

WILL THE REAL NEANDERTAL PLEASE STAND UP: PARTS I, II, and III

BY: Robert Harsh

PART I

Our April CSF program featured an excellent presentation by Henry Jackson. Henry first helped us understand that scientists from both paradigms, Evolutionary Naturalism and Biblical Naturalism depend on faith for what they believe concerning the origin and history of Human Beings. Hank reported that, according to Marvin Lubenow, in his Book, BONES OF CONTENTION, the total count of all fossil hominid individuals as of 1996 is 3998.

It was also revealed that there is a lot of disagreement among professional anthropologists about just about anything. The most important disagreement is, of course, the opinion about whether a fossil was a human or a nonhuman animal.

The theme of this article a deeper examination of exactly who was Neanderthal ala -Man? . Or is it Neanderthal ala Lubenow, Hugh Ross, and Henry Gee, writing for the journal NATURE all use "Neanderthal". John Morris, G.R. Morton, Krings in the journal CELL, Fink, and several articles in SCIENTIFIC AMERICAN all use "Neanderthal". This, in reality, is much to do about nothing, but it goes to show, scientists can disagree about anything. I grew up using Neanderthal and was on the verge of thinking myself ignorant until good old SCIENTIFIC AMERICAN rescued me {possibly temporarily} from such reconstructionism. Marvin Lubenow set the table straight, however, in BONES OF CONTENTION. The 17-th century Theologian, Joachem Neander strolled the valley through of the Dussel River so often that the valley was named after him. "Tal" in German means "valley". The "old German" is "thal" and when pronounced the "h" is --- that's right, silent. Well now let's get into something a little more productive. Exactly who was Neanderthal?

Back in the old days many of us watched a TV show called "TO TELL THE TRUTH". [What a novel idea!] A panel of celebrity judges would ask questions to three people each of whom claimed to be a certain person. They would make their choice and then the real character would then stand up. It was great fun to see if you could do better than the TV celebrities.

Picture three Neanderthals sitting in front of you. The Neanderthal on your left is claiming to be a full-blooded Homo sapiens and is indignant that you would dare question her humanity: she is Neanderthal Woman!

The Neanderthal in the middle is much more humble. She claims to be only a distant cousin. In fact she claims to be so far removed that she was never really human nor did any of her offspring ever become humans. She prefers to be known as Homo neanderthalis, although first official name was Homo antiquus. Much to her chagrin, she believes that between 100,000 and 200,000 years ago the descendants of Homo erectus came up from Africa and wiped her kind out of existence. Her champion is Professor Christopher Stringer of the Natural History Museum in London and Professor Svante Paabo of the Zoological Institute at the University of Munich.

The Neanderthal on your right is at least as arrogant as the Neanderthal on your left. She claims to be your

pre-human Grandmother! She insists on the title *Homo sapiens neanderthalis*. Her champion is Professor Milford Wolpoff of the University of Michigan.

We will first interview *Homo sapiens neanderthalis*. Why do you claim to be the grandmother of European humans but never really quite human? In the year 1856 the great British anatomist, Richard Owen addressed the Royal Institution of Great Britain. Owen spoke about the comparative differences between humans and apes. One of the key anatomical differences was the ape's very prominent eyebrow ridge. Wouldn't you know, in the very next year near the Dussel River in, Germany, a skullcap and some limb bones were discovered. The skullcap appeared to be human except for the especially heavy eyebrow ridges. Within a short time anatomists began to wonder if this might be a fossil of a link between apes and man.

Two years later Charles Darwin published his "Origin Of Species", which provided a seemingly reasonable explanation of how new types of animals could arise [evolve] from already existing types of animals. Professor Hermann Schaafhausen, from the University of Bonn studied the bones and proposed they represented an ancient race of humans probably even primitive and barbaric. So at first we were thought of as a more primitive race. In 1872 the greatest pathologist of that time, Richard Virchow, examined the bones and proposed that they were from a diseased human. His diagnosis was that the odd curvature of the femur bone was due to rickets or arthritis. However, as more "Neanderthal type" fossils were discovered over the next few decades the leg bones seemed to be straighter but they exhibited the heavy eyebrow ridge, low forehead, and massive jaw. People from that time on looked at us as not exactly ape and not quite human. The man on the street in 1998 believes we were one of the great missing links in the evolution of humans from apes.

Let's next investigate the *Homo sapiens Neandertal*. What kinds of evidence does she present that would validate her claim to be fully human? Some of us may have actually lived in caves in the old days and, believe me, I understand that most 20-th century people think of my people as cave men. Let me remind you that people have lived in caves throughout history. Ralph Solecki of Columbia University excavated the Shanidar Cave in Iraq where seven of my people were buried. To his surprise he learned that 80 Kurds had lived in the cave back in 1970 during a time of political unrest [Lubenow, 1998].

