

Pathfinders for Change

New World Citizens - New Evolutionaries

Part 3 – Our Evolution Story - Primates to People

Introduction

In the articles so far we have considered the how evolution, change and update are fundamental and all pervasive processes in our Universe. Indeed this and recent continuing discoveries all point to a far more remarkable universe than we had previously imagined, with profound implications for the forces of consciousness and spirituality and their underlying pre-eminence in the processes of life.

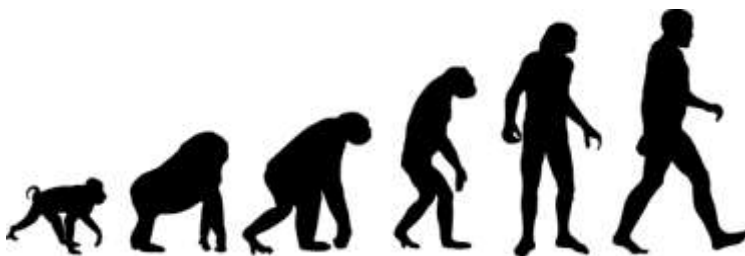
The journey now continues to consider the extraordinary story of the evolution of humans, and particularly the implications for us today and our future. The human evolutionary story has been unfolding continually over the last hundred years or so, and particularly more recently with DNA evidence appearing. New discoveries are regularly made, and the meaning of some previous discoveries is still debated – and no attempt is made here to cover all this detail or debate. But today a very good picture of the key events and elements of human evolution has become clear to us, and within all the extraordinary details that have appeared, there are several key trends that in particular help to point the ways to the future.

1. **The inexorable and continuing process of evolution in the human story.**
2. **The uniqueness of humans in the recent evolutionary record.**
3. **The speeding up of evolutionary processes and events with humans.**
4. **Multiple ‘homo’ species living side by side as one evolves and others become extinct.**
5. **The continuing evolution of artistic abilities, consciousness and spirituality.**

In this article we focus on the human story from the appearance of Primates through to the appearance of Modern Man – some 200 kya (thousand years ago) – and the final article in the series will focus on ‘us’ and how our journey from our appearance points strongly to the issues for our immediate future.

1. The inexorable and continuing process of evolution.

Humans are Primates, and it is now believed that the earliest Primates appeared from 85 mya (million years ago), even while the Dinosaurs were roaming the earth, although specific fossils are somewhat later. So the distinctive story of human from primates took place at these times – the earliest likely dates are given here. The evolution stages are from earliest Primates, then to the appearance of Monkeys, then a further advancement to Apes, and finally to the earliest distinctive form that eventually led directly to humans. It was at this point at around 7



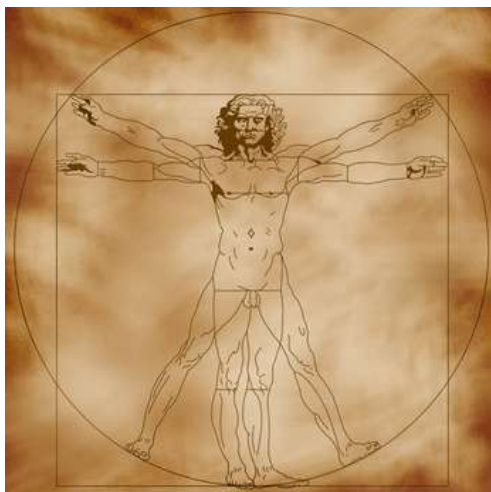
million mya or so that the line that led to ourselves finally diverged from the line of chimpanzees, our closest relative.

So from these earliest developments, the inexorable process of advancing evolution can be seen from more complex to more complex species. **Evolution as we can see is built into our very genes and history from these earliest times.**

Key Evolutionary Stages from Primates to the Earliest Ancestors of Man		
Classification	Members	Earliest Appearance or Divergence
Primates	All Primates to Man	85 mya
Anthropoids	Monkeys, Apes and Man	50 mya
Hominoids	Apes and Man	25 mya
Hominins	Man and Direct Ancestors	7 mya

2. The uniqueness of humans in the recent evolutionary record.

Throughout the history of the earth we can see continuing evolutionary developments in the fossil record. And in the table above we can see the approximate earliest dates at which the major Primate species appeared on this planet. But while evolution within these species has clearly continued, the changes have been relatively minor in all species – except one. The line called Hominins that led to humans.



