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Anth 473L

12/6/24

A complex analysis of Stone axes at the Chaco and Gallina Regions.

Intro:

The Gallina people have been a mystery to modern anthropologists as they are a tribe from New Mexico that vanished from the record. None of the pueblos of New Mexico claim them, they don't even know where they came from. They were considered an outsider group by the pueblos, so since no one knows where they came from or where the remaining tribal members went, its been a mystery in the anthropology and native communities.

The Gallina people inhabited an area just north of Cuba, New Mexico from about 1100 AD- 1300 AD. They are a people with no known decedents in modern times, there are many theories as to where these people came from and where they ended up. The Gallina people were notably unique in their style of making things. For example, pointed bottom pottery and a tri notched style of stone axe making. These make the Gallina people unique as no other tribes do these styles on mass like the Gallina people. The collections for

Gallina was collected by a UNM field school. The collections is housed at unm in the anthropology deparment.

Chaco Canyon is a site located south of Bloomfield, New Mexico and west of Cuba, New Mexico. It was inhabited in large numbers during the 850- 1250 AD. It was semi inhabited long before 850 AD, in the paleolithic period, but it didn't see major settlement of the site until 850 AD. Chaco canyon became a central hub for trade, culture, production of goods, and science, particularly astronomy. The collections from Chaco were collected by Frank Hibben. The collections is housed at UNM in the anthropology department.

Research Question:

My question for this research project is, can I find similarities in the stone tools from the Chaco Canyon region and the Gallina region? I pose this question in order to possibly answer where the Gallina people might have migrated from, or where they migrated too after the abandonment of the region by its people. If true, I would like to see a lot of similarities in the samples, as well as more than a few examples fitting both sites.

Sample:

I worked with a sample of 37 stone axes. Of which 12 came from Chaco, and 25 came from the Gallina region. I chose this sample because it was all the stones axes from these two places that I could access. This might encounter some bias because my Gallina sample is double the size Chaco.

Methodology:

I first made an excel spreadsheet of all the data given to me and modified it to fit the parameters I was looking for in my research. I gathered a Electronic Scale, A Measuring tape, a electronic caliper, a handheld magnifying glass, my samples, and my laptop as these were the materials I needed. I started by taking a sample, weighing it in grams. I then took my measuring tape and using the metric side, I measured in millimeters, and I measured the length of the stone axe. I measured from the base to the tip for every specimen to accurately catalog its length. I then measured its width by taking the farthest points on each side and measured again in millimeters. I cataloged these 3 points in my excel sheet and moved on to my electronic caliper. I measured in millimeters the thickest point of the stone axe with my caliper and replicated this for every axe as to insure accuracy over the whole sample. I cataloged this into the excel sheet and moved on to identifying key stylistic features on the axe. I identified them and cataloged it on my excel sheet. I then took my handheld magnifying glass and looked for any striations in the tip of the blade and with my hand I checked to see if the tip was polished from use. After identifying any striations and tip polish, I cataloged them in the excel sheet and moved on to a new specimen. I replicated these steps until all specimen had been cataloged. I usedd electronic equipent in order to get the most accurate measurments.

Pictures:

Gallina :

2005.47.2 2005.47.3


2005.47.30


CAT #: 2005.47.30
PROJECT: Galina Rebus
SITE: Bg unknown
PROVEN./OLD NO.:
UNK Box #4782
CONTENTS:
Axe Heads/Hammerstone
Basalt
CM

2005.47.41

Chaco Canyon:

