 iron spearheads. While monument 3 includes 4 copper rings and only 1 iron spearhead and undetermined fragment. These two monuments are intriguing and seem to complement each other.

Symbolic secondary interments

A number of symbolic secondary burials, containing a narrow range of material culture items but no skeletal remains were found at Ngayene-II. Four such monuments, (monument 2, 3, 13, and 22) were recorded. They measure 3 to 4.7 m in diameter, built with none to 2 short headstones, with archaeological deposit ranging 1.25 to 1.4 m thick. Two, monument 2 and 22, contained a large hole-mouth vessels in upside-down position at their center, above deposits of metal artifacts. The latter includes 1 iron spearhead and 1 copper ring (monument 2), 1 iron spearhead (monument 3), 1 iron arm ring (monument 13), and 2 iron spearheads (monument 22).

The large predominance of iron weaponry in these monuments may point to a social identity connected to a specific age set, that of adult male “warriors”. These individuals may have been captured and taken away. Their skeletal remains being out of reach, they were nonetheless granted the privilege of secondary interment in a symbolic burial.

PATTERNS AND INFERENCES

The mortuary programs implemented in the Petit-Bao-Bolon drainage cemeteries include some “consecrated” spaces and structures used for the funerals and the performance of a diverse range of rituals. Each of the investigated cemeteries has an open central space with special monuments as is the case for the Sine-Ngayene “ceremonial space”, Ngayene-II monument T-04, 10, 11, 14, and 15, and finally, Santhiou-Ngayene monument 6 with its associated large clay vessel.

The excavated megalithic monuments are partitioned into four main burial categories, primary, secondary, combined primary and secondary interments, and symbolic tombs. Primary interments, either single or multiple and documented in 7 monuments are generally found in earthen tumuli, some ringed with a low laterite blocks wall. Single primary burials were excavated at Sine-

Ngayene (SN-T-01 and SN-T-02) and Ngayene-II (T-01, T-02, and T-05). Multiple primary interments are of two variants: multiple simultaneous and multiple successive. The former variant is documented by Ngayene-II (T-07 and 25 with 3 and 4 individuals respectively). The latter variant is represented by Ngayene-II monument 20 with 5 superimposed successive interments.

Secondary interments are largely predominant. Interim burial monuments are required for the provisional interments of the deceased selected for secondary inhumation. Such interim burials are documented Ngayene-II (T-04, monument 24 and 25) and Santhiou-Ngayene (monument 1, 5, 8, 12, and 15). The latter cemetery appears as a key node in the cultural landscape of the Petit-Bao-Bolon drainage, mostly used for provisional burial. With the single exception of Ngayene-II monument 32 – an earthen tumulus --, secondary interments are found in small stone-circles and monolith-circles. They can be divided into three sub-categories: low, medium, and high frequency, each split into two variants: single and multiple episodes.

Low frequency single episode secondary interments are predominant. They are recorded exclusively at Ngayene-II (stone-circle 1, 4, 5, 6, 7, 8, 9, 12, 16, 18 and 21, monolith-circle 30, and earthen tumulus 32). Low frequency multiple episode interment is documented at Ngayene-II monument 23, a monolith-circle with two superimposed and successive bones deposits.

Three medium frequency secondary interments are recorded: one single episode case at Ngayene-II stone-circle 17 and multiple episode occurrences in monolith-circles, at Sine-Ngayene SN-52 and Santhiou-Ngayene monument 4.

High frequency secondary interments are found exclusively in monolith-circles. Single episode burials are documented at Ngayene-II (monument 26, 27, and 28), and multiple episodes ones at Sine-Ngayene (monument SN-27) and Ngayene-II (monument 31).

Combined primary and secondary interments are found exclusively in monolith-circles. Three such cases were recorded, two single and one multiple episode monuments. The single episode interments are found at Ngayene-II monument 29 and Santhiou-Ngayene monument 2, and the multiple episode one at Santhiou-Ngayene monument 3.

Multiple episodes interments, primary or secondary, were documented in different cemeteries of the Senegambian megalithic zone. They are symbolically rich, ritually intensive and were very likely inserted in a demanding social and ritual calendar. Surprisingly, all such superimpositions of skeletal remains have frequently been interpreted in terms of human sacrifices (Gallay et al 1982, Gallay 2006, Thilmans et al 1980). According to this interpretation, a number of deceased individuals were initially interred at the bottom of the burial shaft. Their bones deposit was sealed with sediment. The remains of sacrificed individuals were buried afterward above the initial interment, and the grave shaft finally back-filled and sealed. This suggestion is 'unfalsifiable'. It is difficult to pinpoint

precisely what data are relied upon to suggest this interpretation. In fact, the case is made even weaker with the practice of secondary interment.

On the average, the burial monuments from Sine-Ngayene are richer and present a broader spectrum of material culture items. With the significant exception of single primary interments in earthen tumuli SN-T-01 and SN-T-02, single and multiple episodes secondary interments monuments, that required extravagant investment of labor and resources, appear to encapsulate the ultimate ethos of ancient Senegambian communities. After a long ritual cycle of unknown length – that may last several years - , many different and possibly scattered members of the same descent groups were finally brought back together in their last “resting place” to join the “league of the ancestors”.

The construction of a megalithic monument was very likely a long and costly process. The final and closing stages were thus scheduled to take place at the optimal time of the year, when resources are available. The ritual performances peaked for those selected to be interred in monolith-circles. The latter contained the skeletal remains of 30 to 56 individuals, probably members of the same in a grand ceremony. Through this mortuary program, people built strong ties with their land through their ancestors.

CONCLUSION: THE CHRONOLOGICAL TIMELINE

Table 13.1. Chronological chart of Senegambian megalithism

Site	1500	1000	500	BCE	0	CE	500	1000	1500	2000
Ngayene-II		Monument 25 1360 -1200						Monument 29 720 – 900 Monument 27 750 – 930	Monument 26 1170 - 1260 Monument 28 1300 – 1400 Habitation site 1310 - 1410	
Sine-Ngayene		SN-T-01 990 – 850						SN-T-02 650 – 750 Monument SN-27 750 -----1450 Ceremonial Space 1306 - 1400	Monument 25 1000 -1100	
Tiekene-Boussoura			Monument 1 200 – 150							
Kodiam								Monument 1 600 – 750		
Wassu									Monument VI 700 – 800	
Wanar									Monument I 1200 – 1400	
Sare-Dioule										Monument 1 1500 – 1600

The senegambian megaliths zone is a relatively low intensity area as far as archaeological research is concerned. Despite that limitation, the results obtained by successive researchers provide a glimpse of a possible time-line for the

genesis of the megalithic phenomenon. Single-site programs provide very interesting and accurate information on the characteristics and use-history of a single place. Settlement systems operate at regional and inter-regional levels. The Sine-Ngayene Archaeological Project has opened the possibility for probing the dynamics of mortuary programs at the regional level. The new chronological framework ranges from ca. the middle of the second millennium BCE [1350 BCE] to the middle of the second millennium CE [1500 CE] (Table 13.1).

The practice of primary burial in earthen tumuli, single and multiple, appears to be the oldest so far. It is dated to 1360 -1200 CalBCE at Ngayene II quadruple burial monument 25 and 990 – 850 CalBCE at Sine-Ngayene SN-T- 01 (Table 13.1). The shift to the practice of secondary burial in combination with multiple episodes of single interments is documented in Tiekene-Boussoura Monument I that is dated to 200 -150 CalBCE (Thilmans et al 1980).

Considering the low research intensity in the area, caution has to be the rule when faced with absence of evidence. It is nonetheless interesting to note a sort of hiatus in the first half of the first millennium CE. The diversification of patterns of disposal of the deceased and burials features is amplified in the second half of the first millennium CE, from 600 to 1000 CE. Large stone circles like Ngayene II monument 29 are submitted to a dual use as interim grave and collective secondary burial. Ngayene II monument 27 is used as high frequency collective secondary burial; single primary burial is documented at Sine-Ngayene SNT-02; Single and multiple primary interments in distinct burial episodes are documented in Kodiam monolith circle 17; Low intensity secondary burial is recorded at Wassu monument VI.

The trends set in the previous period is sustained and amplified during the last half millennium of the Senegambian megalithic traditions. The practice of high density collective secondary interments is largely predominant during that period. Ceremonial spaces and especially dedicated monuments became part of the investigated cemeteries, along with the practices of combined primary and secondary interments in Sare-Dioule stone tumulus, monument I. Pan-regional phenomena like rivalry between competing neighboring polities could have triggered the need to cling to the land and strengthen the links between the living and the dead.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Arnold, B. 2002 A Landscape of Ancestors: the space and place of death in Iron Age West Central Europe. *Archaeological Theory and Method* 11(1): 129-143.
- Arnold, B. & R.J. Jeske 2014 The Archaeology of Death: Mortuary archaeology in the United States and Europe 1990-2013. *Annual Review of Anthropology* 43: 325-346.
- Beck, L.A. editor 1995 *Regional Approaches to mortuary Analysis*. Plenum Press; New York.
- Binford, L.R. 2001 *Constructing Frames of References: An analytical method for archaeological theory building using ethnographic and environmental data sets*. Berkeley ; University of California Press.
- Chisholm, M. 1979 *Rural Settlement and Land Use: An Essay in Location*. London; Hutchinson.
- Cros, J.P. 2010 Pratiques funéraires dans le mégalithisme Sénégalais: États des lieux et Perspectives. Paper presented at the 13th Congress of the Panafrican Archaeological Association for Prehistory and related studies / 20th Society of Africanist Archaeologists, Dakar, November 1-7, 2010.
- Crubezy, E., C. Masset, E. Lorans, F. Perrin, and L. Tranoy 2000 *L'Archéologie Funéraire*. Paris, Editions Errance.
- David, B. and J. Thomas, eds. 2008 *Handbook of Landscape Archaeology*. Walnut Creek ; Left Coast Press.
- Duchemin, Capitaine, 1904 Quelques observations sur les tumulus de la vallée de la Gambie. Présenté par Dr. E.T. Hamy. *Compte Rendus de l'Académie des Inscriptions et Belles Lettres*. 48(5) : 560-569.
- Gallay, A. 2006 Le mégalithisme Sénégalais: Une Approche Logiciste. In C. Descamps et A. Camara, eds. *Sénégalia: Etudes sur le Patrimoine Ouest Africain*. Pp. 205 – 223. Paris, Editions Sepia.
- Gallay, A., G. Pignat, and P. Curdy 1982 Mbolop Tobe (Santhiou Kohel, Senegal): Contribution à la Connaissance du Mégalithisme Sénégalais. *Archives Suisses d'Anthropologie Générale* 46(2): 217-259.
- Gillespie, S.D. 2002 Body and Soul among the Maya: Keeping the spirit in place. *Archaeological Method and Theory* 11(1): 67-78.
- Gould, S.J. 1990 *Wonderful Life: The Burgess shale and the nature of history*. New York; W.W. Norton and Company.
- Haggett, P. 1973 *L'Analyse spatiale en géographie humaine*. Paris; Armand Colin.
- Holl, A.F.C. and H. Bocoum 2006 Variabilité des Pratiques funéraires dans le Mégalithisme Sénégalais : Le Cas de Sine-Ngayene. In C. Descamps et A. Camara, eds. *Sénégalia: Etudes sur le Patrimoine Ouest Africain*. Pp. 224 – 234. Paris, Editions Sepia.
- Holl, A. F. C. and H. Bocoum 2017 *Megaliths, Cultural Landscape, and the Production of Ancestors*. Saarbrücken. Editions Universitaires Europeennes

