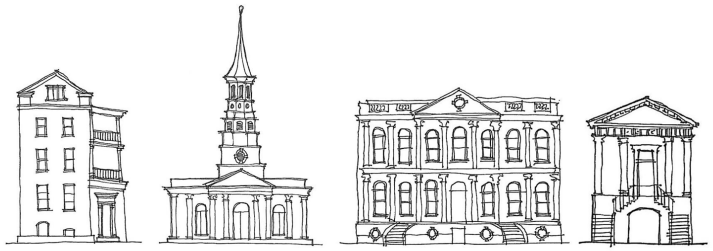
Clemson University/College of Charleston Master of Science in Historic Preservation

Graduate Thesis Presentations, Class of 2023

April 28, 2023



GRADUATE PROGRAM IN HISTORIC PRESERVATION

CLEMSON UNIVERSITY COLLEGE of CHARLESTON

An Investigation of Community-Defined Boundaries and Important Sites

Clemson University/College of Charleston MSHP

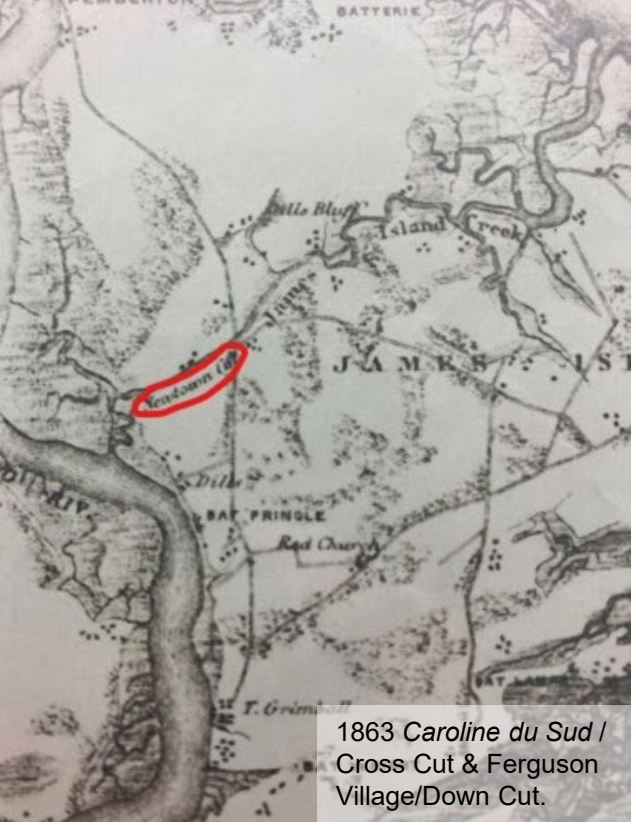
Emma Grace Sprinkle

How do individuals within a community define their own boundaries and important sites?

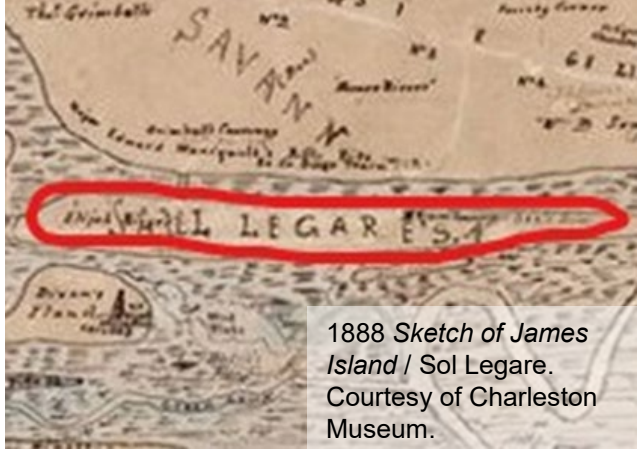
Thesis Question

Methodology

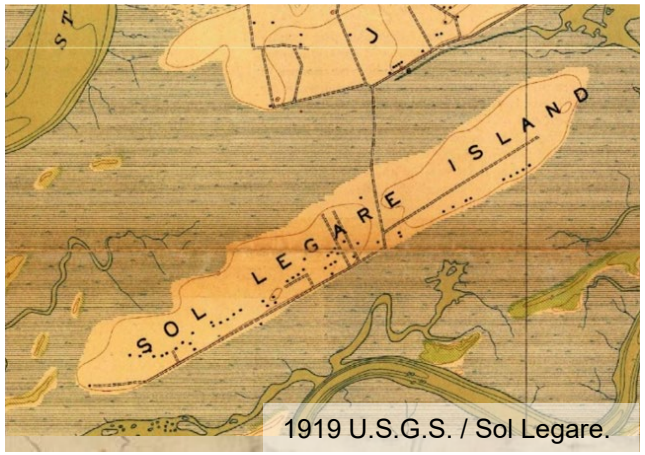
- Data Collection
  - Study of historic maps and aerial photographs
  - Survey of individuals within three communities
- Data Analysis
  - Comparison of maps and aerials
  - Comparison of surveys answers within community and across communities



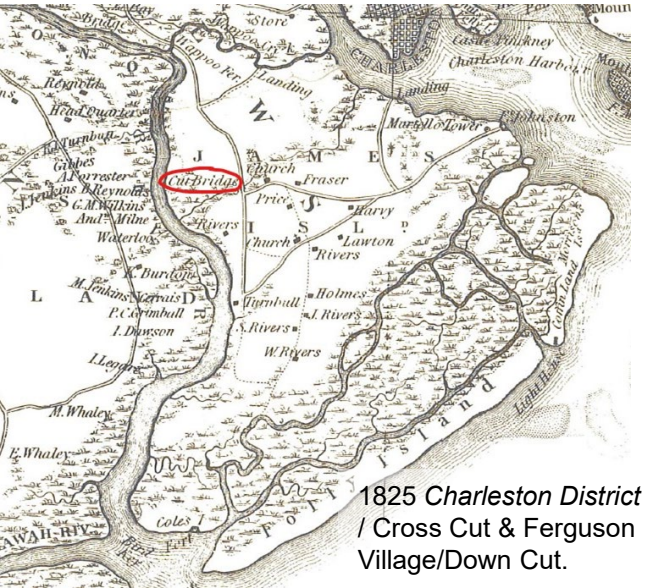
1863 *Caroline du Sud* / Cross Cut & Ferguson Village/Down Cut.



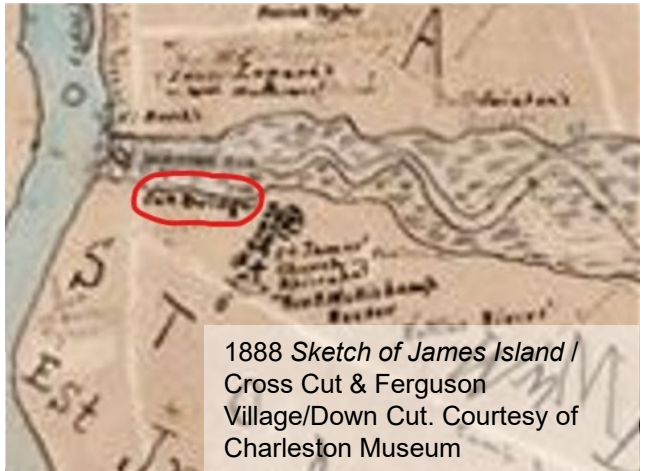
1888 *Sketch of James Island* / Sol Legare. Courtesy of Charleston Museum.



1919 U.S.G.S. / Sol Legare.



1825 *Charleston District* / Cross Cut & Ferguson Village/Down Cut.



1888 *Sketch of James Island* / Cross Cut & Ferguson Village/Down Cut. Courtesy of Charleston Museum

Map and Aerials Study & Analysis

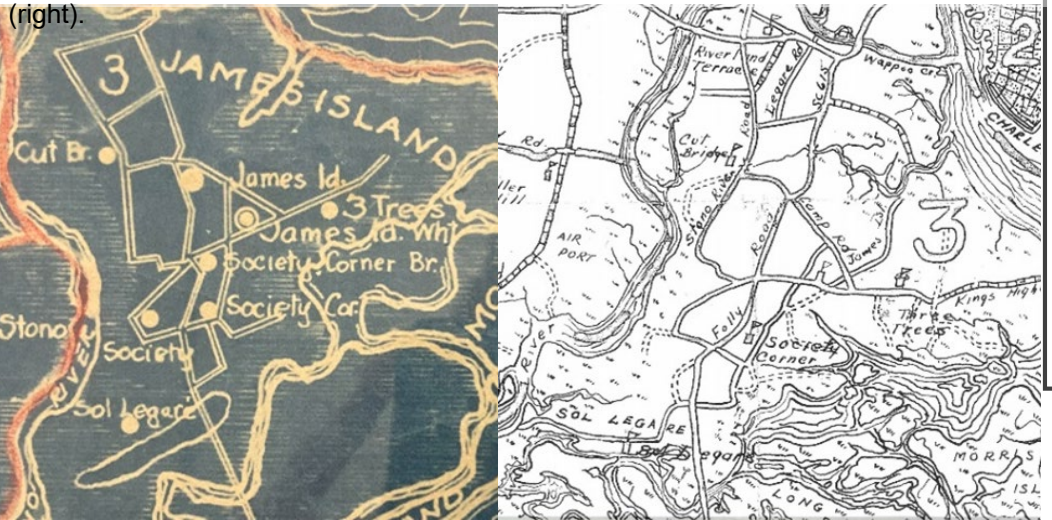
- Geographic features relating to community names such as
  - New Cut/The Cut/Cut Bridge/Newtown Cut/Cut Bridge or New Town Cut for Cross Cut and Down Cut
  - Saul Legare/Sol Legare Island

Kollock map / Cross Cut & Ferguson Village/Down Cut (left) and Sol Legare (right).

1938 Highway map / Cross Cut & Ferguson Village/Down Cut (left) and Sol Legare (right).

Map and Aerials Study & Analysis

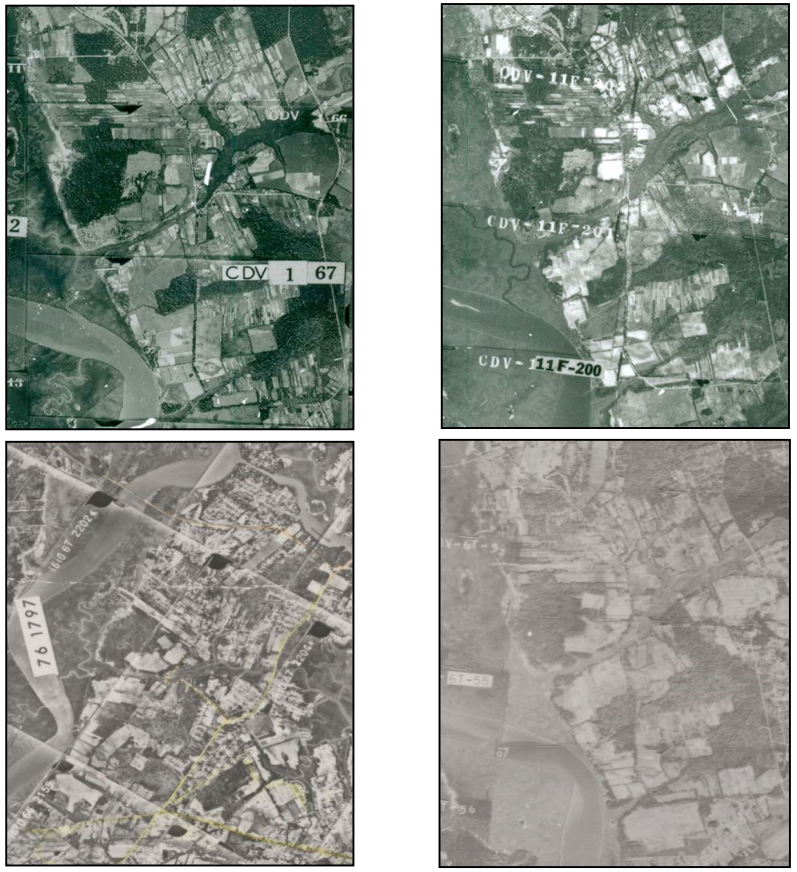
- Systematic racism embedded in maps
- 1932-1934 Kollock property map showing 1860s land ownership
- Built environment of communities such as buildings, schools, and roads are demarcated and named
- Systematic racism and segregation-era history shown in maps



1927 *Schools and School Districts* map (left) and 1948 *Schools and School Districts* (right).

