1.2.3 Case Report

**Introduction:** Last week two skeletons were discovered buried side by side. It was determined that one of the skeletons was a white male of height between 5’4” and 5’8”.

**Summary of Findings:** This person’s pelvis and skull have traits that point to it being a male. However, the lengths of the sections of the femur and humerus point to either female or indeterminate characteristics. This could just be because this boy is short or young. Many of the features on the skull and the curvature of the femur point to a white person. The Nasal index is rather large for a Caucasian, but that could be because of mixed heritage or other factors. The length of the femur points to a height of about 5’4” to 5’8”. This is short for a Caucasian male, but again, this could just be a short or young boy. While generalizations are often very helpful in determining age, sex, race, and height of a skeleton, every human is different and no one will fit every characteristic of their niche, so some flexibility must be taken when using these methods.

**Further Analysis**: Facial reconstruction is a technique which can identify a skeleton by putting flesh on a skull. It endures skepticism because people all have different amounts of flesh on their faces due to race, gender, and other biological features. This would be helpful in identifying the person in our case because we know nothing about him but his race, gender, and height, and he has no flesh on the skull. Forensic scientists can also take X rays of bones and compare them to X rays filed in hospitals. However, this would usually only be helpful if a person has had a broken bone in the past. DNA analysis can also be used to identify bone fragments, but only if the victim has had his or her DNA catalogued. There are many different types of forensic analysis of bones that would be useful in identifying our victim.

**DNA Analysis:** DNA from two missing persons was run through the gel electrophoresis machine using two different restriction enzymes. Missing person one had two bands when cut with enzyme one and three bands when cut with enzyme two. This does not match up with the RFLPs from the bone found at the crime scene. Missing person two’s DNA created two bands when cut with both of the enzymes, which matches with the RFLPs from the bone found at the crime scene. Therefore, the bones at the crime scene belonged to missing person two.

**Conclusion:** this victim is a white male about 5’4” to 5’8” tall. The main determining factors were the pelvis shape, skull shape, and length of the femur and humerus. To further the investigation, we should analyze the DNA, reconstruct probable facial features, and look for any broken bones or other bone wounds. When run through a gel electrophoresis machine, the RFLPS for the bones, missing person one, and missing person two show that the bones belonged to missing person two.

**Sources:**

Roberts, C. (2011, August 24). *ehow*. Retrieved from http://www.ehow.com/info\_12004275\_5-types-forensic-analysis.html