- Holl, A.F.C., H. Bocoum, S. Dueppen, and D. Gallager 2007 Switching Mortuary codes and Ritual Programs: The Double-Monolith-Circle from Sine-Ngayene, Senegal. *Journal of African Archaeology* 5(1): 127-148.
- Humphreys, S.C. and H. King 1981 (eds.) *Mortality and Immortality: The Anthropology and Archaeology of Death*. London ; Academic Press.
- Jouenne, P. Dr. 1930, Les Monuments mégalithiques du Sénégal. Les Roches gravées et leur interprétation culturelle. *Bulletin du Comité d'Etudes Historiques et Scientifiques de l'Afrique de l'Ouest*. Pp. 309-399.
- Klaus, D.H. 2008 *Out of Light came darkness: Bioarchaeology of mortuary ritual, health, and ethnogenesis in the Lambayeque Valley complex, North coast of Peru (AD 900 – 1750)*. Ph.D Dissertation; The Ohio State University. Columbus
- Laporte, L. 2010 Mégalithismes Sénégalais – Dualités exacerbées sur le Site de Wanar. Paper presented at the 13th Congress of the Panafrican Archaeological Association for Prehistory and related studies/20th Society of Africanist Archaeologists, Dakar, November 1-7, 2010.
- Laporte, L., H. Bocoum, R. Bernard, F. Bertin, V. Dartois, A. Delvoye, M. Diop, A. Kane, L. Quesnel 2007-2009 Le Site Mégalithique de Wanar (Sénégal): Note préliminaire sur un nouveau programme de coopération entre la France et le Sénégal (2008-2011). *Afrique: Archeologie et Arts* 5: 99-108.
- Lezine, A.M., C. Assi-Kaudhis, E. Roche, A. Vincens and G. Achoundong 2012 Towards an understanding of West African montane forest response to climate change. *Journal of Biogeography* 2012:1-14
- Maley, J. 2011 Climate and Palaeoenvironment evolution in North tropical Africa from the end of the Tertiary to the Upper Quaternary. In *African Palaeoenvironments and Geomorphic landscape evolution*, edited by J. Runde. *Palaeoecology of Africa* 30: 227-278.
- Martin, V. and C. Becker 1984 *Inventaire des Sites Protohistoriques de la Sénégambie*. Kaolack.
- Mauny, R. 1961 *Tableau géographique de l'Afrique au Moyen-Âge*. Dakar; Mémoires de l'IFAN.
- Metcalf, P. and R. Huntington 1991 *Celebrations of death: The Anthropology of Mortuary Ritual*. Cambridge; Cambridge University Press.
- Migeod, F. W. H. 1924, Stone-circles in the Gambia. *Man* 73: 173.
- Ozanne, P. 1965 The Anglo-Gambian Stone-circles Expedition. *Research Review* 1: 32-36.
- Palmer, H. R. 1939, Stone-circles in the Gambia Valley. *Journal of the Royal Anthropological Institute* 69: 273-283.
- Parker, H. 1923, Stone-circles in the Gambia. *Journal of the Royal Anthropological Institute* 53: 173-228.
- Pearson, M.P. 1999 *The Archaeology of Death and Burial*. College Station; Texas A&M University Press.
- Thilmans, G., C. Descamps, and B. Khayat 1980 *Protohistoire du Sénégal I: Les Sites Mégalithiques*. Dakar; IFAN.
- Vita-Finzi, C. and E.S. Higgs 1970 Site-Catchment Analysis. *Proceedings of the Prehistoric Society* 36: 1-37.
- Wendorf, F. and J. M. Malville 2001 The megalithic Alignment. In *Holocene Settlement of the Egyptian Sahara I: The Archaeology of Nabta Playa*.

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Edited by F. Wendorf, R. Schild, and Associates. Pp. 489-502. New York; Kluwer Academic/Plenum Publishers.
White, T.D. and P. A. Folkens 2005 *The Human Bone Manual*. Amsterdam; Elsevier Academic Press.

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Technological Innovation and the Emergence of the State in Eastern and Southern Africa

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If at first an idea is not absurd, then there is not hope for it
(Albert Einstein)

INTRODUCTION

How and what ways might one view technological invention, innovation, transfer, and impact of metallurgy on ancient and modern African culture and the environment? The discoveries of early copper and bronze working sites in Niger and the Central Africa has strengthened the hypothesis that knowledge of iron working independently evolved in that region and spread to other regions of Africa. The 1200 BC date for the making and use of iron Central Africa weakens the once popular notion that iron and copper working spread in conjunction with the Bantu migration. The production of carbon steel in northwest Tanzania during the first century AD and crucible steel on the Kenya coast around AD 700 provide significant evidence for technological innovation by African practitioners. What is the relationship between technological innovation and the emergence of socially complex societies? Regional scholarship posits that elite control of internal and external trade infrastructure, investment in extractive technologies, restricted access to arable land and accumulation of surplus, manipulation of religious ideology, and exploitation of ecological crises were among the major factors that contributed to the rise of the state. To what extent did elite investment and monopolization of trade, technology, and other wealth-creating resources coalesce to propel the region towards greater interaction, complexity. Major transformations in the form and increase household size, clear differences in wealth, and inequality? It appears that opportunistic use of ideological and ritual power enabled a small elite initially composed of elders, ritual and technical specialists to control the regional political economy and information flows. The timing of these transformations was continent-wide and date to the last three centuries of the first millennium AD. My chapter evaluates the emerging evidence from Eastern and Southern Africa to assess the role of technological invention,

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innovation, transfer on the evolution and sustenance of socially complex chiefdoms and states.

TRADE, TECHNOLOGY, AND INNOVATION AS SOCIO-TECHNICAL SYSTEM

If at first an idea is not absurd, then there is not hope for it (Albert Einstein) (<https://www.goodreads.com/quotes/110518-if-at-first-the-idea-is-not-absurd-then-there>)

Technology is a set of operationally replicable social behaviors that result from the integration of raw materials, knowledge, organization, and consumption. It is a material manifestation of the diverse ways humankind define and pursue existence (Basalla 1988:14).

Technology is essentially an outcome of human interaction with the natural and material world and is thus embedded social behaviors and meanings (Tornatzky et al. 1983:2; Pfaffenberger 1988:241; MacKenzie and Wajcman 1985: 3). Technology play second fiddle to the human capacity to invent and deploy fabulously complex and variable social arrangements (Lemonnier 1986:151; Pfaffenberger 1992:497). Technology embraces scientific ideas, but it is not reliant upon application of science to technical matters. It employs derives from the interaction between material, economic, ecological, and political factors. The success of a technology depends upon choices and social processes that its innovators and consumers make (Noble 1986; Pfaffenberger 1998:240).

Three decades ago Brian Pfaffenberger proposing the technology as a humanized nature:

...technology...is a fundamentally *social* phenomenon...a social construction of the nature around us and within us, and once achieved, it expresses an embedded social vision, and it engages us in what Marx would call a form of life. The interpenetration of culture and nature ... of the sort that Mauss (1967) would readily call *total*: any behaviour that is technological is also, and at the same time, political, social and symbolic. It has a legal dimension, it has a history, it entails a set of social relationships and it has a meaning. To undertake the analysis of the complex relationships between technology and culture requires knowledge of a society's environment, history, social organization, political system, economic system, interregional relations, cultural values, and spiritual life. Such analyses a commitment to situate behaviors and meanings in their total social, historical and cultural context (Pfaffenberger 1998:245).

Since that time, many historians of technology have viewed technology and technological innovation as a sociotechnical system moving away from technological deterministic perspectives that dominated anthropology of technology in much of the 20th century (e.g. White 1959; Wittfogel 1959; Harris 1977). To innovate is to create something new based on an idea aimed at solving

a preexisting problem solving. Innovation is the process of identifying and developing solutions to problems and creating new ways to meet needs (Gorman (2007:vi-vii). If an innovation succeeds, however, the social and mythic dimensions stay in the background. A successful technological innovation occurs only when all the elements of the system, the social as well as the technological, have been modified so that they work together effectively (Hughes 1983; Pfaffenberger 1992:498).

Innovations improve the efficiency of a previous invention and improves the quality and condition of life of its users by through provision of solutions to pre-existing problems. The rate and pace of innovation is dependent up consumers responsiveness to that innovation. People construct their social world using the social resources and structures at hand, but their activities modify the structures even as they are reproduced (Giddens 1979; Pfaffenberger 1992:500). When an innovation occurs, a tiny percentage of people will try a new product then some other forward-thinking people see the first ones using it and give it a try. That creates enough of an example for the majority of people to come along. Finally, are those who lag behind the hear, either to set themselves apart or because they can't just keep up (Gorman 2007:23). The outcome of a given innovation is still subject to substantial modification by social, political and cultural forces (Pfaffenberger 1998:240). Understanding the effects of a given technology on society is an intensely difficult and problematic exercise that requires "one to have a good theory of how that society works... the overall dynamics of a society, and it is thus one of the most difficult, rather than one of the easiest, questions to answer (MacKenzie & Wajcman 1985:6-7; Pfaffenberger 1988:244).

How and what ways might one view technological invention, innovation, transfer, and impact of metallurgy on ancient and modern African culture and the environment? The discoveries of early copper and bronze working sites in Niger and the Central Africa has strengthened the hypothesis that knowledge of iron working independently evolved in that region and spread to other regions of Africa. The 1200 BC date for the making and use of iron Central Africa weakens the once popular notion that iron, and copper working spread in conjunction with the Bantu migration. The production of carbon steel in northwest Tanzania during the first century AD and crucible steel on the Kenya coast around AD 700 provide significant evidence for technological innovation of African practitioners. What is the relationship between technological innovation and the emergence of socially complex societies? Regional scholarship posits that elite control of internal and external trade infrastructure, investment in extractive technologies, restricted access to arable land and accumulation of surplus, manipulation of religious ideology, and exploitation of ecological crises were among the major factors that contributed to the rise of the state. To what extent did elite investment and monopolization of trade, technology, and other wealth-creating resources coalesce to propel the region towards greater interaction, complexity. Major transformations in the form and increase household size, clear differences in wealth, and inequality? It appears that opportunistic use of ideological and ritual power enabled a small elite initially composed of elders, ritual and technical specialists to control the regional political economy and information flows. The

timing of these transformations was continent-wide and date to the last three centuries of the first millennium AD. My paper evaluates the emerging evidence from Eastern and Southern Africa to assess the role of technological invention, innovation, transfer on the evolution and sustenance of socially complex chiefdoms and states (Fig. 14.1).

DEFINING THE STATE

The state as “a politically organized society that is regarded by those who live in it as sovereign or politically independent and has leaders who control its social, political, legal, economic, and cultural activities.” (Trigger 2003:92). States have recognizable diagnostic features including urbanism, social stratification, political organization, production, specialization and exchange, and long-distance interactions (Carneiro 2010:5; Feinman 1995:225; Kusimba 2018a:90). Trigger (2003:47) emphasized the importance of kinship ties and the use of force to maintain political power. He viewed early states as socially stratified societies where individuals who occupied the highest strata possessed and maintained the most wealth, status, and political power. “The core of such an early state (or complex chiefdom) was ethnic group, tribe, or ruler’s kindred to which other groups willingly or unwillingly paid tribute” (Trigger 2003:47). The means through which upper class members gained and maintained power included a combination of physical and ideological power. Trigger (2003:92) echoed Akin Mabogunje’s (1962) notion that city-states were small polities, consisting of an urban core surrounded by farmland containing smaller units of settlement. In contrast, territorial states governed a larger region through a multileveled hierarchy of provincial and local administrators in a corresponding hierarchy of administrative centers. In sum, states can be characterized by centralized political authority resting in the hands of a small elite group, wherein the power is physical, economic, and ideological (Morris 1998:98).

How, when, and what precipitated the rise of complex societies and state formation in Eastern and Southern Africa? Transformations from acephalous to state societies occurred in Sub Saharan Africa towards the end of the first millennium AD (Holl 2000, 2006; Kusimba 2018a; Monroe 2013). Extensive research on the Eastern Coast of Africa (Kenya and Tanzania) and Southern Africa (Zimbabwe, Botswana, and South Africa) has yielded adequate data to enable a discussion on the trajectories of the evolution of social complexity and the state. Three crucial factors: (1) trade, (2) investment in extractive technologies and (3) elite monopolization of wealth-creating resources coalesced to propel the region towards greater interaction and complexity (Garlake 1982; Kim and Kusimba 2008; Kim et al 2015; Kusimba et al 2017; Mitchell 2005; Pwiti 2005). Major transformations household size, clear differences in wealth and status, and settlement hierarchies occurred towards the end of the first millennium AD (Chami 1998; Chirikure 2014; Chirikure and Pikirayi 2008; Chirikure et al 2013; Kusimba 1999, 2008; Manyanga 2006:138; Pikirayi 2010; Sinclair et al 2012; Table 14.1). What factors contributed to the rise of societies that increasingly formalized inequality out of egalitarian and heterarchical societies that preceded them (McIntosh 1998)?



Fig. 14.1. Map showing known sites in Eastern and Southern Africa

Could these factors have also favored investment and use of organized violence as a means to gain and monopolize access to fertile grazing lands, water and

mineral resources, and trade infrastructure (Kim et al 2015)? Regional scholarship proposes that opportunistic use of ideological and ritual power may have enabled a small elite, initially composed of elders, ritual and technical specialists, to control the regional political economy and information flows (Huffman 1996). The timing of these transformations was continent-wide and dates from the seventh centuries of the first millennium AD (Chirikure et al 2013; S. McIntosh and R. McIntosh 1984; see Table 14.2).

