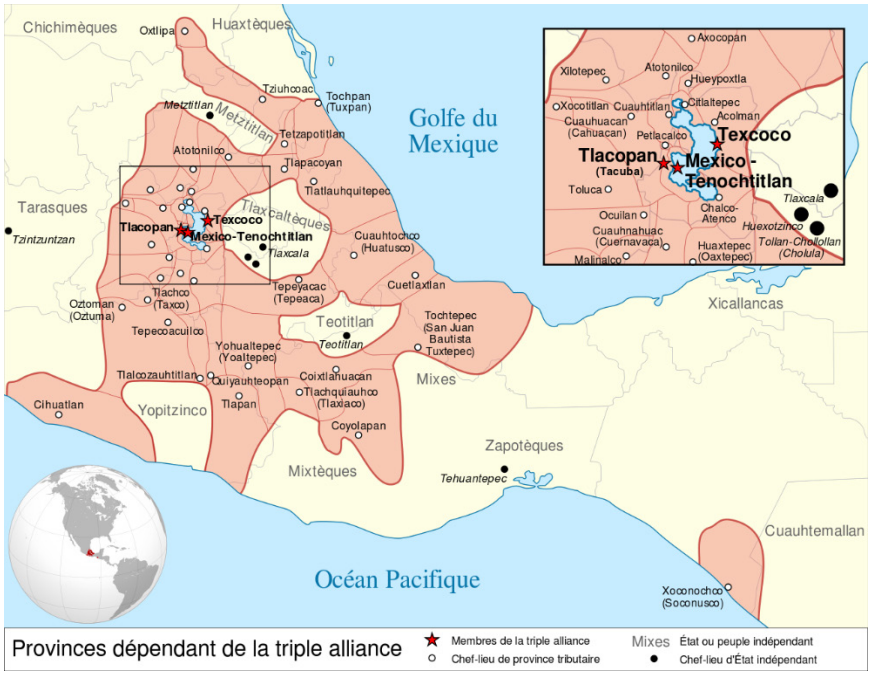

INFERENCE TO THE BEST EXPLANATION HOMEWORK, **due by 11:30 pm on Tuesday, October 5.**

Instructions In a Word document, list the data and hypothesis or hypotheses that are given in this passage. Label the premises and conclusion in the same way as they are in argument (4) on p. 78. If there is more than one hypothesis, make the best hypothesis the conclusion (but you don't have to explain why that hypothesis is the best one or why the others fail).

Everything in your argument should either be in your own words or in quotation marks. Every premise and the conclusion should be a complete sentence. When you've completed the argument, upload your document on Canvas.

Eight masks made from human skulls were found at a temple in Tenochtitlán, Mexico, over three decades ago. Their purpose and origins have always been somewhat mysterious. But a new archaeological analysis suggests that these morbid masks may have been made from slain warriors and other elite members of ancient Aztec society.

The Templo Mayor (Great Temple) was the religious and political heart of Tenochtitlán, a city-state on an island in the Valley of Mexico that became the Aztec Empire's capital in the 15th century AD. The temple was dedicated to Huitzilopochtli, the Aztec god of war and the sun, and archaeologists have found abundant evidence of human ritual sacrifice there, suggesting this practice was key to Aztec religion. Human sacrifice included beheading, extraction of the heart, throwing people into fires, and fights to the death. But the handful of skull masks are unusual, even in the context of ritual sacrifice.

A group of anthropologists led by Corey Ragsdale of the University of Montana set out to analyze the skull masks, as well as unmodified ritual skull offerings, to learn more about the origins and creation of the masks. Their analysis is published in the June issue of *Current Anthropology*.

The masks in question are "decorative headpieces made from human skulls that would have been worn over the face or as part of a headdress," Ragsdale and colleagues write. The skulls have been heavily modified to create interesting looking objects: the back portion of the cranium was removed, they were decorated with dye, and some had inlays in the eyes and chert blades placed in the nose.

To learn more about who was made into masks and who wasn't, Ragsdale and colleagues looked at both modified and unmodified skulls for evidence of age-at-death, sex, and disease. They found that the skull masks were all made from males between the ages of 30-45, and that these people had no evidence of dental disease or other nutritional stress. That is, they were healthier than normal for this culture.

In studying the form of the teeth and comparing them to other known groups in the area, Ragsdale and colleagues were able to show that the men who were made into skull masks likely came from various locations: the Toluca Valley, West Mexico, the Gulf Coast, and other Aztec towns in the Valley of Mexico. This non-destructive form of analysis was further confirmed by a separate isotopic study, revealing both methods work well for differentiating the homelands of members of the Aztec Empire.

Finally, the researchers examined the method of manufacture of the skull masks for additional clues. They were able to experimentally reproduce the cut marks and drill holes on the skulls using the stone tool technology that would have been available at the time. Interestingly, when viewed under a microscope, the cut marks on the skulls were very similar to marks on other archaeological artifacts from Templo Mayor. "The individuals whose skulls became skull masks were probably brought to Tenochtitlán to be sacrificed and processed," Ragsdale and colleagues say.

Drawing together all the data gleaned from bio-archaeological and experimental data, the researchers conclude that "the skull masks were created using the skulls of captured or defeated warriors that were acquired from conquered towns or the executed nobility." It is even possible that one of the skull masks represents the defeated king of Tollocan, who is known from historical records.

Human sacrifice was a common phenomenon in the Aztec Empire. There are debates among experts about just how many people suffered this fate, but historical sources suggest that at least 20,000 people died in this way at Tenochtitlán. Most of them were likely captives of war or tribute payments, as mentioned in the Codex Mendoza, an Aztec record of their history. And most of those people were low-status, ending up in large, commingled pits. Ragsdale and colleagues' study, though, shows that the Aztecs didn't treat everyone the same in the context of human sacrifice. The skull masks appear to have been a special fate reserved for the most elite warriors and nobility.