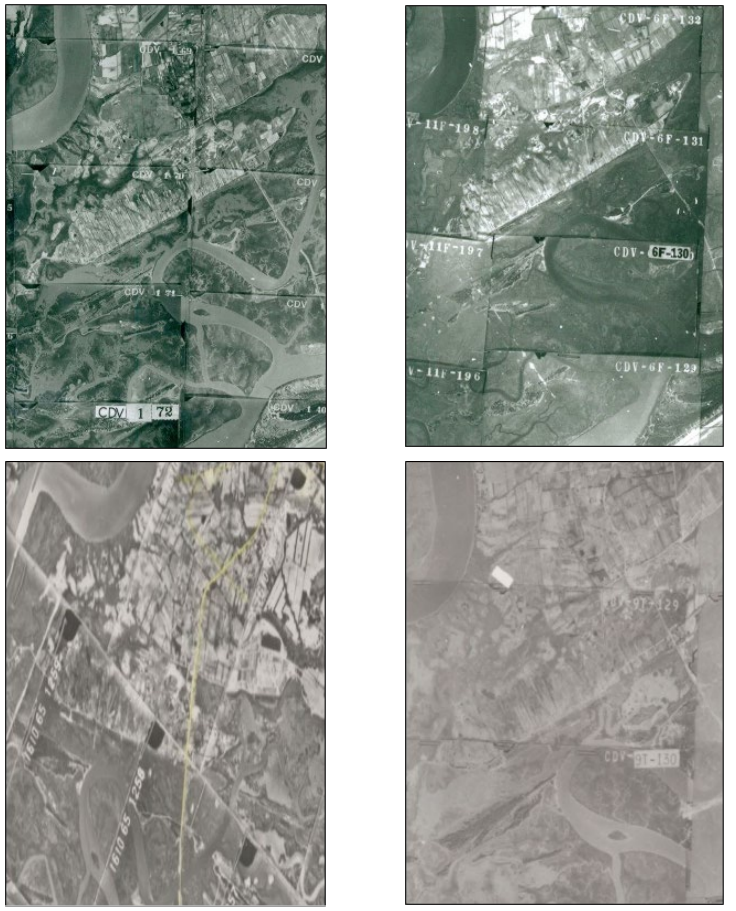
Map and Aerials Study & Analysis: Wider Landscape of James Island

Cross Cut & Ferguson Village/Down Cut



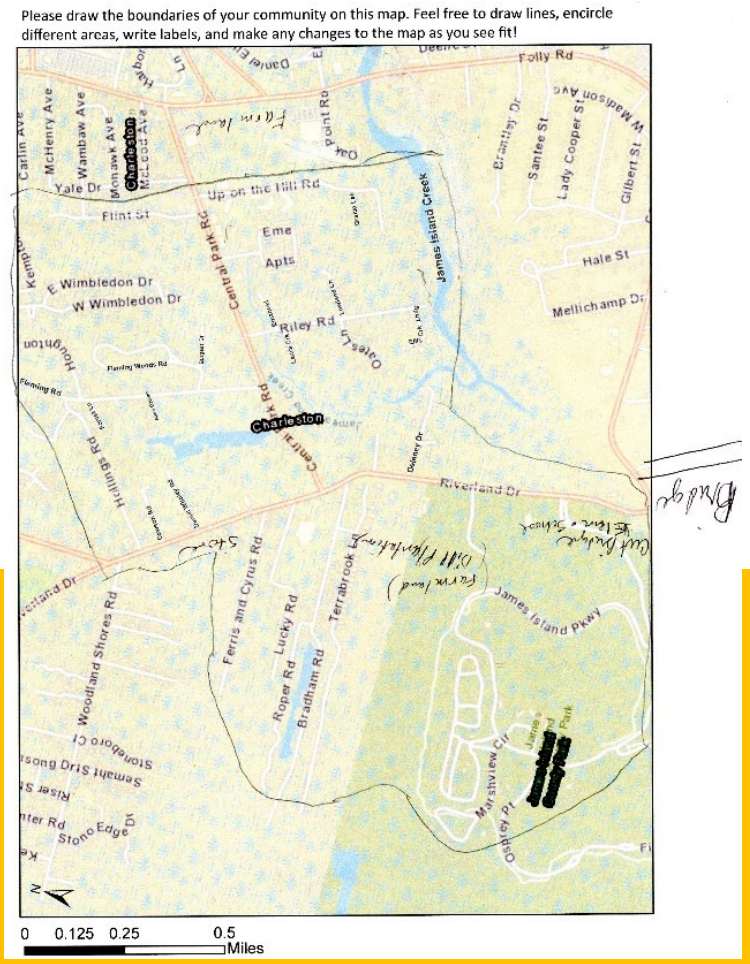
1939, 1949, 1958, 1967 (moving clockwise beginning top left).

Sol Legare



1939, 1949, 1958, 1967 (moving clockwise beginning top left).

Survey Answers & Analysis

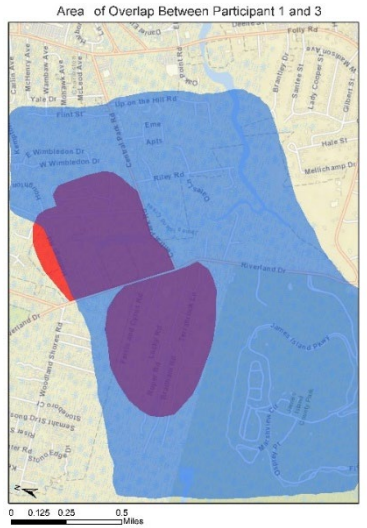


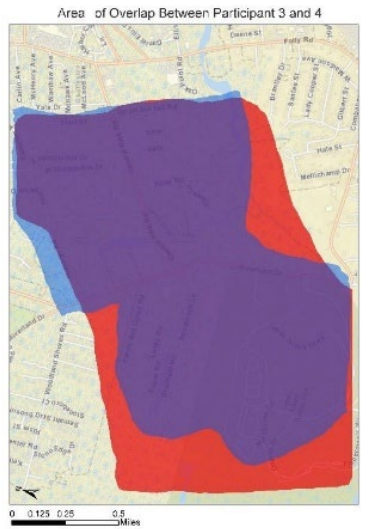
Participant 3's boundary drawing.

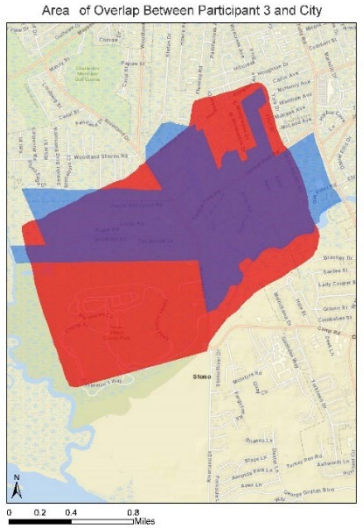
- 15 people contacted directly, 12 people participated (80%)
  - 4 people from Cross Cut
  - 3 people from Ferguson Village/Down Cut
  - 5 people from Sol Legare
- 47 questions, only 15 were required

Survey Answers & Analysis: Boundary Overlap

- Cross Cut: 22% lowest, 76% highest, and 42% average
- Ferguson Village/Down Cut: 10% lowest, 54% highest, and 26% average
- Sol Legare: 43% lowest, 77% highest, and 53% average
- Average overlap for Cross Cut increased to 43% when compared with City of Charleston boundaries, while Ferguson Village/Down Cut average decreased to 20% average







Participant	1	3	4
1		22%	28%
3			76%
4			

Matrix showing percentage overlap for Cross Cut participants.

Community	Participant	Houses	Churches	Schools	Streets	Farm Lands	Rivers and Creeks	Cemeteries	Community Gathering Spaces	Backman's Seafood (OF)	Benny Brown Liquor Store (OF)	Afford to Build Out or Not (OF)	Infrastructure (OF)
Sol Legare	1	5	1	1	5	5	5	2	5				
	2	5	1	4	5	3	5	5	5				
	3	5	5	5	5	5	5	4	5				
	4	5	5	5	5	5	5	1	5	5	5		
	5	5	5	5	4	3	5	4	5			4	5
Average		5	3.4	4	4.8	4.2	5	3.2	5	5	5	4	5

Community	Participant	Houses	Churches	Schools	Streets	Farm Lands	Rivers and Creeks	Cemeteries	Community Gathering Spaces	Golf course (OF)	Other Communities (OF)	Bridge (OF)	
Cross Cut	1	5	5	5	5	5	5	5	5	5			
	2	5	5	5	5	5	5	5	5				
	3	4	2	1	5	1	5	1	5				
	4	5	3	3	5	4	5	2	2		4	5	
Average		4.75	3.75	3.5	5	3.75	5	3.25	4.25	5	4	5	

Community	Participant	Houses	Churches	Schools	Streets	Farm Lands	Rivers and Creeks	Cemeteries	Community Gathering Spaces	Orientation of People's Houses (OF)	Safety, community, and howmuch land plantation owners permitted African Americans to have after slavery (OF)	Where my parents and grandmother had homes (OF)	
Ferguson Village/Down Cut	1	5	5	5	5	5	5	3	5	5			
	2	5	5	5	3	5	3	4	5		5		
	3	5	1	1	3	1	2	1	4			5	
Average		5	3.67	3.67	3.67	3.67	3.33	2.67	4.67	5	5	5	
Overall Average		4.916667	3.605556	3.722222	4.488889	3.872222	4.444444	3.038889	4.638889				

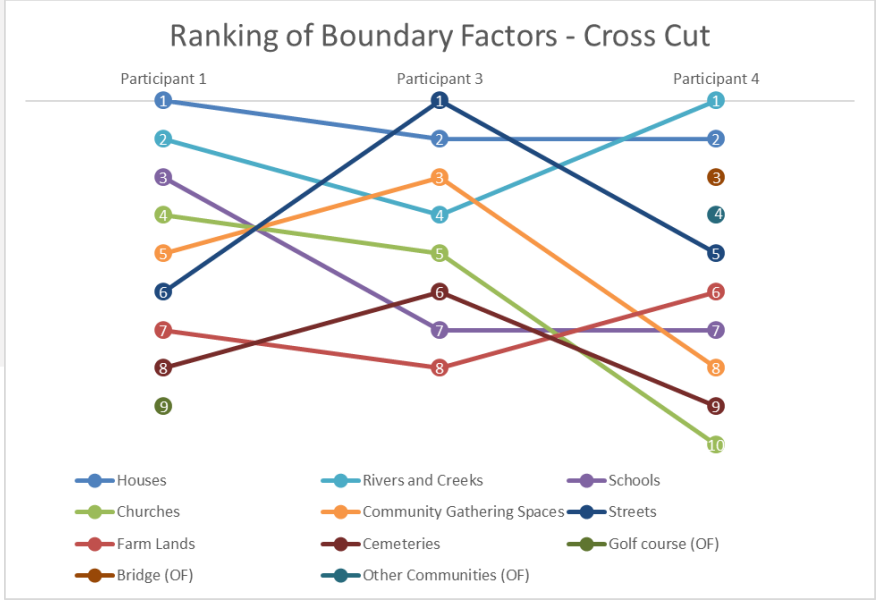
Participants' Likert values for factors, community averages for factors, and overall averages across all three communities.