STATE EMERGENCE IN EASTERN AND SOUTHERN AFRICA

After AD 700 sub-Saharan Africa was on a trajectory towards the emergence of the state (Sinclair 1993). The common features of the social complexity in Eastern and Southern Africa include (1) increasing sedentism (2) changes in settlement patterns from extended family homesteads to fortified urban and peri-urban communities, (3) extensive investment in and use of offensive and defensive weaponry, (4) development of extractive technologies in mining and processing of iron, gold, copper, and tin and (5) expansion of farming and pastoralism (Fig. 14. 2a and 2b). The wide distribution of glass beads in hunter-gatherer, mobile pastoralist, farming, and elite residences in the region provide sufficient evidence of local, regional, and transoceanic trade networks (Davison 1972; Dussubieux et al 2008; Wood 2005, 2012). These networks created opportunities for participants to accumulate wealth. The profits from trade gave them an unequal competitive edge over their neighbors (Chirikure 2014; Sinclair et al 2012).

Innovations in building architecture in the form of coral rag and coral stones along the coast and dry stone in inland Eastern and Southern Africa posits a departure from settlement abandonment that usually occurred at the death of the family head to the embrace of intergenerational perspectives (Fig. 14.2a). Elite investment in permanent inheritable homes and other forms of wealth created more stable family and community lifestyles that were good for building long-term bonds and trading partnerships (Allen 1993; Huffman 1996; Pikirayi 2001:3). Fortification became the norm replacing dispersed homesteads (Fig. 14.2b). The diverse artifacts, ecofacts, ideofacts, and sociofacts recovered at these settlements indicate investment and engagement in diverse occupations from part-time, full-time, and specialized crafts and vocations (Fleisher et al 2015; Kusimba et al 2013). Craft specialization and other complementary vocations increasingly exceeded household scales (Schmidt 1992). Wealth from regional and transoceanic commerce became one of the main catalysts for the emergence of urbanization and social inequality (Middleton 2004; C. Kusimba and S. Kusimba 2003; Wynne-Jones and LaViolette 2018). By the time Islam was adopted, coastal and inland societies had maintained regular commercial and cultural dialogue for many generations (Pwiti 2005; Kusimba and Walz 2018; Walz 2010; Ylvisaker 1979:67). As generations of coastal societies converted to Islam, expansion of interregional trade into the interior came to be associated with, but not monopolized, by Muslim traders (Beach 1980; Mutoro 1998; Mudenge 1974). Indeed, inland trade networks continued to be primarily managed by inland merchants (Bakari 1981). Evidence for this is found in the

fact that despite nearly 1200 years of practice in Eastern and Southern Africa, Islam never achieved universal conversion and continued until the mid-nineteenth century to be a religion confined to the coastal strip and towns and caravanserais along caravan routes (Horton 1996; Kusimba and Walz 2018:430). In West Africa by contrast conversion to Islam was more widely accepted (Insoll 2003).



Fig. 14.2a. The Gede Palace, Kenya ca. 1000-1500 CE

By the end of the first millennium AD, the entire region was a regular partner in long distance maritime exchanges that reached as far as the Arabian Peninsula, India, Sri Lanka, and China (Chirikure et al 2013; Fleisher et al 2015; C. Kusimba and S. Kusimba 2005, 2018; Kusimba et al 2015; LaViolette 2008; Mitchell 2005; Wynne-Jones and LaViolette 2018). By the 13th century an African urban elite financed, managed, and controlled local, regional, and interregional trade and communications along the East African seaboard (Chami 1998; Kusimba 1999a, 1999b). Innovations in ironworking enabled agricultural intensification and specialization in hunting, fishing, and herding (Kusimba and Walz 2018). These changes improved the quality of life and precipitated population growth and economic prosperity (Chirikure et al 2017). In the late 15th century, however, the coast became embroiled in long standing conflict between Christianity and Islam, represented by the Portuguese, Ottoman and Omani Arab mercantile interests (Oka 2018). The Portuguese, Arab, and Turkish rivalry for control of Indian

Ocean commerce was economically crippling for East Africa (Sheriff 1987). The state, however, did not collapse during the time of Portuguese (1498-1975) and Omani Arab (1738-1960) conquest and colonization. However, leadership shifted from the local elite to foreign elite (Alpers 1975; C. Groucher 2014; Kusimba 2004, 2006; Sheriff 1987, 2010; Walz and Brandt 2006).



Fig. 14.2b. Naletale

WHAT IS THE EVIDENCE FOR EVOLUTION TO SOCIAL COMPLEXITY AND EMERGENCE OF THE STATE?

Until the last millennium BC, African subsistence economies were dominated by foraging (S. Kusimba 2003; Mitchell 2002; Walker 1995). The introduction of cow pastoralism substantively improved the quality of life and stimulated population growth, but it was a long slow process. Agrarian communities emerged beginning from the early century of the first millennium AD (Pikirayi 2001:80). These communities possessed a complete tool kit of iron technology, distinctive

ceramics, and new crops (Ehret 1998; Mitchell 2002:259). The diverse economy based on foraging, herding, and farming stimulated demographic growth such that by the 5th century AD, much of Eastern and southern Africa was inhabited by sedentary societies (Hall 1990; Katsamudanga and Pwiti 2017; Mitchell 2002; Pikirayi 2001:79). Adoption of farming and pastoralism transformed the cultural mindset and the landscape, initiating distinctions about communal and private ownership, tolerance, and respect for private property. Trade flourished amongst foragers, herders, and farmers. Crafts such as iron smelting, smithing, and pottery making became more specialized as knowledge increasingly became restricted to specific families and clans and its practice highly ritualized (Schmidt 1997). Demographic changes were regionwide. Residential areas became larger as did gardens and farmsteads. Cattle ownership increasingly defined wealth and status and those who possessed more of it enjoyed higher status (Shenjere-Nyabeze 2016). Mitchell (2002:288) proposes that “domestic animals and crops imply private property; long-term storage of cereals suggests this must have been controlled within families or perhaps centrally within villages.” Property rights and an adherence to territorially affiliated beliefs and ancestor cults were also established at this time (Pikirayi 2001:79).

Once established and formalized, interregional trade and exchange with the coast, became one of the chief means of accumulating wealth in addition to pastoralism and farming (Chirikure et al 2014). Evidence for processing of ivory for export recovered at some inland settlements indicates the complexity of coastal-inland relationships, which promoted investment in the procurement of trade items in high demand (Kusimba and Walz 2018). Such demand required investment in the infrastructure necessary for producing these items. Specialized knowledge such as elephant hunting and ivory working also served as catalysts for development of related crafts including iron working and gold mining. Ivory procurement created a group of highly specialized hunters who would have sought to restrict the specialized knowledge to their group. The lethal poison needed to maim or kill elephants and other African megafauna was painstakingly developed by specialized hunter gatherers who not only jealously protected their esoteric knowledge of poison making but also became the largest suppliers of poison and ivory (Kusimba and Kusimba 2005, 2018). Trade with the coast thus indirectly helped diversify the local and regional political economy (Chirikure 2014; Mudenge 1974). In Mitchell’s words, “such specialisation ...facilitated the expansion of trade and the possibilities for individuals or groups to benefit ... at the expense of others, including opportunities for accumulating larger herds of cattle” (2002:289). In this regard rapid demographic growth, food security, favorable and stable climate, investment in highly specialized craft activities, and interregional trade combined to lay the foundations for the development of the larger chiefdoms to become states (Pwiti 1996; Manyanga 2006:21).

In sum, it is evident that by the mid to late first millennium AD greater amounts of wealth and status were being conferred upon certain segments of societies (Manyanga 2006:139). By the late first millennium AD, ivory and skins were already being exported overseas, with sites like Chibuene, Sofala, Kilwa, and Manda interfacing between inland and transoceanic trade routes (Chirikure 2014,

Chirikure et al 2013; Mitchell 2002:300; Pwiti 2005; Sinclair 1982; Sinclair et al 2012). The presence of craft specialization and material symbols of high status are telling, and we can infer the onset of social stratification and private property on a level heretofore unseen in the region (Kusimba 1996b, 2018b). The germ for hierarchical relationships, social complexity and state development had been sown. By the early centuries of the second millennium, these farming villages and their lifeways had become well established. "Here and there small-scale confederations of subsistence farmers lived in stable agricultural regimens well adapted to their natural surroundings, adjusting to these changes in their social environment" (Pikirayi 2001:95). These fisher, farmer, and pastoral communities represented politically autonomous villages that were poised to become states. I sum up the evidence of each of the three factors and implications for the origins of social complexity and the state in eastern and southern Africa.

REGIONAL AND TRANSOCEANIC TRADE

The rise of autonomous urban polities which followed East Africa's incorporation into the Indian Ocean maritime trade networks created new markets for previously internally circulating commodities (Chirikure et al 2013, 2014; Kusimba et al 2017, Kusimba and Walz 2018). Trade connections between the coast and inland Africa involved all communities from mobile hunter gatherers to emergent increasingly sedentary complex chiefdoms and states (Kusimba and Kusimba 2018). Foodstuff including grains, dried meat and fish would have circulated between communities; beads and cloth due to their affordability circulated across all communities (Dussubieux et al 2008). From inland Africa including the Great Lakes region, Sothorn Africa, and inland Kenya and Tanzania came iron, gold, ivory, copper, leather, among other products (Table 14.1). Trade created the means for elite capital accumulation. The emergent market and distribution centers both inland and along the coast increasingly attracted communities from far and wide leading to emergence of the early urban communities (Sinclair 1993). As they emerged these centers sustenance depended up the relationship they built and sustained with their rural neighbors (Ylvisaker 1979:67). Interregional trade thrived best in the context of tolerance and cooperation among potential trading partners. Evidence for conflict and coercion as a means for securing wealth creating resources in the form of fertile and well-watered agricultural land, disease free grazing land, mineral rich areas continue to elude archaeologists. However, sources of trade items exchanged across the region, implying that cooperation was a critical component for the emergence of the more centralized ethnically diverse state (Stanish 2017). In Eastern and Southern Africa communities developed heritable social and kinship ties to legitimize non-kin interaction spheres (Kusimba and Kusimba 2005, 2018).

Regional markets centers were originally located in neutral zones to enable potential trading partners to freely trade. Such centers had a higher probability of evolving into distribution centers and eventually political capitals. As such, their beginnings incorporated diverse actors who performed different but complementary activities (Kusimba 2018b; Oka 2018; Oka and Kusimba 2008). For intercommunity trade to succeed, an inclusive superstructure that potentially

incorporated all communities from mobile hunter-gatherers, nomadic and sedentary pastoralists, and agrarian communities was paramount. Without such a system, products such as ivory, a domain of specialized hunters, and beads, a universal trade item that was consumed by all, would not have been exchanged globally (Kusimba et al 2017:71). Thus, demands for specific commodities stimulated different but complementary economic specializations. For example, with its vast sources of gold and copper and fertile disease-free grazing lands, the emergent states of Southern Africa, including Mapungubwe, Great Zimbabwe, and Khami, monopolized the gold and copper trade and were among the major suppliers of hides and skins. Inland East Africa mobile hunters and pastoralists held sway on the supply chains of ivory, incense, beeswax, and rock crystals in high demand in the Persian Gulf and South Asia. Thus, wealth gained from investing in hunting, mining and pastoralism was crucial for the emergence of the state. Trade created societal inequities in the distribution of essential resources, such as iron, ivory, gold, copper and salt in that it favored those communities that were engaged in the trade and located along the trade routes.

I am skeptical of the notion that market-oriented trade grew up as a result of external demand for gold and ivory. The claim that, “there is no evidence that either [gold or ivory] commodities had any indigenous value until the advent of the Islamic maritime trade on the east coast,” (Miller et al 2000:96) is undermined by the antiquity of prospective and mining and hunting techniques that predate the formalization of Indian Ocean maritime trade. Further, earlier assumptions that the exploration and consumption of non-ferrous minerals was responsive to external demands has all but been thoroughly demolished by increasing evidence for the antiquity of mining, smelting, and use of nonferrous minerals including tin (Bandama 2014, Bandama et al 2016; Chirikure and Bandama 2014). The wealth accumulated from interregional trade was never confined to gold and ivory but other products as well. External demand for these products stimulated investment in extractive technologies and in agriculture and pastoralism. The safe passage of trade from the inland to the coast required negotiations and cooperation amongst trading partners. Tribute, tax, and where necessary, security escort would have been employed to protect trade and trade infrastructure. The rise of the state and external trade created inequities between communities. The distinct class differences that arose created powerful political and economic elites (Chirikure et al 2013:341; Pwiti 1991). At that same time, the bulk of the resources that came from the coast to inland societies (e.g., cloth and beads) circulated to all regions. Investment in weaving was widespread and formed one of the most common cottage industries in the emergent cities households. The ubiquitous distribution of spindle whorls at most household locales excavated on the coast and in the Southern Africa supports this claim (Chittick 1984; Huffman 1971). In sum, craft specialization in pottery making, cloth making, leatherwork, smithing, curving, stone cutting and masonry among others had become inalienable part of the African landscape. Wealth distinctions were now measured in ones’ ability to own and cultivate large tracts of agricultural land, own large herds of cattle, and built a large permanent and intergenerational homestead (Allen 1993; Garlake 1978; Pikirayi 2001; Pwiti 1991, 1996; Shenjere-Nyabeze 2016).

