Neanderthal vs modern man essay

In the world today, all humans are classified as Homo sapiens. However, exactly 157 years ago, a completely new species is recognized by Johann Fuhlrott in a limestone quarry of the Neander Valley in Germany. In August 1856, a skull cap, two femora, three bones from the right arm, two bones from the left arm, a part of the left ilium, fragments of a scapula, and ribs are excavated and put together into a type specimen named Neanderthal 1. This specimen is believed to be a whole new species: Homo neanderthalensis. Scientists today are still arguing about the origin of the Neanderthals.

Do they belong to the same species as modern men, or are they a species of their own? Neanderthals and modern humans have numerous amounts of similarities and differences, and based on these facts, scientists are trying to come up with a final conclusion on what the actual species of the Neanderthal may be. Neanderthals and modern humans have many physical dissimilarities. Based on intensive studies of Neanderthal skulls, a team of scientists from the Leipzig-based Max Planck Institute for Evolutionary Anthropology conclude that during the first year of life, new-born Neanderthals and human babies have remarkably similar brains.

The similarities of their brains are solely due to the similar structures of both mothers' birth canals. However, as both species mature, the brain size and shape undergo changes. First of all, the face of a Neanderthal at birth is already larger than a modern human's face. As the bodies mature, the Neanderthal's brain grows to be slightly larger than a modern man's. The Neanderthal's nose is also different from a modern man's; it is broader and shorter. The forehead of a modern man is high-domed, and the jaw is smaller than a Neanderthal's.

The larger frontal lobe of a modern man is what makes the species a more intelligent one. Since that region of the brain controls decision making, creativity, and abstract thought, the modern man is more intellectual than a Neanderthal. Also, Neanderthals lack the pointy protruding chin which Homo sapiens have. Generally, the skull of a Neanderthal is more robust and more tough than a modern man’s skull; modern people have a much more delicate skeleton. From these observations, scientists conclude that the Neanderthals rely more on body strength than on mental strength.

Neanderthals are generally short and stocky. The average height of a female Neanderthal is five feet, her weight being 119 pounds. The male is five inches taller, and weighs 149 pounds. From skeletal studies of the bodies, scientists can conclude that the Neanderthals do a great deal of walking and running. The thickness and high density of their leg bones suggest that the species highly use their ability to move in a bipedal manner. Because the Neanderthals have lived through long periods of cold weather, the large size of their brain is therefore explained.

The larger the brain, the more energy is produced by the body. This energy is needed in order to hunt, build shelter, and generate heat for the body. Since modern men are much more clever than Neanderthals, their hunting techniques are rather different from each other. Specifically, the tools modern men have used for hunting and eating are fascinating to study. Modern humans used a stone-carving technique called flint-knapping to make stone tools. This technique requires chipping flakes off one piece of flint by striking it against another piece.

One of the most popular tools is the hand ax, carved with extreme delicateness and accuracy, from stone. Unlike the chunky flaked tools that are used by Neanderthals, modern men use long sharp blades, sharpened on both sides. These accurate measurements indicate the strong geometry knowledge of modern men. The blades are used in hunting – they are attached to spears and hurled into the prey. The hand ax is used in dismembering the prey after it is killed. Modern men also have made needles out of bone, fish hooks, and harpoons.

All of these intricate tools have been successfully used in hunting and eating, and because of these inventions modern men have out-numbered the Neanderthals. Because the Neanderthals were not smart enough to make good tools, they were forced to depend on vegetation more than on meat as their source of food. Since Neanderthals never developed a spear they could throw, they were basically forced to kill their prey with bare hands. Large groups of men tackled the prey down while another group stabbed the prey with sticks and short hand spears.

Because hunting for them was so risky, Neanderthals most probably avoided hunting, scientists hypothesize. Instead of eating mostly meat, Neanderthals ate mostly vegetables and other vegetation such as roots and herbs. According to the study of 50, 000-year-old skeletal remains found in El Sidron Cave in northern Spain, Neanderthals are definitely known to have eaten greens. Scientists examined the teeth of 13 Neanderthal individuals, and their tests showed layers of calcified plaque, which contained a range of carbohydrates and starch granules.

Some also showed roasted starch granules, which suggested that Neanderthals cooked and smoked plants. Very few lipids or proteins from meat were found. This information proves that that the Neanderthals mainly consumed vegetation than meat, due to their lack of intelligence in tool-making. Even though Neanderthals and modern humans share so many differences in tool-making, eating, and physical traits, the two species are still somewhat related to each other. Studies today suggest that after migrating from Africa, modern humans may have interbred with Neanderthals.

Neanderthals have been around for about 30, 000 years, whereas modern humans appeared 200, 000 years ago. In 2010, scientists completed the first sequence of the Neanderthal genome. They used DNA extracted from fossils, and their results suggested that modern humans' ancestors interbred with Neanderthals. Also, according to recent estimates, Eurasian genomes today are made up of one percent to four percent of Neanderthal DNA, which explains the tough immunity of some people today. According to the studies, Neanderthals appeared to be more closely related to people outside Africa than in Africa.

To explain this occurrence, scientists decided to look at similar DNA sequences in both European and Neanderthal genomes. After studying the lengths of the DNA chunks, researchers estimated that modern people and Neanderthals last exchanged genes between 37, 000 and 86, 000 years ago. This year period is much more after the time period during which the species began spreading outside of Africa, but potentially before spreading through Eurasia. These results suggested that modern people used to share

ancestors with Neanderthals. Therefore, the two species were somewhat related to each other.

So, the Neanderthals and modern humans are somewhat similar and somewhat different, but an important question still remains in the shadows: why did modern humans outlive the Neanderthals? How come the Neanderthals went into extinction? This question is still not completely answered today, but scientists have enough facts to support their opinions. According to some research done by anthropologists, the Neanderthal populations were never very large. They disappeared about 35, 000 years ago. Scientists suggest that when modern people entered Europe, their customs were different from Neanderthals, i. e. hey had the concepts of bringing up a family, and letting men do the risky job of hunting and building shelter. The women were busy caring for their children while the men brought home food. Since hunting for Neanderthals was extremely hard, it required large crowds of people. Thus, very often, large groups of Neanderthals would become injured during a battle with their prey, and so they would die off. With less men left, the women could not breed again, and therefore the child population decreased significantly. In this manner, the Neanderthal population faded away until it became completely extinct.

Even though Neanderthals did not survive for a longer period of time, they were still a very successful species. Neanderthals were the first to live in subarctic environments during the warmer stages of the Ice Age. They were also the first to inhabit Europe. Even though scientists today know so much about Neanderthals and Homo sapiens, they are still unsure of whether to include them into the human species, or give them a species of their own. So

far, Neanderthals are considered humans’ distant relatives, but no one knows of what species yet. It is all still a mystery.