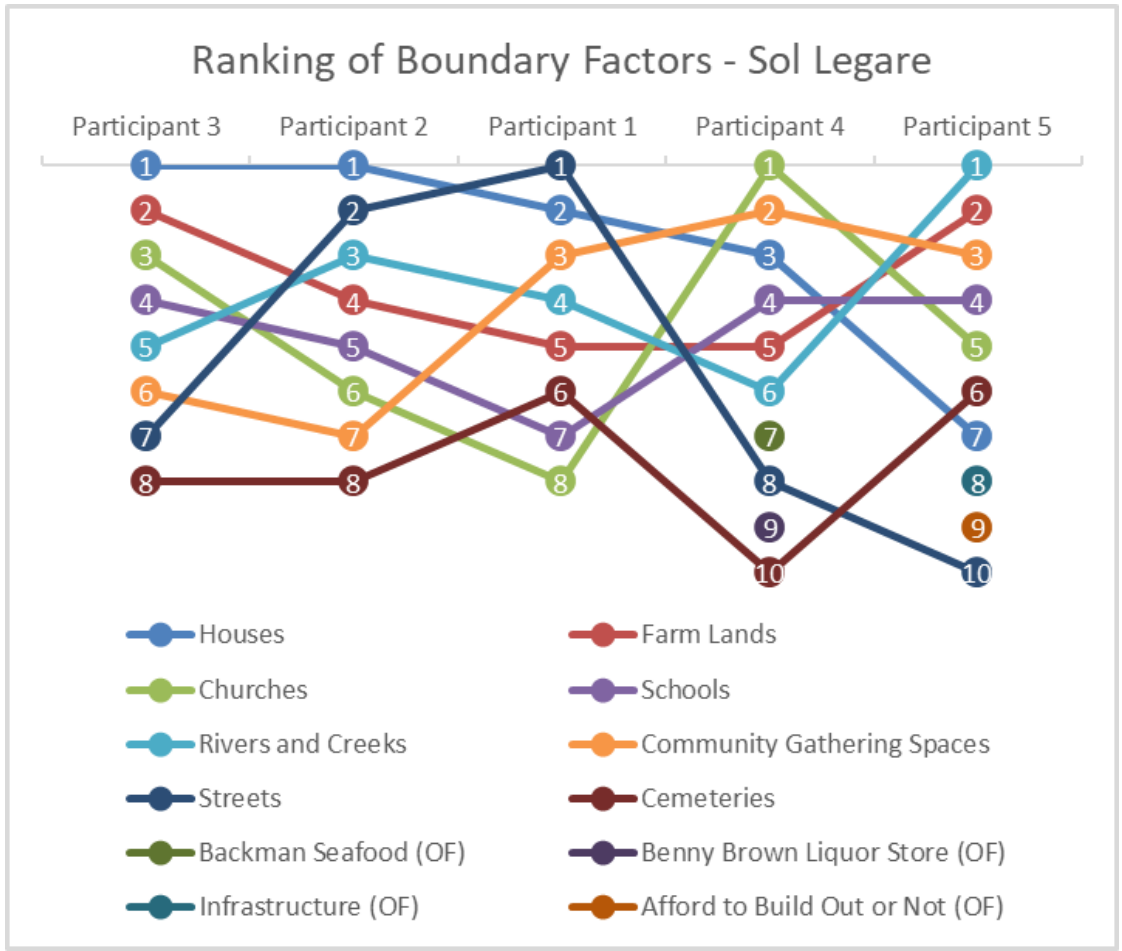
Survey Answers & Analysis: Likert Scale Questions

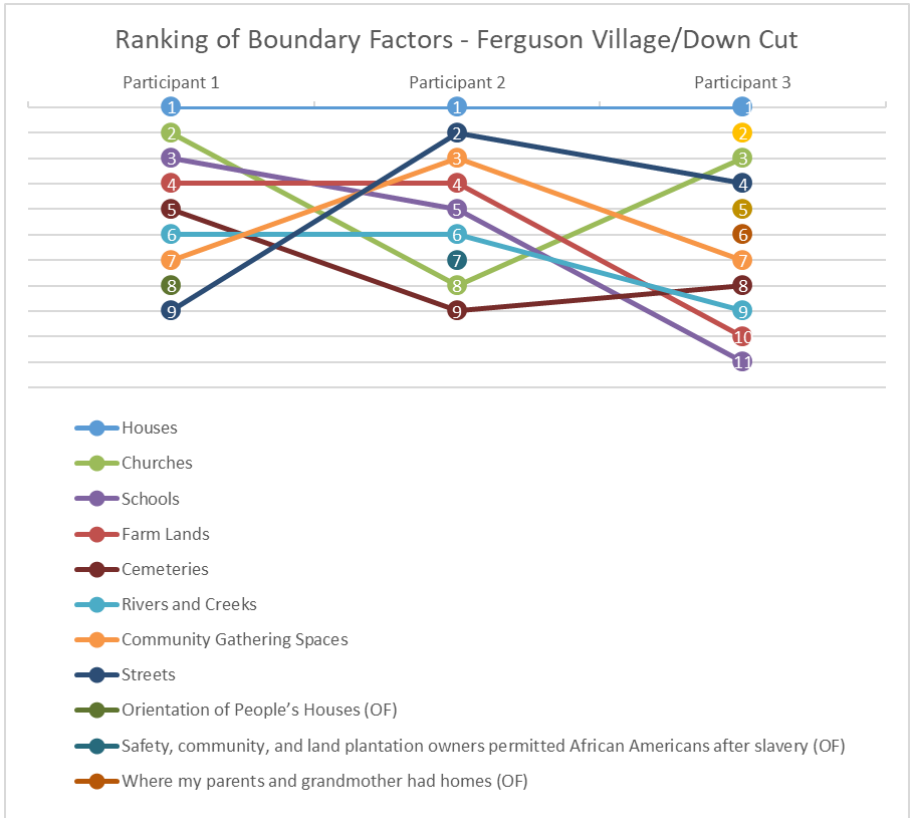
Asked on a scale of 1 to 5 how important houses, churches, schools, streets, farm lands, rivers and creeks, cemeteries, and community gathering spaces were to participants' boundary drawings

Survey Answers & Analysis: Ranking Question

No one participant ranked factors the same







	Meta Themes	Themes	Count
Cross Cut	Development	More houses	2
		Better housing	1
		More traffic	2
		More development	1
		More businesses	1
		Not as many businesses	1
		Former farm lands	2
	Government	Better roads/streets paved/more street names	3
		In City boundaries or not	1
	Demographics	Population growth	2
		Population demographics	1
Ferguson Village/Down Cut	Development	Families lost land	1
		Physical landscape	1
		Development	1
	Government	High taxes	1
		Street names added/new streets	1
	Demographics	Used to be predominantly black and family community/now people coming in	1
		Demographics	1
	Other	Not the same	1
		No longer family community	1
		Society always evolving from generation to generation	1
		Bishop Gadsden	1
		Communities inside community	1
		Losing trees to flooding and erosion	1
		Sinkholes	1
Sol Legare	Development	Less land	1
		People selling land	2
		Stores not here anymore	1
	Government	Boundaries	1
		Folly saying Harris Teeter to Folly Rd. part of Folly	1
		Taxes going up	1
		Need for infrastructure like sidewalks and lighting	1
	Demographics	More people	1
		Population demographics	3
		Some familes and younger people leaving	1
	Other	Need for preserving history	1

Participants' responses and frequency of responses.

Survey Answers & Analysis: Change Question

- Asked "In what ways has your community changed, if at all? Physical landscape, social gathering, population, demographics."
- All participants said their community had changed
- 8 out of 12 participants mentioned population
- 6 out of 12 participants mentioned land

Conclusions, Importance, & Future Research

- Boundaries important for these communities and other African American settlement communities for local, state, or federal district to trigger review of development that could threaten places
- How communities were represented in past vs. how individuals within communities see their own boundaries and important sites
- Better practice of capturing boundaries of community as defined by community members

Thank you!

Graduate Thesis Presentation

April 28, 2023

Clemson University

Master of Science in Historic Preservation

Peter Gaytan

TITLE

We Are Gullah: A Community Approach to Defining Significance of Gullah Geechee Historical Sites

PURPOSE

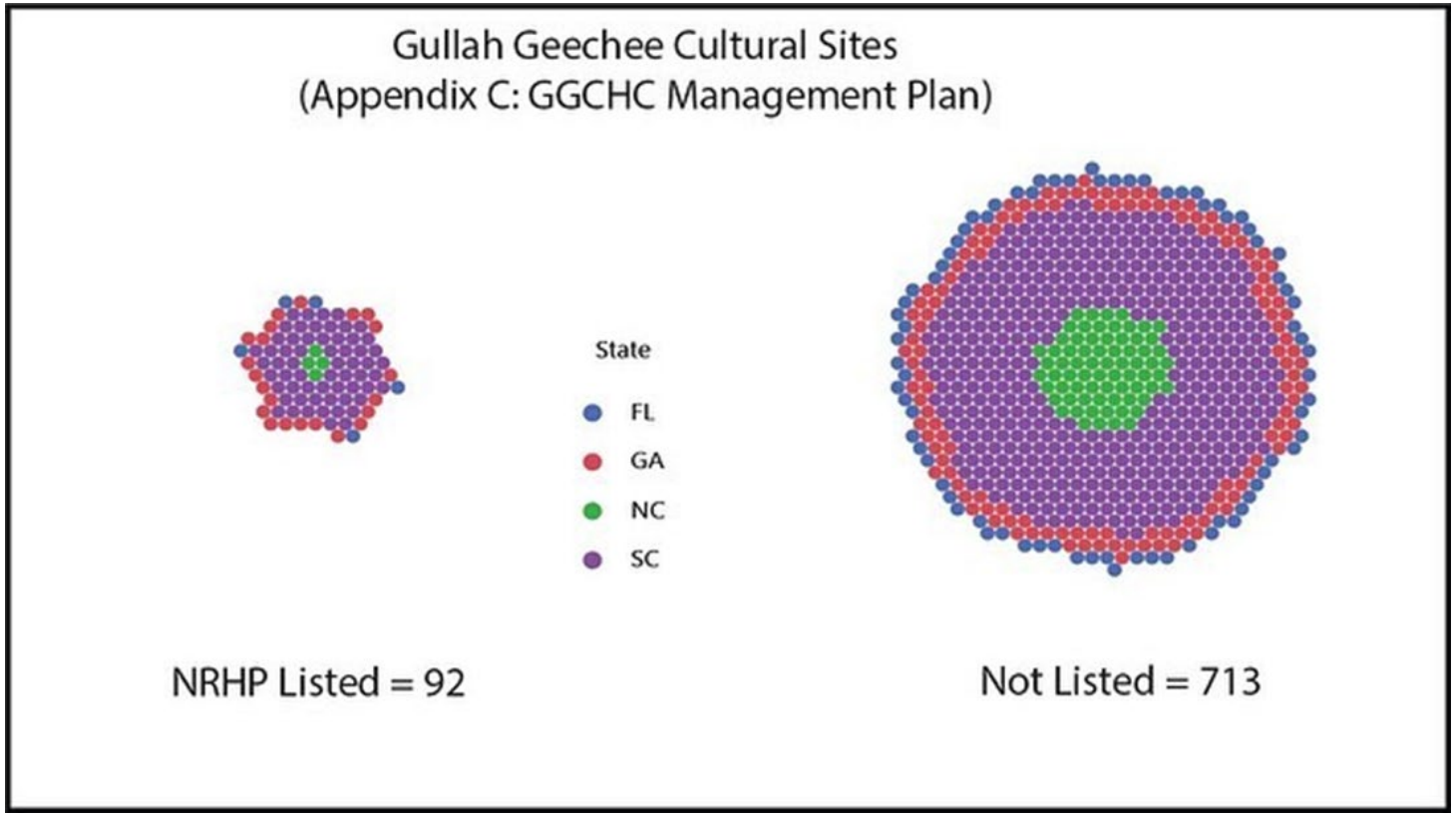
- To answer specific questions pertaining to Gullah Geechee historical sites of significance
- How do Gullah Geechee Community members define cultural/historical significance, and how does this differ from the traditional National Register of Historic Places definition and eligibility process?
- How many Gullah Geechee historical sites are listed on the NRHP
- How many sites listed on the NRHP are also listed on the Gullah Geechee Cultural Heritage Corridor Resource Index Appendix C
- How does the NRHP define significance
- How do Gullah Geechee people define significance
- Does the NRHP lack inclusion of Gullah Geechee historical sites

MAIN OBJECTIVES

- Create a database of all the sites listed on the Gullah Geechee Cultural Heritage Corridor Resource Inventory Appendix C
- Document all sites listed onto the NRHP
- Document how the sites became listed onto the NRHP
- Compare the definition of significance created by the NRHP to the definition created by the Gullah Geechee people
- Find approaches Gullah Geechee sites can take to become listed onto the NRHP
- Document ways Federal, State, and Local Governments have taken to preserve and protect Gullah Geechee historical sites