Table 14.1. Principle Trade Items from Eastern and Southern Africa

From Inland Africa to the Coast	From the Coast to Inland Africa	Primary Producers of African Trade Items
Copper	Trade ceramics (Chinese and Islamic)	South Africa
Iron bloom	Persian faience and glass	Inland and coastal
Ivory (raw and cut)	Glass beads (Chinese, Indian)	Inland and coastal
Wood	Cloth (cotton and silk)	Inland and coastal
Hides and skins	Citrus Fruits	Inland and coastal
Honey, beeswax and Resins	Rice	Inland and coastal
Gold, copper, bronze	Banana	Zimbabwe and South Africa
Grains (millet, sorghum)	Marine shells especially cowry shells	
Ostrich eggs and beads		Inland and coastal
Rhinoceros horns		Inland coastal
Frankincense and Myrrh		Inland Kenya and Somalia
Rock crystal		Inland Kenya
Bronze		South Africa

INVESTMENT IN EXTRACTIVE TECHNOLOGIES

Evidence for investment in pyrotechnologies primarily comes from iron smelting and smithing (Kusimba 1996a; Mapunda 2002). Investment in iron technologies predates the evolution to social complexity. In fact, iron production beyond local needs in East Africa was recognized fairly early such that during the 10th century, the polity of Malindi's notable exports to India was iron bloom (Kusimba et al 1994). The antiquity of iron making in sub-Saharan Africa is no longer contested. Although some archaeologists believe that nonferrous pyrotechnologies were brought in by foreigners, the occurrence of tin bronzes in early twelfth century AD contexts at Jahuda a century before at Mapungubwe confirms the technical sophistication of metal workers that many historians have technology have labored to deny credit to local innovators (Bandama 2013; Chirikure 2015; Chirikure and Bandama 2014; Chirikure et al 2013:342). The recovery of gold (in the form of trinkets, beads, and sheets) and copper (in the form of wire, bangles, and bracelets) in sedentary, pastoral, and mobile communities in Southern Africa points to regionwide consumption of these articles and to the existence of inter-community exchange networks upon which regional networks that crisscrossed the subcontinent, eventually reaching the East African coast and beyond interlocked in the late first millennium AD (Chirikure et al 2013:360; Garlake 1973:177; Miller et al 2000:94). Gold mining was dominant in Zimbabwe while the centers for copper and tin were more numerous in South Africa, the latter centered around contemporary Rooiberg in the central Transvaal (Hammel et al 2000:51).

Mineral extraction and processing involved managerial organization, technological innovation, and decision-making. Practitioners conceptual understanding of the geology, harnessing of the tools-- iron gads, chisels, hoes, drills, crucibles, and hammerstones-- and practical skills, figuring out ways to overcome physical and mechanical obstacles required social cooperation and leadership (Chirikure 2015; Hammel et al 2000:52; Summers 1969; Swan 1994:64-66). Mineral prospection, mining, processing, and commercial activities points to larger concerns indicative of distinct division of labor (Hammel et al 2000:53; Phimister 1974). Locally consumed gold may have circulated among the networks of ritual leaders and elders in all societies. These emergent leaders from the ranks of mobile, pastoral, and agropastoral communities who inhabited this massive landscape would later coalesce to become members of the royal chieftaincies and polities. As more formalized leadership emerged, the internal circulation and external control of gold mines and the infrastructure of its production would become restricted to the economic and political elite, who were drawn the same networks. For example, the much heralded Mapungubwe gold objects including gold beads, beaten gold attached to a backing with gold rivets, a gilded 'bowl', a gilded staff, a 'mace-head', numerous wound wire bangles and the famous gold rhinoceros represent elite insignia, used by the rulers of the last major phase, from about ca.AD 1220 to 1290 (Meyer 1998:212-213; Miller et al 2000:96). Although international demand for African gold varied depending on conditions, estimate of 1.5 tons per year for the Muslim trade period, and 0.5 tons per year for the Portuguese period seem plausible (Austin 1987:276; Miller et al 2000:96).

Sources of Elite Power

The physical delimitation of elite and commoner residences, differences in volume and scale in material culture including grave goods¹, and presence and absence of exotica often serve as evidence of social inequality and social distinctions (Renfrew and Bahn 2016). Robinson's (1985:32–33) archaeological explorations at the Hill Complex in Great Zimbabwe recovered large houses adobe houses dating to the 12th century. The shift in location, an increase in house size and scale implied a clear departure from ordinary practice of erecting small family structures (Table 14.2). The erection of these large constructions upon a hill required leadership, cooperation, and persuasion which could have including mechanisms for reward and punishment (Stanish 2017).

The capitals of early and later states of Eastern and Southern Africa like their contemporaries in west Africa were secured by perimeter walls. In addition to serving security functions, these walls symbolized the normalization of hierarchy and inequities. One such capital is Great Zimbabwe which I briefly discuss below.

¹ At Chumungwa, a dzimbahwe located near the southern edge of the Zimbabwe plateau, seven burials have been unearthed containing gold grave goods (Garlake 1973).

Great Zimbabwe

Political centralization which began in the early second millennium on the East African Coast and in the Southern Zambezia culminated in the rise of state with capitals that were controlled by powerful elite who had consolidated their positions by opportunistically investing in agriculture, pastoralism, mining, and long-distance trade and monopolizing profits from these proceeds. Settlement relocation to hilltops and fortification provided more security and privacy for the leadership, their families and members of the inner circle. Spatial segregation, stone architecture, and the prominence of the chiefly palace established and separated elite spaces and elite decision-making.

Table 14.2. Periodization of Social Complexity and the State

Stages of development	Associations	Examples of Sites
First Stage (ca. 1AD to 700)	Early farming and herding communities in dispersed villages, no evidence of social differentiation and ranking.	Unguja Ukuu, Ras Hafun, Kwale, Manda, Kilwa, KiMa1, KiMa9, Misasa, Mpiji, Kiwangwa, Masuguru, Chibuene
Second Stage (ca. AD 700-800)	The elaboration of interregional and introduction of external trade.	Pemba, Tumbe, Shanga, Ungwana, Kaole, Zhizo, Changwehela
Third Stage (ca. AD 800-1000)	Volume and scale of regional and external trade increases, emergence of complex chiefdoms, cooperation in building elite and ritual residences, operationalizable evidence of social differentiation	Kima6. Kirongwe, Lamu, Mombasa, Malindi, Kilifi
Fourth Stage (ca.AD 1000-1500)	The establishment of state characterized by dry stone architecture in inland Southern Africa and Coral rag along the East African coast	Mapungubwe, Mapela, K2, Great Zimbabwe, Leopard Kopje, Gumanye, Mtwapa, Manda, Shanga, Pemba, Kilwa East Africa)
Fifth Stage (ca AD 1500-1900)	European Conduct and onset of Transatlantic slave trade, conquest, and colonization	Mutapa, European and Oman Fortresses

The Great Zimbabwe state proper is estimated to have covered 50,000 square kilometers. The state capital covering 720 hectares was, at the time, the largest in sub-Saharan Africa (Fletcher 1998). Outside these elite residences was an estimated 20,000 people engaged in various vocations tied to the political economy of the state. Archaeologists continue to map hundreds of contemporary settlements across the state that were part of the state (Hall 1990:92; Shenjere-Nyabeze and Manyanga 2015; Fig. 14.3). In terms of its influence the territory of Great Zimbabwe extended to eastern Kalahari, the Indian Ocean, and the

heartland between the Zambezi and Limpopo rivers (Ndoro (2001:22; Hall 1990:91; Fig. 14.4).



Fig. 14.3. Ndogo Site



Fig. 14.4. The Great Enclosure at Great Zimbabwe

Elite accumulated wealth was derived from monopolizing ownership over fertile agricultural and grazing land and rich mineral sources. Cattle, surplus farm produce would attract followers who were willing to sell their labor and loyalty leaders who were more generous and provided more opportunities for a stable livelihood (Shenjere-Nyabeze 2016). Craft industries including iron, gold, and copper mining, smelting and smithing, elephant hunting and ivory carving and stone cutting and carving (Fig. 14.5). These crafts were labor intensive and were carried out on a scale that required astute leadership and managerial skills. By the 12th century, Great Zimbabwe elites had extended their networks east and added the coast as a major trading partner (Pikirayi 2001:125; Pwiti 2005; Sinclair et al 2012). Wealth drawn from regional and coastal trade was reinvested into better and permanent homes in dry masonry stone. By 1270 an elaborate urban complex covering smaller towns and centered on Great Zimbabwe had emerged in southern Africa (Pikirayi 2001:125). This complex was engaged with its hinterland that extended in all directions into modern day Botswana, South Africa, Zambia, and Mozambique (Denbow et al 2009, 2015; Sinclair et al 2012). The city of Great Zimbabwe was a metropolis with many neighborhoods, including elite residences, ritual centers, public ceremonial courts, public forums, markets, as well as houses for commoners and artisans (Ndoro 2001:24; Pikirayi 2001:129). It was divided into three main architectural zones: the Hill Complex, the Great Enclosure and the Valley ruins (Huffman 1996; Pikirayi 2001:13; Robinson 1985; Fig. 14.4).



Fig. 14.5. Cut Ivory

Great Zimbabwe was socially stratified with considerable wealth and power concentrated in few families. Political control over the economy – “the network of transactions that linked peasant villages, madzimbahwe and the capital and, beyond this, the state itself with the wider commercial world.” Was the basis of power (Hall 1990:95)? Trigger (2003:92) proposed that due to their larger size, governance of territorial states was managed through a multileveled hierarchy of provincial and local administrators in a corresponding hierarchy of administrative

centers. These provincial centers show that at its zenith (Shenjere-Nyabeze and Manyanga 2015), Great Zimbabwe operated as a territorial state (Kim and Kusimba 2008) comparative to the Great Peruvian Inca state (Arkush and Stanish 2005; Bauer 2010; Bauer and Stanish 2010).

DISCUSSION: EVOLUTION OF SOCIAL COMPLEXITY AND THE STATE ON THE EASTERN AND SOUTHERN AFRICA

The emergence of sociopolitical complexity in Eastern and Southeastern Africa was neither unique nor different from other regions that saw rise of secondary states. In Eastern Africa, a combination of factors including local and regional trade coupled with the development of trade pacts were the main push factors toward the emergence of the state (Fleisher et al 2015; Kusimba et al 2013; Prestholdt 2004). On the other hand, the cultural sequences in Southern Africa show that a combination of factors propelled the region on a path to social complexity: sedentism, livestock production, agriculture, region and interregional trade, and crafts specialization (Bandama 2013; Chirikure 2014; Garlake 1982:13). Favorable climatic conditions and increased interaction amongst communities pursuing different but complementary subsistence strategies made possible the sharing and exchange of ideas and systems of knowledge that once held sway within specific ethnic and subsistence groups. Migration and settlement of pastoralists in what were previously mobile hunter-gatherer domains and the later settlement of agrarian communities, along with the incorporation of knowledge from all the groups, created a vibrant community that would elevate individuals and personalities from the groups to leadership positions.

The generation of a surplus, accumulation of wealth and investment in craft specialization indicates the power dynamics amongst the leaders and followers (Haas 2001). Food surplus means food security, which enabled some people to pursue a variety of vocations on a part-time and full-time basis. For example, elephant hunting, iron and gold working, ivory and stone carving, masonry, basketry, pottery making, and trade. Food security and increasing sedentism especially amongst previously forager and pastoral communities improved quality of life and inevitably led to demographic changes.

Location of settlements in resource rich areas with good clean water as well as arable and grazing land availed greater opportunities that attracted more settlement aggregation which inevitably required management of resources and people, thus creating opportunities for investment in more highly specialized crafts, local and interregional trade, accumulation of wealth, power, and status. In the case of Great Zimbabwe, the prominence of interregional trade with the Swahili coast was one a major catalyst in its transformation to the state (Garlake 1982:10). Great Zimbabwe exported gold, copper, ivory, hides and leather and imported a variety of items such as glass beads, cloth, porcelain, stoneware, and earthenware (Pikirayi 2001:20). The managerial elite monopolized trade with rural and frontier zones with the state capitals playing central roles as collection,

processing, and distribution centers for gold, ivory, copper, and iron to regional and coastal entrepôts on the Mozambican coast (Mudenge 1974, 1988).

