African Pre-Historic Societies

Although each day brings us newer information about our past it is worthy to document African pre-history as it is today. According to Bekerie, A. (2007), the ancient African past, in its broadest sense, refers to deeds and events documented, through oral or written traditions, by peoples of Africa or African descent from the earliest, in African time…"[1] But what is Africa? Africa is a continent made of 54 countries (or 56 countries if we include the French territories in Africa Reunion and the Comoros) with an area approximately of 30.3 million Square Kilometers.[2] When this article was written the approximate total population was 935 million people. Africa is perceived as the 'last' continent because of its poor economic performance. According to the most current data available in the Central Intelligence Agency, World Factbook, Africa is currently contributing nearly 4% of the World level of Gross Domestic Production (taking into account the Purchasing Power Parity). When this article was written, data from the Central Intelligence Agency of the United States of America showed that the average per capita income for Africa was approximately USD $4,100 p.a. with Equatorial Guinea, having the highest per capita income at just over USD $ 30,000.[3]

Due to its varied geography, history, demography, governance and economies, Africa is often perceived as a divided continent. A common division of the continent, and that which I would prefer to use in this article, would based on economic and geographical affiliation and social-demographic composition. In this case most authors have divided Africa into; Northern, Western, Central, Eastern and South confederations. This does not mean that the appropriate structure hear elaborated is a perfect outline of the divisions. For instance, countries in the central, eastern and southern Africa at various points in time have entered into economic relations with each other.

[1]Ayele Bekerie, Journal of Black Studies, Vol. 37, No. 3, Pp. 445-460
[2] Cfr. Central Intelligence Agency, Source: Feb 21, 2009; World FactBook: https://www.cia.gov/library/publications
3 Cfr. Central Intelligence Agency, Source: Feb 21, 2009

Northern Africa is made up of 6 countries, Egypt at the furthest Northeastern end, Libya, Tunisia, Algeria, Western Sahara and Morocco at the Northwestern end. Western Sahara is still in dispute between Morocco and Mauritania after Spain moved out last century. These countries were historically very close to their northern neighbors, Lebanon, Palestine, Arabia and Mediterranean Europe. As long history has been, it's political, social and economic history is entwined with that of its northern neighbors. Egypt was one of the primeval world civilizations together with the civilizations of the Sumer region and that of yellow river civilization. It was the first African region to be Christianized in Africa; it was colonized by the Muslims from Arabia in the 7th century and since then it has a strong Muslim presence. For example, Egypt and Sudan are seen as part of the Arab League of Nations.

Western Africa on the hand is often considered as comprising 17 countries. Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, Gambia, The Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone and Togo. These countries are located west of Chad in the east, boarder the Atlantic coast on the west and south of the Sahara desert. Another region generally considered as the central region of Africa is given the same name, Central African Region. It is made up of 10 countries, namely, Equatorial Guinea, Botswana, Gabon, Angola, Republic of the Congo, Cameroon, Chad, Zambia, Central African Republic, Democratic Republic of Congo.

The Eastern African countries are made of 17 countries. If we were to include two French territories affiliated to Africa, they would be 19. For the purposes of this paper both Reunion and the Mayotte Islands will be considered as part of the 'Eastern African territory' for the purposes of historical outline. The reader may note that the Mayotte Islands, located between the Northern end of Madagascar and the coast of Mozambique, are a disputed territory between the Comoros and the French Government. The other 17 countries that make up Eastern Africa include, Seychelles, Mauritius, Djibouti, Sudan, Kenya, Tanzania, Comoros, Madagascar, Uganda, Mozambique, Rwanda, Ethiopia, Malawi, Eritrea, Somalia, Burundi, Zimbabwe.

Finally, there is the Southern African region which is made up of 5 countries all very closely affiliated to South Africa. They are; South Africa, Namibia, Swaziland, Lesotho. Both Swaziland and Lesotho are geographically surrounded by the South African territory. Namibia's economy is almost entirely dependent on the South African economy.