Several infamous Western American outlaws routinely hid out in caves to avoid the lawmen. Numerous large caves in the US. are known to have housed Native Americans.. Lot and his daughters lived in a cave for awhile because they were afraid to live in Zoar. [See Genesis 19:30]

Caves have been used throughout history for burial sites. You can read in Genesis, Chapter 23 about how Abraham bought a cave from Ephron for a burial site for his wife Sarah. The price was four hundred shekels of silver. Genesis 25 and 45 record that Abraham, Isaac and Rebekah, and Jacob and Leah were also all buried in that same cave, over a span of many years.

Caves have also been used as official burial sites for my people. Don't you know, that is precisely why so many of the skeletons of my people have been preserved?

So far the fossils of at least 345 individuals have been discovered at 83 sites in Western Asia, the Near East and Europe. "Of these 345 Neandertal individuals, 183 of them [53%] represent burials- all of them burials in caves or rock shelters"[Lubenow, 1998]. In fact many of the caves would better be called cemeteries because of the numbers of individuals buried in the caves. Krapina Rock Shelter in Croatia contains at least 75 individuals. Arcy-sur-Cure caves in France contained 26, while Kebara Cave Mount Carmel, Israel had 21 Neandertal remains buried there.

Possibly my people were nomadic, much like modern day people who seem to have no roots and move

around from one locality to another quite often. Caves don't move and can be easily located to return to pay homage loved ones buried there or to go to in order to bury another loved one.

During much of history many burial sites have been exclusive to people who share common cultural or religious beliefs. It is interesting that in at least three caves in Israel my Neanderthal people are buried in the same grave cave, right along with anatomically modern Homo sapiens.[See Lubnow p.89] This is strong evidence that Neandertals and anatomically modern man "lived together, worked together intermarried , and were accepted as members of the same family ,clan,and community"[Lubenow].

My people were not at all like many Twentieth Century humans think they were. Neandertals were not primitive stupid-looking inferior ape-like beings; they were highly intelligent people who sometimes lived in caves but also made good use of caves as cemeteries. There is also good evidence that ritual accompanied burials.

In the Shanidar cave the remains of Shanidar IV were positioned resting on a bedding of woven horsetails [a wetlands plant] in a curled up fetal position. The pollen from several species of flowering plants was discovered with those bones. From the orderly distribution of grains around the fossil remains, there is no question that the flowers were arranged deliberately and did not simply topple into the grave, as believed as the body was being covered"[Leaky and Lewin, 1977]. The species found around Shanidar IV were:yarrow,cornflower, St. Barnaby's thistle,groundsel,grape hyacinth, woody horsetail, and mallow. Many of these plants have been used in modern times for their medicinal qualities.Leaky and Lewin [1977] speculated that the Shanidar people were probably aware of the medicinal qualities of the flowers.

Another ritual seems to have been the sprinkling of red ocher. Besides the red ocher, Sheever[1995] reported the remains of a young male at the Le Moustier site in southern France was buried with his head resting on a pillow of flints. Shackley[1980] discovered that at the Teshik-Tashsite in Uzbekistan a Neandertal child was buried with mountain goat horns surrounding his grave. The horns were in pairs and appeared to have been driven into the ground.

At the Drachenloch site in Switzerland a very interesting discovery was made that is good evidence that my people were fully human. Inside a chest were the skulls of seven cave bears, each with its muzzle facing the entrance of the cave. The chest was covered with a massive stone slab. Deeper in the cave were six more bear skulls in niches along the wall. Among the bones was one bear skull that had a leg bone of a younger bear piercing its cheekbone and resting on two bones from two other bears.

Arranged bear bones were also found in Basua Cave in Savona, Italy. At the Regourdou site in southern France a stone slab that weighed about a ton covered a pit, which contained twenty bear skulls. Nearby another pit contained Neandertal bones along with a bear humerus, a scraper and some flakes; probably grave offerings. No other animal carries on burial of their own, with ritual. I am completely baffled as to how any creationist can insist that Neandertals were not human. Evolutionist are always hoping to find intermediate forms to fill in the gaps between known organisms. Neandertals didn't fit that need so they were more than elated when Svante Paabo announced that, based on his mitochondrial DNA studies, there was too much genetic distance between Neandertals and Modern Man. [But we'll hold off on that discussion until the July issue.]

Besides living in caves for shelter and for hiding places during times of danger [just like modern humans] is there any more evidence that Neandertals were human?

In the Ukraine there are ten sites that provide good evidence that Neandertals built dwelling structures that made use of mammoth bones. At the Terre Amata site in France a wooden hut was excavated. Inside the hut , archeologists found a fireplace and hearth, numerous stone tools, and animal bones. Neandertals

also built structures within their caves, by using stalactites and stalagmites, at Bruniquel, France. Now does that sound like any kind of non-human animal activity?! Using building materials like mammoth bones may sound rather crude to a sophisticated 20-th century person, however, I would challenge any of our readers, especially you engineering types to take a bunch of bones, antlers, and hides and build a dwelling out of those materials so that you could survive a winter in France. I think you would gain a new appreciation for how smart my Neanderthal people were.

