

Danish Colonial Healthcare Policy, St. Croix, Virgin Islands

MEREDITH REIFSCHNEIDER *

Email: mreifschneider@sfsu.edu

(Post)colonial scholarship in recent decades has undergone methodological and conceptual revisions and scholars have increasingly adopted the premise that social and political transformations are the product of both global and local struggles. The goal of this paper is to position healthcare as an “imperial force field” by focusing on the development of a colonial healthcare system in the nineteenth-century Danish West Indies. I argue that challenging seemingly self-evident concepts such as healthcare forces us to recognise that interventionist healthcare was contested and negotiated at multiple levels. This paper mobilises archival and archaeological research from a plantation hospital at Estate Cane Garden, St. Croix, Virgin Islands, to provide a context for interrogating the practical negotiations of colonial healthcare policy. While colonial administrative documents and physician reports depict a rather narrow range of healthcare practices, archaeological evidence from a plantation hospital suggests that healthcare, within plantation institutions, was more heterogeneous than the documents indicate. The goal of this paper is largely methodological. It mobilises colonial transcripts and material culture in ways that disrupt and reimagine taken-for-granted assumptions to show how those most affected by colonial policies complicate colonial institutions via on-the-ground practices.

Keywords: Danish West Indies, plantations, healthcare, medical archaeology

Introduction

Despite Denmark’s participation in global expansionism and colonialism throughout Northern Europe, West Africa, India, and the Caribbean, social, political, and academic discourses commonly elide Denmark’s imperialist role in colonialism and participation in the transatlantic slave trade.¹ More recently, scholars of Danish and West Indian history have moved beyond linear frameworks of economic development to, in the words of Naum and Nordin, “rethink colonialism.”² Fur notes that scholars must reconsider strict definitions of geographic expansion and settler colonialism and instead focus on the “many roads and pathways to colonialism.”³ Rethinking colonialism entails identifying the competing agendas of colonisers and analyzing how contested boundaries and categories between “ruler and ruled” were maintained.⁴ Recent scholarship on

Scandinavian colonialism has interrogated both the commonality and the exceptionality of Danish colonialism and plantation slavery. In doing so, scholars analyse Danish colonies in the West Indies as projects that included administrative and demographic controls to secure a productive workforce⁵ and projects that created racialised and gendered ideologies of difference.⁶

This paper similarly interrogates the administrative tensions between metropole and colony, specifically in reference to the development of a comprehensive healthcare system in the Danish West Indies. I draw on recent scholarship in (post)colonial studies and archaeology to show how healthcare policy and practice in the Danish West Indies represented a complex reworking of colonial desires in a localised setting. The healthcare system in the Danish West Indies was modelled after an extant healthcare system in Denmark, but was consistently modified by the Danish colonial government, physicians, and enslaved people.⁷ After the effective ban of the slave trade in 1803, the health of the enslaved population became a central concern of the Danish colonial administration, since the viability of the enslaved workforce directly affected the plantation economy.⁸ Colonial healthcare measures included training and authorisation programmes for physicians and midwives, vaccination programmes, and the establishment of public and private hospitals.⁹ Putting Danish colonial-period medical texts in dialogue with material culture from archaeological excavations reveals how healthcare was represented by colonial administrators and physicians and how these discourses intersected with on-the-ground medical practices. I use archaeological data gathered at a plantation hospital at Estate Cane Garden as a material context for interrogating the practical negotiations of colonial healthcare policy. The archaeological record provides a unique set of data that reveals the realities of day-to-day practice in a plantation hospital, a context in which the colonial administration, physicians, and, most importantly, enslaved people negotiated the practice of healthcare.

Integrating History and Archaeology

The integration of historical documents and archaeological materials is essential to historical archaeology,¹⁰ although *how* historical documents and archives are mobilised in historical archaeological research is debated.¹¹ In historical archaeology, written representations of the past are often treated as deeply biased, since they are produced by those with social, economic, and political means, or by individuals with definite ideological agendas.¹² In this case, it has been argued that archaeology can act as a corrective to biased representations.¹³ But as Voss argues, historical archaeologists must recognise that “*all* historical representations (texts and images) are produced *both* through engagement with the material world *and* through power-laden conditions of perception and expression.”¹⁴

Historical archaeologists have recently recognised the need to attend to the political and social context in which images and texts are created. Integrating diverse lines of evidence such as images, texts, and material objects creates productive challenges which

enable new insights into the past.¹⁵ Instead of using archaeological research simply to “tell us about things the documents don’t mention,”¹⁶ an “archaeology of documents” includes challenging how documents were created, the social and political contexts in which they were created, and the works’ relationship to material evidence. Instead of seeking “absent” and misrepresented voices in the archives, colonial documents may be interpreted as configurations of epistemological and political concerns.¹⁷

This article builds on representational studies in historical archaeology to interrogate the social and political context of Danish colonial-period medical documents. Certain taken-for-granted representations of the world, such as reports, photographs, and demographic descriptions, are increasingly considered sites of knowledge production by virtue of the types of information they choose to portray and the interpretive work that these representations do.¹⁸ Demographic records, medical accounts, and hospital records are representational practices that aim to describe, delineate, and ultimately manage particular populations for specific purposes.¹⁹ Danish administrative documents and physician health reports were meant to “extend the gaze”²⁰ of Board of Health officials in Copenhagen to the Caribbean colonies; thus they elucidate the aims of colonial-period healthcare and the types of care administrators deemed both necessary and appropriate. Administrative documents indicate that healthcare, both as a concept and as a practice, was meant to target severe medical cases using medical procedures that were accepted within the European medical community. Physician medical reports were produced for a specific audience, in this case the Danish Board of Health in Copenhagen. Many physicians working throughout the Danish West Indies produced the types of demographic reports mandated by the Board of Health, and in doing so contributed to a colonial vision of a structured, comprehensive healthcare system. Other physicians liberally expounded upon the types of treatments they provided to their patients, thus referencing certain healthcare practices that were deemed acceptable under the rubric of state-controlled medicine.