42.30.42

2012.168.189

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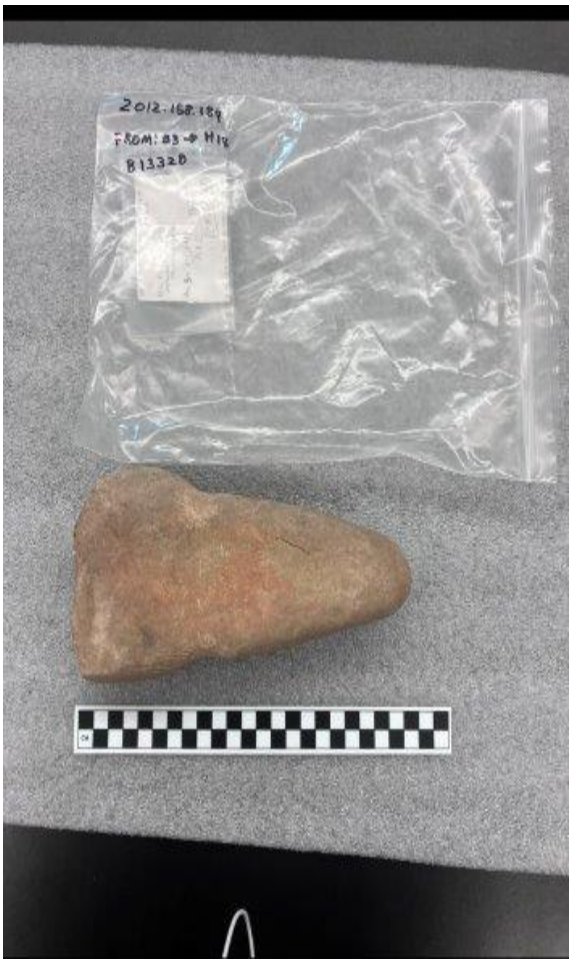


41.28.18

2019.7.1551


Data:

Metric Data:

Culture area	Average of Weight (g)	Average of Length (mm)	Average of Width (mm)	Average of Thickness (mm)
Chaco	632.4375	124.5	76.1875	37.053125
Gallina	824.7580645	138.3677419	108.8548387	35.05129032
Grand Total	**759.287234**	**133.6468085**	**97.73404255**	**35.73276596**

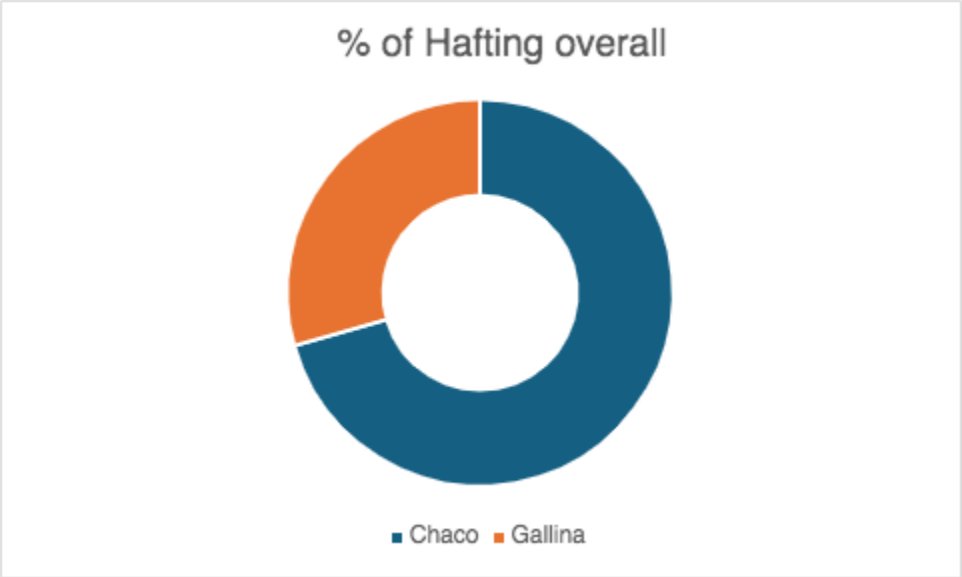
We see Gallina having a higher average weight, length, and width compared to Chaco. With

Chaco having a overall higher average thickness.

Hafting Data:

Count of Style	Style	
Culture	Hafting	Grand Total
Chaco	12	12
Gallina	5	5
Grand Total	**17**	**17**

Hafting Graph:



