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Paul Jackson November 30, 2011 ANT 1010 Michelle Lappegarrd Language of the Neanderthal It is understood that the Neanderthal was an exceptional thinker and communicator; but there are heavy debates that question whether or not it spoke with a language. Some argue that the hyoid bone of the Neanderthal was too high in relation to its larynx to enable its tongue to form words, while others argue the opposite. With respect to both theories, it was indeed a linguistic hominid. The Neanderthal skull is more similar in shape to the Homo sapien than that of hominids before it; which would make it reasonable to believe that it was able to speak using language. Since it was the transitional species however, it may have been limited in its development of language usage. History of the Neanderthal Before analyzing the arguments discussing the language used by the Neanderthals, it is important to understand what is known about them. Homo neanderthalensis is the last species in the evolution of hominids, which is not considered a “ modern human. " After many years of study, and dozens of findings, scientists observed the differences in the shape of Neanderthal skulls compared to Homo sapiens. They discovered that the brain was smaller, the bones were much more robust, and that the Neanderthal had no chin. The first findings of Neanderthals were in Belgium, Germany, and Gibraltar, in the early to mid 1800s. Some of the most important findings of the Neanderthal were in the La Chapelle- aux- Saints caves of Southern France. The ideas that have come from these rolling hills have both hurt and helped the progress for valid information in Neanderthal studies. In 1908,
Jean and Amédée Bouyssonie’s findings led many scientists to conclude that Neanderthals lived strictly in caves. This is now proven to be false. These rumors however, created widespread generalization that made Neanderthals

appear vastly inferior to modern humans. One such generalization held sway and brought about artistic depictions of the Neanderthals being sluggish and awkward creatures. These depictions were created in reflection of the reconstruction of the “ OId Man of La Chapelle- Aux- Saints" by French paleontologist, Marcellin Boule. The bones in the reconstruction of this particular Neanderthal were arthritic; and “ although Boule was aware of the deforming illness…his reconstruction apparently did not take it into account sufficiently" (Sommer 2006: 213). It wasn’t until the mid- 1900s that paleoanthropologists discovered that the Neanderthal walked upright and wasn’t slouched over at all. Discussions on the Neanderthal Hyoid Bone Despite all of the progress that has been made in figuring out just who Homo neanderthalensis was, anthropologists still have a long way to go. There are many sub-topics about the enigmatic skeletal remains of the Neanderthal that are stirring up heated debates in the world of anthropology, and are still left to skepticism. One of the most controversial is whether it was able to speak with flexible tongue movements that were able to create sophisticated variances in sound; that moreover allowed it to live with social interactions that rivaled the ones we use today. The hyoid bone and larynx position of the Neanderthal compared to Homo sapiens is the most explored aspect of this debate of language. In these arguments, the morphology of the organs and bones in the neck are often times more of a concern than their functionality. The hyoid is a U shaped bone, responsible for harnessing the movements of the tongue. It is located just above the larynx, which is also known as the voice box. The larynx and hyoid bone are positioned in a way that work together to form the words heard among modern day humans. In the early 1970s, scientists E. S. Crelin and Philip Lieberman reassembled the larynx of

the Neanderthal and came up with a strong theory that is still agreed with today. They found that the Neanderthal “ larynx is positioned high, close to the base of the skull, and the tongue lies almost entirely within the oral cavity" (Lieberman 1975: 494). Lieberman is an expert in the evolution of language and has spent a greater part of his career discussing the major differences between Neanderthal and modern human language. He has written volumes that greatly detail the morphology of the Neanderthal’s mandible and laryngeal bone structure; and has for the most part concluded that Neanderthal language was nowhere near that of modern day humans. Shortly after Lieberman and Crelins’ reconstructed Neanderthal skull, there was not yet an actual Neanderthal hyoid bone found; and other scientists and thinkers in the 1970s disagreed with the way the Neanderthal skull was reconstructed. They based this off of the fact that Crelin was using only five specimens of Neanderthals from the La Chapelle Aux Saints site and also that the culminated skull was reconstructed incorrectly. Many paleontologists believed that the way it was put together would have made it impossible for it to swallow food. “ One cannot help wondering why the vocal tract remodeling concentrates so heavily on La Chapelle when La Ferrassie I is in a much better state of physical preservation" (Carlisle and Siegel 1978: 370). Despite the valid statements made by Carlisle and Siegel that account the pristine condition of the skull that was put together at the La Ferrassie I site; it still did not give any more evidence that pointed to advanced vocal communication among the Neanderthals. Around the late 1980s the first Neanderthal hyoid bone was found in the Kebara Caves of Mount Carmel, Israel. It was discovered in the middle Paleolithic layers of soil that date back to sixty thousand years ago. Upon investigation of the bone, it was