The emergence and organization of agriculture, management of cattle, propagation of culture, and control of trade were key factors that contributed to the rise of states in southern Africa (Katsamudanga and Pwiti 2017; Shenjere-Nyabeze 2016). But long-distance trade interlocked a regional economy that was already thriving, thus giving rise to a hierarchical society (Manyanga 2006:144; Pikirayi 2001:21). Once established, however, long-distance trade became a major builder of wealth and status (Chirikure (2014:718; Manyanga 2006:114). Elite control of strategic resources such as rich agricultural and grazing lands, investment and monopolization of extractive crafts technologies such as iron working and gold panning, mining and processing, and specialized elephant hunting were crucial for emergence of the state (Mitchell 2002:327-328; Pikirayi 2001:35).

The ability to control access to resources or trade routes was an important element of emergent complexity and political centralization. Embedded in this is power of a physical and military nature, a power that can restrict access to wealth-creating resources and production (Haas 2001; Mann 1986). For example, control over iron production and distribution of was so crucial for an agricultural state such that the physical force needed to monopolize access to iron resources that were beyond the political control of the state capital was a necessity (Mitchell 2002:329).

Once asymmetries in power had been established, what strategies did leaders in Eastern and Southern Africa use to stay in power and accumulate more wealth, status, and power? The evidence suggests that elites in Southern Africa initially accumulated wealth in cattle and later invested in gold and ivory trade with the East African Coast. To do so, they also invested in local and regional infrastructures that made it viable for communities living and exploiting different but complementary resources to be willing to comply and be incorporated into the regional political economy. Both peaceful and coercive means were used to extend elite power to the frontier chiefdoms and minor states. Thus, "As the paramount chief's wealth increased, the population of the royal settlement would swell, partly because of the prestige of living in the settlement and the chance that some of the wealth might find its way through the normal redistributive channels." (Huffman 1972:365). Additionally, involuntary and coercive approaches to incorporate peripheral societies were options open to a determined and increasingly powerful leadership. Inevitable conflicts, coercion, and exploitation between classes and social segments within emergent complex societies were regularly. For instance, the use of elevated hilltops by elites for their residences as a means for delineating social status also reflected concerns over security and threat (Kim et al 2015). Similarly, the perimeter walls surrounding state and provincial capitals served a social and defensive functions and thus provide sufficient evidence of warfare and coercion as a crucial factor in the evolution and sustenance of the state (Kim et al 2015).

In sum, the emergence of social stratification and complexity in Eastern and Southern Africa was a result of trade, technology, and innovation. The monumentality of urban sites across this landscape is still a testament to two thousand years of innovation. At the height of their power, these states exercised political and economic influence beyond their urban cores to the hinterland and frontier societies by means of elite manipulation of ideological and monopolization of extractive technologies that restricted wealth creation within a small but power elite and its allies in Africa and the Indian Ocean.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Allen, J. de Vere 1993 *Swahili Origins: Swahili Culture and the Shungwaya Phenomenon*. Athens: Ohio University Press.
- Alpers, Edward A. 1975 *Ivory and slaves in east and central Africa*. London: Heinemann Press.
- Arkush, Elizabeth and Stanish, Charles 2005 Interpreting Conflict in the Ancient Andes. *Current Anthropology* 461: 3-28.
- Austin, Ralph A. 1987 African economic history: 1-294. London: James Currey.
- Bakari, Bin Mtoro, and J. W. Allen 1981 *The Customs of the Swahili People: The Desturi Za Waswahili of Mtoro Bin Mwinyi Bakari and Other Swahili Persons*. Los Angeles: University of California Press.
- Bandama, F. 2013 *The archaeology and technology of metal production in the Late Iron Age of the Southern Waterberg, Limpopo Province, South Africa*. Unpublished PhD thesis, University of Cape Town.
- Bandama, F. Simon Hall, Shadreck Chirikure 2015 Eiland crucibles and the earliest relative dating for tin and bronze working in southern Africa. *Journal of Archaeological Science* 62:82-91.
- Bauer, S. Brian 2010 *The Sacred Landscape of the Inca: The Cusco Ceque System*. Austin: University of Texas Press.
- Bauer S. Brian and Charles Stanish 2010. *Ritual and pilgrimage in the ancient Andes: The Islands of the Sun and the Moon*. Austin: University of Texas Press, 2001.
- Beach, D. N. 1980 *A Zimbabwean past: Shona dynastic histories and oral traditions*. Gweru: Mambo Press.
- Carneiro, Robert. 2012 "A Clarification, Amplification, and Reformulation." *Social Evolution and History* 11 (2): 5–30.
- Chami, Felix. 1998 "A Review of Swahili Archaeology." *African Archaeological Review* 15:199-218.
- Chirikure, Shadreck. 2014 "Land and Sea Links: 1500 Years of Connectivity Between Southern Africa and the Indian Ocean Rim Regions, AD 700 to 1700. *African Archaeological Review* 31:705–724.
- Chirikure, Shadreck. 2015 *Metals in past Society: A Global Perspective on Indigenous African Metallurgy*. New York: Springer.

- Chirikure, Shadreck and Foreman Bandama 2015 Indigenous African furnace types and slag composition—Is there a Correlation? *Archaeometry*, 56(2):296–312.
- Chirikure, Shadreck and Innocent Pikirayi. 2008 Inside and outside the dry stone walls: revisiting the material culture of Great Zimbabwe. *Antiquity* 82: 976–993.
- Chirikure, Shadreck., Munyaradzi Manyanga, Innocent Pikirayi, and Mark Pollard 2013 New Pathways of Sociopolitical Complexity in Southern Africa. *African Archaeological Review* 30:339–366.
- Chirikure, Shadreck, Pollard, A. M., Manyanga, M., & Bandama, F. 2013 “A Bayesian chronology of Great Zimbabwe: Re-threading the sequence of a vandalized monument.” *Antiquity*, 87(337):854–872.
- Chirikure, Shadreck, T. Moultrie, Foreman Bandama, C. Dandara and Munyaradzi Manyanga 2017 “What was the population of Great Zimbabwe (CE1000 – 1800)? PLoS ONE 12.6: 0178335
- Chittick, H. N. 1984 *Manda: excavations at an island port on the Kenya coast. Memoir / British Institute in Eastern Africa; no. 9*. London: British Institute in Eastern Africa.
- Davison, Claire C. 1972 *Beads in African Archaeology: Results from Neutron Activation Analysis supplemented by Results from E-Ray Fluorescence Analysis*. Berkeley: University of California at Berkeley.
- Denbow, James, M Mosothwane, N Ndobochani. 2009 Everybody here is all mixed up” In Postcolonial encounters with the past at Bosutwe, Botswana, edited by Peter R. Schmidt, *Postcolonial archaeologies in Africa*. Santa-Fe; School of American Research
- Dussubieux L, C.M. Kusimba, V. Gogte, S.B. Kusimba, B. Gratuize, and R. Oka 2008 “The Trading of Ancient Glass from South Asian and East Africa Soda-Alumina Glass Beads.” *Archeometry*. 50(5):797-821.
- Ehret, Chris. 1998 *An African Classical Age: Eastern and Southern Africa in World Prehistory, 1000 BC to AD 400*. Charlottesville: University of Virginia Press.
- Feinman, Gary M. 1995 The “Emergence of Inequality: A Focus on Strategies and Processes.” In *Foundations of Social Inequality*, Edited by T. Douglas Price and Gary M. Feinman, 255-280). New York: Plenum Press.
- Fleisher, Jeffrey, Paul Lane, Adria LaViolette, Mark Horton, Pollard, Edward, Erendira Morales, Thomas Vernet, A Christie, and Stephanie Wynne-Jones. 2015 “When Did the Swahili Become Maritime? *American Anthropologist* 117(1): 100–115.
- Fletcher, Roland. 1998 “African Urbanism: Scale, Mobility and Transformations.” In *Africa: Essays on Africa’s Later Past*. Edited by Graham Connah, 104–38. London: Leicester University Press.
- Garlake, Peter. 1973 *Great Zimbabwe*. London: Thames and Hudson.
- Garlake, Peter. 1978 Pastoralism and Zimbabwe. *The Journal of African History* 19(4): 479-493.
- Garlake, Peter. 1982 Prehistory and Ideology in Zimbabwe. *Past and Present in Zimbabwe* 1-19.
- Gorman, Tom. 2007 *Innovation* Avon, MA: Adams Media.

- Groucher, Sarah, K. 2014 *Capitalism and cloves: An archaeology of plantation life on nineteenth-century Zanzibar*. New York, Springer.
- Haas, Jonathan. (editor) 2001 *From Leaders to Rulers*. New York: Kluwer Academic/Plenum Publishers.
- Hall, Martin. 1990 *Farmers, kings and traders: the peoples of southern Africa, 200-1860*. Chicago: University of Chicago Press.
- Hammel, A. C. White, Susan Pfeiffer, and Duncan Miller 2000 "Pre-colonial mining in southern Africa." *Journal of the South Africa Institute of Mining and Metallurgy* 100: 49-56.
- Harris, Marvin 1977 *Cannibals and kings: the origins of cultures* (New York: Vintage Books).
- Holl, Augustin F.C. 2000 *The Diwan revisited: literacy, state Formation and the rise of Kanuri domination (AD 1200-1600)*. New York: Routledge.
- Holl, Augustin F.C. 2006 *West African early towns: archaeology of households in urban landscapes*. Anthropology Papers. Museum of Anthropology, University of Michigan.
- Howlette, M. 2009 Process sequencing policy dynamics: Beyond homeostasis and path dependence. *Journal of Public Policy*, 29 (3):241-262.
- Horton, Mark. 1996 *Shanga: the archaeology of a Muslim Trading Community on the Coast of East Africa*. Memoirs of the British Institute in Eastern Africa; no. 14. London: The British Institute in Eastern Africa.
- Huffman, Thomas N. 1971 "Cloth from the Iron Age in Rhodesia." *Arnoldia* (Rhodesia) 5:1-19.
- Huffman, Thomas N. 1972 "The Rise and fall of Zimbabwe." *The Journal of African History* 13(3): 353-366.
- Huffman, Thomas N. 1996 *Snakes and crocodiles: power and symbolism in ancient Zimbabwe*. Johannesburg: Witwatersrand University Press.
- Hughes, Thomas P. 1983 *Networks of power: electrification in western society, 1880-1930* Baltimore: Johns Hopkins University Press.
- Insoll, Timothy. 2003 *The Archaeology of Islam in Sub-Saharan Africa*. Cambridge: Cambridge University Press,.
- Katsamudanga, Seke and Gilbert Pwiti. 2017 "Chronology of Early Farming Communities of Northern Zimbabwe: A Reappraisal." In *Archives, Objects, Places and Landscapes: Multidisciplinary approaches to Decolonized Zimbabwean Pasts*. Edited by Munyaradzi Manyanga and Shadreck Chirikure, 119-136. Bamenda: Langaa Research and Publishing CIG.
- Kim, Nam, and Kusimba, C. M. 2008 "Pathways to Social Complexity and Political Centralization in the Southern Zambezan Region." *African Archaeological Review* 25: 131-152.
- Kim, Nam, Kusimba, C. M.. and Lawrence Keeley. 2015 "The Role of Coercion and Warfare in the Rise and Fall of State Societies in Southern Zambezia." *African Archaeological Review*. 32:1-34.
- Kusimba, C. M. 1996 "The Social Context of Iron Forging on the Kenya Coast." *Africa: Journal of the International African Institute*, 66(3): 386-410.
- Kusimba, C. M. 1999 *The Rise and Fall of Swahili states*. Walnut Creek: AltaMira Press.
- Kusimba, C. M. 2004 "The Archaeology of Slavery in East Africa." *African Archaeological Review*, 21(2): 59-88.

