Introduction

Betty’s Hope was a sugar plantation situated on the eastern part of Antigua, British West Indies that contained 700 acres of land. Christopher Codrington acquired the plantation in 1668 and arrived on the island in 1674. He proceeded to establish the most successful sugar plantation on Antigua. The plantation operated under the same family until 1944, resulting in extensive archives that include letter books, manuscripts, shipment returns, invoices, and maps of the plantation. These “Codrington Papers” have guided research since 2007 when excavation began at the Great House. The on-going excavation is directed by Dr. Georgia Fox and conducted by the CSU Chico field school.

New work at Betty’s Hope is using digital technology to transform the archives and take archivally-based research further in key ways: digitizing the Codrington archives themselves, and using the historic maps to guide site surveys and create digital overlays. These actions not only directly aid the site and its researchers, but will also increase the accessibility of information about the site for anyone who wishes to learn from it.

Theory

This idea is often attributed to Foucault’s “Discipline and Punish” and stems from a form of social control discussed by the 17th and 18th centuries. Theorists such as Foucault and social reformist Jeremy Bentham discussed the “surveillance society” as one that oppressed through visibility and control over a negotiated landscape.

In the late 17th century, the rise of the plantation system allowed for a new form of social control to emerge, to which the term “perfect prison” was applied. The plantation system used economic incentives and social control to govern the laborers. The plantation was designed in a way that the central and most prominent feature of the landscape was the sugar mill. This prominence represented power and control over the landscape. Such power was created in and perpetuated in a way that the constant visibility of all surrounding lands and opportunity or possibility of surveillance at any moment in time created a sort of prison for those working on the plantation.

Archaeology of plantations has often turned to analyzing plantation house to better understand ideas of power and industrial relationships on this unique landscape. In the Caribbean, many theories of social and working relationships have focused around the location of the great house and slave villages and what these locations can reveal about the lives of these people (Dille 1990; Bigman 1981; Randle 2001; Singleton 2001; Upton 1980; Epperson 2000; Armstrong 2006).

In recovering these landscapes, the focus of the great house in relation to slave villages is often used to examine the theory of a central power, or visibility as an oppressor. This theory proposes that plantation was designed in such a way that the central and most prominent feature on the landscape was the great house. This prominence represented power and control over the landscape. Such power was created in and perpetuated in a way that the constant visibility of all surrounding lands and opportunity or possibility for surveillance at any moment in time created a sort of prison for these working on the plantation.

Methods

Acquiring a digital copy of historic maps of Betty’s Hope from the Museum of Antigua and Barbuda National Archives.

Geographically register maps to modern landscape using Benes satellite imagery from Bing. Nine ground control points were identified.

Ground survey and collection of GPS points

Building locations

Roadways

DEM

Streets to DEM of the project was readily available one was constructed using:

GPS data collection

Camera map acquired from Antigua National Parks Authority in Nelson’s Dockyard

Convent to Meters

First source of ASTER DEM of Antigua

Converge radar data from DEM points shapefile

Interpolate elevation point layers into a DEM using Tips to raster tool at a meter resolution

Overview

Historic map overlaid on satellite image

Map snapped to satellite image using:

Geographic features (streams, ponds)

Roads

African markers

Structures still standing on landscape (windmills, cisterns, Great house)

Map was then projected into the UTM coordinate system

Results of the viewshed analysis show that the slave villages do fall within the line of sight of the manager’s or overseer’s house. This means that the great house was in direct line of sight of the industrial complex at the site (the windmills and sugarworks). Viewshed analysis also revealed that only certain farm locations fell within the line of sight of the actual great house. The majority of the village locations were only visible from the manager’s location. Viewshed from the slave village seems to reinforce these results. The viewshed from slave tall locations does not reveal the actual great house location or include any one of the white servants and overseer’s locations. These results would indicate that the perspective of the plantation may have some validity at Betty’s Hope. The slave villages and working locations were in constant line of sight of their direct supervisors and or punishment. Whether in the sugar works or surrounding locations, imposing structures of the planocracy would always be visible from & punished. This would go far to reinforce the idea of power relations as an archetypal person landscape.

While these results coincide with the theory of centrality of power, these results are preliminary and further research and analysis is necessary before any conclusions are drawn. It is also important to keep in mind the nature of the data consulted in this analysis. Errors in elevation data due to satellite access, collection error, and recording methods could result in a skewed or misleading elevation model. Further research and data collection could provide the systematic collection of elevation data based on the area of interest. Building heights and actual ground location also need to be taken into account to further improve the analysis and results.

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