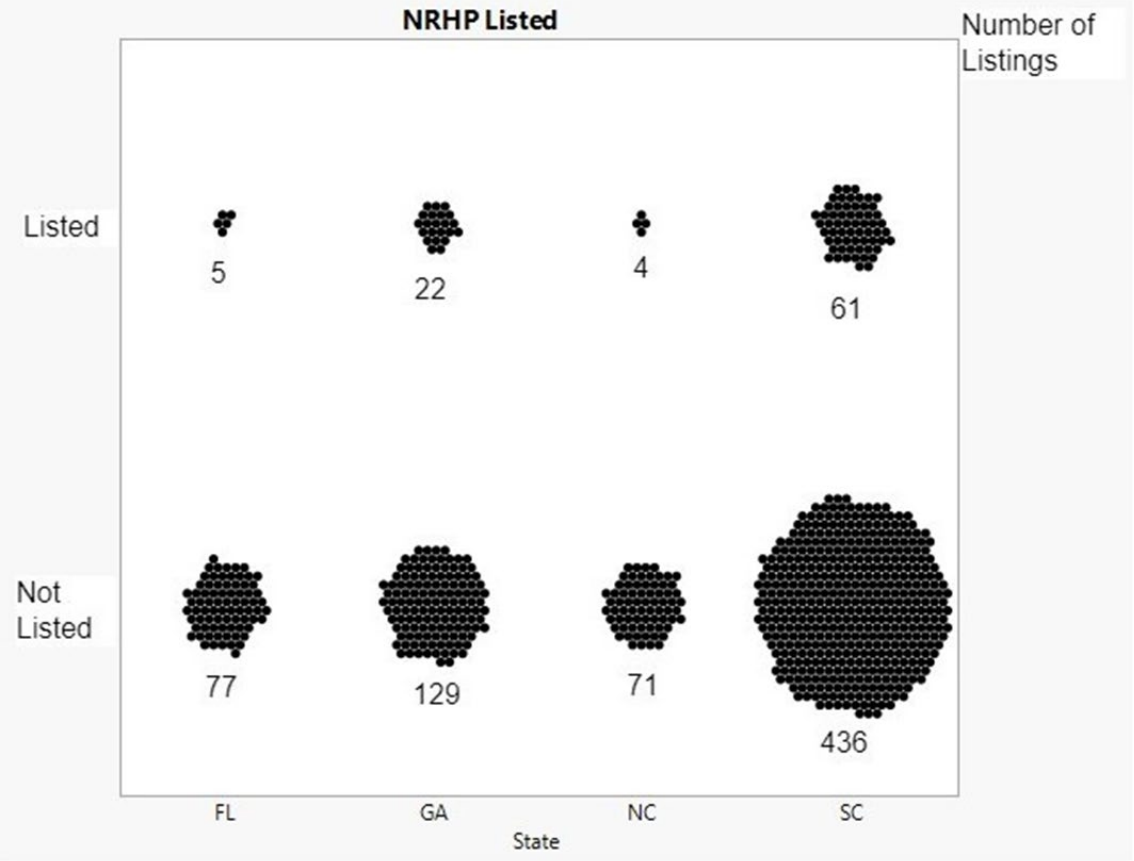
FINDINGS

- There are 805 sites documented as historically significant by the Gullah Geechee people
- All 805 sites are within the Gullah Geechee Cultural Heritage Corridor
- Of the 805 Culturally significant sites only 92 are on the NRHP (11%)



FINDINGS

- The Gullah Geechee Cultural Heritage Corridor geographically includes four states
- Florida, Georgia, North Carolina, South Carolina
- I document the number of NRHP listings for each state

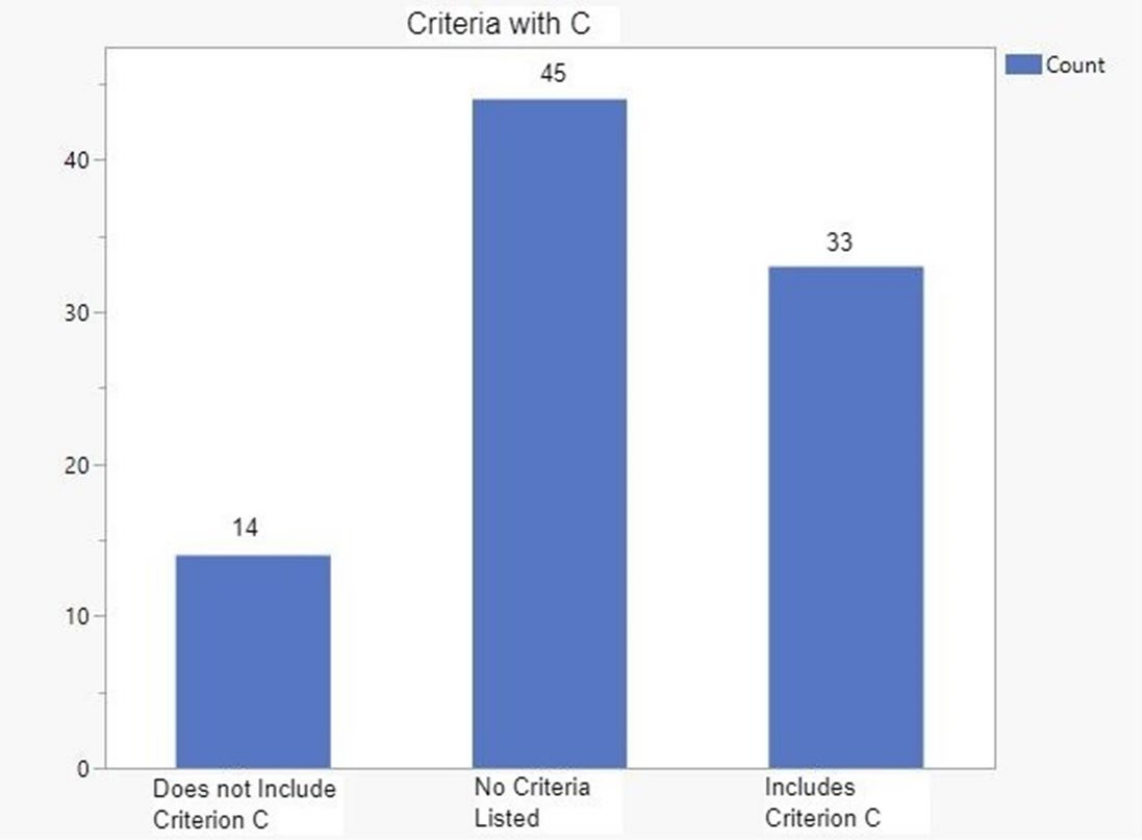


FINDINGS

- I reviewed each listed sites NRHP Application
- I documented what Area of Significance each site met
- Due to many sites being listed just after the Bicentennial many application had no record of what Criteria was met
- But the Statement of Significance paragraphs of sites listed before 1990 include Architectural Significance, suggesting a correlation to "Big House" or plantation house.

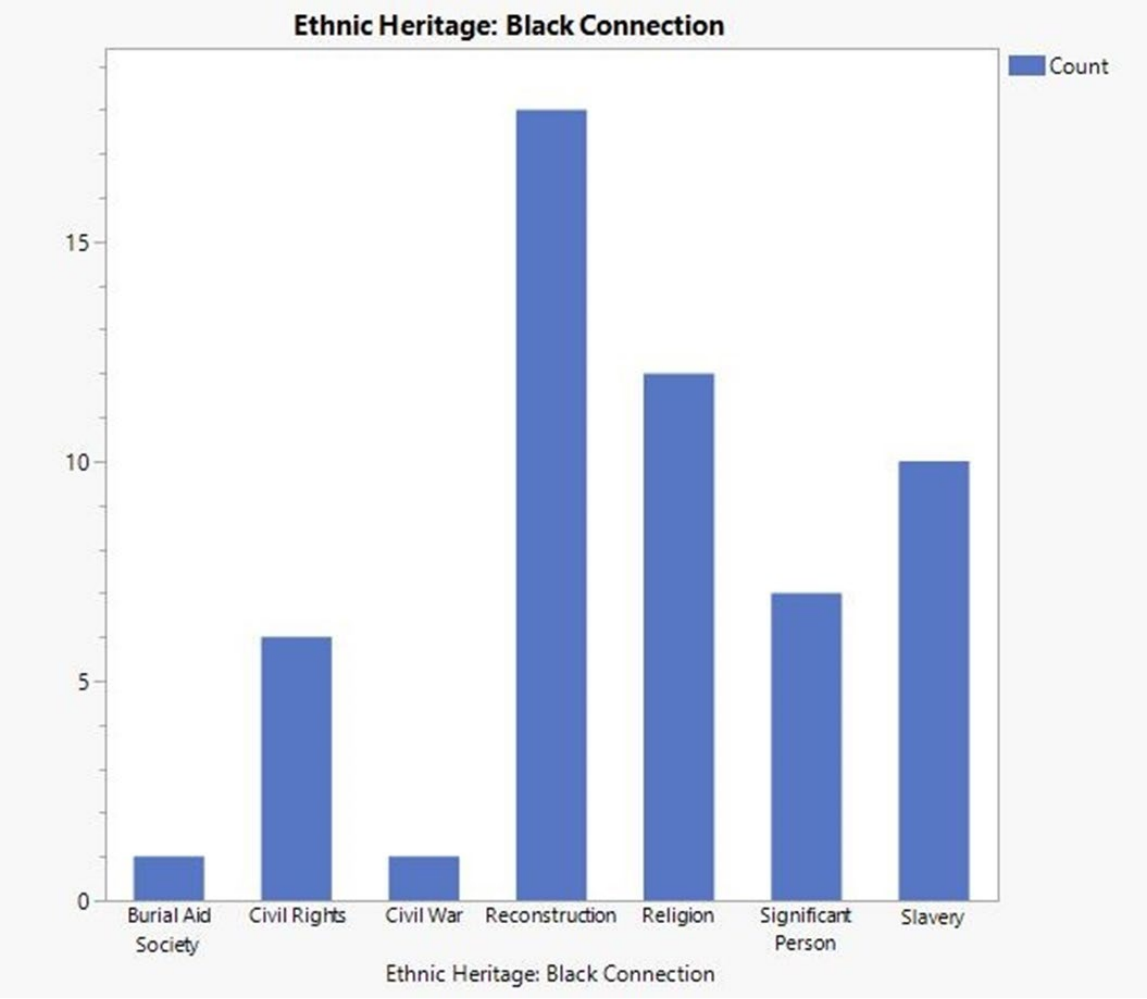
FINDINGS

- The chart shows that for the 92 sites listed for NRHP inclusion are associated with Criterion C, which refers to high-style architecture. 33 sites of the 92 are associated with Criterion C.
- This pattern suggests that those sites may be listed because of plantation homes (big house) architecture rather than for their cultural/historical association with Gullah Geechee people.



FINDINGS

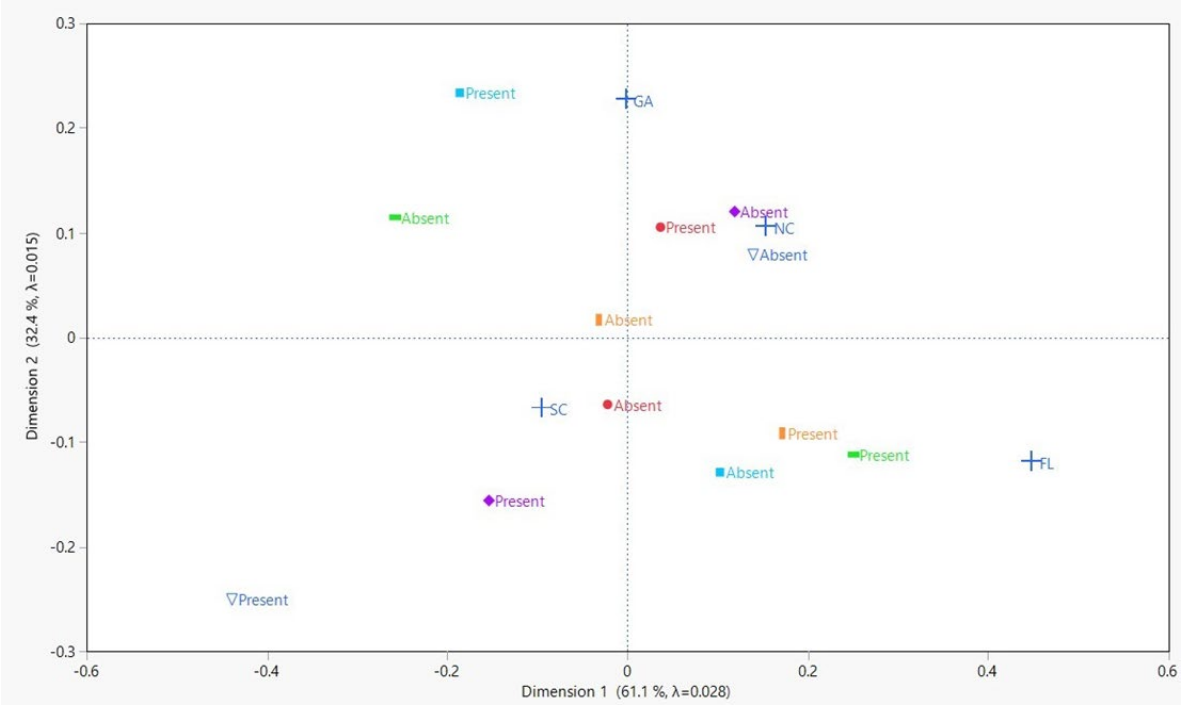
- Area of Significance
- Ethnic Heritage: Black
- 55 sites of the 92 listed, document an Area of Significance relating to Ethnic Heritage: Black



FINDINGS

- After creating a database of the 805 sites documented on the GGCHC Resource Index Appendix C I was able to create a Multiple Correspondence Analysis
- A Multiple Correspondence Analysis (MCA) takes multiple categorical variables and seeks to identify associations between levels of those variables.
- I used this to better understand how Gullah Geechee people define significance compared to the NRHP definition and eligibility criteria