In our current history, it is this region one refers to Africa. Geographically, it lies between the southern limits of the Sahara and the northern limit of the Kalahari Desert or River Limpopo in the south. Despite this seeming homogeneity, Sub-Saharan Africa is made up of a variety of nations (often referred to as tribes, to differentiate them from their contemporary world of 'nations'. It is a matter of semantics) and peoples with significant historical, socio-political ethnic and religious disparities. Sub-Saharan Africa may be divided according to its inherent disparities, between Western Africa, Central Africa and Eastern Africa.

Radioactivity and the natural decomposition of certain chemical isotopes have made it possible to date certain types of rocks. Based on research done by Artigas and Turbón (2008),[4] it is calculated that there are certain rocks on the earth's surface that date back 4.55 billion years while at the same time there are rocks from the moon and about 70 meteorites that date back to the same age, that is 4.5 billion years.[5] For the purposes of a history of Africa, it is relevant to know when and what science has so far revealed of the first of our galaxy often seen as part of the Milky Way. The same authors continue to explain that, the first biological life seems to have emerged almost 3.8 billion years ago although no one knows yet hoe they arose. Science has not deciphered this so far. However postulations are that the first DNA, or deoxyribonucleic acid, is the hereditary material in humans and almost all other organisms) was already formed at this time. The DNA strand inhuman genetics is like a very resilient and stable computer or data center in humans. However, biological scientists postulate that the first living beings carried Ribonucleic acid (RNA) which is a type of molecule that consists of a long chain of

[4] Artigas, M. and Turbón, D., Origen del Hombre, Ciencia, filosofía y Religión; 2ª ed. Eunsa: Pamplona, 2008, P. 30
[5] Artigas, M. and Turbón, D., Origen del Hombre, Ciencia, filosofía y Religión; p. 36

nucleotide units very similar to the DNA, according to Wikipedia[6]. The RNA is the only molecule able to change things with its computer like capacity. However, this theory has not been supported substantially through experiments.

Around 1.4 billion years ago there appeared another evolutionary conquest which was the colonization of middle earth by Cyanobacterias, also known as blue-green algae, blue-green bacteria or Cyanophyta, is a phylum of bacteria that obtain their energy through photosynthesis.[7] Within another 1.3 billion years, it is suggested that the first marine algae pluricelulars appeared on earth, followed by the appearance of the first animals about 1.2 billion years ago. However, this postulation is still to be supported by concrete data since fossil research has discovered life beyond 600 million years ago. So far it seems that 1 billion years ago saw the first animals with blunt bodies and fish, later the first vertebrates, then the first plants and terrestrial animals; reptiles followed then mammals and finally man about 7 million years ago. The earliest dated humanlike species closest to man's physical attributes is TM 266-01-060-1, "Toumaï", Sahelanthropus tchadensis discovered by Ahounta Djimdoumalbaye in 2001 in Chad, in the southern Sahara desert (Brunet et al. 2002, Wood 2002). [8] He belongs to the species *Australopithecus* meaning the southern man. There are many other Australopithecus fossils that have been discovered to date which give a sense of the evolutionary process of man. They have been discovered in mainly in Africa; in South Africa, the East and Central African regions. Among the species of the genus Australopithecus are; Aphaerensis, Africanus, Bosei, Robustus. The next fossils in Man's evolutionary process are; the Homo habilis, the Homo Erectus, Homo Erectus Pekinensis and finally the Homo Sapien.

From the 18th century, science studies man as a species of nature, identifying him as the confluence of advances in Medicine, comparative anatomy and archeology. Fundamentally he is seen as a rational animal with an ingenious capacity to generate culture to protect him from

[6] http://en.wikipedia.org/wiki/RNA
[7] http://en.wikipedia.org/wiki/Cyanobacteria
[8] Artigas, M and Turbón D, 2008; Origen del Hombre, Ciencia, filosofía y Religión; 2ª ed. Eunsa: Pamplona, P. 39