discovered that it was nearly identical to those of modern humans. It is important to point out that many of noted paleontologist, Philip Lieberman’s studies were based on comparing the hyoid bones of Chimpanzees to Neanderthals. Lieberman and his colleagues reached a consensus that Neanderthals spoke more like Chimpanzees than modern humans. Chimpanzees have been reportedly able to communicate with very subtle changes in tonality, which indicates there is a primitive language there. That being said, the shape of the hyoid bone of the chimpanzee is worlds apart from the Homo sapien. Whereas, previously mentioned the hyoid was nearly identical to the Homo sapiens’. The chimpanzee’s hyoid bone is much smaller and narrower in comparison to its larynx which is partly what makes its language usage, extremely limited. Not only that, but its brain is much smaller than not only the modern human, but also the Neanderthal. Lieberman’s vast knowledge of Linguistics has made him an important figure in Archaeology, but his morphological ideals that are commonplace have left out some of the more obvious similarities between Neanderthals and Humans. Neanderthal DNA The functions of the DNA structure of the Neanderthal are often times abandoned entirely in the arguments defending their “ lack of language. " Proteins extracted from digs surrounding Neanderthal sites have been analyzed in labs and their DNA structures have given researchers positive reinforcement that the Neanderthal was very similar in its genetic makeup. According to Dr. Julien Riel- Salvatore from the University of Colorado at Denver, “ Genetically, they [Neanderthals] share with modern humans a distinctive mutation of the FOXP2 gene, which seems to be intimately associated with speech" (Julien Riel-Salvatore, personal communication 2011). This same mutation is not exhibited in the

Chimpanzee. Neanderthals and Human Breeding There are other debates that coincide with Neanderthals being able to speak, for instance a study that shows Neanderthals may have been able to breed with humans. This is a paradox in that it would rule out the term Neanderthal entirely, because in order to breed, an animal must be of the same species. If this is true not only would it point out that Homo neanderthalensis could speak as eloquently as the Homo sapien, but the Homo neanderthalensis was a Homo Sapien. The differences would be more in the light of behavior, nomadic skills, and tool technology that made the Homo Sapien with a chin able to out-survive the other. Playful notions aside, this is still a very debatable sub-topic of Neanderthal language and many more discoveries will have to be made to prove its total validity. Misleading Theories Other noted archaeologists believe that the large nose of the Neanderthal made it incapable of speech, insisting “…Contrasts in facial morphology probably led to nasal-like vocalizations…[and for]…advanced hmmmmm sounds" (Mithen 2006: 226). The brief description that Mithen uses to back up this opinion does not prove anything about how the nose may have certainly caused vocal limitations. Its nose was larger in size, but so were other parts of the Neanderthal, and they were no impedance to how it got around. Conclusion Corrosion of bones and more importantly muscle tissue make many aspects of anthropology a challenging field. It is not always clear how the muscle tissue that once surrounded the skeletons of our ancient relatives operated in relation to nerves, connective tissue, and bones. The Neanderthal is a confusing hominid because of its somewhat smaller cranial capacity, and extremely large skeletal frame. The shapes of its bones are like larger replicas of ours, aside from the skull which is unique in its brow ridge and lack of chin. The

conclusions of inter-breeding seem a bit far-fetched. It may have been able to speak as well as modern humans, but perhaps in comparison to the Darwin Finches, its slight variances in structure may have selected it to extinction. Acknowledgements I would like to thank Dr. Riel- Salvatore for his feedback on the Neanderthal. I am not a professional analyst in anthropology, and am grateful that he was able to provide me with some of his personal inquiries on the controversial debates centered on Neanderthal language. Works Cited Boellstorf, Tom (Editor) 1978 Additional Comments on Problems in the Interpretation of Neanderthal Speech Capabilities Vol 80 American Anthropology Association, Virginia. Lynch, Michael (Editor) 2006 Mirror Mirror on the Wall: Neanderthal as Image and Distortion in Early 20th-Century French Science and Press Vol. 36. SAGE Publications, California. Mithen, Steven 2006 The Singing Neanderthal. Harvard University Press, Massachusetts. Riel- Salvatore, Julien (Interview) 2011 Original notes from email. Ruff, Christopher (Editor) 1996 Structural Harmony and Neanderthal Speech: A Reply to Le May Vol. 45 Wiley-Liss, New Jersey.