Trends in Indigenous Marriages at Misión San Gabriel

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I. Introduction: Nature of the Data
   A. Methods for analysis
   B. Data Cleaning

II. Research Questions
   A. Findings

III. Conclusions
Data Cleaning

- Removal of erroneous data entries
  - Marriages occurring in dates outside the Mission Era
- Improve organization of data frame and make analysis easier
  - Separating Groom Name into two columns: first and last name
- Maintain consistency of data frame entries
  - Making sure all character strings for a given data entry are consistent throughout a given columns i.e ‘India’ v. ‘india’
Validity and Reliability of the Data Set

- Because the data set was collected manually (rather than scraped) several issues of reliability must be addressed
  - Uneven data collection (gaps between years)
  - Limited number of data points
  - Human error

Data collection from mission Friars is also subject to scrutiny

https://www.google.com/search?q=data+collection&source=lnms&tbm=isch&sa=X&ved=0ahUKEwiEmuKSYZhQQ5iPjE4KHaTiDooQ_AUIDigB&biw=1278&bih=622#imgdii=VkcHVNau6xRbqM:&imgrc=oa0KFOyufK4NGM.
Methods for analysis

- Excel
  - Pivot tables

- R Studio
  - Linear regression models
  - Plots over time
  - Basic statistical analysis
    - P-values
    - R-squared values
What is the frequency of the last name Maria over time?

Grooms are shown in blue, and brides in red

G p-value: 0.03303: it is significant!

G $R^2$: 0.25

G formula: $y = -0.1932x + 351.3096$

B p-value: 0.1029: not significant

B formula: $y = -0.2382x + 431.1299$

B $R^2$: 0.09874
Why do we care about the last name Maria?

Bernal Díaz de Castillo:
- proliferation of the name Maria
- importance of Maria in conquest

The missionary system as a way to evangelize indigenous people

https://en.wikipedia.org/wiki/Bernal_D%C3%ADaz_del_Castillo

Manuel de Arellano, Virgin of Guadalupe, 1691, oil on canvas, 161.45 x 123.38 cm (Los Angeles County Museum of Art)
How many brides/grooms are from a specific origin in Mision San Gabriel?

Frequency of Groom Origin

Frequency of Bride Origin
Did the frequency of specifics origins of the brides/grooms change over time in Mision San Gabriel?

Most frequently appearing origins:
- "-Rancheria"
- Linear trend or lack thereof

Time period
Lack of data
Conclusions
How many marriages occurred among the same indigenous tribes?

<table>
<thead>
<tr>
<th>Tribe</th>
<th>Number of Marriages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajuibit</td>
<td>7</td>
</tr>
<tr>
<td>Sibapet</td>
<td>2</td>
</tr>
<tr>
<td>Jutucubit</td>
<td>2</td>
</tr>
<tr>
<td>Yabit</td>
<td>1</td>
</tr>
<tr>
<td>Juyubit</td>
<td>7</td>
</tr>
<tr>
<td>Mision</td>
<td>13</td>
</tr>
<tr>
<td>Gunibit</td>
<td>1</td>
</tr>
<tr>
<td>Cucamobit</td>
<td>1</td>
</tr>
</tbody>
</table>

- Most marriages among Mision natives occurred between 1806 to 1808
- Most marriages among Ajuibit occurred in 1775
- Marriages between the same tribes occurred outside the missions- not in our data set
How has the frequency of marriages changed over the early 1800s?

- Downward trend in indigenous marriage frequency
- Very loose correlation: is this insignificant, or can it be explained by historical evidence?
Possible Interpretations and Explanations of Data

- The decline in indigenous marriages could be explained by a decrease in population, an increase in interracial marriages in the mission, or people moving away from the missions as they declined.

- One problem with the data is the R-Squared value is .088, meaning that though the model is statistically significant (p value .038), there is essentially no correlation of the data points.
What type of data was missing?
Conclusions

- Disease and violence in mission system may have led to decline in the native population
- Decline in population could have lead to the decline in marriages
- Decline in marriages could also indicate why there is a decline in the frequency of the name Maria and in the frequency of all origins except “Mision” and “Mision - esta”
- The re-figuring of identity through inter-marriage could account for lack of origin information
- Future inquiry: Do mixed marriages go up as indigenous marriages go down?


Manuel de Arellano, Virgin of Guadalupe, 1691, oil on canvas, 181.45 x 123.38 cm (Los Angeles County Museum of Art)