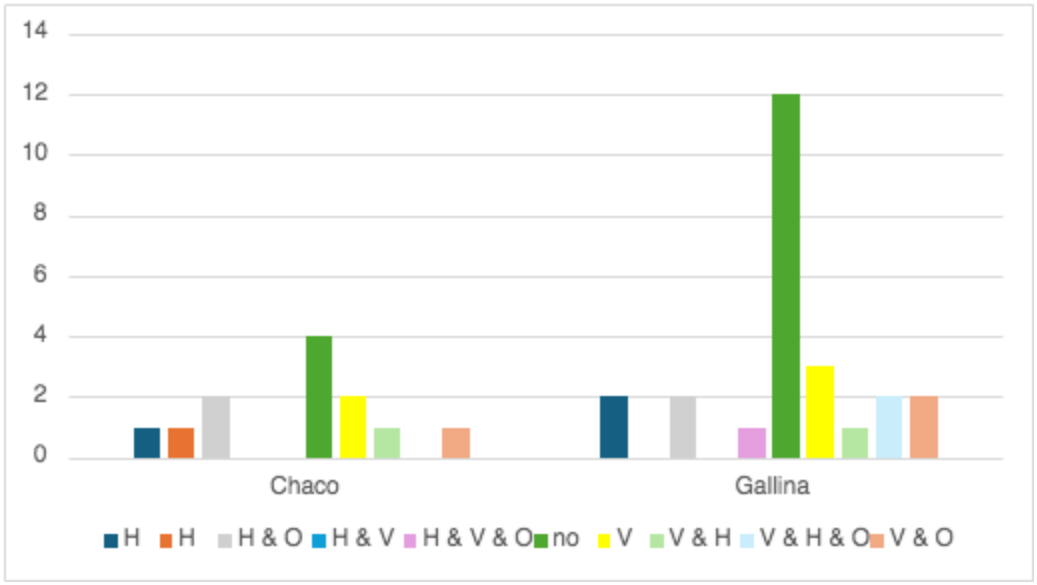
We see a overwhelming percentage of the sample of hafted axes, coming from Chaco.

Chaco had 71% of all the Hafted axes.

Striation Data:

Count of Count	Tip striations											
Culture area	H	H	H & O	H & V	H & V & O	no	V	V & H	V & H & O	V & O	Grand Total
Chaco	1	1		2		4	2		1	1	12
Gallina	2			2	1	12	3	1	2	2	25
Grand Total	**3**	**1**		**4**	**1**	**16**	**5**	**2**	**2**	**3**	**37**

Striation Graph:



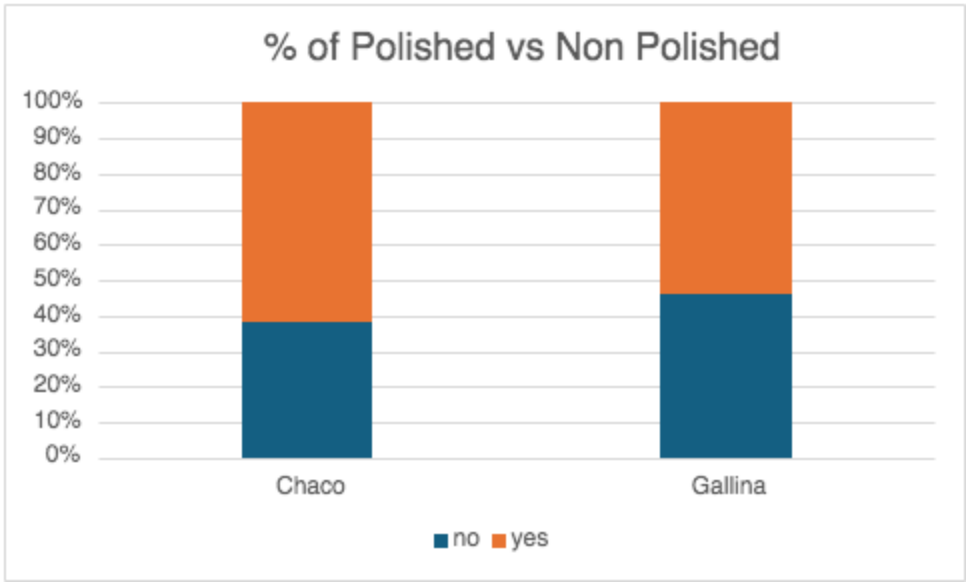
We see more axes at Gallina having multiple kinds of striations on them. Chaco had more of just one type of striation.

Tip Polish Data:

Count of Count	Tip Polish		
Culture area	**no**	**yes**	**Grand Total**
Chaco	5	8	13
Gallina	11	13	24
Grand Total	**16**	**21**	**37**

For the tip polish data we see Gallina has more than double the No compared to Chaco but Chaco had nearly half as many samples. This indicates Chaco had a lot more wet material being harvested like clay or trees for example.