Archaeological research at a plantation hospital suggests that administrative attempts to mobilise a hierarchically organised (and standardised) healthcare system were complicated by physicians, nurses, and enslaved people, who were targeted by this care. Administrators’ and physicians’ discourse on medical practice underrepresents other forms of healthcare that took place in plantation hospitals. Archaeological evidence recovered from a plantation hospital in St. Croix does not reflect the kinds of medical practices provided by colonial proclamations and physician reports. Archaeological excavations at Estate Cane Garden, a former privately owned sugar plantation on St. Croix, have uncovered a range of plant and animal remains and material culture associated with nutrition and ethnomedical plant use. I have argued elsewhere that “healthcare” for enslaved people at Cane Garden relied overwhelmingly on foodways, including the use of plants for medicinal and nutritional purposes.²¹ Instead of using the archaeological evidence to fill in the details of the documentary record, I argue here that “healthcare,” as both an epistemological concept and a practice, was performed in multiple ways by various state and nonstate actors. The disjuncture between physician health reports and the types of care recovered by archaeological excavations evidences the goals of the colonial

state and physicians, as well as the manner in which enslaved people created alternative methods of care.

Healthcare in Historical and Political Context

“Admiration for the virtues of a growing population, and an intense desire to increase the number of people within a country marked the political and economic views of the later seventeenth century and most of the eighteenth century,” and exemplified the economic principle of cameralism.²² According to cameralist ideals, the central goal of the government should be to develop programmes to ensure the welfare of people and thereby increase the overall population. Cameralist programmes included the supervision of midwives, training of physicians and surgeons, protection of citizens from contagious diseases, inspection of food and water, and maintenance of hospitals.²³ This “politics of health” required training medical police, surgeons, legislators, and physicians, as well as developing a “complex material field that encompassed ... the extent of commerce, and the development of cities and roads, living conditions (housing and nourishment), the number of inhabitants, their longevity, their health, and their aptitude for work.”²⁴

In 1672, the Danish government passed a decree monopolising the practice of medicine to a small group of professionally trained physicians who had studied at the University of Copenhagen or at other European universities.²⁵ In 1736, the Royal Academy of Surgeons was founded in Copenhagen in an attempt by the government to professionalise the field of medicine and separate barber-surgeons from professionally trained physicians and surgeons.²⁶ The *Collegium Medicum* (medical college) was established in 1740 and the Commission for the Improvement of the Health Police was established in Denmark in 1802.²⁷

In 1803, the Danish government effectively abolished the slave trade. This had profound implications for how the colonial government, physicians, and, to a questionable extent, plantation managers oversaw enslaved people.²⁸ High mortality and morbidity rates amongst enslaved people became a central concern for the administration, since enslaved people could no longer be imported directly from Africa. Efforts at increasing the overall health of the enslaved population reflect a direct motivation to stabilise the labour force of the plantations in the Danish West Indies by reducing high mortality rates and increasing natural reproduction.²⁹ The Danish West Indies developed a health-care system modelled after that in Denmark, but instead of targeting citizens of the Danish state, it focused on enslaved populations.³⁰ In the Danish colonies, medical policies and legislation targeted a number of public health concerns, including creating more healthful living arrangements for enslaved workers,³¹ reducing rates of infectious disease among rural and plantation populations,³² and managing the reproductive rates of enslaved people, especially women.³³

The archival component of this paper focuses on several primary document sources: pharmacy records, proclamations detailing the legal requirements for medical practice in the Danish West Indies, and individual physician reports, which were required of all

practising physicians on the islands and were sent to the Board of Health on an annual basis. Government proclamations represented efforts to reform and standardise the practice of medicine in the colonies. Proclamations focused on three principal components of medical practice on the islands, namely the sale and purchase of medicines, authorisation programmes for practising physicians, and accountability and demographic information acquisition.

Proclamations and pharmacy records indicate that the European medical community in St. Croix largely followed the practice of *heroic* medicine, prevalent from the 1780s through the 1850s. Heroic medical treatments caused dramatic effects on the body in an effort to rid the body of harmful substances.³⁴ The use of purgatives and emetics (calomel, lead, turpentine, copper sulphate), blisters (Spanish fly), and bleeding implements was common practice amongst West Indian physicians.³⁵ Of the medicines listed in pharmacy orders and health reports from St. Croix, a significant number include lead, mercury, sulphuric acid, arsenic, and copper sulphate. Other medications were plant-based, including meadow saffron (*Colchicum autumnal*), black and white hellebore (*Veratrum album*), and thorn apple (*Datura stramonium*).³⁶ Although physicians used plant-based medicines, most of these are highly toxic and would have caused extreme physiological stress. According to the medical reports, most medicines were purchased directly by physicians from pharmacies on St. Croix, or were imported from Britain and the United States.³⁷ The West Indian government tried to limit the sale of medications on the islands to authorised pharmacists, although a letter dated to 1840 from the pharmacist P. E. Benzon to *landfysikus* Dr. Schlegel mentions that illicit medicines were being sold in Christiansted without the proper authorisation.³⁸

The West Indian government was also increasingly concerned with the perceived number of “unauthorised” medical practitioners in the Danish West Indies. Unauthorised healers, both in Denmark and its colonies, included folk healers, cunning folk, and witches.³⁹ “Unauthorised medicine” appears to have been defined in relation to payments received for treatment and the absence of acceptable medical training on the part of the medical practitioner. According to the Danish Board of Health, unauthorised healers, or “quacks,” were persons that “occupy themselves with treating ordinary ailments for payment, even though they have no knowledge of medicine ... they still attempt to treat diseases that cannot always be cured without scientific training and a general knowledge of medicine.”⁴⁰ Beginning in 1818, all physicians practicing in the Danish West Indies were to have been trained and licensed in Copenhagen or to have a special dispensation to practice medicine in the Danish colonies. A proclamation sent to the Royal West Indian Government in 1818 states:⁴¹

- 1) That no unauthorised doctor, which after the English occupation of the Danish West Indian Islands in the year 1807 have set up here, can after 1 year from the announcement date of this resolution, practice as doctor on the Danish West Indian Islands, unless he subjects himself to the ordered medical or surgical exam at the University of Copenhagen.