An interesting piece of evidence is the possibility that Neandertals practiced a religion that involved Shamanism. In 1972 French archaeologists discovered, "the articulated bones of the left paw and tail of a leopard. Their arrangement suggested that the fragments were once the remnants of a complete leopard hide worn as a costume" [Shreeve, James, THE NEANDERTAL ENIGMA]. The arrangement of the bones suggested that the bones were the remnant of a robe worn by a religious leader known as a Shaman. The hide of the cape has long ago disappeared by way of decay but the bones remain. How do we know that this was not simply the remains of a leopard that wandered into the cave or was killed and dragged into the cave? Where are the other bones, claws, and teeth that should be there? They were removed to make a better cape. If Neandertals engaged in Shamanism then they were spiritual beings. Only "pure" Homo sapiens exhibit any measure of spirituality.

In answer to a question about what the earliest sign of civilization was, the anthropologist, Margaret Mead said it was not a clay pot, iron, tools, or agriculture. Her evidence for civilization was a healed femur [leg] bone. [See Brand and Yancey, FEARFULLY AND WONDERFULLY MADE.] Neandertals certainly meet Mead's criteria for being fully human. The "Old Man" at La-Chappelle-aux-Saints apparently suffered from severe paralysis and arthritis and he had a broken jaw and was missing some teeth. He had survived with these handicaps for a long time. It seems obvious that he couldn't hunt and needed help with moving about. SOMEONE TOOK CARE OF HIM. The Shanidar I individual from the Shanidar Cave in Iraq was blind in his left eye and suffered from arthritis. His right arm had been amputated. He also would have had a tough time surviving, but it is evident that he lived a long time despite those handicaps. His front teeth were worn down to the bone, indicating that he used his teeth as a vice to manipulate materials that would normally be handled by his arm. It is again clear that other Neandertals helped Shanidar I.

Neandertals made and used tools. Their tools included: choppers for opening bones, hacking wood, and as a hammer; scrapers for cleaning meat from bones and dressing hides; backed knives for cutting flesh; and points for spears. The skill it takes to choose the proper materials and then to pound flakes off to make a cutting edge is certainly evidence of at least as much distance between Neandertals and other animals as between modern humans and other animals.

Evidence that Neandertals had the ability to cooperate to make their lives better is illustrated at the La Quina site in France. Piled up bones of bovids, horses, and reindeer were found below a steep cliff, indicating a cliff drive had taken place there. Native Americans employed this technique to get meat from bison, and we know it required a cooperative effort.

It may seem obvious to you by now that Neandertals were 100% human and that our Homo sapiens Neanderthal may as well stand up now and identify herself as the real Neanderthal. But hold the phone, evolutionist like Christopher Stringer are gleefully clinging to the coattails of Svante Paabo who thinks he has genetic proof that Neandertals are not closely related. The creationist, Hugh Ross is equally happy, but for different reasons.

In our next issue we will examine the case against Homo sapiens Neandertals, as well as one more category of strong evidence for their 100% human classification.

PART II:

In our June issue we discussed who Neanderthal really was. If you will recall we had three candidates, and two had testified. We first heard from Homo sapiens neanderthalis who proclaimed that she was a distant ancestor but her kind never quite attained being fully human. She claimed to be what evolutionists were looking for; a missing link. Their more robust skeletal frame, heavy eyebrow ridge, low forehead, and massive jaw all contributed to that conclusion. The historical timing and the need for intermediate links to validate Darwin's hypothesis also made Homo sapiens neanderthalis an attractive choice. The fact that the first fossil specimens were found in caves also went a long way in painting a picture of primitive "cave men".

We next investigated the Neanderthal, who claimed she and her kind were 100% human. We found out that, although some may have lived in caves, the caves were primarily used as cemeteries. We learned that Neandertals had religion and burial rituals. The fact that they cared for their sick and injured was important evidence for their humanity. Finally, Neandertals' ability to make and use tools seems to be a good indicator that they were fully human.

In 1995 another discovery made it of utmost importance for evolutionists to find some way to separate Neandertals from the lineage of humankind. It seems that Neanderthal Man has become a disappointing embarrassment as the longstanding champion MISSING LINK. At the Divje Babe I cave in the foothills of the Alps in Slovenia, Ivan Turk discovered that Neandertals made musical instruments. Turk found a flute that was made from a bear femur [upper leg bone]. A musicologist, Bob Fink saw the picture of the bear bone flute in a newspaper and became interested. What caught Fink's eye was the spacing of the holes. The second and third holes were twice as far apart as the third and fourth holes. Fink recognized that this would allow the player to produce both whole tones and also half tones. "These three notes on the Neanderthal bone flute are inescapably diatonic and will sound like a near-perfect fit within ANY kind of standard diatonic scale, modern or antique" [Neanderthal Flute a Musicological Analysis, Internet essay by Bob Fink].