Even outside these species, the story is the same. In the last 7 million years there has been the extinction of iconic species; such as that quite recently of the Sabre Tooth Tiger, the Irish Elk, and the famous Woolly Mammoths, found frozen in time in the Arctic Tundra. And Evolutionary processes have been found in other species too; but not such a dramatic leap, or an event of such importance to the history of life on earth as the evolution of man over the last 7 million years.

In this period there have certainly been six absolutely major evolutionary stages in human history, and undoubtedly many smaller ones – every one as dramatic and significant an advance as the appearance of monkeys

or apes noted above. The key stages of our evolution are set out below, with examples of the possible species that have been ascribed to that evolutionary stage.

Certainly if we look at this period of world history in the evolution record, the unique position of the evolutionary progress of man stands out as being of quite unique importance. Indeed it is also

suggested that there is a quite remarkable evolutionary focus on the human species, with every evidence that it continues today.

Key Evolutionary stages from the Earliest Ancestors of Man to Ourselves		
Classification	Examples	Possible Earliest Appearance
Earliest Hominins	<i>Sahelanthropus tchadensis</i>	7.0 mya
Australopithecines	<i>Australopithecus africanus</i>	5.0 mya
Earliest Homo	<i>Homo habilis</i>	3.0 mya
Homo Erectus	<i>Homo ergaster</i> <i>Homo erectus</i>	2.0 mya
Early Modern Man	<i>Homo heidelbergensis</i> <i>Homo neanderthalensis</i>	800 kya 350 kya
Modern Man	<i>Homo Sapiens</i>	200 kya

3. The speeding up of evolutionary processes and events with humans.

Looking at both these tables there is another feature that stands out. If we consider that in broad terms the evolutionary step from one stage, one species in each of the tables to another, is of comparable significance, then clearly the process of evolution, in the development of Primates and the line of Hominins that lead to man, has been continually speeding up. **From the earliest time when an evolutionary step took some 35 million years, the last major step to modern man only took some 150 thousand years, from the appearance of Neanderthals to Modern Man.**

This development appears first in these tables from earliest Primates to Modern Man, and later we shall see that within the era of Modern Man, that same increasing speed of evolutionary developments continues right up to today. It is one of the most remarkable and significant features of our evolutionary history, and points quite clearly to further more rapid evolutionary events in our future.






4. Multiple ‘homo’ species living side by side.

Today strangely we live in a very unusual period of human evolution. There appears to be only one species of human alive today! Isn't that the norm? Absolutely not. For almost the whole of human evolutionary history there have been multiple species living side by side. As the human has evolved,

earlier species continue but gradually weaken and become extinct, while the more capable and more advanced species continues to develop and thrive.

Indeed not only have there been several evolutionary stages of species living side by side but there have usually been two or more species within each of those levels of evolution as well. The story of human evolution has been quite complex. It is very much the normal way of evolution for a new species of human to evolve while older species are still present, and for the one with the ways needed for the future to grow, while the others die out over a period of time.

As can be seen from the diagram below, it is normal that may even be three levels of human species present at any one time, and even two or more species present within each level.

Multiple Evolving Species Living at the Same Time		
Classification	Species	Possible Living Eras
Australopithecines	Many	5 mya  1.5 mya
Earliest Homo	2 +	3 mya  1 mya
Homo Erectus	2 +	2 mya  30 kya
Early Modern Man	2 +	800 kya  23 kya
Modern Man	1	200 kya 

5. The upward progression of human evolution

From the first appearance of the early species that led to Modern Man there have been quite remarkable developments of capabilities of all kinds. But there has also been a clear ‘progression’ from an emphasis on one capability to another.

One of the earliest and more remarkable discoveries was that the human physical capability of upright walking was one of the first to appear in the earliest species. The table below sets out the major features of evolutionary development in each of the key stages to modern man.