- 2) That no unauthorised doctor, which before the English occupation have set up on the aforementioned islands, can, within the same timeframe, be allowed to take on any amanuensis or assistants.
- 3) That no others may hereafter be permitted to practice as doctors on the Danish West Indian Islands, than those who at the University of Copenhagen have submitted themselves to the ordered exam and in so doing have been qualified for practice.

Further efforts to universalise medical practice and reporting in the Danish colonies took the form of annual medical reports. In 1803, Danish health authorities demanded that all physicians working in Denmark and its territories send an annual medical report to the Danish Board of Health, enforceable by the Danish medical police.⁴² Physicians' annual reports were to be submitted in the form of a standardised questionnaire. A proclamation dated 1820 from the West Indian government to the *landfysikus* Dr. Schlegel states that "just as the doctors in Denmark submit annual Medical Reports, so should the royally appointed doctors on the Danish West Indian Islands submit the aforementioned reports ... in the same way as Denmark, should be sent to the Board of Health, which subsequently submits them to the Chancellery."⁴³ A petition dated 1820 from Dr. Schlegel to the West Indian government asks that the annual report be "better suited" to the circumstances and conditions of the Caribbean colonies. He suggests that questionnaire entries should reflect the concerns and circumstances of the West Indian medical community, and that certain medical factors to be taken into account were:

- 1) Which diseases that have ravaged most in the past year, particularly with regard to smallpox, scabies, venereal disease, as well as such diseases that are most distinctive for the West Indian climate.
- 2) What the reason for these diseases is presumed to have been.
- 3) Progress of vaccinations, namely how many whites, free coloureds and slaves every doctor in the past year has vaccinated.
- 4) The mortality, particularly of infants and women in childbed.
- 5) Unfortunate incidents.
- 6) In which town or on which estate the doctor resides, which estates he attends, and the number of negroes on each estate, as well as on which estates there are negro women trained in midwifery.
- 7) If the doctor has any assistant in his pharmacy, either white, free coloured or slave, and in which way this assistant has been necessary.
- 8) From where the doctor in the past year has supplied his pharmacy with medicine.⁴⁴

Technologies of data collection in the Danish West Indies took the form of observed, statistical calculations which facilitated the demographic management of colonial and enslaved populations. Factors such as incidence of disease, injury, birth, and death were counted and categorised by Danish physicians, the West Indian government, and the Danish Board of Health in Copenhagen. Annual physician reports from the Danish

West Indies indicate that interests in infectious and communicable disease, reproduction and childbirth, and standardisation in training and reporting took precedence over ostensibly mundane health concerns.

For example, annual reports submitted between the years 1820 and 1848 describe in any detail only illnesses and disease understood to be life-threatening.⁴⁵ Nonthreatening illnesses such as “remittent and intermittent fevers” are commonly mentioned but appear to be a regular and un concerning feature within the disease landscape of the colonies.⁴⁶ The Danish administration and physicians seem to have shared a common concern with epidemic disease, quarantine and vaccination programmes, and reproductive viability. This demonstrates a narrow set of aspirations, primarily maintaining the demographic structure of the enslaved and colonial population and keeping the enslaved population well enough to work.

Despite the administrations’ desire to receive standardised medical information on a yearly basis, physician reports are decidedly heterogeneous in form and content. Some physicians, such as Dr. Bretton of St. Thomas, are categorically terse in their yearly reporting, briefly answering each of the questions or leaving out certain categories entirely.⁴⁷ Other annual reports are quite verbose, detailing the monthly weather conditions, providing narrative accounts of which diseases afflicted the islands, and/or describing particular medical cases in detail. Dr. Johnson, who attended Cane Garden, was particularly effusive in his medical reports; he commonly described his treatment methods in detail (they overwhelmingly included administration of calomel powder) and often included at least one narrative description of an “unfortunate incident.” The inconsistencies in physician reporting (both in style and content) provide a more complex picture of healthcare on the islands than that afforded by administrative documents. While many of the treatment practices reported by physicians are conspicuously similar, differences in reporting suggest a number of potentialities. Physicians may not have thought the annual reports a valid or important use of their time, or physicians may have not regularly visited certain plantations on a consistent basis (even though the districts and their corresponding plantations are listed in their reports). Regardless of the reason behind these heterogeneous reporting standards, the documents suggest that administrative oversight and physician reporting was often a power-laden and disputed field of practice.

The healthcare proclamations provide an opportunity to examine formalised healthcare as a politicised institution, and largely influenced economic concerns. Danish healthcare campaigns, in Denmark and the DWI, were founded in certain ideas about demographic structure and economic growth: mainly that targeted state intervention in the healthcare of concerned populations, in this case enslaved workers, would meet certain profitable economic ends. One goal of the Danish West Indian healthcare system was to create ordered and standardised methods of care through training and authorisation programmes; the other goal was the elimination of specific diseases that the administration viewed as demographic threats. The physician reports demonstrate certain colonial ideals against which standards of healthcare and health were measured. Suitable healthcare practices included procedures that were integral to the medical landscape in Europe, such as surgery, bloodletting, and the use of purgatives.

However, on-the-ground healthcare practices did not necessarily accord with the Danish state's wishes, nor did they fit the patterning of medical practice suggested by physician reports. The next section draws on archaeological evidence from a plantation hospital on St. Croix to address how enslaved nurses responded to the injuries and illnesses of their patients. How did enslaved nurses practice healthcare at the hospital? What available resources did enslaved nurses use to care for sick workers? How did healthcare at the plantation hospital intersect with the kinds of care physicians and the colonial government had envisioned?

Plantation Hospitals on St. Croix

St. Croix was home to state-administered garrison hospitals in Frederiksted and Christiansted that provided care for military personnel, sailors, poor whites, and urban enslaved workers who were owned by the king⁴⁸ as well as privately owned plantation hospitals that cared for sick and injured enslaved workers. Although privately owned plantations were not legally required to have a formal hospital, this was encouraged by the colonial administration; after 1803, nearly all private and royal plantations had one.⁴⁹ Jensen notes that it was customary for planters to employ physicians on annual contracts, and the Board of Health sought to discourage cases where plantation managers chose not to employ a doctor.⁵⁰

Plantation hospitals were staffed by enslaved caretakers who were responsible for cooking, cleaning, and administering medications prescribed by the physician. Although plantation nurses did not receive formal training (at least in the eyes of the Danish government), plantation managers typically assigned older women who had proven experience in medical care.⁵¹ Unfortunately, medical reports are written from the perspective of physicians, not the nurses who undertook daily care and treatment at the hospitals. From the historical documents, we do not know the extent to which enslaved nurses may have reinterpreted physicians' standards of care or the kinds of treatments they provided for their patients. As such, the primary goal of the archaeological component of this research is to examine how healthcare was performed at the hospital, as evidenced by the archaeological record.