FINDINGS



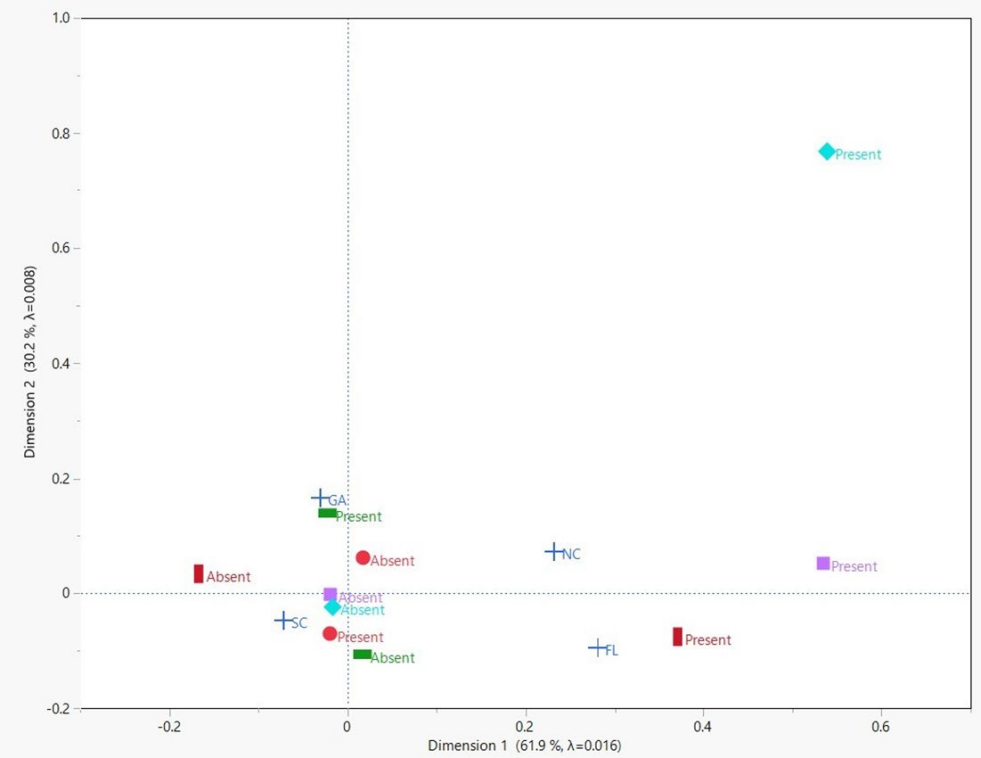
Legend

- Origins & Early Development
- Quest for Freedom, Equality, Education & Recognition
- Global Connections
- Connection with the Land
- Cultural & Spiritual Expression
- Gullah Language
- State

FINDINGS

- Many sites in South Carolina are deemed significant due to associations with Gullah Language and Cultural/Spiritual Expression. Sites in North Carolina have many sites associated with Origins and Early Development. The sites in Florida are strongly associated with Quests for Freedom, Equality, Education, and Recognition. Lastly Georgia’s sites are strongly associated with Connection with the Land.

FINDINGS


1.0
0.8
0.6
0.4
0.2
0
-0.2
Dimension 2 (30.2 %, λ=0.008)
-0.2
0
0.2
0.4
0.6
Dimension 1 (61.9 %, λ=0.016)
Present
GA
Present
Absent
Absent
NC
Present
Absent
Absent
Absent
SC
Present
Present
Absent
FL
Present

Legend
Type:Historic Structure
Type:Cultural Landscape
Type:Ethnographic Resource
Type:Museum Collection
Type:Archeological Resource
State

FINDINGS

- Sites in North Carolina and Florida are more commonly associated with Ethnographic Resources and Museum Collections. Sites in Georgia are associated with Cultural Landscapes. Lastly, the sites in South Carolina are mostly associated with Historic Structures. There is a small number of sites between each state associated with Archeological Resources, having only 24 out of the 805 sites with this association. Georgia having the most sites associated with Archeological Resources.

FINDINGS

- The results from the multiple correspondence analysis indicate that there is significant variation among communities in each state of both themes and property types. This conclusion supports arguments for the need for the NRHP eligibility guidelines and evaluation of significance need to be more inclusive pertaining to Gullah Geechee historical sites.

FINDINGS

- Mike Allen Interview
- Mike explained how the NRHP definitions of significance and integrity need to be re drafted to better address underrepresented sites. He did explain how the use of TCP's Traditional Cultural Properties is one step underrepresented sites can take to become listed on the NR, but he explained that, of his 25 years with the NPS, he only knows of one site listed on the NRHP that used a TCP. This site is Phillips Community in Charleston County, South Carolina

CONCLUSION

- More work needs to be done
- Certain questions arise such as, how can underrepresented sites fit into the four criteria listed on the NRHP application? How can underrepresented sites meet a limited area of significance criteria? Lastly, how can sites use the National Register Bulletin 38, Guidelines for Evaluation and Documenting Traditional Cultural Properties, to become listed on to the National Register as a TCP (Traditional Cultural Property).

Why This Matters?

- This thesis presents clear evidence that preservation and protection of Gullah Geechee historical and cultural sites is needed. Through the help of Gullah Geechee people and communities, a recognition by the National Register of the need to be more inclusive, and the consideration by local SHPO's , historical sites observed by underrepresented communities can become included on to the National Register of Historic Places.

THANK YOU

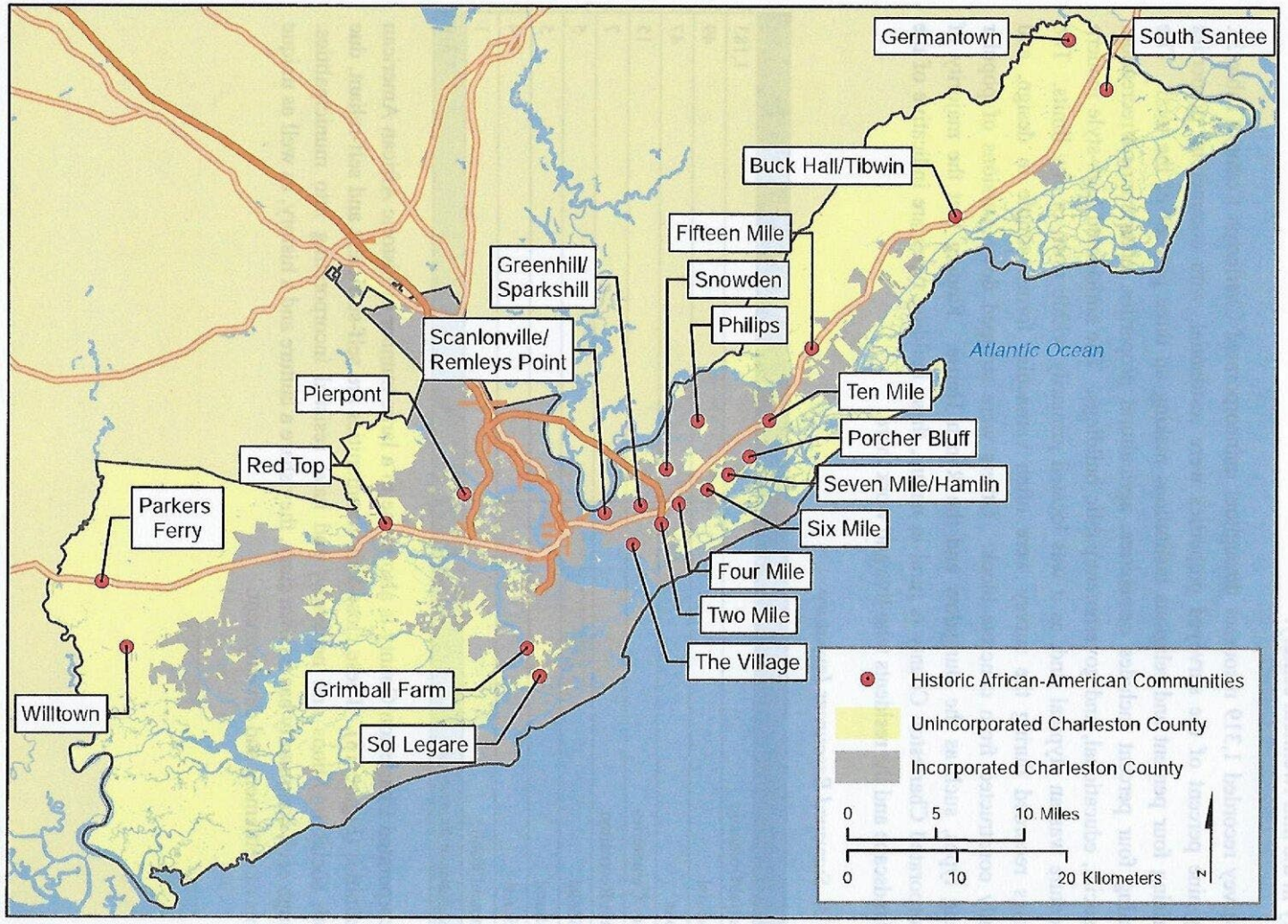


Figure 18.
Historic African American Communities in Charleston County
Note: Only Communities Referenced in Report are Shown om Map

Source: ESRI

CHARLESTON BOARDING HOUSES 1840-1880: PREVALENCE, PLACEMENT, AND CHARACTER

Clemson University/College of Charleston MSHP
Holly Adington

QUESTION

What do period advertisements, Charleston City Directories, and Historic Maps reveal about the prevalence, placement, and character in Charleston boarding houses from 1840-1880?

METHODOLOGY

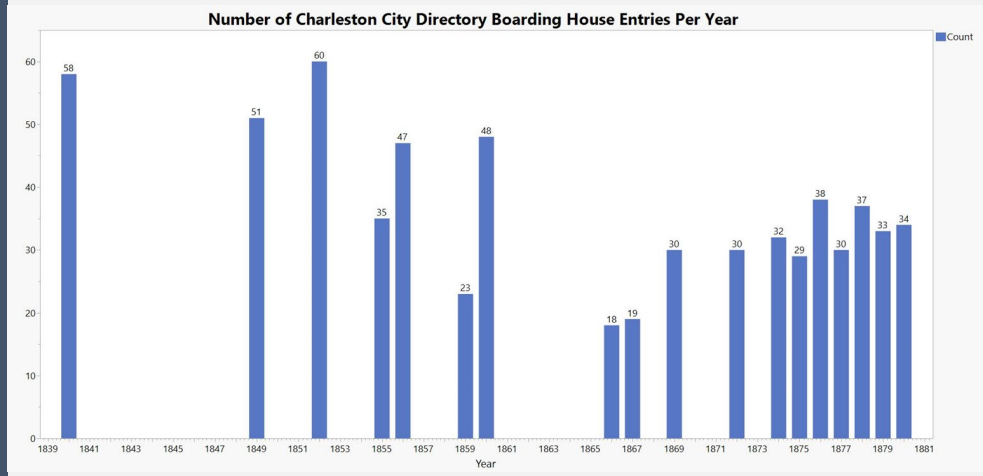
- **Contemporary Newspaper Advertisements**
- Used for qualitative analysis
- Accessed News Bank through CCPL
  - Key word "Private Boarding"
  - Key word "Boarding House"
- Data was analyzed for address, date, keyword, source, number of reruns, who was being advertised to, price, and the gender and marriage status of person associated with advertisement

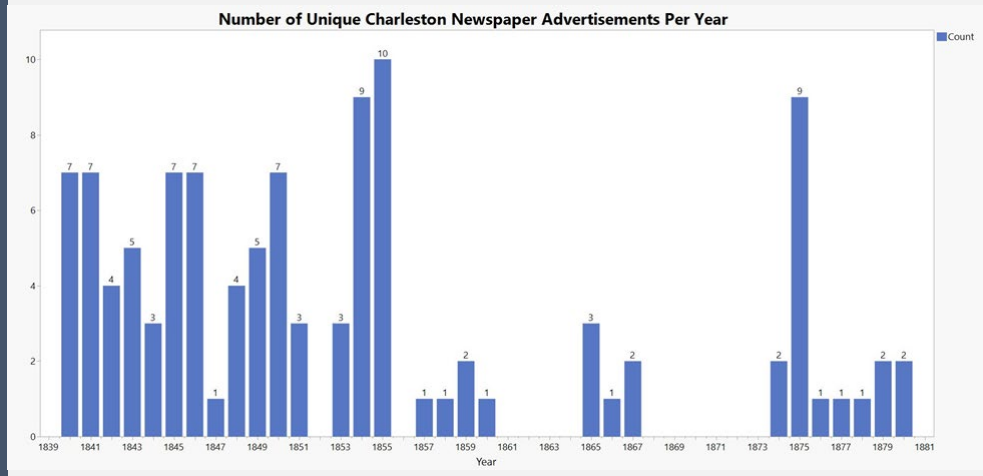
- **Charleston City Directories 1840-1880**
- Used for quantitative data
- Accessed through CCPL and Ancestry.com
  - 18 Directories
  - Identified using profession to determine Houses
- Data was analyzed for address, year, boarding house type, and gender, marriage status, and race of person associated with listing

- **Bird's Eye View of The City of Charleston 1872**
  - Addresses found in 1872 Directory were used to locate buildings on Bird's Eye View map
  - To do this either the 1884 or 1888 Sanborn Fire Insurance Map was used to locate address and then used to find building on 1872 Bird's Eye
    - Number of stories, building material, roof style, roof material, percentage of lot covered by boarding house and outbuildings, and the number of outbuildings.