In fact, Fink constructed a flute and used the same proportional spacing. Guess what; it worked. Perhaps the Neanderthal flute maker just got lucky.

"To calculate a conservative estimate of the order of magnitude regarding the number of distinctive scales possible, the full remaining 7.7 cm. span of the flute is available for the placement of holes in these .45 cm. sections. This allows for approximately 17 tones. Using a standard permutation formula, the three holes allowed to vary in position could be distributed between the available span in $17!/14!3!$ ways, e. g., 680 ways. Therefore, the order of magnitude against a close match is in the hundreds. Thus it appears unlikely that a close match with the minor diatonic scale could occur as a matter of chance" [B. Fink, 1997, Neanderthal Flute, Musicological Analysis].

These people were highly skilled to be able to make a flute that produced just the right notes. That they were even concerned with producing an instrument capable of producing a diatonic scale is compelling evidence that these people were 100% human. Dr. Milford Wolpoff, the leading proponent of the multiregional theory for the evolution of humans from Homo erectus, went so far as to conclude that because it was so clear Neandertals made and used musical instruments, "it would be a key to arguing that they were capable of language as well " [Wolpoff, 1997, as quoted by K. Wong, " Neanderthal Notes", Scientific American, September, 1997].

With their cranial capacity on average 200 cubic centimeters larger than modern humans, it should not surprise us that they were intelligent people. Some apes have more massive heads but have much smaller brain sizes.

"Culturally, he cared for the sick and elderly, buried his dead, employed art and religious rites, appreciated agriculture, clothing, and music. His cultural level was " primitive" compared to twentieth century technology, but not all that different from many people groups worldwide in recent centuries" [J. Morris, 1997, Is Neandertal In Our Family Tree?-Human evolution update on Internet from ICR].

Let's next interview Homo neandertalis. She claims to be an extinct separate species that was never in the direct ancestry of man, but shared a common ancestor, Homo erectus over 700,000 years ago. Christopher Stringer has been the major supporter of Homo neandertalis and his model, the "monogenesis model", suggests that true humans arose in Africa and after migrating up to Europe, wiped the Neandertals out. In the late 1980's, Cann and Wilson introduced a new avenue of investigation. They compared the sequences of nucleotides of mitochondrial DNA of around 100 people from four continents. Then they applied computer analysis to the data and determined that the ancestral common source of all humans lived only 200,000 years ago in Africa. Milford Wolpoff and his "multiregional" group have of course objected on many grounds .So the debate goes on.

Enter Svante Paabo. Her strongest support comes from the research involving comparison of the mitochondrial DNA of one Neandertal with 994 modern day humans from five different races. Svante Paabo and several associates first introduced this line of evidence by way of a paper in the July 11, 1997 issue of the journal, Cell, [Krings, M., Stone,A., Schmitz, R.W., Krainitzki,H., Stoneking, M., and Paabo, S., Neandertal DNA sequences and the origin of modern humans. Cell, 90: 19-30].

Paabo claims to have examined the nucleotide sequences of mitochondrial DNA taken from the humerus [arm bone] of the first Neandertal that was discovered in the Neander valley in 1856. His colleague, Mattias Krings extracted the mtDNA from a 0.125- ounce sample of bone and cloned it by polymerase chain reaction technique and produced enough new mtDNA to be able to study the nucleotide sequences. He then compared that data with the nucleotide sequences from more than 1600 modern Africans, Asians, Native Americans, Australians, Oceanians, as well as Europeans.

Paabo and his associates were able to study only 379 base pairs out of a total of 16,500 base pairs of human mitochondrial DNA or about 2% of the total.

In an attempt to insure that the results were not from contamination from modern humans, Krings repeated the whole experiment with a new 1/100th of an ounce sample of Neandertal bone. He got the same results. Mark Stoneking from Penn State University examined yet another sample and got the same sequence.

The results showed that the 379 base pair Neandertal sequence differed in 27 positions from average modern human sequences while modern sequences differed among each other, on average, by only eight places. Paabo concluded that because the Neandertal mtDNA was not similar enough, Neandertals were not closely related to humans and had to have evolved separately for at least 500,000 years to have become so different.

Before going any further, let's try to understand the biology involved here; and what a magnificent biological design it is! I don't want to insult anyone's intelligence or leave anyone behind, so we will proceed from general to specific. I want every one of our readers to be able to understand this topic because this is a brand new angle that evolutionists are taking the ball and running. Although the conclusions should be very tentative, many anthropologists are treating this as indisputable scientific proof.