Estate Cane Garden

Estate Cane Garden is located on St. Croix, the southernmost former Danish colony in the Caribbean (Figure 1). The first mention of a plantation hospital building or "sick house" at Cane Garden comes from a property appraisal dated to 1798.⁵² This document mentions that the building containing the "sick house" also held a storage room and animal stable, indicating that the building was used for multiple functions. Written documents do not express how long the hospital building was in use, but a mean ceramic date of 1828 suggests the building was used for a relatively long time.

The annual medical reports indicate that Estate Cane Garden was attended by Dr. Christopher Johnson from 1829 until 1848.⁵³ Christopher Johnson was born in

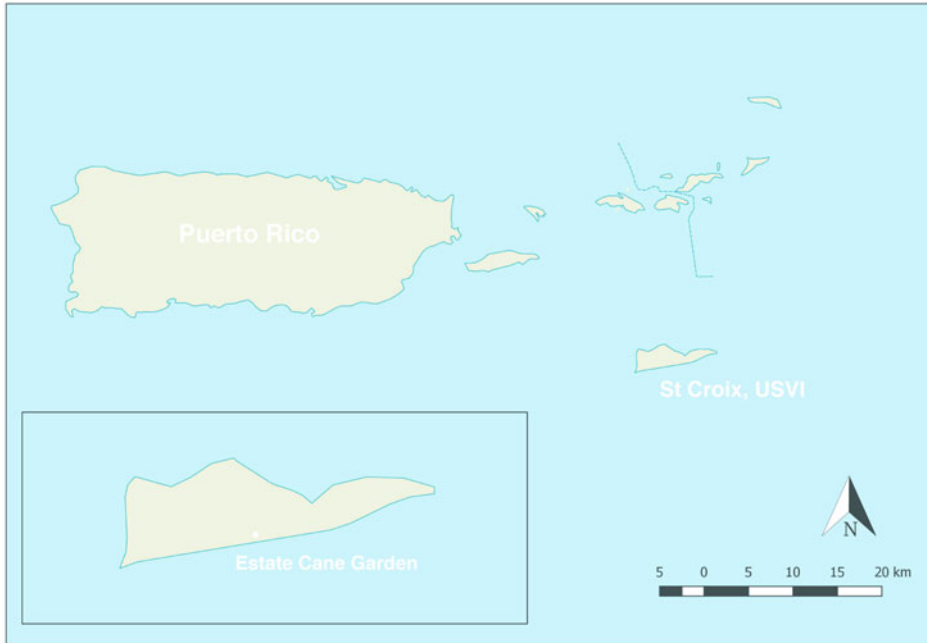


Figure 1. Map of the US Virgin Islands and location of Estate Cane Garden on St. Croix.

St. Croix and graduated from medical school in Edinburgh. He “submitted himself to an exam at the University in Kiel in 1829 which subsequently have sent him a Communication stating, that His Majesty the King under July 24th 1829 most graciously have given him Permission to exercise medical and surgical Practise in the Royal Danish States.”⁵⁴ Unfortunately, in the period 1829 to 1848, Dr. Johnson only mentions Estate Cane Garden once in his annual reports.⁵⁵ The lack of locational specificity in Dr. Johnson’s records is not anomalous; most physicians are remiss in stating where specific medical cases occurred. Nonetheless, important information regarding Dr. Johnson’s practice of medicine can be gleaned from his reports.

Dr. Johnson describes an “outstanding medical case” from Estate Cane Garden in 1843. He recounts an incident concerning a woman from the estate who had complications in childbirth.⁵⁶ He describes the measures he had taken to treat medical complications, including venesection and the administration of calomel.⁵⁷ The child appeared to have been breached and Dr. Johnson, assisted by Dr. Roebuck, undertook a series of procedures in order to remove the child; this indicates that physicians in the colonies performed internal and well as external medicine. Dr. Johnson’s medical reports recount multiple instances of bloodletting and purging to heal a variety of afflictions, from fevers to catarrhs to rheumatism. Dr. Johnson also utilised a variety of emetics and purgatives, including lead powders, calomel, and mercury powders, along with pain relievers such as opium and laudanum.⁵⁸



Figure 2. Cane Garden hospital building, facing west (photo by author).

The plantation hospital building at Estate Cane Garden fits the descriptions of other private and Crown-owned plantation hospitals.⁵⁹ The two-story building at Cane Garden is constructed of limestone brick and cut coral, subdivided on the ground floor by an east-west wall (Figure 2). The southern room appears to have been subdivided into smaller rooms, possibly for storage purposes, and a large doorway on the ground floor leads to the north room. It is possible that the larger, northern room was used to hold animals while patients were kept on the top floor. A series of beam supports along the eastern front of the building and a large posthole sunk into the bedrock along the same side suggest that a porch ran along the front. There may have been an attached kitchen on the west side of the building: there is evidence of a very burned, chimney-like stone structure.