- Kusimba, C. M. 2006 "Slavery and Warfare in African Chiefdoms." In *the Archaeology of Warfare: Prehistories of Raiding and Conquest*. Edited by Elizabeth Arkush and Mark Allen, 214-249). Gainesville: University Press of Florida.
- Kusimba, C. M. 2008 "Early African Cities: Their Role in the Shaping of Urban and Rural Interaction Spheres." In *the Ancient City: New Perspectives on Urbanism in the Old and New World*. Edited by Joyce Marcus and Jeremy Sabloff, 229-246. Santa Fe: School for Advanced Research Press.
- Kusimba, C. M.. 2017 "The Swahili and globalization in the Indian Ocean." In *the Routledge Handbook of Archaeology and Globalization*. Edited by Tamar Hodos, 104-122. London: Routledge Handbooks.
- Kusimba, C. M. 2018a "Trade and the Medieval Swahili State. In *State Formations: Histories and Cultures of State*. Edited by J. L. Brook. Cambridge University Press, Cambridge.
- Kusimba, C. M.. 2018b "Trade and Civilization in Medieval East Africa: Socioeconomic Networks." In *Ancient Trade and Civilization*, edited by Kristian Kristiansen, Thomas Lindkvist, and Janken Myrdal, 320-353. Cambridge University Press, Cambridge.
- Kusimba, C. M. and Sibel B. Kusimba. 2005 "Mosaics and Interactions: East Africa, 2000 B.P. to the present." In *African Archaeology*. Edited by Anne B. Stahl, 392-419). Oxford: Blackwell Publishers.
- Kusimba, C. M. and Kusimba, Sibel B. "Mosaics: Rethinking African Connections in Coastal and Hinterland Relationships." In *the Swahili World*, edited Stephanie Wynne-Jones and Adria LaViolette, Routledge, London, pp 403-418.
- Kusimba, C. M. and J Walz 2018 "When Did the Swahili Become Maritime?: A Reply to Fleisher et al. 2015, and to the Resurgence of Maritime Myopia in the Archaeology of the Swahili Coast." *American Anthropologist*. 120(3):429-443.
- Kusimba, C. M.. David Killick and Richard G. Creswell. 1994 "Indigenous and Imported Metals in Swahili Sites on the Kenyan Coast." *MASCA Research Papers in Science and Archaeology* 11: 63-78.
- Kusimba, C. M., Kusimba, Sibel B and Laure Dussubieux, L 2013 "Beyond the Coastalscapes: Preindustrial Social and Political Networks in East Africa." *African Archaeological Review* 30:39-63.
- Kusimba, C. M., Sibel B. Kusimba, and David K. Wright. 2005 "The Collapse of the Tsavo Mosaic". *Journal of African Archaeology* 3(2): 243-265
- Kusimba, C. M., Nam Kim, and Sibel B. Kusimba. 2017 "Trade and State Formation on the Ancient East African and Southern Zambezia." In *Feast, Famine or Fighting? Multiple Pathways to Social Complexity*. Edited by Richard. J. Chacon and Richard G. Mendoza, 61-89. Springer, New York.
- Kusimba, Sibel B. 2003 *African Foragers*. Walnut Creek: Altamira Press.
- LaViolette, Adria. 2008 "Swahili cosmopolitanism in Africa and the Indian Ocean world, AD 600-1500." *Archaeologies* 4(1): 24-49.
- Mabogunje, Akin. 1962 *Yoruba Cities*. Ibadan: University of Ibadan Press.
- Mackenzie, Donald and Judy Wajcman. 1985 Introduction. In *The social shaping of technology*. Philadelphia: Open University Press.

- Mann, Michael. 1986 *The Sources of Social Power*. Volume 1. A History of power from the Beginning to A. D. 1760. Cambridge: Cambridge University Press.
- Manyanga, Munyaradzi. 2006 *Resilient Landscapes: socio-environmental dynamics in the Shashi-Limpopo Basin, southern Zimbabwe c. AD 800 to the present*. Studies in Global Archaeology 11, Uppsala: Department of Archaeology and Ancient History, Uppsala University.
- Mapunda, Bertram. 2002 "Iron Metallurgy along the Tanzanian Coast." In *Southern Africa and the Swahili World*. Edited by Felix Chami, 76–88. Dar es Salaam: Dar es Salaam University Press.
- McIntosh, Susan K., and Roderick J. McIntosh. 1984 "The Early City in West Africa: Towards an Understanding." *African Archaeological Review* 2 (1984):73–98
- Meyer, A. 2004 *The archaeological sites of Greefswald*. Pretoria: University of Pretoria, 1998.
- Middleton, John. *African Merchants of the Indian Ocean: Swahili of the East African Coast*. Long Grove: Waveland Press.
- Miller, Duncan, Desai, N. and Lee-Thorp, J. 2000 "Indigenous gold mining in southern Africa: a review." *South African Archaeological Bulletin Goodwin Series* 8: 91-99.
- Mitchell, Peter 2002 *The Archaeology of southern Africa*. Cambridge: Cambridge University Press.
- Mitchell, Peter. 2005 *African Connections: Archaeological perspectives on Africa and the Wider World*. Walnut Creek: Altamira Press.
- Monroe, J. Cameron. 2013 "Power and Agency in Precolonial African States." *Annual Review of Anthropology* 42:17–35.
- Morris, Craig 1998 Inka Strategies of Incorporation and Governance. In *Archaic States*. Edited by Gary Feinman and Joyce Marcus, 293-309. Santa Fe: School of American Research Press.,
- Mudenge, S. I. 1974 "The role of foreign trade in the Rozvi Empire: A reappraisal." *Journal of African History*, 15:373–391.
- Mudenge, S. I. 1988 *A political history of Munhumutapa c 1400–1902*. Harare: Zimbabwe Publishing House.
- Mutoro, Henry W. 1998 "Precolonial Trading Systems of the East African Interior." In *Transformations in Africa: Essays on Africa's Later Past*, edited by Graham Connah, 186–203. Leicester: Leicester University Press.,
- Ndoro, W. 2001 *Your Monument our Shrine: The preservation of Great Zimbabwe*. Studies in African Archaeology 19, Department of Archaeology and Ancient History. Uppsala: Uppsala University.
- Noble, David. 1986 *Forces of production: a social history of industrial automation*. New York: Oxford University Press.
- Oka, R. 2018 "Trade, Traders, and Trading Systems: Macromodeling of Trade, Commerce and Civilization in the Indian Ocean." Edited by Kristian Kristiansen, Thomas Lindkvist, and Janken Myrdal, 279-319. Cambridge University Press, Cambridge.

- Oka, R., and C. M. Kusimba. 2008 "Archaeology of Trading Systems 1: A Theoretical Survey." *Journal of Archaeological Research* 16:339-395.
- Pfaffenberger, Bryan. 1988 "Fetishized Objects and Humanized Nature: Towards an Anthropology of Technology," *Man*, Vol. 23, No. 2:236-252.
- Pfaffenberger, Bryan. 1992 "The Social Anthropology of Technology," *Annual Review of Anthropology*, 21:491-516.
- Phimister, I.R. 1974 Alluvial Gold Mining and Trade in 19th-century South-central Africa. *Journal of African History* 15:445-456.
- Pikirayi, Innocent. 2001 *The Zimbabwe Culture: Origins and Decline of Southern Zambezi States*, AltaMira Press, Walnut Creek, CA.
- Pikirayi, Innocent. 2010. In *the Urban Mind: Cultural and Environmental Dynamics*. Edited by Paul Sinclair, G. Nordquist, F Herschend, and C. Isendahl. Uppsala: University of Uppsala Department of Archaeology and Ancient History.
- Prestholdt, Jeremy. 2004 "On the global repercussions of East African consumerism." *The American Historical Review*, 109. 3: 755-781.
- Pwiti, Gilbert. 1991 "Trade and economies in southern Africa: The archaeological evidence." *Zambezia*, 18(2):119-129.
- Pwiti, Gilbert. 1996 *Continuity and Change: An Archaeological Study of Farming Communities in Northern Zimbabwe AD 500-1700*. Uppsala: Societa Archaeologica Uppsaliensis.
- Pwiti, Gilbert. 2005 "Southern Africa and the East Africa Coast." In *African Archaeology: A Critical Introduction*. Edited by Anne B. Stahl, 378-391. Oxford: Blackwell Publishing.
- Renfrew, Colin and John Cherry. 1986 "Peer polity interaction and socio-political change." In *Contemporary Archaeology in theory: A Reader*. Edited by Robert Preucel and Ian Hodder, 114-142). Oxford: Blackwell.
- Robinson, Keith R. 1985 Dated Iron Age Sites from the Upper Umguza Valley 1982: Their Possible Implications. *South African Archaeological Bulletin*, 40.141: 17-38.
- Schmidt, Peter R. 1997 *Iron Technology in East Africa: Symbolism, Science, and Archaeology*. Bloomington: Indiana University Press.
- Schmidt, P.R. J Karoma, A LaViolette, and A Fawcett. 1992 *Archaeological investigations in the vicinity of Mkiu, Kisarawe District, Tanzania*, Archaeology Unit, University of Dar es Salaam.
- Shenjere-Nyabeze, Plan. 2016 "Imperceptible realities: an ethnoarchaeological perspective on the acquisition, ownership and management of cattle by women in southeastern Zimbabwe." *Azania: Archaeological Research in Africa* 51:380-402.
- Shenjere-Nyabeze, Pan and Munyaradzi Manyanga 2012 The Archaeology of the Northern Nyanga Lowlands and the unfolding farming community sequence in Northeastern Zimbabwe. *South African Archaeological Bulletin* 67.196:244-255.
- Sheriff, Abdul M. H. 1987 *Slaves, spices, and ivory in Zanzibar*. London: James Currey.
- Sheriff, Abdul M. H. 2010 *Dhow Culture of the Indian Ocean: Cosmopolitanism, Commerce and Islam*. New York: Columbia University Press.

- Sinclair, Paul. 1982 "Chibuene - An Early Trading Site in Southern Mozambique. Festschrift for James Kirkman". *Paideuma* 28: 149-164.
- Sinclair, Paul J.J. 1993 "Urban Trajectories on the Zimbabwean Plateau." In *the Archaeology of Africa: food, metals and towns*, Edited by Thurstan Shaw, Paul Sinclair, Bassey Andah and Alex Okpoko, 705-731. London: Routledge.
- Sinclair, Paul. 2010 "Towards an Archaeology of the Future: the Urban Mind, Energy Regimes and Long-term Settlement System Dynamics on the Zimbabwe Plateau." In *The Urban Mind: Cultural and Environmental Dynamics*. Edited by Paul Sinclair, G. Nordquist, F Herschend, and C. Isendahl, 591-616. Uppsala: University of Uppsala Department of Archaeology and Ancient History.
- Sinclair, Paul J.J., Anne Ekblom and Marilee Wood. 2012 "Trade and society on the south-east African coast in the later first millennium AD: the case of Chibuene." *Antiquity* 86:723-737.
- Stanish, Charles. 2017 *Evolution of Cooperation*. Cambridge: Cambridge University Press.
- Summers, Roger. 1969 *Ancient mining in Rhodesia and adjacent areas*. Museums Memoir No.3. Salisbury: National Museums & Monuments of Rhodesia.
- Swan, Lynn. 1994 *Early Gold Mining on the Zimbabwean Plateau*. Studies in African Archaeology 9. Uppsala: Societas Archaeologica Upsaliensis.
- Tornatzky, Louis G. 1983 *The process of technological innovation* (Washington: National Science Foundation.
- Trigger, Bruce G. 2003 *Understanding Early Civilizations*. Cambridge: Cambridge University Press.
- Walker, Nick J. 1995 *Late Pleistocene and Holocene Hunter-gatherers of the Matopos*. (Studies in African Archaeology 10), Uppsala: Societas Archaeologica Upsaliensis.
- Walz, Jonathan R. 2010 *Route to a Regional Past: An Archaeology of the Lower Pangani (Ruvu) Basin, Tanzania, 500–1900 C.E.* Unpublished Ph. D. Dissertation, University of Florida.
- White, Leslie A. 1959 *The evolution of culture*. Chicago: Univ. Press.
- Wittfogel, Karl. 1957 *Oriental despotism*. New Haven: Yale University Press.
- Wood, Marilee. 2005 "Making connections: relationships between international trade and glass beads from the Shashe-Limpopo area." *South African Archaeological Society Goodwin Series* 8:78-90.
- Wynne-Jones, Stephanie and Andria LaViolette. 2018 *The Swahili World*. London: Routledge, 2018.
- Ylvisaker, Marguerite. 1979 *Lamu in the Nineteenth Century: Land, Trade, and Politics*. Boston, MA: Boston University Press.

