Master's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Humanities
Department of Historical and Classical Studies

Hans Martin Gribbestad

Disease Control on St. Croix & St. Thomas

The Role of the Newspaper in the Battle Against Smallpox

Master's thesis in Lektorutdanning i Historie for Trinn 8–13
Supervisor: Jon Olav Hove
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Kunnskap for en bedre verden

Abstract

The smallpox vaccine first arrived on the Danish Virgin Isles in 1803. The authorities on the islands immediately began to form a strategy for the vaccination of the inhabitants, that mostly consisted of enslaved workers. This thesis will examine the strategies and measures used in the vaccination campaigns and in doing so evaluate what role the newspapers had in the execution of these strategies. My research thus focuses on the concepts of slavery, medicine, governmental control, and exercise of power in relation the smallpox pandemic. My study is based on a qualitative study of newspaper articles released on St. Croix and St. Thomas between the arrival of the vaccine in 1803 and the first few decades after the emancipation of the enslaved on the islands in 1848. This is supplemented by a quantitative study of vaccination protocols provided by the Danish National Archives. My findings suggests that the newspapers' role changed during this period, reflecting developments occurring on the island. They also suggest that the emancipation was a major turning point in the vaccination campaigns and the newspapers' role in maintaining disease control.

Sammendrag

Koppervaksinen kom til de danske koloniene i Karribien i 1803. Myndighetene svarte umiddelbart med å igangsette strategier for å få befolkningen, som i all hovedsak besto av slaver, gjennomvaksinert. Denne master oppgaven vil utforske disse strategiene og de konkrete virkemidlene brukt i kampen mot kopper, derav finne ut av hvilken rolle avisene spilte i denne prosessen. Arbeidet mitt går dermed inn på tema og konsept som slaveri og medisin, samt statlig kontroll og maktutøvelse i relasjon til kopperpandemien. Forskningen min har basert seg på kvalitativ analyse av aviser utgitt fra 1803 til de første tiårene etter frigjøringen av slavene på øyene i 1848. Videre har jeg gjennomført en kvantitativ studie av vaksinasjonsprotokollene som er digitalisert og utgitt av det Danske Rigsarkivet. Funnene mine tilsier at avisenes rolle utviklet seg i takt med endringene som skjedde på øyene i dette tidsrommet. Videre viser forskningen at frigjøringen i 1848 ble et viktig skifte i hvordan vaksinasjonskampanjer ble gjennomført og hvilken innflytelse og rolle avisene hadde i å opprettholde kontroll på viruset.

Preface

Slavery and medicine are two topics that are linked together by a dark but important history. Understanding health, anatomy, medicine, and hygiene has often happened on the behest of enslaved individuals: the silent frontiers of modern medicine. *The Price for Their Pound of Flesh*, written by Dr. Diana R. Berry (2017), explores the history of the first educational programs for medicine in American universities are explored. Her research delves into the graverobbing and dissection of black bodies in 19th century America, that expanded the knowledge of anatomy that helped build American medical universities. Berry's work became a turning point for my interest in history and for my perception on these two seemingly unrelated concepts. In addition to being test subjects and cases for observation, enslaved were also exposed to western medicine, challenging the medicinal practices of their traditions.

My thesis will explore the topics of slavery and medicine, though from another perspective than my original intent of following Berry's work. Beginning my thesis, I set out to explore the connection between slavery and medicine on the Danish Virgin Islands and how Denmark-Norway's knowledge and understanding of concepts related to health changed during their time as colonists in the Caribbean. I quickly found that the topics of slavery and medicine on the Danish Virgin Islands had been thoroughly explored by the historian Niklas T. Jensen. As part of studying his work, I found that his study of the smallpox epidemics on the island did not include how strategies regarding disease control were communicated to the population. The intent of my master's thesis thus became clear: I would add to Jensen's research by examining the role of the newspaper in the battle against smallpox.

I would like to express my deepest gratitude to my supervisor Jon Olav Hove who has guided me throughout the entire process of writing this master's thesis. His commitment and patience have been detrimental to my work and our conversations have helped me see more than I was able to myself. I am also extremely grateful to my fiancée who made me see the light in the end of the tunnel. I would not have been able to complete my work had it not been for her support and belief in me. Lastly, I would like to acknowledge my friends and family who has kept me sane through all non-work-related conversations, allowing my mind to rest. My sisters that have called me late in the evenings, knowing that I was working and in need of a break, and my friends who has dragged me from my desk to feed me coffee and absurd conversations. My final days of being a student would not have been the same without you.