Archaeological Research at Cane Garden

Archaeological fieldwork at Estate Cane Garden took place in 2015 and 2016. Initial archaeological excavations focused on the interior of the hospital building. An east-west six-metre-by-one-metre trench was opened in the north room of the hospital building, but no floor surface was found and few artefacts were discovered within the interior of the building. Because the interior excavations proved relatively unproductive, a series of one-by-one-metre excavation units were placed immediately adjacent to the building along the east side and along what would have been the porch (Figure 3). While excavating these units, a large concentration of artefacts was uncovered along the east side of the building just to the south of the doorway, likely representing domestic trash that was discarded during the use and occupation of the building. The deposition of refuse

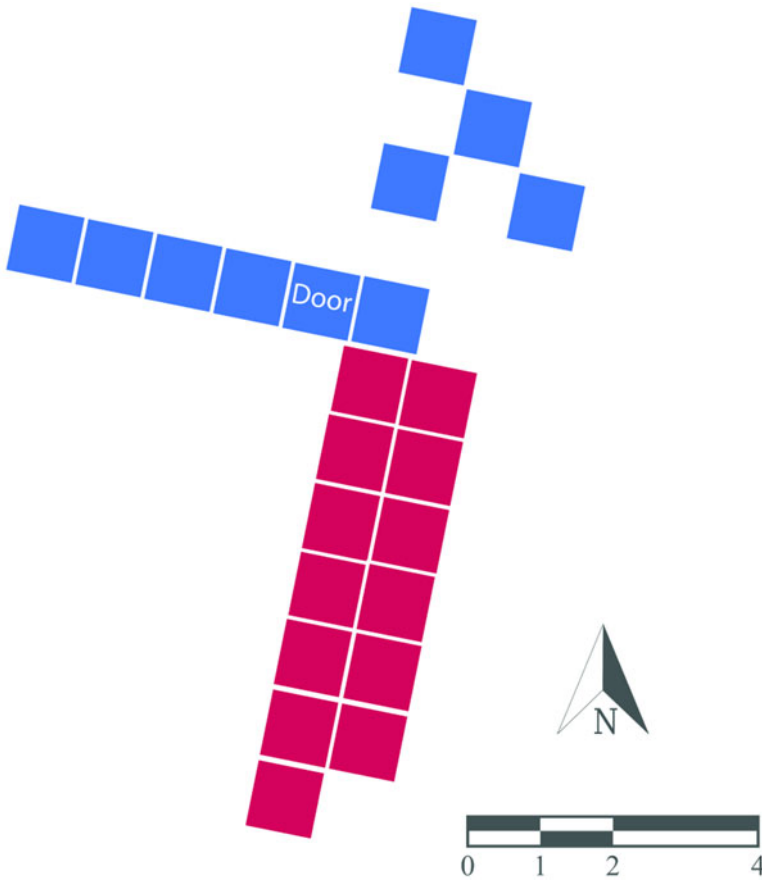


Figure 3. Plan map of building and location of interior and exterior excavation units. Excavation units to the south represent the area of the trash midden (map by author).

adjacent to a building where people are living seems somewhat unconventional by contemporary standards, but this method of trash disposal is quite common in nineteenth-century archaeological sites.⁶⁰

Results

Several categories of material culture were recovered from the hospital trash midden,⁶¹ including beverage bottles, tableware ceramics, smoking paraphernalia (clay smoking pipes), clothing items, architectural materials, zooarchaeological (animal) remains, and items related to animal care. Many artefacts included small personal items, such as metal pins, bone and shell buttons, and glass beads. Other material culture categories include a range of architectural materials: bricks, iron nails and bolts, iron door knobs and locks, and iron barrel strap fragments, likely related to food and alcohol storage in

the building. Items associated with animal care included horseshoes, horseshoe nails, and metal buckles from bridles or saddles. The majority of artefact classes from the hospital are associated with food storage, consumption, and preparation; other artefacts such as barrel ties and items associated with animal care indicate the building was likely multifunctional.

Artefact Analysis

When compared to annual physician reports, proclamations, and pharmacy records, the artefact assemblage does not fit pre-existing expectations of what a hospital assemblage *should* look like. Other than a single glass apothecary bottle, there are no materials that would ostensibly have been used in a scientific medical practice. The artefact assemblage from the hospital does not accord with the heroic medical practices listed in the medical documents, such as cupping, bloodletting, and the use of purgatives. There is also little of what other archaeologists have commonly interpreted as evidence of Western or scientific medicine in hospital contexts. For example, Starr's archaeological investigations of a nineteenth-century convict hospital discovered a wide array of medical tools and materials associated with scientific medicine.⁶² These included ceramic cupping devices, glass syringes, patent medicine bottles, ceramic vessels used for bloodletting, and scalpels and knives used in surgical practices.

The lack of easily identifiable objects associated with scientific medicine raises important theoretical and methodological concerns, including certain material practices tied to understandings of healthcare on the part of enslaved workers. While plantation hospitals on St. Croix were presumably places where enslaved individuals were to be medically treated, treatment itself is a contested practice. The majority of artefacts from the hospital are food and cuisine-related items, and it has been argued elsewhere that foodways may have served as important sources of healing for enslaved caregivers and nurses.⁶³ The following section reviews food-related items from the hospital, after which I discuss their interpretive potential.

Ceramics

A minimum number of vessels (MNV) of ninety-two was identified from the hospital midden. A mean ceramic date of 1825 was determined based on mean manufacture dates of British-made ceramics.⁶⁴ Thirty earthenware ceramics were recovered from the hospital midden, which may have been produced locally, either on St. Croix or elsewhere in the Caribbean. The unglazed earthenware ceramics were likely used for cooking, since they exhibit burning and sooting on the exterior surfaces. At least five of the fragments have charred residue on the interior surfaces, also suggesting they were used for cooking. Analysis of the hospital's ceramics by decorative type suggests that no single decorative style or ware type was selected over any others.⁶⁵

Imported ceramic vessels from the hospital midden represent a wide variety of vessel forms, including cooking vessels, bottles, a griddle, a sugar pot lid, soup plates, indefinite

flatwares and hollowwares, teacups, jars, a mug, and wide-mouth and closed-mouth storage vessels. When vessels are categorised by general shape, hollowwares (steep-sided vessels) are more prevalent than flatwares (plates). Hollowwares, including soup plates, bowls, cups, and mugs, comprise 48.8 percent of the ceramic assemblage, in comparison to flatwares, which comprise nearly 20 percent of the overall assemblage.