the process of natural selection and to help control his own evolution.[9] This scientific perception was clearly based on Wallace and Darwin's evolution theory. As Artigas and Turbón explain, science sees man today as someone who dominates his natural environment using his qualities and capacities. He has the capacity to understand complexity relatively fast in relation to his environment and can communicate through articulated language – a better means of communication in comparison communication by gestures such as that of most animals. This capacity has enabled man to develop all kinds of technology based on his intellectual exegesis; such as, making instruments like the airplane. But all this is the result of cumulative knowledge since man significantly depends on group knowledge; or better said on his society. There seems no other group, where the individual depends so much on the others in order to accumulate knowledge as is the case of man. His cognitive capacity is crucial for his survival. It seems therefore necessary to link sciences related with the study of the human brain and the norms that govern or regulate human social life. This science, as Artigas and Turbón explain, has also to include normative instructions on how it should be done and more so how to conserve the knowledge derived from group or social experience within man himself. We may lose this so important capacity thanks to overzealous material scientists. Primarily, this has to be related to Encephalization.

Encephalization is the measurement of the process of brain enlargement through evolutionary time dimensions. It is the ratio between the size of the brain obtained and that which is expected from an animal of the same total body mass.[10] Quantifying an animal's encephalization has been argued to be directly related to that animal's level of intelligence. It is now known that the human evolutionary strategy started about 2 million years ago thanks to paleontologists and archeologists.[11] The human brain is almost the same size as that of primates but a clear difference arises when we consider man's brain relative to his body. Using encephalization we see that in the evolutionary process so far proposed, the human brain has a

[9] Artigas, M and Turbón D, 2008; Origen del Hombre, Ciencia, filosofía y Religión; P. 39
[10] Artigas, M and Turbón D, 2008; Origen del Hombre, Ciencia, filosofía y Religión P. 61
[11] Artigas, M and Turbón D, 2008; Origen del Hombre, Ciencia, filosofía y Religión, P 61

higher ratio of Encephalization Quotient (EQ) than that of the monkeys and it improves through history as the data below shows. The data shows that through evolution Homo habilis reached the level of encephalization of the Dolphins and since then became the leading being with the highest Encephalization factor.

Table 1: Comparison of Longevity, body mass and the Encephalization Quotient

Species	Longevity (avg. yrs)	Avg. Body Mass (Kg)	Jerison's EQ 67
Extinct Species			
Austr. Aphaerensis	-	37	3.1
Austr. Africanus	< 20	35	3.4
Austr. Bosei	-	48	3.0
Austr. Robustus	< 20	44	3.5
Homo Habilis	< 20	48	4.0
Homo Erectus (Asia and Africa)	< 20	53	5.5
Homo Erectus Pekinensis		53	6.1
Living Species			
Gorilla Gorilla	40	140	1.7
Papio Cynocephalu (Baboon)	31	19	2.3
Hylobathes Lar (Gibbon)	32	6	2.4
Pongo pygmeus (Orangutan)	46	53	2.5
Pan Troglodytes (Chimpanzee)	46	45	2.6
Homo Sapiens (Humans)	100	57	7.6

Source: Artigas and Turbón, 2008, Origen del Hombre, Ciencia, filosofía y Religión; 2ª ed. Eunsa: Pamplona, p. 62

Raymond Dart in 1924 found the first hominid – *Australopithecus Africanus*, called "the baby Taung" is South Africa.[12] Later in Ethiopia, Alemayehu Asfaw, found a fossil more than 3 million years old.[13] "Dinqnesh" or Lucy's scientific name is *Australopithecus aphaeresis* - meaning the "Southern Ape" of the Afar region. Ethiopians refer to her as "Dinqnesh." She is also classified in Hadar as AL 288-1. Lucy is kept fully preserved at the national Museum in Addis Ababa; an

[12] Artigas, M and Turbón D, 2008; Origen del Hombre, Ciencia, filosofía y Religión, P. 55
[13] Time Magazine, in partnership with CNN, Monday, Dec. 02, 1974