All living organisms are made of cells and all of these cells require energy to be able to live and carry out their functions. The source of that energy for humans is the food that we eat. We are able to digest and

chemically change that food into glucose, also known as blood sugar. Each of our cells, including our bone cells, takes in glucose and uses the energy in the glucose to make ATP [adenosine triphosphate], the universal energy source for almost all cellular activities. The process of taking the energy from the glucose and using that energy to make ATP requires oxygen and is called cellular respiration. If an animal were to suffocate it would not be directly due to lack of enough oxygen, but lack of ATP, which is the cell's energy source. Respiration takes place in marvelous cellular organelles known as mitochondria which have the physical structure that a myriad of enzymes carry out numerous chemical reactions in the extremely efficient processes of cellular respiration.

How do you know how to manufacture these complex structures along with their large array of respiratory enzymes? The answer is the same as, how you knew how to construct your heart or eyeball. Your DNA [genes, chromosomes] contains all of the necessary blueprints.

And where did you get your DNA? Until fairly recently the proper answer would have been; you got 1/2 of your DNA[genes] from your dad and 1/2 from your mom. We now know that is not quite accurate. It has been discovered that you have DNA in your mitochondria as well as in the nuclei of your cells. It is true that you inherit exactly half of your nuclear DNA from each parent, but you also inherit almost all of your mitochondrial DNA [mtDNA] only from your mother.

Eggs and sperm are each single cells which contain, not only the nuclei but also a vast array of organelles. When a sperm fertilizes an egg it contributes its chromosomes which then combine with the chromosomes of the egg to form the first nucleus of the zygote [fertilized egg]. The other organelles of the sperm do not become part of the zygote and are merely lost. However according to Giles and associates, a small portion of mtDNA, less than 4% could come from the father [Giles, Richard, Blanc, Cann and Wallace. 1980. Maternal inheritance of human mitochondrial DNA. Proc. National Acad. Sci. USA. V.77[11]:6715-6719.]. Nicholas Schork and Sun-Wei Guo estimated from their research that up to 0.1% of the mtDNA in the zygote [fertilized egg] is paternal[Schork, Nicholas J. and Sun-Wei Guo. 1993. Pedigree models for complex human traits involving the mitochondrial genome. Am. J. Genet. 53: 1320-1337]. For purposes of our discussion we will ignore the paternal mtDNA.

So, if the mitochondria that are contained in the zygote all came from the mother then the mtDNA they contain also came only from the mother. When a zygote divides by mitosis to produce two daughter cells the nuclear DNA first replicates so that each new daughter cell has identical DNA. This exact replication of nDNA [nuclear DNA] takes place each time cells go through mitosis [cell division]. The organelles, however, are distributed unequally between the two daughter cells in a process known as cytokinesis. After cell reproduction however, new organelles must be manufactured as the daughter cells grow. The "blueprint" for these new organelles is totally found in the nuclear DNA. In other words, existing mitochondria do not independently reproduce; they are produced by the cell under the direction of the nucleus [Alberts et. al. .1994 The Cell. p.713].

In 1981 the complete sequence of the human mitochondrial DNA genome [all of the DNA]was published [see The Cell. 1994. P, 708]. Human mitochondria were found to contain 16,569 nucleotides that code for 37 genes. This compares to nuclear DNA [nDNA] which codes for 50,000 to 100,000 genes [Bishop, 1998] and is 300,000 times longer [Miller, 1998, The Fire Within].

The mitochondrial genome contains 2 ribosomal RNA genes, 22 transfer RNA genes and 13 genes that code for non-structural proteins. " The DNA's of several other animal mitochondrial genomes have also been completely sequenced and they have the same genes and gene organization" [Cell p.708].

If you would like to see the entire human mitochondrial DNA genome database the Department of Genetics and Molecular Medicine at Emory University has provided it at their website

at: "<http://infinity.gen.emory.edu/mitomap/v3.0/mitoseq.html>" and a functions map of the mtDNA that notes the locations of all mtDNA genes may be found at : "<http://infinity.gen.emory.edu/mitomap>"

Research has shown that mtDNA mutations happen at a rate ten times greater than nDNA. According to a leading university cell biology textbook " the relatively high rate of evolution of mitochondrial genes makes mitochondrial DNA sequence comparisons especially useful for estimating the dates of relatively recent evolutionary events, such as the steps in primate development." [Cell p.710]

Let's next look at a small section of the mtDNA sequence. The first twelve nucleotides are : gatcacaggtct. [The nucleotide letters represent: a= adenine, c= cytosine, g= guanine, t= thymine.] These twelve nucleotides code for the first four amino acids. Possible changes in the DNA code can take several forms: deletion of one or more nucleotides, addition of nucleotides, or substitution of nucleotides with other nucleotides. Any of these changes [mutations] may range from having no effect to the production of a completely useless product. Note that all evolution completely depends on the unlikely event of a random nucleotide change, which brings about production of a better product. Let me emphasize that it is only by successful random sequence changes of the amino acids that natural selection has anything new to work on to bring about positive evolutionary change.

The prevailing thought is that if two individuals have mtDNA nucleotide sequences that are significantly different, they are genetically less related than individuals whose sequences are more similar. It is also thought that nucleotide differences are a function of time. Greater nucleotide sequence difference translates into longer time since the two individuals had a common ancestor. Because almost all mtDNA is inherited from the mother, variation due to recombination of paternal and maternal genes each generation is not a factor.

