The Mimbres and the Salado were two prominent cultural groups that settled in the southern Southwest of North America, occupying many of the same regions: present-day southern Arizona and southwestern New Mexico, albeit at different times. They have been highly regarded by archaeologists for their distinctive and beautiful pottery styles, which have become integral to understanding their respective cultural identities.

Despite their regional proximity, these two groups produced pottery that often varies greatly in design and apparent intent— but how different are these two pottery cultures actually?

This analysis hopes to answer that question by comparing the Classic Mimbres Black-on-White period (1000-1100 CE) and the Salado Polychrome period (1275-1450 CE) pottery styles, focusing on the production process and methodology of each group. The goal is to gain a better understanding of how, and potentially why, elements of pottery production were either maintained or changed between the two groups. To accomplish this, a variety of factors are examined, including available natural resources, raw materials, tools, and technologies.

### Resources and Tools

#### Clay
- **Pueblo (possibly):** A ceramic base to help shape the vessel
  - No direct archaeological evidence, but pueblos were a common trait amongst other groups, and it is possible the Mimbres would have adopted it.
- **Ground Scraper:** For smoothing vessel walls
- **Polishing Stones:** To burnish the vessel
- **Yucca Brushes:** To apply slip and paint

#### Slips & Paints
- **White Slip:** Made of kaolin— a type of clay abundant in hematite, which is a mineral-rich in silicon and aluminum.
  - Occurs when kaolinite minerals are mixed with water and heat via natural processes.
- **Black Paint:** Mineral-based, made of hematite
  - The paint would have appeared red pre-firing, then would turn black after the firing process was completed.
  - A syrupy substance which helps the paint stick to the pot and uphold the integrity of the design

#### Forming & Firing Processes
- **No evidence of kilns!**
  - Likely completed using a pit fire
- **Firing atmosphere:** Oxidized
  - How do we know?
  - The hematite-based paint was black post-firing. If the fire was oxidizing, the paint would maintain its red color.
  - **Firing Temperature:** +/- 900°C (1650°F)

### Introduction

A Comparative Analysis of Mimbres and Salado Pottery Cultures
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### Clays & Slips

#### Classic Mimbres Black-on-White
- **Clay:** White
  - A thrown or coiled vessel's primary base
- **Red Slip:** hematite – red iron oxide mineral
  - The use of black paint after mixing with the red slip makes the vessel appear black.

#### Salado Polychrome
- **Clay:** Reddish
  - A thrown or coiled vessel's primary base
- **Black Paint:** Made using smectite – a mineral-rich in Si and Al
  - Occurs when calcic ash deposits undergoes weathering
  - Super absorptive and helps form organic paint black during firing
  - Black Paint typically organic, carbon-based (natural mineral)
    - **Paint:**
      - 1. Black Walnut
      - 2. Beechwood
      - Paint was mixed with a plant-based binder

### Tools

#### Classic Mimbres Black-on-White
- **Gourd Scrapers:** For smoothing vessel walls
- **Polishes Stones:** To burnish the vessel
- **Yucca Brushes:** To apply slip and paint

#### Salado Polychrome
- **Perforated Plates:** A shallow, plainware ceramic piece used as a base to help form vessels
- **Originated with the Kayenta around 800 C.E.**
- **Gourd Scrapers:** For smoothing vessel walls
- **Polishes Stones:** To burnish the vessel
- **Yucca Brushes:** To apply slip and paint

### Firing

#### Classic Mimbres Black-on-White
- **Firing Temperature:** +/- 900°C (1650°F)
- **Firing time:** Much shorter

#### Salado Polychrome
- **Firing Temperature:** 900°C (1650°F) maximum
- **Firing time:** Much longer

### Conclusion

Both groups prefer brown slip paste, as well as the coil-and-scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (e.g., the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.

The differences in tools and raw materials can be partially explained by the fact that both groups settled in resource-rich river valleys, where abundant clay, fine sand, smooth polishing stones, and water would have been in abundance.

Major differences between the Salado and Mimbres include their use of slip and paint, as well as the firing atmosphere used to finish the vessels. Both factors can be partially explained by the differing cultural influences experienced by each.

Although the Mimbres didn’t adopt the Hohokam method of production, the earliest forms of Mimbres pottery (known as Style 1, or pre-Classical) include representational motifs first seen in the Hohokam. However, over time the style shows fewer of these influences, so by the time of the Classic period, the design is entirely different. It has been posited that this may be due to a desire, conscious or subconscious, to form a more unique Mimbres identity.

### Acknowledgements

I would like to thank everyone whose assistance aided me in this research: my proposed advisor, Dr. Anthony Howell, for his guidance and support; my community for their encouragement and support; and Andy Ward and Allen Denoyer for providing me with supplies. I also want to acknowledge the NSF REU Award No. 1851763, which provided the necessary funding for me to attend this event.

Resources
- Hegmon et al. (2020).
- Simon et al. (1998).
- American Southwest Virtual Museum.
- Archaeology Southwest, “Learning the Secrets.”
- Anthropology, Western New Mexico University.

Figure 1.
Map of the American Southwest and the spread of various cultural groups, Source: Denoyer. Photo taken by me.

Figure 2.
Forming, white and painted with a black motif, Source: Dallas Museum of Art

Figure 3.
A vessel made by Andy Ward, demonstrating the scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (I.e. the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.

Figure 4.
An interior view of a Classic Mimbres bowl, showing the black slip and red clay surface on the exterior. (Hegmon et al. 2020).

Figure 5.
Polychrome bowl (1300-1450 CE, a sub-type of Salado Polychrome). This vessel features a single, bold black and white design. The Salado’s preference for organic-based paints, as well as the firable slips and paints they used, are a result of their desire to create a unique identity. This also explains why the organic paint from oxidizing and burning off.

Figure 6.
A vessel made by Andy Ward, demonstrating the scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (I.e. the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.

Figure 7.
A vessel made by Andy Ward, demonstrating the scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (I.e. the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.

Figure 8.
A vessel made by Andy Ward, demonstrating the scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (I.e. the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.

Figure 9.
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Figure 10.
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Figure 11.
An exterior view of a Mimbres jar featuring a geometric design. From the Eastern Arizona College Mills collection.

Figure 12.
An interior view of a Mimbres bowl with a partially oxidized design, indicating that the firing process was not complete, and the technology to do so originated with Cibola groups in the Kayenta. The so-called “Salado phenomenon” as a whole is a product of the Kayenta migration to the southern regions of Arizona and New Mexico, so it is natural that they would have brought these design motifs with them. This also applies why the Salado polychrome style varies so significantly in comparison to the Mimbres, the Kayenta design was widespread, and polychrome design had been altered according to the southern groups they eventually joined.

Figure 13.
An exterior view of a classic Mimbres bowl, showing the black slip and red clay surface on the exterior. Sources: Dallas Museum of Art

Figure 14.
A vessel made by Andy Ward, demonstrating the scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (I.e. the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.

Figure 15.
A vessel made by Andy Ward, demonstrating the scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (I.e. the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.

Figure 16.
A vessel made by Andy Ward, demonstrating the scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (I.e. the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.

Figure 17.
A vessel made by Andy Ward, demonstrating the scrape method of production are typical of groups belonging to the greater Mogollon cultural sequence. Although some neighboring groups (I.e. the Hohokam) used the paddle-and-rod method, this was not something that was adapted by either the Mimbres or Salado—the most likely explanation of this is simply a matter of tradition.