exact plaster replica is also displayed next to her. (Pankhurst 1-2)[14] She was very bipedal. Donald Johnson an anthropologist involved in the research commented; "Surely such a noble little fossil lady deserved a name. As we [his expedition crew] sat around one evening listening to Beatles' songs, someone said, 'Why don't we call her Lucy? You know, after "Lucy in the Sky with Diamonds". So she became Lucy."[15] In 1978, Mary Leakey had found "Laetoli" in Tanzania which dated 3.6 million years. As recently as 27 February, 2009, Prof. Matthew Bennet and his team reported finding "hominin footprints in two sedimentary layers dated at 1.51 to 1.53 million years ago (Ma) at Ileret, Kenya, providing the oldest evidence of an essentially modern human–like foot anatomy, with a relatively adducted hallux, medial longitudinal arch, and medial weight transfer before push-off. The size of the Ileret footprints is consistent with stature and body mass estimates for Homo ergaster/erectus, and these prints are also morphologically distinct from the 3.75-million-year-old footprints at Laetoli, Tanzania."[16] In time many hominids have been found but so far the evolutionary link between them is still in debate. It seems that around 2.8 million years ago sudden climatic changes resulted in changes in a grand scale. The panama isthmus was land locked; the Arctic froze and there was a progressive disappearance of African forests[17]. Homo habilis developed a capacity for making stone tools.

Based on genetic research Homo sapiens may have come from an African male gene dated 59,000 years. Female mitochondria seem to reach the same conclusion. As in the case of Asfaw above and Richard Leakey's research in the Lake Turkana region, the Rift Valley geographical formation seems to hide a tremendous amount of historical data buried under its morphology. Dinqnesh is a forerunner to women's active presence in the African past. African women invented agriculture. In ancient Africa, women held central positions in creation legends and mythologies. Rock paintings and engravings amply documented the deeds of both women and

[14] MOHR, A., Countries and Their Cultures; Gale Group, Thomson Corporation Company, 2001, Pp 2
[15] MOHR, A., Countries and Their Cultures, p. 2
[16] *Science*, Vol. 323. no. 5918, 27 February 2009:pp. 1197 – 1201, DOI: 10.1126/science.1168132
[17] Artigas, M and Turbón D, 2008; Origen del Hombre, Ciencia, filosofía y Religión, P. 60

men. Although minimal, early documents narrate the historical achievements of great women leaders. Human evolution continued in Africa until the emergence of Homo erectus, whose family members migrated out of Africa about 1.5 million years ago. The species were no longer simply scavengers and gatherers; they used their stone tools to cut and break meat into smaller pieces. In other words, mobility and the availability of stone tools enhanced the range of food sources. With the production of more advanced tools, such as stone axes, spears, and cutting knives, hunting became a major source of food. Homo erectus educated children during their childhood and in their adolescent years. Around 1.8 million years ago this species began a sudden migration from Africa populating Europe (1.7 million years ago), China (1.8 million years ago) and Asia (around 1.8-1.6 million years ago).[18] Evidence of this left to us through myriad of fossils and tools strewn all over Europe, Asia, china and Africa. It has been postulated that this movement would only have resulted from a change in conduct and the improvement of our organic development.

The transition from Homo habilis to Homo sapiens may probably have been occurred around 500,000 years ago. It did not occur uniformly. Around 300,000 years ago the total population of Homo sapiens probably did not exceed 3 million. Homo Sapiens Neanderthals (an evolution of Homo habilis that occurred in Europe around 400,000 – 120,000 years ago) appeared in Europe. Paleontological research also suggests to us the original evolution that reached its peak with the emergence of Homo sapiens about 150,000 years ago. Africa, and especially the Eastern African zone, had the highest Homo sapien population. This has been worked out using both DNA analysis of the archeological fossils and pollen. Through analysis of Carbon 14 it seems that fire was discovered around 10,500 years ago. With the DNA analysis it has also been proved that there is very little genetic difference between human beings. Their homogeneity is now a given fact and secondly it is a certainty now that the “supposed” Adam and Eve – that is the first parents of the Homo sapiens lived in East Africa at the boarder of Kenya and Uganda between 60,000 and 100,000 years ago. Adam had ‘Chromosome y’ and it seems almost

[18] Artigas, M and Turbón D, 2008; Origen del Hombre, Ciencia, filosofía y Religión, P. 67

100,000 years more recent than the Eve's mitochondria. "Rock art in South Africa carries the San people's religious concepts and ritual and the tradition was a common Homo sapiens were hunters and gatherers. [19] They were also the pioneers of family, communal living, rituals, and other cultural activities. Rock paintings and engravings that are found throughout the continent of Africa help us understand the early human beings and their lives. Practice until the end of the nineteenth century of our era".[20] They were to be found in the rest of the world in Siberia, along the Indian coast, in North and Central China and Asia. It is believed that by 30,000 years ago Homo sapiens were modern intellectually and anatomically.