So do the conclusions reported by Paabo and Stoneking prove that Neandertals were a completely different species from true Homo sapiens and that they didn't contribute their genes into the modern Western European gene pool?

We will save that answer for a future Origins Insights. Remember to locate your June issue and put it with this issue so that you can review the whole topic as a unit when the third installment arrives [probably next month].

PART III

Welcome to the third installment on the topic of investigating Neanderthal Man. The idea for this series came from our CSF meeting in April, 1998 with a presentation given by Hank Jackson. While reading Lubenow's book, Bones of Contention and his article in the Creation Ex Nihilo Journal ,vol.12,no.1, I became even more interested. News of Svante Paabo's mitochondrial DNA studies comparing the first Neanderthal ever discovered with modern humans further stimulated my interest in this topic because I knew his interpretation of his results had to be proven false. His conclusions presented me with a disconcerting feeling. Savante believed that he was able to prove that Neandertals and modern humans were separate species! But, how could this be?!

Neandertals exhibited anatomical and behavioral characteristics reserved only for humans. I believe that man was created in God's image, not physically but spiritually. Man is not so special by his appearance but by characteristics that make him totally unique as a living organism. I am referring to his behavior. Besides their obvious anatomical similarity, Neandertals behaved like humans. They had art: painting and jewelry. They had instrumental music and constructed musical instruments that the average 20th Century human could only dream of having the talent to produce. They buried their dead; it seems,with ceremony. They cared for their injured and old. Most important they seemed to believe in an after-life and had

religion.

So what's the big deal, Mr. Harsh?!

The big deal is this. We are being asked to accept that two species of animals exhibited exclusively human traits. Constance Holden in an article in the journal, *Science* put it this way, " Neandertals are fantastic ways of realizing the alternative ways of humanness" [Holden, C. 1998. How much like us were the Neandertals? *Science* . 283: 1456]. And, yes, Mr. Hugh Ross, you are dead wrong to gleefully accept Savante Paabo's conclusions that Neandertals have made no contribution to the human gene pool. If Neandertals were not human but, on the other hand, exhibited human traits and even lived side by side in "ancient" Israel, what exactly does it mean to be "created in God's image"? The vast gulf between human animals and all other created animals is not just in their anatomy but in their special position in all of God's creation, and is exhibited by vastly different behaviors. All cultures of human beings worship some sort of God or gods and we by nature know we should worship God. This is clearly explained in Romans 1: 18-23. **I believe the greatest benefit we derive from being created in God's image is our privilege of being able to carry on communication with our Creator.**

It is extremely important for creationists to not let the evolutionist establishment latch onto this so called proof that two human-like animals evolved and one went extinct!

The philosophy that the earth is billions of years old is common sense knowledge today. It got its start with the belief, by many scientists and theologians, in Charles Lyell's contention that every thing about nature has happened the same way and at the same rate throughout history[Uniformitarianism]. Lyell's unproved and unprovable hypothesis is taken for granted as absolute truth today. I am convinced that you readers who are "Old Earthers" have felt compelled to bring your interpretation of scripture in line with Lyell's philosophy rather than allowing the normative hermeneutic to be your guide. Allowing Lyell misinterpretation of Earth's history has cost the quest for truth dearly!

We may scoff at the notion that Darwin's hypothesis holds any real scientific validity today but it doesn't matter. Darwin's hypothesis has become the paradigm of most scientists today and the man in the street assumes that Darwin's hypothesis is undeniable truth. ***Unbelievers got away with another misinterpretation of the truth about nature and the world has paid dearly. Stalin and Hitler were both big fans of Darwin's philosophy.***

Ernst Haeckel got away with it. Haeckel proposed that the embryological development in animals mirrored their evolutionary history. He even had detailed illustrations to prove his point. It is now known the Haeckel doctored his illustrations to make his case. It doesn't matter; his illustrations of ONTOGENY RECAPITULATES PHILOGENY have appeared in so many biology books that now it is such common belief that we can even blame our bad behavior on our evolutionary past. **Freud was a great fan of Haeckel's fraud and the founder of modern psychology was able to do great damage to our proper understanding of why people behave as they do.**

The famous Monkey Trial in Dayton, Tennessee was a showcase of misinformation that was believed at that time. Nebraska Man and Piltdown Man were key witnesses at that ACLU driven media circus. As you probably know, Nebraska Man was based on a single tooth that in reality turned out to be from an extinct pig! Piltdown Man, of course was a deliberate hoax. Do people today view the Scopes trial as a triumph for evolution, even though the key evidence was based on false information? You bet they do. The lie is perpetuated hundreds of time each year when English teachers, who are ignorant about the real historic trial require their students to read " Inherit The Wind". **Evolutionists have gotten a lot of mileage out of portraying creationists as poor ignorant religious buffoons. And they continue to do so. In my mind that is why many scientists keep quiet about their doubts about evolution. They do**

not wish to be portrayed as ignorant. *Evolutionist bully tactics have been very successful in perpetuating the big lie!*

And now evolutionists are trying to get another very powerful lie on solid ground. If there is scientific proof that there were two completely different non-interbreeding species both possessing human behavior traits, how can we any longer believe that man is so special in God's sight?