Zooarchaeological Remains

The mammal bone assemblage from the hospital midden is relatively small and consists of 463 individual specimens. Only sixty-nine of those were identifiable to a specific taxonomic level or to generic size determination. Sheep or goat comprise the majority of the total identifiable assemblage (34%). It is very difficult to use bone morphology to distinguish between sheep and goat archaeologically, and as such sheep and goat were catalogued as a single taxonomic category.⁶⁶ Most (58%) of the sheep/goat skeletal elements were from the foot or lower limb portions of the skeleton and all exhibit chop and cut marks on the bone. Skeletal elements from bovines comprise 10 percent of the hospital assemblage. The bulk of the cattle specimens are phalanges (foot elements) and like the sheep/goat bones, all exhibit chop marks and cut marks. Pigs comprise 17 percent of the assemblage. All pig teeth consist of unerupted permanent first molars, indicating that they were from young individuals. One horse (*Equus*) incisor from an older animal and one possible sesamoid from a white-tailed deer (*Odocoileus virginianus*) were also found in the assemblage. Rodents (Rodentia) are represented by two skeletal elements.

In addition to mammals, marine animals from the hospital are represented by gastropods, bivalves, and fish. The gastropods include marine snails, West Indian topshell, and conch. The five most abundant fish taxa are pelagic and reef fish: Scaridae (parrotfish), Acanthuridae (surgeonfish), Clupeidae (herring), Serranidae (sea bass), Albulidae (bonefish), and Holocentridae (squirrelfish). All are local fish, except for the herring, which may be Caribbean or North Atlantic species.

Macrobotanical Evidence

The macrobotanical assemblage from the hospital includes a range of wild, gardened, and domesticated plants. Identified taxa include grass (Poaceae), nightshade cf. (*Solanum* sp.), palm (Aracaceae), pigweed (*Amaranthus* sp.), prickly-pear cactus (Cactaceae, cf. *Opuntia* sp.), purslane (*Portulaca* sp.), Sapodilla family (Sapotaceae), Sapote cf. (*Pouteria* sp.), smartweed (*Polygonum* sp.), spurge (*Euphorbia* sp.), horse purslane (*Trianthema* sp.), and wild legumes (Fabaceae).

Four of the plant taxa represented in the hospital midden have documented historical and contemporary medicinal uses: *Solanum*, *Euphorbia*, *Portulaca*, and *Trianthema*. In St. Croix, *Solanum* has historical and contemporary medicinal value for treating oral candidiasis (thrush) in children.⁶⁷ *Euphorbia* similarly has a multitude of medicinal uses. *Euphorbia* species used in historical and contemporary healing on St. Croix include *Rincinus communis* (castor bean), *Jatropha mutlifida* (physic nut), and *Jatropha curcas*

(Barbados nut, purging nut).⁶⁸ Castor bean oil was used as a laxative and as a cure for skin burns. The leaves of the castor bean plant can be used to treat stomach aches, fevers, and toothaches.⁶⁹ *Portulaca*, commonly known as purslane, is a weedy plant⁷⁰ that can be crushed into a poultice to remove splinters from the skin or to cool the skin.⁷¹ Similarly, horse purslane grows easily in disturbed soils and can be used as a foodstuff,⁷² while the roots can be used as an abortifacient.⁷³

Discussion

The model of healthcare the colonial administration had proposed, based on a system of systematised and standard medical practices, does not fit the artefact patterning at the Cane Garden hospital. When looking at the archaeological evidence from Cane Garden, it appears that the colonial administration was less successful at creating a comprehensive healthcare network on the island at the level of private plantations.

The archaeological assemblage from Cane Garden provides key information about how the hospital was administered and the methods enslaved nurses utilised to care for their patients. Although plantation managers' voices are missing from the written documents, the archaeological assemblage from Cane Garden provides secondary evidence as to how the hospital was administered. Ceramics, zooarchaeological, and macrobotanical evidence all suggest a lack of managerial oversight by plantation managers. When looking at ceramics from Cane Garden, the absence of matching, purchased sets suggests a lack of institutional management at the hospital. Each of the fifty-six vessels is different in size, shape, colour, decorative pattern, and ware type. The various patterns and decoration styles on each of the vessels indicate that one or a few pieces were acquired at a time, rather than as a matching set. Ceramic acquisition patterns from other plantation settings may help to contextualise the assemblage from the hospital at Cane Garden. Archaeological studies of enslaved plantation households have demonstrated how individual ceramics were often handed down from planters to enslaved workers or purchased directly by individual enslaved families.⁷⁴ The ceramics at Cane Garden may have been acquired in similar ways. Enslaved patients may have brought ceramics from their own households, family members or acquaintances may have provisioned the hospital, or enslaved nurses may have purchased or been gifted ceramics as needed. The ceramics may have also been provided by the plantation manager, either through piecemeal purchase patterns or as hand-me-downs from the manager's household.⁷⁵

The zooarchaeological and macrobotanical remains are also indicative of the lack of managerial oversight at the hospital. Records from royal plantation hospitals indicate that doctors often prescribed to managers a specialised diet for enslaved patients consisting of chicken, sheep, barley, starchy roots, vegetables, and wine.⁷⁶ Zooarchaeological and macrobotanical remains suggest a much more diverse diet at the hospital at Cane Garden. Both beef and herring may have been provided in the form of rations, since barbelled beef and salt fish were commonly rationed to enslaved households throughout the Caribbean.⁷⁷ Cattle foot elements from an older animal may also indicate that the animal

was locally raised, used as a draft animal, and then slaughtered late in life. The sheep, goat, pig, and chicken from the hospital may have been locally raised, either in private house yards or as part of the plantation provisioning system.⁷⁸

Macrobotanical remains represent wild taxa, indicating that either nurses or other members of the enslaved social group were able to hunt for, and procure, wild plants from the surrounding landscape.⁷⁹ A notable trend is the paucity of maize and other staple grains, such as wheat, barley, and sorghum, which have been found in other Caribbean plantation contexts. Maize kernels and cupules have been recovered from other historic period sites in the Caribbean.⁸⁰ Corn was a common provision staple in the Danish West Indies.⁸¹ The scarcity of maize from Cane Garden may indicate a lack of staple provisioning by the plantation manager, or may be suggestive of preservation issues at the site, since meal would not have survived in the archaeological record.