RESULTS: PREVALENCE

- Boarding houses seem to be fairly steadily prevalent before and after the Civil War looking at Directories and Newspapers though decreased in number after Civil War
  - Gap during the Civil War and during reconstruction in the late 1860s early 1870s
- Earlier years in City Directories had higher number of listings but fewer directories produced averaging around 50 entries each
- Post Civil War directories were produced more frequently, and the average directory had around 30 listings.
- Looking at unique advertisements run in Charleston City newspapers, there is a significant decrease in the number run before and after the Civil War.
  - Probably due to economic downturn and slow recovery of reconstruction.





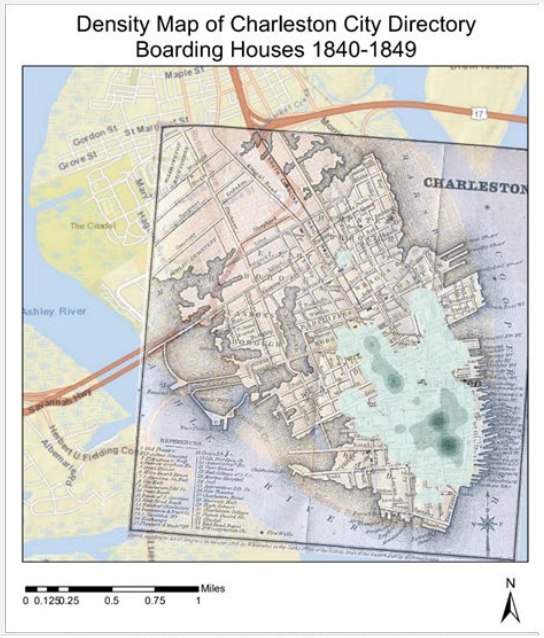
Density Map of Charleston City Directory Boarding Houses 1840-1880

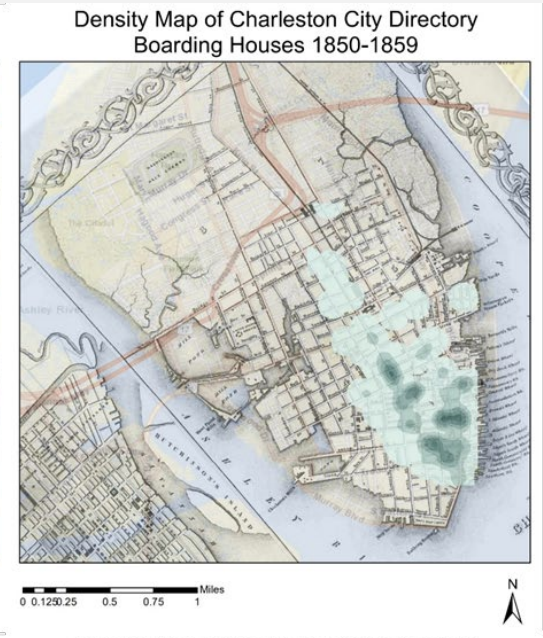
RESULTS: PLACEMENT

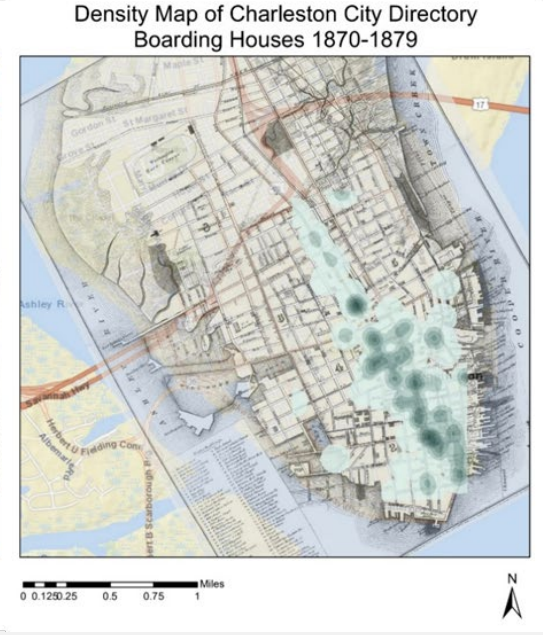
- Throughout the entire time period the southeastern portion of the peninsula was popular for boarding houses likely due to the proximity to Charleston's wharves
- Commercial streets were also popular including East Bay Street, Broad Street, and King Street.
- Boarding houses were as far south as South Battery Street, as far north as Line Street, as far west as Ashley Avenue, and as far east as the edge of the peninsula

RESULTS: PLACEMENT

- When looking by decade, there was growth in every decade's density excluding the 1860s when the Civil War took place.
- As the peninsula was infilled to the west and developed to the north, Boarding houses spread out in those directions over time.

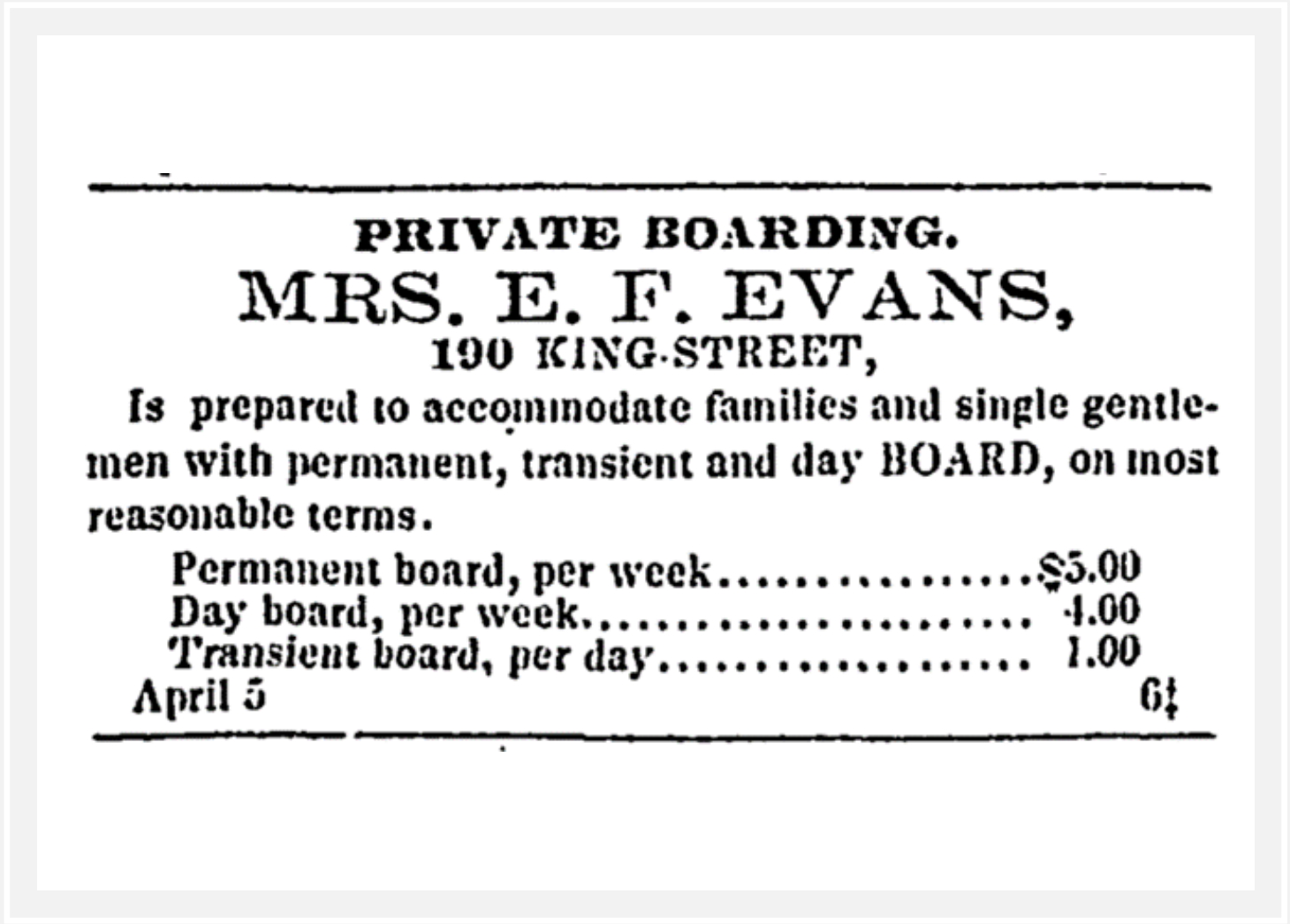






RESULTS: PRICE AND DEFINITION

- Boarding in the 1840s included both lodgings and meals however as seen in this advertisement this changes
- By the 1850s boarding seems to mean the providing of a meal which can include lodging but does not necessarily have to
  - Options advertised included **permanent board, transient board, day board,** and **board without lodging**
- Prices in the 1840s averaged around $3.50 for boarding and lodging
- By the 1850s the options ranged anywhere from $1 for transient boarding to $7 for boarding and lodging and finally day boarding being around $4
  - No price was given in advertisements that discussed boarding without lodging though it would probably be similar to day boarding



PRIVATE BOARDING.

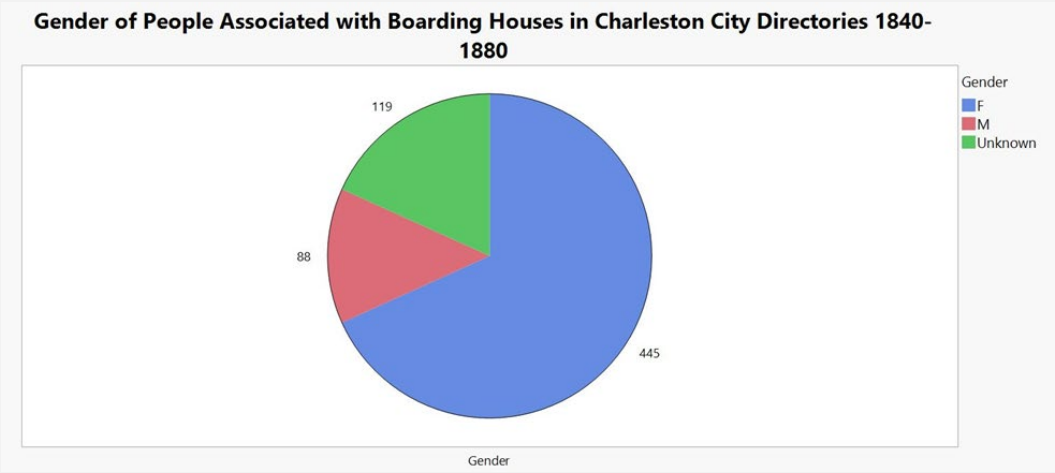
MRS. E. F. EVANS,

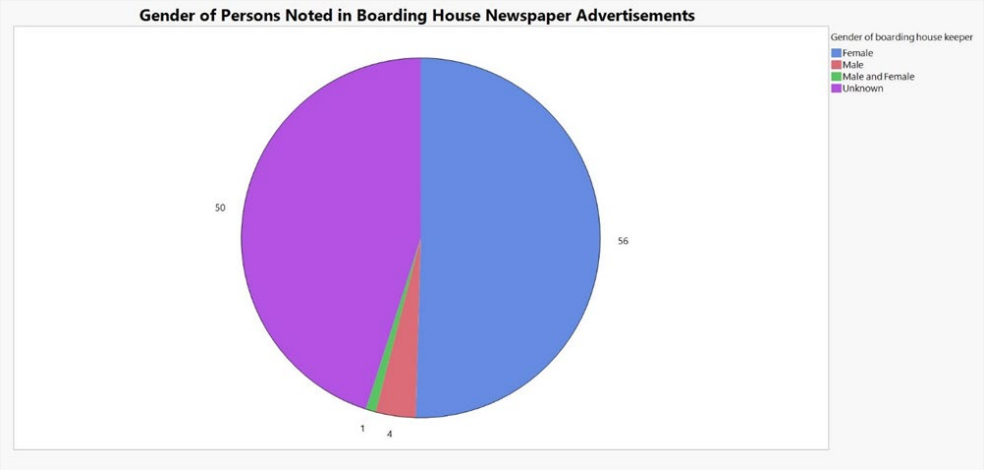
190 KING-STREET,

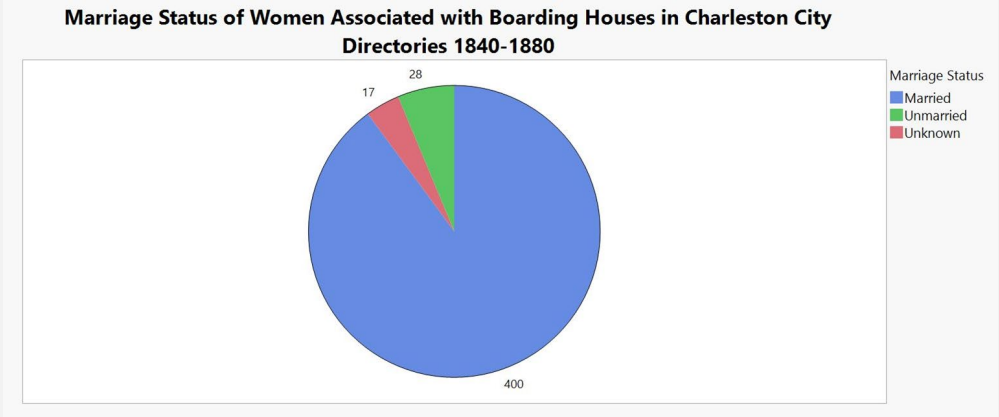
Is prepared to accommodate families and single gentlemen with permanent, transient and day BOARD, on most reasonable terms.