Let us not make the same mistake and allow misinformation evolve into scientific fact!!! The stakes are high.

Man is special only because he was created in God's image and is the only part of creation that God is interested in fellowshiping. Creator God did not take on the very being of His creation over a part of creation that He didn't care all that much for. " For God so loved the world[people] that He gave only Son[Jesus Christ]that whoever believes in Him should not perish but have everlasting life." [John3:16]

Let us now investigate the DNA evidence.

Powledge and Rose wrote the following in the journal *Archaeology*: "DNA can be used to understand the evolution of modern humans, trace migrations of people, identify individuals and determine the origins of domestic plants. DNA analysis , as one scholar put it is the greatest archaeological excavation of all time'. Because ancient DNA molecules are normally so few and fragmented, and preserved soft tissues are so rare, scientists had little hope of finding and analyzing it. But two breakthroughs have made this possible: the polymerase chain reaction [PCR], a method of copying any fragment of DNA, and the successful recovery of DNA from any preserved hard tissues, bones, and teeth that are durable and relatively abundant" [Powledge,T. and M. Rose. 1996. The great DNA hunt. *Archaeology*, Sept./Oct.1996]

You may recall, from the October,1998 *Origins Insights*, that Svante Paabo's landmark article appeared in the July 11, 1997 issue of the journal *Cell*. A 0.125 ounce sample was extracted from the humerus bone of the very first Neandertal that was discovered. It was then cloned by PCR technique to obtain enough mtDNA to be able to study. Paabo was only able to study a 379 base pair segment out of a possible 16,500 base pairs in human mtDNA.

You may also remember that he then compared the Neandertal mtDNA with the mtDNA from 1,600 modern humans. From that meager data Paabo concluded that there was enough difference between the two to divide them into separate species.

In my mind , the most fundamental source of error is right at the beginning. "One of the problems of extracting ancient DNA concerns the laboratory procedures used to extract it. Essentially, one goes fishing with pieces of modern DNA, which hooks the ancient DNA [if any]. An enzyme is used to copy the ancient DNA sequence millions of times"[Gee, H. 1997. *Relics: Neandertal DNA settles evolution debate. Nature. July,24,1997*]. Extreme care must be given to the meager amount of mtDNA sample that is to be tested.

PCR technique is nondiscriminating and will copy any DNA that is available to it. For anyone so inclined, the May 1998 issue of *Scientific American*, has an excellent illustrated explanation of how PCR works, on page 112. There is no difference between ancient DNA and modern and the slightest bit of contamination by modern DNA from anyone who handled the specimen from the time it was discovered to the extraction of the sample will be copied millions of times. There is a good chance that it may go undetected and be classified as ancient. Researchers, Gibbons and Kahn wrote in *Science*, " It's tough to distinguish DNA intrinsic to an ancient sample from the modern DNA that unavoidably contaminates it - the source of many false claims in the past. Ancient human samples are especially tricky, because their

sequences might not differ much from that of contaminating modern human DNA, so it's hard to get believable results"[Gibbons, A. and P. Kahn.1997. DNA from an extinct human. *Science*,277: 176-177 as found in Lubenow,1998]. Gee added," Very often, putative ancient DNA fragments extracted from a dinosaur bone, for example, come from modern fungi or bacteria—or from the experimenters themselves"[Gee,1997]. Consider the thinking of Paabo himself, " Any trace of modern DNA that makes it into the experiment will be amplified if it carries sequences to which the primers can bind. One must wonder whether a similarity between oneself and one's putative ancestors is real or merely the result of sloppy laboratory technique. Contaminating DNA can come from many sources: skin cells shed by archaeologists or museum keepers as they handle the samples; dust particles; or minute amounts of DNA from earlier experiments conducted in the same room"[Paabo, S. 1993. Ancient DNA. *Scientific American*, Nov. 1993]. Contamination can even come by way of the ventilation system and the PCR laboratories must be isolated from each other.

Marvin Lubenow in his article," Recovery of Neandertal mtDNA: An Evaluation" noted that John Marcus also raised the point that the PCR technique itself may introduce errors into the sample and then copy those PCR induced errors into billions of copies. Marcus noted that of the 27 differences between Neandertal and modern human DNA[in that short, 379 base pairs segment that was studied] 24 of the differences were changes of G to A and C to T. It seems like something is fishy here because A [adenine] and G [guanine] are both purines and are almost identical in their chemical structure and C [cytosine] and T [thymine] , both pyrimidines, are also almost identical as to their structural formulas. One would expect that changes due to mutations through the years would have produced changes nearer to one third for each nucleotide.[i.e. 1/3 A(C; 1/3 A(G; 1/3 A(T etc.)