Archaeological materials from the site also provide a point of departure for examining how enslaved people at Cane Garden developed systems of care, foodways, and medicinal practices that drew from locally attainable resources. I adopt Mrozowski et al.'s interpretive framework of well-being to assess the various roles plants and animals played in securing enslaved people's health and wellness.⁸² Enslaved people on plantations were chronically under-rationed on plantations, but abated food insecurity by drawing from African, European, Caribbean, and Native American foodways and ethnomedical plant-use traditions to care for themselves and each other.⁸³ Faunal and plant remains found at the hospital were likely used by enslaved nurses and patients to cope with the effects of illness, injury, hunger, and other forms of biological deprivation.⁸⁴

Results of the macrobotanical analysis reveal a broad pattern of foraging activities to support patients' dietary and medicinal needs. As evidence of subsistence, many of the wild plants would have served as important nutritional resources. Both amaranth and chenopods are highly nutritious and easily accessible weedy plants, since they grow readily in the disturbed soils of gardens and fields.⁸⁵ Other weedy taxa, such as nightshade, euphorbia, and purslane, provide insight into the medicinal strategies of nurses. Purslane and nightshade species have a range of medicinal and nutritional properties, depending on the method of preparation and part of the plant utilised. Plants would have served an important role in providing targeted healing and nutrition to patients within the hospital.

When looking at faunal remains from the hospital, the assemblage is dominated by low-utility cuts of meat. Meat utility indices are used by archaeologists to interpret the overall meat "quality" and protein and fat content of a particular cut of meat or skeletal portion.⁸⁶ Low-utility meat cuts, such as feet and crania, are commonly associated with enslaved households, while higher-utility skeletal portions, such as ribs and upper limbs, are commonly associated with planter households.⁸⁷ The predominance of feet, lower limb, and cranial elements from the hospital suggests that low-utility elements and less meaty cuts were provisioned to the hospital. When looking at processing marks on the bones from the hospital, it is evident that enslaved nurses prepared meat in ways that would maximise their nutritional content. The large number of cut, chop, and scrape marks and fracture patterns on the bones indicate that they were finely processed in

order to release fat and nutrients.⁸⁸ None of the bones evidence any charring, indicating that they were cooked in liquid (likely as stews).

The ceramic assemblage corroborates the zooarchaeological evidence from the hospital. The high number of hollowware ceramic vessels from the hospital is consistent with the types of foods that were served. The prevalence of hollowware vessels in enslaved household contexts is indicative of specific types of eating and food preparation practices by enslaved women: in particular, the consumption of soups and stews.⁸⁹ Enslaved women developed “one-pot meals” because they were easy to cook, could stretch the nutritional content of ingredients, and could provide nutrition and care to their households.⁹⁰ Enslaved people in the American South made cattle feet into broths for medicinal purposes⁹¹ and the high number of cattle phalanges may indicate a similar practice at the Cane Garden hospital. Enslaved women at the Cane Garden hospital likely served nutritious meals to their patients using cooking methods that maximised food’s nutritional value and provided comfortable foods.

Conclusion

A central goal of the Danish administration was to create a comprehensive system of medical practice and a physician licensing system. The momentum of profit maximisation from the eighteenth to twentieth centuries shaped public health policies in Europe and its colonies, while slavery provided a context in which to develop public health policies and legislation by targeting reproduction and the bodily fitness of labouring populations.⁹² Interventionist healthcare, targeted towards enslaved populations on St. Croix, was worked through at multiple levels and involved a range of actors, including the Danish Crown, the Danish West Indian government, physicians, planters, and, most importantly, enslaved people. While the Danish Crown and West Indian government ultimately strove to create a comprehensive healthcare system based on the centrally administered healthcare system in Denmark, this colonial project was consistently complicated by local conditions. Archival documents depict the desires of the Danish Crown and the practicalities of implementing these desires in a colonial setting. The colonial government in the West Indies had to compensate for a large enslaved population, a paucity of authorised physicians, and conflicts between administrators, physicians, and enslaved people. Ongoing correspondence between the *land-fysikus* in St. Croix and the Danish Board of Health in Copenhagen regarding the standardisation of annual medical reports “in order to better reflect the conditions of the islands” exposes the discursive and unstable relationship between various agents and subjects.

Despite the Danish Board of Health’s efforts to create a standardised reporting system for physicians working in the Danish West Indies, annual physician reports are quite varied in both form and subject. Reading “along the grain”⁹³ of physician reports reveals the information physicians and the administration deemed important, as well as how concepts such as healthcare were mobilised in discourse and practice. The “body without

disease”⁹⁴ appears to have been the primary concern of the colonial government, while physicians focused on the labouring and efficient body and had a general unconcern for more mundane afflictions. Proper healthcare was to be administered by state-authorized physicians who had been trained in a formal university setting. Although not legally mandated, specific treatments described in the physician reports are fairly standardised, which suggests a normative model of accepted healthcare.

The archaeological evidence from Cane Garden presents a very different picture of healthcare. The dominance of food-related items and medicinally useful plants from the midden excavations suggests that nurses (and possibly patients) were invested in abating the effects of harsh labour and biological deprivation. The presence of wild plants and wild taxa (fish, molluscs) furthermore alludes to the role of social networks in healthcare. Reef and pelagic fish, molluscs, and wild plants may have been collected by multiple individuals within the enslaved social group at Cane Garden, and healthcare networks may have extended beyond the boundaries of the hospital.

In sum, approaching archival sources as artefacts by emphasising the political and historical context of their creation “sidesteps the false dichotomy between bias and truthfulness” and helps to assess their evidentiary value for historical archaeological research.⁹⁵ The archival materials de-emphasise the rich complexity of healing practices that occurred within the hospital at Cane Garden. It is possible that administrators and physicians ignored aspects of healing that did not conform to colonial expectations,⁹⁶ or that administrators and physicians did not deem them significant. A view from the annual physician reports and material objects from the hospital clarifies that methods of healthcare enacted by physicians and enslaved nurses were quite different. Healthcare, from the perspective of colonial actors and physicians, was based on incipient biomedical theories of the body and a desire to increase the physical labouring capacity of enslaved populations. For enslaved nurses and patients, healthcare may have been more about abating the bodily violence of plantation slavery and negotiating the effects of colonial policies by using locally available resources to create a grounded sense of well-being.