Tip Polish Graph:



For the Tip Polish Graph we see a clear backing of our tip polish data as we can see a higher percentage of polished stone axes compared to Gallina. A 61.5% Polish rate at Chaco Vs a 54.1% at Gallina.

Interpretation:

For the interpretation of my data, I noticed Gallina had axes with a higher on average length, width, and weight. But Chaco had axes with a higher average thickness. This can indicate Gallina had to make tools more expediently and they didn't refine these axes very much. This also shows that the Gallina region might have needed bigger and heavier axes for their environment when compared to Chaco Canyon. For my Hafting data, we saw every axe from Chaco had Shafting on them whereas Gallina had a very small about with shafting and a lot more with tri notching instead. Chaco made up 71% of the overall hafting samples. For my tip striation data and graph, it seems as if Chaco has more axes with one

striation type, like vertical, horizontal, or oblique only. Whereas Gallina has more axes with multiple striation types like Vertical & Horizontal & Oblique together. This indicates Chaco might have had a industry to streamline or make a uniform axe in a more detailed way, for a specific purpose where as Gallina might have had to use axes for multiple functions as indicated in the multiple types of striations. This could mean they didn't have as much availability to stone axes or didn't have as much time to devote to making axes for specific purposes. For my tip polish data and Graph we saw Chaco have more polished tips on their axes, 61.5% compared to Gallinas 54.1%. This shows more wet materials being cut into at Chaco when compared to Gallina. This could be clay for pottery production or trees being cut down to build structures. This could show more of a industry or more of a population at Chaco then at Gallina. When we look at the photos i provided it shows a good example of stone wedge axes being found at both sites. These are 41.28.18 for Chaco and 2005.47.41, this could be a indicator of trade but I don't have enough to draw a distinct connection between the two. For the Tri notching you can see from Chaco, 2019.7.1551, this axe had what could be called tri notching on it. But, again there is not enough evidence to draw a distinct connection between the two and could be a result of trade. I think this makes sense since we know these sites were during the same time partially, and we know there was trade between the two sites, this further supports the idea that this was trade based.

Results:

For my results, I was able to find some similarities in the style of stone axes in the Gallina and Chaco Canyon regions. But not enough to be used as evidence of a strong connection between the two. I don't think my data points to a place of origin

or a ultimate destination for the Gallina people, only trade between the two regions. I base this off a possible tri notched stone axe from the Chaco Canyon region, specifically 2019.7.1551, but this could be explained as trade. I also found multiple types of wedge axes at both sites as indicated in my photos, specifically 41.28.18 from Chaco Canyon and 2005.47.41 from the Gallina region. I think my work could be used in further research in the Gallina people as more research could be done trying to identify similar tribes who made tri notching tools, like the Gallina people. I think in the future there will need to be more samples showing clear style connections in order to draw a conclusion about the Gallina people. I could however draw a conclusion that the people at the Gallina region had to use tools in a multi purpose functionality, when compared to Chaco canyon. This could be explained by Chaco having more a stone tool industry and Gallina, being smaller and less populus, needed too make axes and use them for multiple purposes as there might not have been ample resources or time to make axes for specific jobs. I see this in my data on tip striations, as Gallina has more tools with more than one striation type where as Chaco has more tools with only one striation type, either Vertical, Horizontal, or oblique. I also noticed Chaco had more axes with polished tips, this should indicated more wet substances being cut like clay or trees at Chaco when compared to Gallina. This could show a big industry of making pots and cutting down trees for buildings. My findings did not support a claim that the Gallina people migrated from Chaco or too it after the collapse of the Gallia region.

Future Research:

I think I would like to continue this research as it could be very rewarding to native communities around New Mexico, as well as give me some good experience in research with archives at the University of New Mexico. For the future, I would travel to pueblos or people with knowledge on the pueblos of New Mexico and ask questions about the Gallina people to maybe pinpoint who might be a more likely ancestor or maybe who incorporated the Gallina people into their tribe. I would also extend this search to areas around New Mexico as they might also have information on the Gallina people.

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