Another distinct problem is that , fundamental to any valid scientific investigation, the investigation and its results must be repeatable. Paabo and his team, as well as other investigators. have attempted to extract mtDNA information from other Neandertals without any success whatsoever! Are evolutionists jumping the gate a little bit in their confident proclamation that Neandertals were not *Homo Sapiens*?

The problem lies, not so much in the science, but in the disgraceful tactics they employ. The original report was an attempt to do good science and it was tentative[as it should be] with acknowledgment of alternative interpretations and sources of error. However the subsequent articles based on the original research do not hint of any tentativeness. The conclusions are offered as absolute truth. Then the, possibly flawed, information is passed on to the unsuspecting public who grab it up and believe that scientists have definitely proven that Neandertals and humans are not related. Even such influential people as Hugh Ross naively perpetuate the misinformation that should present a real dilemma to any thinking creationist.

Another area of concern in evaluating Paabo's research is in his statistical deficiencies. Paabo compared the mtDNA from 1,669 modern humans with **one** Neandertal! The whole thesis of his conclusions is based on statistical averages. **An average of 27 differences was observed between 1,669 modern humans as compared with an "average" of one Neandertal.** I do not understand how a professional scientist can take such liberties with his statistical analysis!

The range of nucleotide substitutions between modern humans and Neandertal was from 22 to 36 differences. On the other hand, the range among the 1,669 modern humans was from 1 to 24 differences! This means that there are humans that exist today with more differences in that short stretch of DNA than are the differences between some modern humans and Neandertals. ***That's right, if Paabo's research is right you are more related to the Neandertal found in the valley of Germany's Dussel River than you are to many other modern day humans!*** Now that's scary.

Another curious result found in Paabo's Cell report is that modern humans are more related to chimpanzees than are Neandertals related to chimps. A graph appeared in the paper which showed

various comparisons: human-human, human-Neandertal, and human-chimp. In personal correspondence with Lubenow, Marcus wrote: " What is clear, however, from the DNA distance comparisons that I performed, is that the Neandertal sequence is actually further away from either of the two chimpanzee sequences than the modern human sequences are. My calculations show that every one of the human isolates that I used was closer to the chimp than was the Neandertal. Clearly, the Neandertal is no more related to chimps than any of the humans. If anything, Neandertal is less related to chimps"[Lubenow,1998].

Lubenow brought out another interesting observation. The amount of divergence in DNA base pairs is the basis for the "so called" molecular clock. A report in Science gave the opinion that mtDNA may mutate as much as 20x faster than previously thought. In referring to the mitochondrial Eve, Gibbons wrote: "Using the new clock, she would be a mere 6,000 years old" [Gibbons,A., 1998. Calibrating the mitochondrial clock. Science, 279:28]. In the December, 1992 Scientific American I read that Stoneking and Vigilant published a range for the time of existence of mitochondrial Eve " between a lower boundry of 63,000 years and an upper boundry of 416,000 years. The range has 95 percent reliability, the standard statistical test of such measures" [Ross,P.,1992. Shaking the tree. Scientific American. December, 1992].

A little simple arithmetic will show that the range could legitimately be calculated to be 3,159 to 20,800 years since the mitochondrial Eve walked planet Earth[63,000/20 and 416,000/20]. Mr. Ross is of course taking for granted that the reader understands that the statistical fine print for his 95 percent reliability reads " As long as the mutation rate has on average remained constant and the rate of mutations that have been preserved is known and is accurate". I doubt if the average person took into account that fine print [I'm just kidding; there is no fine print].

Finally; while I have your attention thinking about microbiology and biochemistry, allow me to make one more point. As was pointed out in the previous issue, the DNA found in the nucleus codes for mitochondria and then the cell builds them. I have no idea how many base pairs of DNA mitochondria it would take but it must be an enormous number. Evolutionists have to admit that somewhere between the primordial soup [you remember, that stuff we all evolved from!] and humans, mitochondria had to evolve. Although I cannot tell you the odds of mitochondria evolving by pure chance , I can give you a glimpse of what evolutionists are up against. Mitochondrial DNA had to have evolved by pure chance sometime along the line before functional mitochondria could have been produced. We know that for the only 37 genes in mtDNA a minimum,16,569 base pairs of nucleotides are required.

The odds of the first particular nucleotide, G, would be 1/4. The odds of the second, A, would also be 1/4, as would the third, T, and the fourth, C. The odds of the proper ,GATC sequence would be 1/4 to the fourth power = 1/256. The odds of producing just the 37 genes that help to run the mitochondria =1/4 to the 16,569th power! ***What faith evolutionists have to have to fight against such minute odds! No wonder they have felt it necessary to resort to poor science and deceit to spread their brand of religion!***

[Return to CSF Home Page](#)