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Notes

- * Meredith Reifschneider is an assistant professor in anthropology at San Francisco State University. She is the director of the Cane Garden Archaeology Project in St. Croix, USVI. She is currently developing a project in California focusing on nineteenth-century urban medical institutions, drawing from archaeology, oral histories, and archival documents.
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 - 2 Naum and Nordin, "Situating Scandinavian Colonialism," 3–16.
 - 3 Fur, "Colonialism and Swedish History," 30.
 - 4 For discussion, see Cooper and Stoler, *Tensions of Empire*.
 - 5 Jensen, "For the Benefit"; Jensen, *For the Health of the Enslaved*.
 - 6 For a discussion of colonial law in the Danish West Indies, see Simonsen, "Magic, Obeah and Law." For discussions of race and colonialism in Iceland, see Loftsdóttir and Pálsson, "Black on White," and Loftsdóttir, "Shades of Otherness." For West Africa, see Bredwa-Mensah, "Slavery and Resistance."
 - 7 Jensen, *For the Health of the Enslaved*.
 - 8 Ibid.
 - 9 Jensen, *For the Health of the Enslaved*; Rezende, "Midwifery."
 - 10 For a discussion of problems associated with methodological and theoretical divisions between prehistoric and historical archaeology, see Lightfoot, "Culture Contact Studies."
 - 11 Cipolla, "Textual Artifacts"; Little, "People with History"; Hall, *Archaeology and the Modern World*; Voss, "Image, Text, Object, Object."
 - 12 Voss, "Image, Text, Object."
 - 13 Ibid.; Little, "People with History."
 - 14 Voss, "Image, Text, Object," 149.
 - 15 Johnson, "Rethinking Historical Archaeology," 3.
 - 16 Ibid.
 - 17 Stoler, *Along the Archival Grain*.
 - 18 Ibid.
 - 19 For a discussion of biomedical practice and population management, see Rose, "Normality and Pathology." See also Lock and Nguyen, *An Anthropology of Biomedicine*, for a discussion of the historical development of biomedical practice.
 - 20 Voss, "Image, Text, Object," 148.
 - 21 Reifschneider, "Enslavement and Institutionalized Care."
 - 22 Rosen, "Camerarism," 21.
 - 23 Ibid, 27.
 - 24 Lynch, "The Politics of Health," 116.
 - 25 Bierlich, "The Danish Slave Trade," 233.
 - 26 Ibid, 234.
 - 27 Brix, "The First Set of Legislation"; Carroll, "Medical Police"; Rosen, "Camerarism."
 - 28 Jensen, *For the Health of the Enslaved*.
 - 29 Ibid.
 - 30 Jensen, *For the Health of the Enslaved*.
 - 31 Chapman, "Slave Villages."
 - 32 Jensen, "Safeguarding Slaves."
 - 33 Rezende, "Midwifery."
 - 34 Berman, "The Heroic Approach."
 - 35 DNA BH 1252:15 1803–1858.
 - 36 Ibid.
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- 38 DNA WIMA 683:10.2.2 1782–1853.
- 39 Bonderup, “Danish Society.” For a nuanced discussion of Obeah in the Caribbean, see Simonsen, “Magic, Obeah and Law.”
- 40 Bonderup, “Danish Society,” 81.
- 41 DNA WIMA 683:10.2.2.
- 42 DNA BH, Med. Rep., 1803–1958.
- 43 Ibid.
- 44 Ibid.
- 45 DNA BH, Med. Rep. 1823–1832, 1833–1840, 1841–1852.
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- 47 Ibid.
- 48 Jensen, “Sundhed, Citroner og Slaver.”
- 49 Jensen, *For the Health of the Enslaved*, 61.
- 50 Ibid, 59.
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- 52 NARA RG 55, St. Croix Landsting, Panteprotokol 1797–1799.
- 53 DNA BH 1252:15 1803–1858.
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- 58 DNA BH, Med. Rep. 1841–1852.
- 59 Jensen, *For the Health of the Enslaved*, 63–4.
- 60 King, “A Comparative Midden Analysis.”
- 61 For a detailed description of fieldwork methods and finds from Cane Garden, see Reifschneider, “Archaeology of Danish Healthcare.” Also see Reifschneider, “Enslavement and Institutionalized Care,” for a more comprehensive discussion of the artefacts from the hospital midden.
- 62 Starr, “Convict Artefacts.”
- 63 Reifschneider, “Enslavement and Institutionalized Care.”
- 64 For methods used here to determine mean ceramic dates, see South, “Pattern Recognition.”
- 65 Samford, in “Response to a Market,” describes methods for dating English made ceramics based on decoration type.
- 66 For an overview of zooarchaeological methods used in this analysis, see Reitz and Wing, *Zooarchaeology*.
- 67 Soelberg et al., “Historical Versus Contemporary.”
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- 70 Bowes, “Provisioned.”
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- 72 VanDerwarker, *Farming*.
- 73 Mathieu and Meissa, “Traditional.”
- 74 Wilkie, “Culture Bought.”
- 75 Ibid.
- 76 Jensen, *For the Health of the Enslaved*, 64.
- 77 Brunache, “Enslaved Women.”
- 78 Crader, “Slave Diet.”
- 79 McKee, “Food Supply.”
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- 81 Jensen, *For the Health of the Enslaved*, 160.
- 82 Mrozowski et al., “Archaeobotanical Analysis.”
- 83 Carney, “African Traditional Plant Knowledge.”
- 84 Ibid.
- 85 Bowes, “Provisioned.”
- 86 Metcalfe and Jones, “A Reconsideration.”
- 87 For case studies, see Baker, “Archaeological Visibility”; Crader, “Slave Diet”; Otto, *Canon’s Point Plantation*.
- 88 Heinrich, “The Archaeological Signature.”
- 89 Singleton, “The Archaeology of Slavery,” 125.
- 90 Franklin, “The Archaeological Dimensions.”
- 91 Wilkie, “Secret and Sacred,” 85.
- 92 Arnold, *Colonizing the Body*; Marks, “What Is Colonial.”
- 93 Stoler, *Along the Archival Grain*.
- 94 For discussion, see McMullin, “The Call to Life,” 810.
- 95 Voss, “Image, Text, Object,” 168.
- 96 Ibid, 167.