Permanent board, per week	$5.00
Day board, per week	4.00
Transient board, per day	1.00

April 5 6t



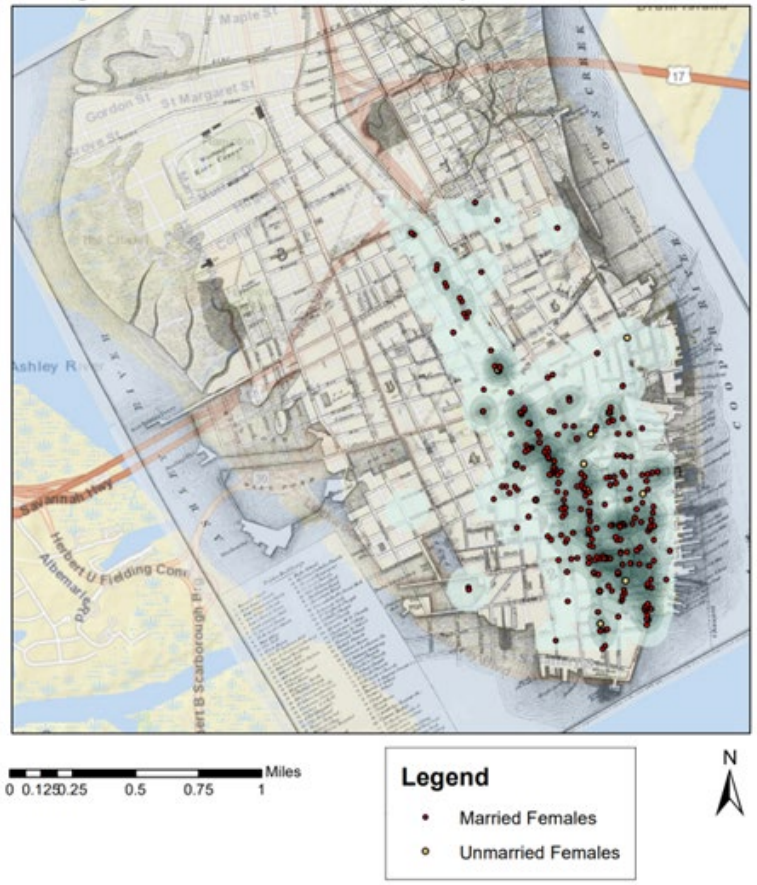




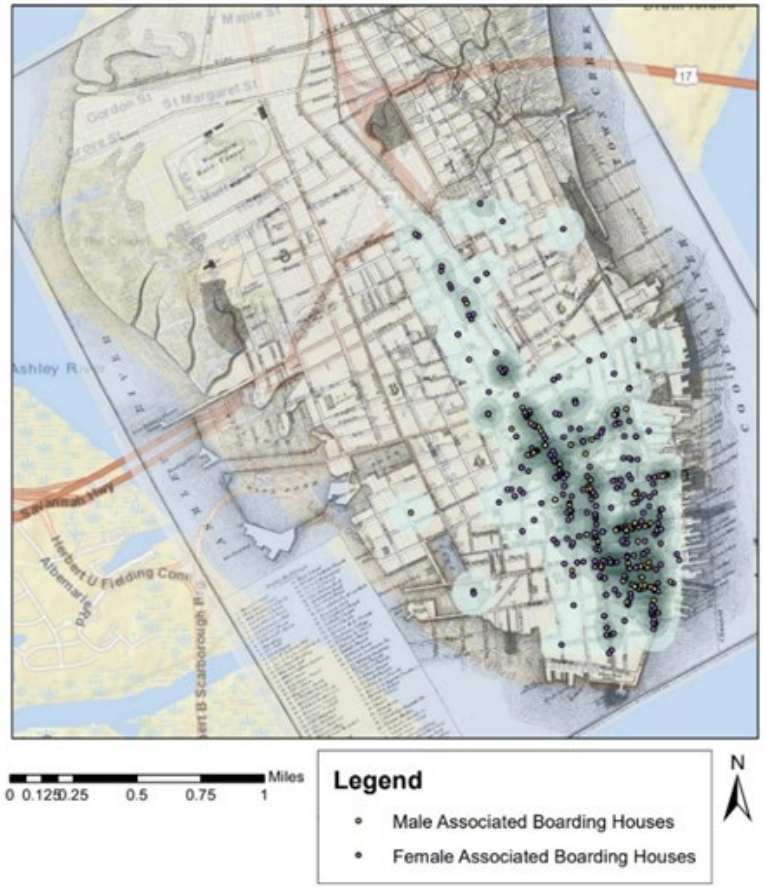
RESULTS: GENDER, MARITAL STATUS, AND RACE

- Women were the most common gender associated with both City Directories and Advertisements
- Half of advertisements did not give a person whose gender could be determined
- The vast majority of women were determined to be married with 400 out of 445 women indicating this status in directory entries
- Within Charleston newspaper advertisements, all women either could not be determined or indicated they were married
- City Directory listed three people associated with running or owning of boarding houses as being Black.
  - were not recorded until after the end of the Civil War in 1866 and 1878

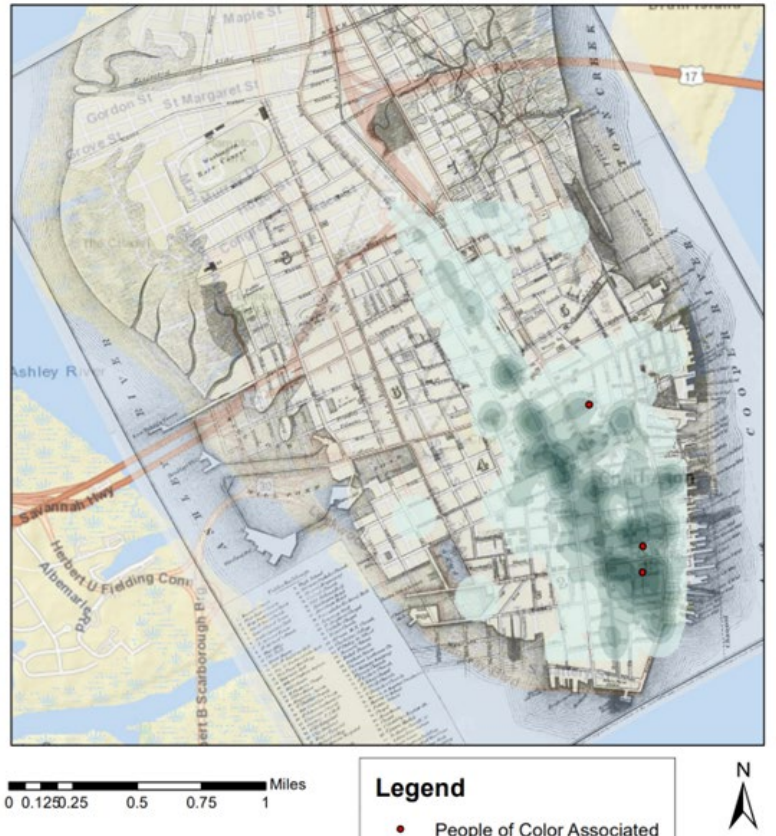
Map of Married and Unmarried Women Associated with Boarding Houses in Charleston City Directories 1840-1880



Map of Male and Female Associated Boarding Houses in Charleston City Directories 1840-1880



Map of People of Color Associated Boarding Houses in Charleston City Directories 1840-1880



RESULTS: CHARACTER AND PLACEMENT

RESULTS: BOARDING HOUSE TYPES AND STYLES

Row Labels	Count of Boarding House Types in Charleston City Directories
Barroom	2
Italian	1
Sailor's	3
Seamen's	5
Unspecified	641
Grand Total	652

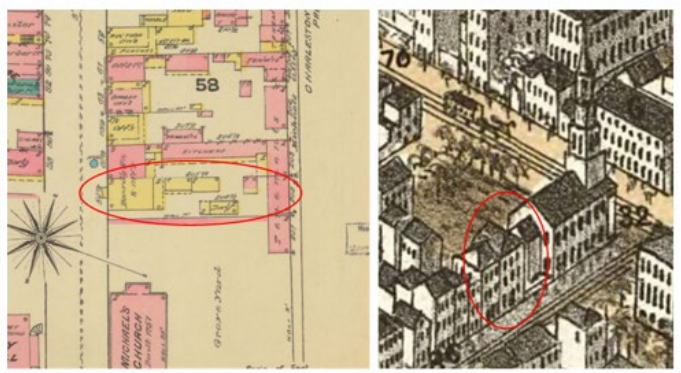
Boarding House Type	Unique Advertisement Count
French	3
French and Spanish	1
Unspecified	107
Grand Total	111

- Most listings and advertisements did not specify boarding house type
- Directory listings seemed to mostly advertise specific communities
- Newspaper advertisements specified mostly style of dining with the exception being the French and Spanish boarding house advertised in both languages which is seemingly more community based

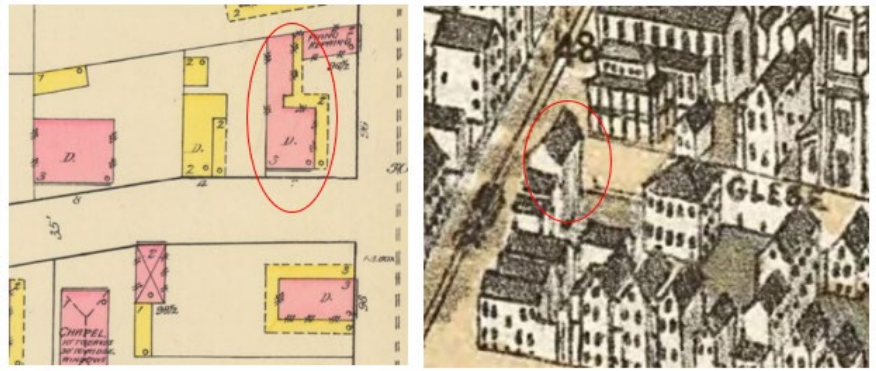
RESULTS: PHYSICAL CHARACTER

(AND OCCUPANCY)

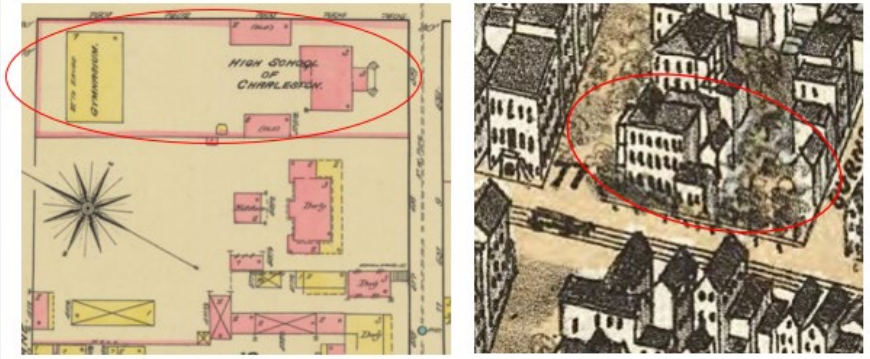
- Boarding addresses from the 1872 Charleston City Directory were located using the 1884 or 1888 Sanborn Fire insurance maps and then found on the Bird's Eye View of the City of Charleston 1872 map
- Generally found that there was no set of architectural features that identified boarding houses
- The common features such having three stories, made brick building, with slate roof, and avg. of 2 outbuildings in combination with the main building take up more than half the lot, are common among most Charleston Buildings of the time.
- Census data for occupancy was checked for these three addresses in 1870. Mansion House listed 56, King Mansion listed 19 people, and 2 Glebe listed 16 people.