The next period of interest is the Neolithic period. This is the period more or less around 9000 and 6750 B.C. According to Fernandez; it is believed that this was a period representing a "technological revolution" in the History of early man. Man during this period experienced scarcity of food due to the growth of population and therefore had to find a way of dominating it. Archeological evidence has been established beyond reasonable doubt in the near East. That is, fossils have been found in Zatal Huyuk, Jarmo, Jericho, Syria, Khirotikia among others. Neolithic culture began in the Levant (Jericho, modern-day West Bank) about 9500 BC. It developed directly from the Epipaleolithic Natufian culture in the region, whose people pioneered the use of wild cereals, which then evolved into true farming. The Natufians can thus be called "proto-Neolithic" (12,500–9500 BC or 12,000-9500 BC). By 9500–9000 BC, farming communities arose in the Levant and spread to Asia Minor, North Africa and North Mesopotamia. Early Neolithic farming was limited to a narrow range of plants, both wild and domesticated, which included einkorn wheat, millet and spelt, and the keeping of dogs, sheep and goats. By about 8000 BC, it included domesticated cattle and pigs, the establishment of permanently or seasonally inhabited settlements, and the use of pottery.

[19] *Science*, Vol. 323. no. 5918, 27 February 2009:pp. 1197 – 1201, DOI: 10.1126/science.1168132
[20] Isichei, E., *A history of African societies to 1870*. Cambridge University Press: Cambridge, UK, 1997

In Africa, archaeologists also found remnants of a white limestone casing for the surviving, 16-foot-tall (5-meter-tall) pyramid base. The angle of the base helped them determine that the pyramid's walls stood at a 51-degree angle. The 4,300-year-old monument is believed to be the tomb of Queen Sesheshet, the mother of Pharaoh Teti, the founder ancient Egypt's 6th dynasty. Once nearly five stories tall, the pyramid—or at least what remains of it—lay beneath 23 feet (7 meters) of sand. Based on that angle, the team determined that the pyramid was originally 46 feet (14 meters) tall and about 72 feet (22 meters) square at its base.[21] According to Ayele (2007), a team of scholars found clay tablets in Abydos, Egypt dated as far back as 3200-400 B.C. which makes them perhaps the oldest record of writings.[22] He also quotes Martin Delaney's work in the "Principia of Ethnology", who indicates a serious possibility that with our limited knowledge of Archeology "the philosophy and root of alphabetic literature had its origin in Africa. This would also make sense given that the earliest civilizations include the civilization along the River Nile in Egypt.

AGRICULTURE IN AFRICA

According to Herlin, Susan J. (2003),[23] Humans in Africa started agricultural cultivation in the equatorial forests between about 6000 and 1000 BC. The main reason for this was favorable locations, the use of new technology through accumulation of knowledge. She quotes among the early 'cradles of agriculture' and cattle domestication as North Africa, Sudannic West Africa, forests of West Africa, and the Ethiopian highlands. In each of these areas certain abundant plants and/or animals native to the region were increasingly selected and cultivated for use by local populations that had previously relied entirely on foraging. We know from her research that the earliest agriculture may have been in the highlands of Ethiopia, where they cultivated a kind of banana, millet and coffee bean. In the Sudannic belt there was millet, the black-eyed pea, and okra due to better rainfall. Around 2000 BC, we find in the Nigerian forest and savannah yams, kola and palm kernels.