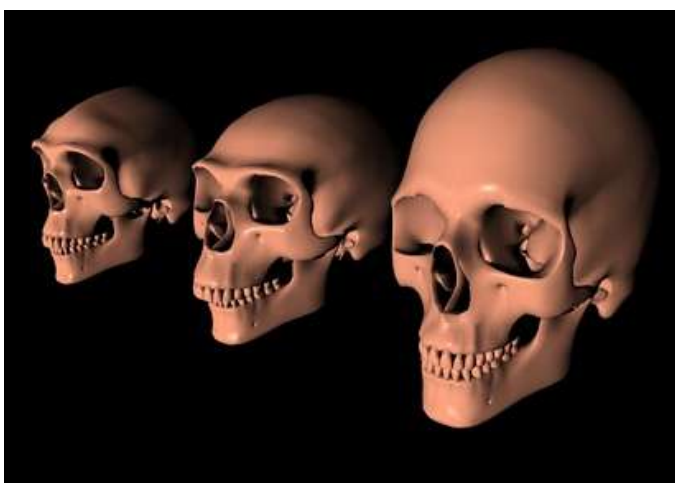


It should be emphasised that once this feature had appeared it continued to evolve as further species evolved, and although a particular capability is highlighted as appearing with one species it does not mean it was totally absent earlier, just nor present as a dramatic breakthrough.

Tool making is a good example. Australopithecines most probably used things they picked up as 'tools' but it seems that it was only the earliest 'homo' species that actually made and designed tools for their use – the really dramatic change. But then after that time tools became more and more sophisticated as each new species evolved. So from studying the human record the progression of critical but more basic developments can be seen leading eventually to the development of the human's higher faculties and spirituality.

Significant Evolutionary Steps from the Earliest Ancestors of Man to Ourselves				
Classification	Significant Evolutionary Steps (Continuing to Evolve)			
Australopithecines	Upright walking			
Earliest Homo	↓	Tool <i>making</i> , and technology		
Homo Erectus	↓	↓	World exploration & growth of brain and consciousness	
Early Modern Man	↓	↓	↓	Advancing expertise, social order & humanities
Modern Man	↓	↓	↓	↓ Arts and Spirituality

Within these developments, the progression of the human brain, and thus intelligence and consciousness, is one of the most remarkable parts of the story. Yet again it shows one of key



inexorable elements of human evolution from the earliest days of divergence from chimpanzees (whose brains incidentally have not developed significantly from that time).

Early modern man such as Neanderthals actually had larger brains than modern man – but in the progression of the more important brain to body size, modern humans took another leap forward (Note: Elephants have larger brains than humans too!)

Brain Development from the Earliest Ancestors of Man to Ourselves

Classification	Brain Size - cc	EQ Ratio (Brain to Body Size)
Modern Chimpanzees	380	2.0
Australopithecines	400	2.5
Earliest Homo	650 – 800	3.1
Homo Erectus	850 – 1000	3.3
Early Modern Man	1100 – 1400	4.8
Modern Man	1300	5.8

Back to the Future?

What can this evolution story from our past tell us about our possible future? There are certainly some quite remarkable and very clear trends that have continued over millions of years, and we can hardly expect these universal trends to stop just because we have arrived in the 21st century! So to go back to the main themes of this exploration, the kinds of indications they would give to our future could be as follows.

1. **Our evolution will continue inexorably, as it has done in the past.**
2. **The human would remain uniquely the focus of the major evolutionary events of the period we are living in.**
3. **Such events as do happen would come faster and faster, as the time between events decreases.**
4. **We may return to the more typical process of evolution in which more advanced features coexist with less advanced in the human sphere, as he more advanced spread.**
5. **The focus on human evolution will remain with the higher faculties, the higher consciousness and higher spirituality and humanity.**
6. **The progression of the brain, higher mental abilities and the mind would continue.**

We live in a moment of time today, and it too easy to think that the future will be a progression of the past. For some of human history this may be true, but we humans are only here today because times of change have occurred, in which great evolutionary leaps forward have occurred that have transformed the line of progression from the past, with dramatic new updates, capabilities and sensitivities. These events have been gathering pace as the record of history shows, who is not to say that another such time of progression is not arriving within the human race today?