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On the Antiquity of Southern Africa – China Interaction

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INTRODUCTION

Without doubt, in the 21st century, China eclipsed the West to become the African continent's biggest trading partner. What however, is the antiquity and deep history of Sino-African trade and exchange relationships? Archaeological and historical evidence suggests that regions such as East Africa had over one thousand years of direct and indirect interaction with China (Casson 1989; Chaudhuri 1990; Chami 1998; La Violette 2008; Fleisher 2010; Kusimba 2016). Therefore, contrary to popular narratives in western historiography, China had been to Africa before Vasco da Gama. What is less emphasised in Eurocentric versions of the past is that between 1405 and 1433 during the Ming Dynasty (1368-1644) in Imperial China, Zheng He conducted imperial adventures that landed him in East Africa some time before Vasco da Gama (Abraham 2015; Dashu 2018; Kusimba 2018; Levathes 2014). In 1418 Zheng He commanded a giant fleet of more than 62 ships ferrying 37,000 soldiers across the Indian Ocean (Abraham 2015; Levathes 2014). Even before Zheng, historical evidence suggests that multi-directional contact had taken place between the Arabian Peninsula, Egypt, the Persian Gulf, Egypt, India, Sri Lanka, Indonesia and various communities on the East African coast and the Indian Ocean Islands (Casson 1989; Chaudhuri 1985; Crowther et al. 2014; Hawley 2008). This set-in motion an earlier form of globalisation pivoted on the Indian Ocean rim, and where Europe featured little (Chirikure 2014, 2019).

Consequently, pivoting the center of global history on Europe, as was previously the case is not only inappropriate but has stunted the flourishing of research into the deep history of connections that predate the dominance of Europe in other parts of the world. Not surprisingly, the last two or so decades have witnessed increased and successful attempts to re-write global history, away from a Eurocentric point of view to one that acknowledges the contribution of others, particularly those referred to as 'people without history' - the Indian Ocean rim region included (Wolf 1982; Scott 2009). As such, the continual growth in strength of Indian Ocean studies in Africa (e.g. Chittick 1974; Horton 1996;

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Kusimba 1994; 2016, 2018; Pwiti 2005; La Violette 2008), when examined using local lenses, in various participating regions offers nuanced histories that show globalization with Europe in the periphery. In fact, African connections with Europe (southwards of Angola) only started much later during the buildup to the Portuguese 'voyages of discoveries' to India.

Recent work drawing from archaeology, archaeometry, linguistics and history continues to expose the deep history of connections between various areas within the Indian Ocean rim (Fleisher 2003; Crowther et al. 2014; Kusimba 2018). African plants, crops, and commodities ended up at different points in time in Asia, and vice versa. While the mechanics of the early history of circulations of ideas and commodities and nested biological exchanges are still being explored, from AD 700 onwards, historians and archaeologists have recorded intensified exchange relationships between the interior of southern Africa and the Swahili coast (eastern Africa) on the one hand and the wider Indian Ocean rim on the other (Curtin 1984; Chaudhuri 1985; Pwiti 2005; La Violette 2008). The Swahili coast stretches for nearly 3000 km from Mozambique in the south all the way up north, via Tanzania and Kenya to Somalia (Horton 1996; Chami 1998; Fleisher and La Violette 2005). Included in this space are the Indian Islands of Comoro and parts of Madagascar (Kusimba 2016). This coast was strategic space in the inter-continental Indian Ocean based maritime exchange in which commodities from hinterland southern Africa such as gold, iron, bark cloth, ivory, and slaves alongside those from the coast such as mangroves were traded and exchanged in return for cloth, glass beads, ceramics and among others incense (Pikirayi 2001, Fleisher and Wynie-Jones 2012; La Violette 2008). Within southern Africa, communities based at places such as Great Zimbabwe, Mapungubwe, Mapela, Bosutswe, Manyikeni and many others interacted and circulated commodities indirectly or directly with those at ports such as Chibuene, Sofala and Kilwa (Pwiti 2005; Sinclair et al. 2012; Chirikure 2014). Along the coast, the Swahili took advantage of predictable monsoon winds to have wider circulations of people, commodities and ideas linking Arabia, the Indian subcontinent, parts of Asia such as China and Africa (Chaudhuri 1990; Kusimba et al. 2013).

While there is a general acceptance of the antiquity and deep history of the Indian Ocean based circulations system, the unanswered question still revolves around the antiquity and nature of southern Africa-China interactions. As a follow on, what was the nature of the connection and trade and exchange relationship? Was it direct or indirect? Within a framework availed by archaeological, archaeometric and historical evidence, this paper seeks to provide answers to these and other questions.

EVIDENCE OF SOUTHERN AFRICA-CHINA INTERACTION

Unlike the Indian Ocean coast of Africa stretching from Djibouti and Eritrea, all the way down to Tanzania and perhaps Mozambique, where there exist some written records, albeit in various states of completeness and precision (Casson 1989; Chami 1998), nothing of the sort exists in the interior of southern Africa. Here, communities had oral literacy (Beach 1980; Pikirayi 2001), a source of

evidence often treated as inferior to written literacy. The history of mobilities and circulation of people, commodities, ideas and values along the Indian Ocean coast partly rests on written records, some backed up by direct observation but others on hearsay. In addition, there is archaeological evidence of objects that were made in various parts of the Indian Ocean rim regions and conjoined hinterlands (Kirkman 1963; Horton 1996; Kusimba 1994; Pikirayi 2001; Pwiti 2005; Zhao 2012). One of the earliest written records attesting to circulations in the Indian Ocean parts of east Africa still remains the *Periplus Maris Erythraei* (342 AD), a few travel documents from famous Arab travellers such as Al-Masudi and Ibn Battuta (10th century AD) and hearsay knowledge documented in Chinese sources (Casson 1989; Mudenge 1988; Pikirayi 2001; Prinsloo et al. 2005; Kusimba 2018). These written sources provide fragmentary information on what was happening at the coast but are however, mute on the relationship between the coast and the interior of southern Africa, otherwise known as the coastal hinterland (Beach 1980; Summers 1969). Historical sources (both oral and written) indicate that Swahili towns sourced gold, ivory, and other objects from the hinterland of Sofala which is believed to be the Zimbabwe plateau (Beach 1980; Mudenge 1988; Pwiti 1991, 2005, Pikirayi 2001; Kusimba 2018; La Violette 2008). Although it is traditionally assumed that the Swahili were intermediaries in the circulations of commodities between East Africa and beyond, no written records are available for their direct relationships with the interior (Bhila 1982). In fact, it is only when the Portuguese settled in the interior that written records directly relating to Zimbabwe plateau became available (Beach 1980; Mudenge 1988).

Consequently, before the Portuguese, available written evidence mostly refers to activities and events in East Africa. Because oral literacy is less trusted the further we go back in time (Beach 1980; Vansina 1985; Schoenbrun 2018), most of what we know comes from the material evidence. As such, our understanding of links between southern Africa and China mostly rests on archaeological evidence (Kusimba 2018). While it is clear that commodities from the Indian Ocean were circulated much earlier in the first millennium AD (La Violette 2008), the earliest Chinese objects ever recovered from the interior likely date after AD1000 (Garlake 1968; Prinsloo et al. 2005) at places such as Great Zimbabwe (AD1000 – 1700) and Mapungubwe (AD1220-1290). Great Zimbabwe is a multi-building 720-hectare settlement that yielded, from its constituent settlements a sizeable quantity of Chinese ceramics with a clear typological succession, from different stratigraphic contexts (Garlake 1968; Collett et al. 1992). Caution is however required because the correlation of the ceramics to Chinese dynastic histories was performed in the early twentieth century, characterised by poor availability of information and expertise, and as such, may be in need of revision now that more information is available. To place this problematic into focus, the best syntheses of Chinese ceramics in southern Zambezia still remains Garlake (1968), which in itself was meant to be preliminary. Archival reports at Iziko Museum suggest that some early researchers thought that Tang Dynasty ceramics were the earliest Chinese ceramics recovered from Great Zimbabwe (Iziko Museum Archives and Files, nd) (Fig). However, such an interpretation was not sustained through time. Consequently, the whole point of discussing

these 'forgotten' ceramics is to bring them to the attention of readers and experts to prompt a more correct or refined classification. It is simply not prudent to keep these finds in the closet forever. More ceramics Chinese ceramics recovered Great Zimbabwe include bluish green celadon, apple green celadon, celadon and blue on white porcelain possibly belonging to Yuan and Ming Dynasties (Chirikure 2014). Compositional analyses performed by Prinsloo et al (2005) suggested that the celadons from Great Zimbabwe archived at Iziko Museums may date to the Yuan period. However, as mentioned earlier, more expert opinion is required to verify and validate these observations. This point was also made by Garlake (1968) but has surprisingly not been seriously taken on more than a half century later.

Of all the discoveries of objects ever made at Great Zimbabwe, an eclectic collection of local and nonlocal objects and commodities found in the Renders Ruin (Valley Enclosures) easily stands out, both for the spectacular finds and for its implications for understanding circulation of Chinese objects within the southern African political economy (Chirikure 2019). Commonly referred to as the Render's Ruin hoard the assortment of objects included a Chinese jade teapot, a Persian bowl bearing an inscription in Naskhi characters made in the 13th or 14th century, fragments of Chinese celadon dishes, a piece of coral, a spoon, an iron lamp holder, a copper box, two copper finger rings, and two small bronze crotals (Garlake 1973, p. 132). The significance of Chinese objects forming part of this discovery will be discussed below.

Away from Great Zimbabwe, two fragments of Chinese porcellaneous ware were excavated in 1934, from Mapungubwe Hill near the junction of Shashi and Limpopo rivers (Prinsloo et al. 2005). An initial classification of the ceramics identified them as late Southern Song dynasty (1127 – 1279 AD). However, just over a decade ago, Prinsloo et al. (2005), studied the pigments on the ceramics and the fabrics using Raman spectrometry and XRF and concluded that the ceramics may be early Yuan. More isolated Chinese ceramics were recovered from second millennium AD contexts at Iron Age sites located in southern Zambezia encompassing parts of Botswana, northern South Africa and parts of central Mozambique. For example, Danamombe on the Zimbabwean midlands yielded apple green celadon and seventeenth century Chinese ceramics while Khami yielded blue on white porcelain and some European ceramics, possibly brought by the Portuguese. The highest number of Chinese blue on white porcelains came from Portuguese trading sites such as Dambarare, Luanze and Baranda (Garlake 1968; Pikirayi 1993). These trading sites date from 1498 onwards, when the Portuguese attempted to control trade between hinterland southern Africa and coastal east Africa (Mudenge 1988).

In summary, allowing for over-counting, the total number of Chinese objects recovered at the interior sites in southern Africa is unlikely to exceed 200, the majority coming from Great Zimbabwe. Macroscopically, the typology of ceramics from hinterland sites resembles that from chronologically overlapping sites along the coast such as Manda, Shanga and Gedi on the Kenyan coast and among others from Kilwa off the coast of Tanzania (Kirkman 1963; Chittick 1974;

Middleton 1992; Horton 1996; Chami 1998; Zhao 2012; Chirikure 2014; Moffett and Chirikure 2016; Kusimba 2018). Unlike at the coast where Chinese coins were recovered at places such as Mambui in Kenya and other few places along the coast, none are known from the southern African interior. However, in both the interior and coast however, Chinese objects are associated with those from Persia, India, and other places showing that they formed part of the broader circulation systems in the Indian Ocean rim and adjacent regions (Chirikure 2019).

DISCUSSION: WHAT WE KNOW, WHAT WE THINK WE KNOW AND WHAT WE DON'T KNOW

Archaeological evidence indicates that from AD 900 onwards, Chinese objects circulated within the southern African hinterland, away from the coast (Garlake 1968). The frequency of objects in the interior is however miniscule when compared to the coast (Kusimba 1994, 2018; La Violette 2008; Dashu 2018). At the individual site levels, the coastal sites of Malindi, Mambui, Kilwa and Shanga have yielded more ceramics when compared to interior sites such as Great Zimbabwe. To date however, no historical records suggest that the Chinese ever penetrated the interior of southern Africa (Abraham 2015; Kusimba 2018) although this picture may change as more research unfolds. However, for the east African coast, it can be generalised that Chinese objects were circulated widely into parts of Indian Ocean Africa before Chinese people, who later followed the same networks culminating with Zhen He's adventure at Malindi. Objects left China through various circulation systems and ended up on the east African coast from whence they ended up in hinterland southern Africa (Chirikure 2017). Down the line trade and exchange or a relay was largely responsible for the dispersal of early Chinese objects, alongside those from varying provenances, via established networks resulting in indirect contact between Chinese culture and coastal and hinterland southern Africa. In the absence of hard evidence, one may be pardoned for speculating the significance of the circumscribed nature of objects found in the Render's Ruin hoard at Great Zimbabwe. The material included a jade teapot, bronze bells, and crotals of Chinese provenance. The context appears to date to between the 13th and 15th centuries, a time when jade was more valuable than gold in China and was certainly an elite material (Dashu 2018). Assuming that a fifteenth century date is plausible, is it possible that these objects which were associated with Chinese courts represented high level diplomatic gifts brought by one of Zheng He's emissaries into the interior? While this is speculation of the highest order, there is a difference between ceramics that were traded and exchanged before and after, and the restricted nature of the jade teapot, bronze bell and crotals. Nowhere have such finds been made in the interior, making it possible that this 'gift' may not have been destined for trade. Instead, it perhaps became an inalienable possession of one of the rulers of Great Zimbabwe.