[21] Onishi, N., A wall, A Moat, Behold! A lost Yoruba kingdom, Eredo journal, 1999, p. A4
[22] Ayele Bekerie, JOURNAL OF BLACK STUDIES, Vol. 37 No. 3, January 2007 445-460
[23] Herlin, Susan J., Ancient African Civilizations up to 1500 A.D. http://louisville.edu/a-s/history/herlin/textsup.htm, 2003, p. 22

Appendix 1: Estimates of Global Geographic and Economic Statistics

Source: Feb 21, 2009; Central Intelligence, World Factbook: https://www.cia.gov/library/publications/the-world-factbook/geos/wi.html

Countries	*GDP-PPP	Total	Size	Pop/Km^2
	In US $	Population	in Km^2	
Central Africa				
Equatorial Guinea	30,200	616,459	28,051	22
Botswana	15,800	1,842,323	600,370	3
Gabon	14,900	1,485,832	267,667	6
Angola	9,100	12,531,357	1,246,700	10
Congo, Republic of the	3,800	3,903,318	342,000	11
Cameroon	2,400	18,467,692	475,440	39
Chad	1,600	10,111,337	1,284,000	8
Zambia	1,500	11,669,534	752,614	16
Central African Republic	700	4,444,330	622,984	7
Congo, D. R. of the	300	66,514,504	2,345,410	28
Sub Totals		**131,586,686**	**7,965,236**	
Eastern Africa				
Seychelles	18,700	82,247	455	181
Mauritius	12,400	1,274,189	2,040	625
Reunion	6,000	776948	2517	309
Mayotte	4,900	216,306	374	578
Djibouti	3,800	506,221	23,000	22
Sudan	2,200	40,218,456	2,505,810	16
Kenya	1,800	37,953,840	582,650	65
Tanzania	1,400	40,213,160	945,087	43
Comoros	1,100	731,775	2,170	337
Madagascar	1,100	20,042,552	587,040	34
Uganda	1,100	31,367,972	236,040	133
Mozambique	900	21,284,700	801,590	27
Rwanda	900	10,186,063	26,338	387
Ethiopia	800	82,544,840	1,127,127	73
Malawi	800	13,931,831	118,480	118
Eritrea	700	5,502,026	121,320	45
Somalia	600	9,558,666	637,657	15
Burundi	400	8,691,005	27,830	312
Zimbabwe	200	11,350,111	390,580	29
Sub Totals		**336,432,908**	**8,138,105**	

Countries	*GDP-PPP	Total	Size	Pop/Km^2
	In US $	Population	in Km^2	
North Africa				
Libya	14,900	6,173,579	1,759,540	4
Tunisia	8,000	10,383,577	163,610	63
Algeria	7,100	33,769,668	2,381,740	14
Egypt	5,500	81,713,520	1,001,450	82
Morocco	4,000	34,343,220	446,550	77
Western Sahara	4,000	393,831	266,000	1
Sub Totals		**166,777,395**	**6,018,890**	
Southern Africa				
South Africa	10,400	48,782,756	1,219,912	40
Namibia	5,500	2,088,669	825,418	3
Swaziland	5,100	1,128,814	17,363	65
Lesotho	1,600	2,128,180	30,355	70
Sub Totals		**54,128,419**	**2,093,048**	
West Africa				
Benin	1,500	8,532,547	112,620	76
Burkina Faso	1,300	15,264,735	274,200	56
Cape Verde	4,200	426,998	4,033	106
Cote d'Ivoire	1,700	20,179,602	322,460	63
Gambia, The	1,200	1,735,464	11,300	154
Ghana	1,500	23,382,848	239,460	98
Guinea	1,100	9,806,509	245,857	40
Guinea-Bissau	600	1,503,182	36,120	42
Liberia	500	3,334,587	111,370	30
Mali	1,200	12,324,029	1,240,000	10
Mauritania	1,900	3,364,940	1,030,700	3
Niger	700	13,272,679	1,267,000	10
Nigeria	2,200	146,255,312	923,768	158
Sao Tome and Principe	1,400	206,178	1,001	206
Senegal	1,800	12,853,259	196,190	66
Sierra Leone	700	6,294,774	71,740	88
Togo	900	5,858,673	56,785	103
Sub Totals		**284,596,316**	**6,144,604**	
Total	**4,118**	**973,521,724**	**30,359,883**	32
World Est.	**10,500**	**6,706,993,152**	**510,072,000**	13
Ratio of Africa/World		15%	6%	