69 Broad Street, Mansion House located on 1884 Sanborn Fire Insurance Map and 1872 Bird's Eye View
Courtesy of The Library of Congress



2 Glebe Street on 1884 Sanborn Fire Insurance Map and 1872 Bird's Eye View
Courtesy of The Library of Congress



Meeting and George Streets, King Mansion located on 1884 Sanborn Fire Insurance Map and 1872 Bird's Eye View
Courtesy of The Library of Congress

IMPORTANCE AND FURTHER STUDIES

Importance

- This research has added complexity to the research of the lives of everyday people during the 19th century
- This research has added to the understanding of the boarding house landscape of Charleston
- This research has helped to expand the understanding of boarding in the United States through the addition of a southern industrializing city to the better researched northern cities

Further Studies

- More in-depth research of the people associated with the running of boarding houses
- More in-depth look at census data to understand the scale of boarding houses in Charleston during this time period
- A look at architectural characteristics through contemporary news papers advertising buildings as ideal for boarding to understand the basic necessities
- A close look at the shift from enslaved labor to domestic servants at the close of the Civil War and its effects on boarding house number or size

THANK YOU

QUANTITATIVE TECHNIQUES FOR CLASSIFYING MOULDINGS: AN EXPLORATION OF LOGISTIC REGRESSION WITHIN ARCHITECTURAL INVESTIGATIONS

South Carolina Historic Preservation Conference
April 28, 2023
Chase Pilcher

RESEARCH QUESTIONS

Research Question 1

Can a mathematical model be built that can help consistently classify the time period for historical mouldings, starting with Georgian architraves?

Research Question 2

Can the results from the model provide insight into stylistic changes over time?

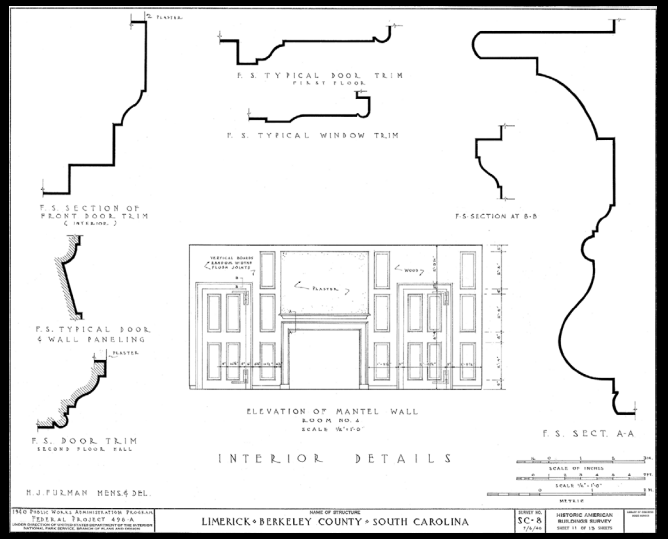
WHAT IS LOGISTIC REGRESSION?

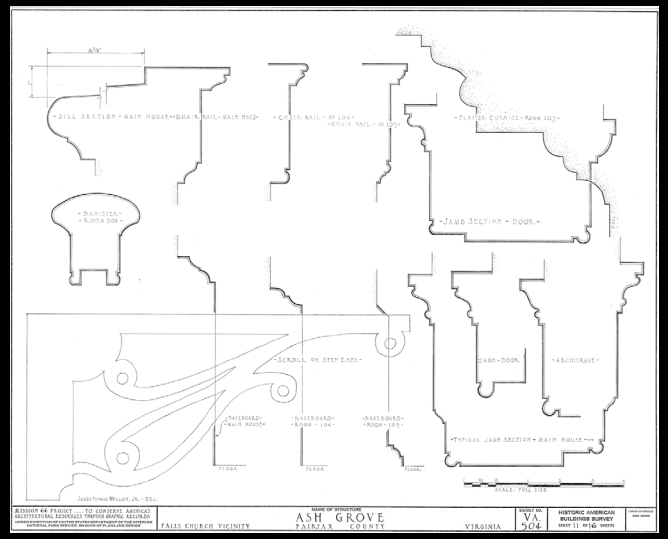
- Logistic regression is a statistical model used for classification and predictive analytics.
  - Served well for this study since one of the main purposes was to classify Georgian and non-Georgian architraves

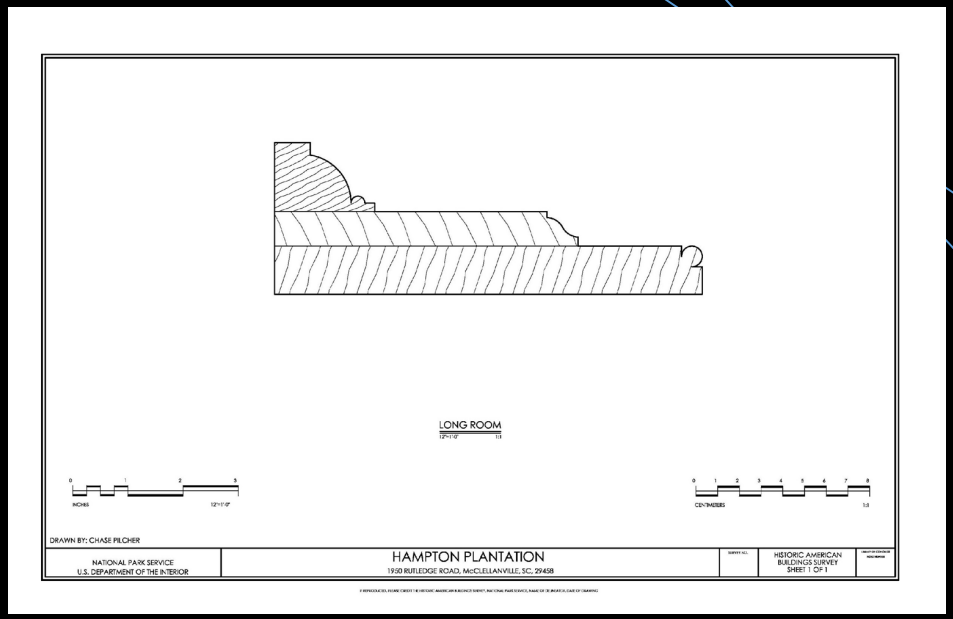
- The outcome of logistic regression is a probability, so the dependent variable is bound between 0 and 1
  - For binary classification, a probability less than .5 will be classified as a 0 (non-Georgian) and above .5 as a 1 (Georgian).

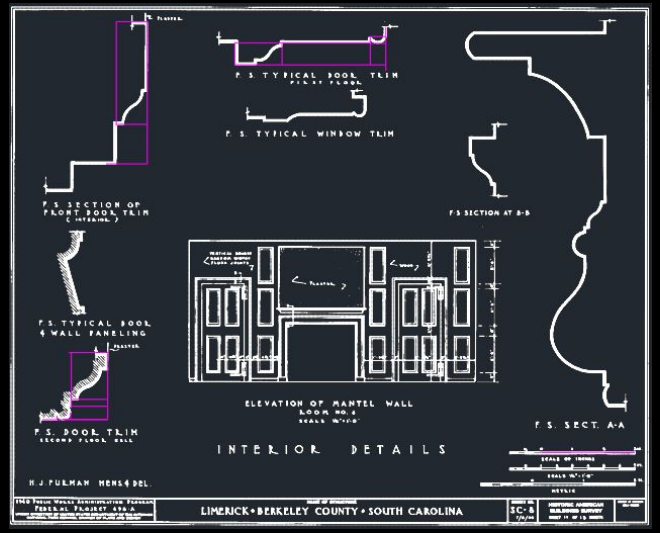
$$p(x) = \frac{1}{1 + e^{-(\beta_0 + \beta_1 x_1 + \cdots + \beta_k x_k)}}$$

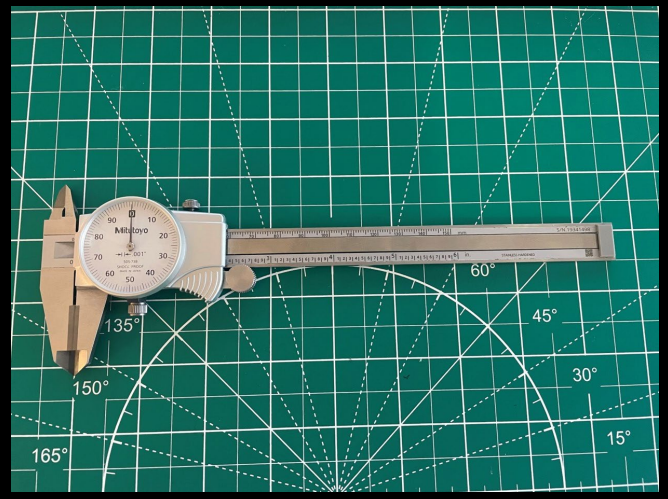
DATA COLLECTION METHODOLOGY











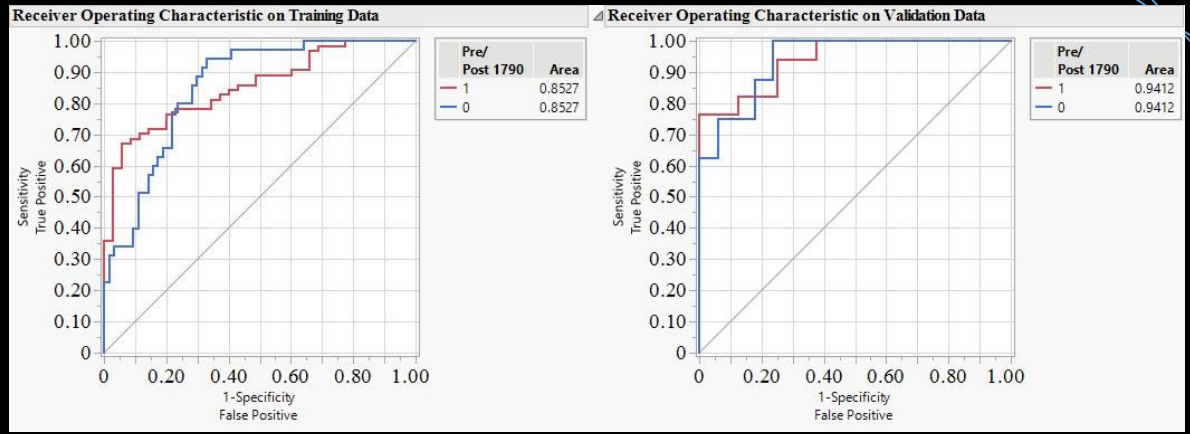
DATA ANALYSIS METHODOLOGY

- The first and most important step is to separate a portion of the data
- Because the sample size was limited to 126 observations in the training set, k-fold cross-validation was used to validate iterations of the model.
- To better understand the accuracy of the model, each model was run against 100 k-fold cross-validation training sets. The average of the results was used as a comparison of accuracy against competing models.
- Built approximately 20 models, including more advanced machine learning models, such as binary decision trees.

RESULTS FROM TRAINING SET

- 124 unique architraves
  - 81 Georgian
  - 43 non-Georgian

- Results of the seven-variable logistic regression model for training and validation set.
  - AUC
  - Confusion Matrix



Confusion Matrix

Training

Actual Pre/ Post 1790	Predicted Count 1	0
1	53	11
0	14	21

Actual Pre/ Post 1790	Predicted Rate 1	0
1	0.828	0.172
0	0.400	0.600

Validation

Actual Pre/ Post 1790	Predicted Count 1	0
1	16	1
0	2	6

Actual Pre/ Post 1790	Predicted Rate 1	0
1	0.941	0.059
0	0.250	0.750

RESULTS FROM HOLDOUT SAMPLE

- 79 unique architraves
  - 52 Georgian
  - 27 non-Georgian

- Results of the seven-variable logistic regression model for the holdout sample set.
  - Confusion Matrix

	Most Likely Pre/Post 1790_1	
Pre/Post 1790	0	1
0	19	8
1	13	39

	Cutoff .7	
Pre/Post 1790	0	1
0	22	5
1	24	28

	Cutoff .65	
Pre/Post 1790	0	1
0	21	6
1	21	31

	Cutoff .6	
Pre/Post 1790	0	1
0	21	6
1	18	34

	Cutoff .55	
Pre/Post 1790	0	1
0	19	8
1	15	37

CONCLUSIONS AND AREAS OF FURTHER RESEARCH

THANK YOU!