Continuing with the theme of value, what was the significance of Chinese objects in the interior? Traditionally, it was argued that exotics were highly valued with their use being mostly restricted to the elites (see Chirikure 2014; Moffett and

Chirikure 2016 for a critique). This appears to have been the case at the coast where elites who lived in coral houses were associated with imported objects (Fleisher and La Violette 2005; La Violette 2008; Kusimba et al 2013). In the interior however, the number of exotics is however too small. The Chinese porcellaneous ceramics mostly appear in the form of bowls (e.g. Great Zimbabwe, Danangombe etc), plates (e.g. Khami, Great Zimbabwe) and perhaps a ribbed teapot (from Mapungubwe). While tempting to assume that the rarity of these objects equates with high value, it is important to assess this line of thinking against local notions of value and prestige (Chirikure 2014). Historical and archaeological evidence suggests that ownership of the land, birth and cattle were important sources of prestige alongside ancestors (Mudenge 1988; Lan 1985). Ownership and control of production were an important power base as opposed to the consumption of objects and trinkets such as glass beads (Chirikure 2019). Archaeologically, places such as Great Zimbabwe yielded significant amounts of cattle bone across the site while drystone walls, soapstone bowls and birds and metal objects were important status objects and symbols of power (Chirikure et al. 2018). The pattern appears to be the same at other sites where the frequency of exotics is small (Garlake 1968; Moffett and Chirikure 2016). The few plates and bowls and isolated teapots may have been gifts whose value and significance could not supplant local status and prestige symbols. In any case, it is far too risky to base one's power on exotic objects whose source they had no control (Mudenge 1988). For example, Chinese ceramics could not supplant the use of clay pots in ritual and daily utilitarian purposes (Chirikure 2014). Consequently, there were thresholds which exotics could and could not cross (Barber 2007). Be that as it may, it is possible that some of the exotics found their use in ritual owing to their colours and how they articulated with local meanings. This means that once incorporated into local value systems, exotics became local (Chirikure 2019). There are numerous examples in southern Africa and elsewhere where leaders lost power when they incorporated exotic values and ideologies at the expense of pre-existing ones (Mudenge 1988; Norman 2015). One of the lessons from this discussion is that the value of objects changed along the circulation system, to the extent that there is no guarantee that the Chinese jade teapot from Great Zimbabwe had values similar to the ones it was associated with in China. Along the circulation pathways, to southern Africa, it is possible that the meanings of the object were invented and reinvented as well as contextualised and re-contextualised.

Archaeologically speaking, ceramics from China have assisted a great deal towards building chronologies in southern African sites where they were found (Garlake 1968; Prinsloo et al. 2005). This has been made possible by the fact that their typologies change with dynasties thereby allowing coarse chronologies to be established for non-Chinese sites which they are recovered from. Most of this work in cross dating sites using historically dateable imports has relied on macroscopic and stylistic characteristics but recent efforts have witnessed an attempt to use compositional techniques to match the recipes implied in the composition with those recorded at production sites (Prinsloo et al. 2005). The results of such an approach suggested that the Mapungubwe shard, previously believed to be Song, was possibly manufactured at a later date than likely to be

the 14th century. In a reversal of interpretation, some Great Zimbabwe ceramics were identified to be Yuan or early Ming. This invites more work to compare southern African ceramics with those in producer regions to build robust chronologies.

At this juncture, it is important to pose the question: did the Chinese ever visit southern Africa? A historiography of Sino-Chinese relations shows that China was involved with Africa's different regions from early on beginning in the north in Egypt and the Gulf of Arden and gradually extending southwards to the Swahili coast (Levathes 2014). Some of this information exists in Chinese ancient texts, by Chinese observers as well as from hearsay. The indication is that from the Tang Dynasty (618-907) through the Song Dynasty (960-1279), and Ming Dynasties (1368-1644) Chinese knowledge about Africa evolved from indirect to direct with official and private contacts between parts of Africa and China increasing. Song Dynasty coins were recovered in Zanzibar and Ethiopia (Abraham 2015). By the Yuan Dynasty (1271-1368) there had been several maritime routes from China to Africa. There was the China to East Africa route: travelling from China to the Maldives and then to East Africa (ibid). During the Ming Dynasty (1368-1644), Zheng He is believed to have visited Malindi (Dashu 2018). Archaeological work along the coast of Kenya found a brass coin with a square hole near Malindi in Kenya. This coin was minted between 1403 and 1424 and could have reached Africa through Zheng He's fleet. However, we do not know if the Chinese ever set foot in the interior of southern Africa.

CONCLUSION

In conclusion, southern Africa-Chinese relations have evolved through time from being indirect to more direct. While historical documents and archaeological evidence points to Chinese contact with North Africa, direct interactions with east Africa took long to develop. Eventually the Chinese followed circulation systems followed by their objects to coastal east Africa. By the Ming Dynasty, Zheng He visited Malindi. The dispersal of Chinese objects did not end at the coast: rather they circulated into the interior, albeit in lesser numbers. As yet, there is no hard evidence that the Chinese ever set foot in the interior of southern Africa. The value of Chinese exotics in the interior was variable and changed based on context and local meanings. However, parts of Africa and China were connected for more than a millennium in which commodities and ideas were circulated and or recirculated.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

Casson, L. 1989. *Periplus Maris Erythraei*. Princeton, NJ: Princeton University Press.

- Chami, F. 1998. A Review of Swahili Archaeology. *African Archaeological Review* 15:199-218.
- Chaudhuri, K. N. 1985. *Trade and civilization in the Indian Ocean: an economic history from the rise of Islam to 1750*. Cambridge; New York: Cambridge University Press.
- Chaudhuri, K. N. 1990. *Asia before Europe: economy and civilisation of the Indian Ocean from the rise of Islam to 1750*. Cambridge; New York: Cambridge University Press.
- China Daily. July 11, 2005. Is this young Kenyan Chinese descendant? China Daily [website]. Available at http://www.chinadaily.com.cn/english/doc/2005-07/11/content_459090.htm
- Chirikure, S., 2014. Land and sea links: 1500 years of connectivity between southern Africa and the Indian Ocean rim regions, AD 700 to 1700. *African Archaeological Review*, 31(4), pp.705-724.
- Chirikure, S., 2015. *Metals in past societies: A global perspective on indigenous African metallurgy*. Springer.
- Chirikure, S., 2018. Early metallurgy and surplus without states in Africa south of the Sahara. In *Überschuss ohne Staat-Politische Formen in der Vorgeschichte: 10. Mitteldeutscher Archäologentag vom 19. bis 21. Oktober 2017 in Halle (Saale)* (pp. 431-446). Landesmuseum für Vorgeschichte.
- Chirikure, S., Nyamushosho, R., Bandama, F. and Dandara, C., 2018. Elites and commoners at Great Zimbabwe: archaeological and ethnographic insights on social power. *Antiquity*, 92(364), pp.1056-1075.
- Chirikure, S., Thondhlana, T.P., Martínón-Torres, M. and Rehren, T., 2017. The Mutapa and the Portuguese: archaeometallurgy and regional interaction in southern Africa. *Objects, Places and Landscapes; Multidisciplinary approaches to decolonised Zimbabwean pasts*, pp.169-195.
- Chittick, H. N. 1974. *Kilwa: an Islamic trading city on the East African coast*. Memoir – British Institute in Eastern Africa; no. 5. Nairobi: British Institute in Eastern Africa.
- Chittick, H. N. 1984. *Manda: excavations at an island port on the Kenya coast*. Memoir British Institute in Eastern Africa; no. 9. Nairobi, London: British Institute in Eastern Africa.
- Crowther, A., Horton, M., Kotarba-Morley, A., Prendergast, M., Quintana Morales, E., Wood, M., Shipton, C., Fuller, D.Q., Tibesasa, R., Mills, W. and Boivin, N., 2014. Iron Age agriculture, fishing and trade in the Mafia Archipelago, Tanzania: new evidence from Ukunju Cave. *Azania: Archaeological Research in Africa*, 49(1):21-44.
- Curtin, P. D. 1984. *Cross-Cultural Trade in World History*. Cambridge: Cambridge University Press.
- Dewar, R.E and H. Wright 1993. Dewar RE, Wright HT (1993) The culture history of Madagascar. *Journal of World Prehistory* 7(4):417–466.
- Fleisher, J. and Wynne-Jones, S., 2012. Finding meaning in ancient Swahili spatial practices. *African Archaeological Review*, 29 (2-3): 171-207.
- Fleisher, J., 2010. Rituals of consumption and the politics of feasting on the Eastern African coast, AD 700–1500. *Journal of World Prehistory*, 23(4):195-217.

- Fleisher, Jeffrey B. 2003. *Viewing stonetowns from the countryside: An archaeological approach to Swahili regions, AD 800-1500*. PhD. Dissertation, Department of Anthropology, University of Virginia.
- Hawley, J.C. ed., 2008. *India in Africa, Africa in India: Indian Ocean Cosmopolitanisms*. Indiana University Press.
- Horton, M. 1996. *Shanga: the archaeology of a Muslim trading community on the coast of East Africa*. Memoirs of the British Institute in Eastern Africa; no. 14. London: The British Institute in Eastern Africa.
<https://newafricanmagazine.com/news-analysis/history/chinas-long-history-africa/>
- Kirkman, J. S. 1963. *Gedi: The Palace*. The Hague: Mouton and Company.
- Kusimba, C. M and S.B. Kusimba. 2005. 'Mosaics and Interactions: East Africa, 2000 b.p. to the present,' in *African Archaeology*. Edited by A. B. Stahl, pp. 392-419. Oxford: Blackwell Publishers.
- Kusimba, C. M. 1994. Chinese Ceramics in the Fort Jesus Museum Collection. *Kenya Past and Present* 26:55-59.
- Kusimba, C. M. 2018. Ancient Connections between China and East Africa Early Maritime Cultures in East Africa and the Western Indian Ocean Papers from a conference held at the University of Wisconsin-Madison (African Studies Program) 23-24 October 2015, with additional contributions Edited by Akshay Sarathi. 83-102.
- Kusimba, C. M., and R. Oka. 2009. 'Trade and Polity in East Africa: Re-examining Elite Strategies for Acquiring Power' In *The Changing Worlds of Atlantic Africa*, edited by T. Falola and Matt D. Childs, Carolina Academic Press, Durham.
- Kusimba, C.M., 2016. *The Swahili and globalization in the Indian Ocean* (pp. 104-122). Abingdon: Routledge.
- Kusimba, C.M., 2016. The Swahili and globalization in the Indian Ocean. *The Routledge Handbook of Archaeology and Globalization*. Edited by Tamar Hodos, pp.104-122. London: Routledge Handbooks.
- Kusimba, C.M., Kusimba, S.B. and Dussubieux, L., 2013. Beyond the coastalscapes: preindustrial social and political networks in East Africa. *African Archaeological Review*, 30(4), pp.399-426.
- Kusimba, C.M., Kusimba, S.B. and Wright, D.K., 2005. The development and collapse of precolonial ethnic mosaics in Tsavo, Kenya. *Journal of African Archaeology*, 3(2): 243-265.
- LaViolette, A. 2008. Swahili cosmopolitanism in Africa and the Indian Ocean world, AD 600–1500. *Archaeologies* 4(1):24-49.
- LaViolette, A. and J. Fleischer. 2005. The Swahili,' in *African Archaeology*. Edited by A. B. Stahl, pp. 392-419. Oxford: Blackwell Publishers.
- Levathes, L., 2014. When China ruled the seas: The treasure fleet of the dragon throne, 1405– 1433. Open Road Media.
- Middleton, J. 1992. *The World of the Swahili: an African Mercantile Civilization*. New Haven: Yale University Press.
- Pikirayi, I., 2002. *The Zimbabwe culture: origins and decline of southern Zambezian states*. Altamira; Walnut Creek.
- Prinsloo, L.C., Wood, N., Loubser, M., Verryn, S.M. and Tiley, S., 2005. Re-dating of Chinese celadon shards excavated on Mapungubwe Hill, a

- 13th century Iron Age site in South Africa, using Raman spectroscopy, XRF and XRD. *Journal of Raman Spectroscopy* 36(8):806-816.
- Pwiti, G., 2005. Southern Africa and the east African coast. *African archaeology: A critical introduction*, pp.378-91.
- Zhao, B., 2012. Global trade and Swahili cosmopolitan material culture: Chinese-style ceramic shards from Sanje ya Kati and Songo Mnara (Kilwa, Tanzania). *Journal of World History* 23(1):41-85.

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