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Chapter 1: Introduction

Smallpox had been a pressing issue in the Caribbean since it first arrived there in the 1500s. The disease became more deadly during the 18th century, ravaging both Europe and their colonies. Following the discovery of the vaccine in the late 1700s, vaccination quickly became the dominant factor of disease control. In this thesis, I will examine how the Danish Virgin Islands implemented new strategies in the battle against smallpox following the arrival of the vaccine in 1803. My focus will be on newspaper's role in strategies and how its role changed during the 1800s. I will furthermore use the newspapers as historical traces and as historical accounts of disease control to discuss what they tell us about the understandings and attitudes toward vaccines. The broader themes of this thesis are thus health, slavery, and disease control, while my focus is on the role of the colonial newspapers in the battle against smallpox on the Danish Virgin Islands.

This thesis is written as the final step of my lector program, marking the end of five years of studies. As part of the final step in my studies, the thesis has to both be a contribution to academic research and be relevant to my future as a teacher. The first requirement will be discussed further in the historiography. The latter is more complex and can be summarized in four points. First, my research focuses on a pandemic and how it was perceived and managed, making it an excellent topic for comparison in the classroom. Second, my thesis will narrow in on the vaccination efforts on the two islands. As part of this, vaccine skepticism and the difficulty of achieving complete vaccination coverage will be explored, adding to the relevance between the smallpox and the covid pandemic. Third, the period contained both the abolition of the slave trade and the emancipation of the enslaved. Ideas of equality and freedom that impacted the process can be seen in relation to later civil rights movements. Finally, the newspapers can be used as a tool for teaching students how to work with sources and in doing so allow them to create narratives themselves. This allows me to challenge the students' historical awareness and way of thinking history.

Historiography

To understand how colonial newspapers were used in controlling smallpox and the inhabitants of St. Croix and St. Thomas, certain historical subjects must be explored. Working on my thesis, I identified four such subjects that were detrimental to contextualizing my findings. These include slavery, medicine (or more specifically, smallpox), the Danish Virgin Islands, and Denmark as a colonial power. For the latter, I have used two volumes in the series entitled *Danmark og Kolonierne*.[1] The first of the two is *Vestindien – St. Croix, St. Thomas og St. Jan*.[2] This volume delves into the history of the Virgin Islands, from when Denmark obtained them in the 17th and 18th century until they were sold to the US in 1917. The other installment is *Danmark – En kolonimagt*.[3] This takes on an even broader perspective, as it explores Denmark as a colonial empire by examining their administration and politics.

The first of these two volumes also function as a portal to the history of the islands. Other works on the topic of the Danish Virgin Isles include *De Dansk-Norske Tropekoloniene* by Roar Løken (2020).[4] In the first book on the Danish-Norwegian topical colonies written in Norwegian, Løken presents a comprehensive historical narrative of the Danish involvement in their various colonies, as well as detailing the life within them. Much of the book is dedicated to the Caribbean colonies, though it gives a grand narrative that allows for comparison between the Caribbean- and non-Caribbean colonies. More detailed literature on the life, customs, history, and geography of St. Croix can be read in a collection of accounts by the Danish scholar Hans West, collected by Arnold R. Highfield (2004).[5]

For literature on the broad definition of slavery, and slavery as a global phenomenon, I have relied on Brenda E. Stevenson (2015) and Joel Quirk (2011). Stevenson presents a perspective on the history of slavery both before and after the Atlantic trade, and how its has been practiced differently depending on the actors involved.[6] A deeper discussion on the

[1] The series is called *Danmark og Kolonierne*. It is written by Danish historians specializing in colonial history and edited by a committee of central experts within this field of study.
[2] Olsen, P.E. (Ed.). (2017). Vestindien: St. Croix, St. Thomas og St. Jan. Gads Forlag A/S.
[3] Gulløv, H.C. (Ed.). (2017). Danmark: En Kolonimagt. Gads Forlag AS.
[4] Løken, Roar. (2020). *De Dansk-Norske Tropekoloniene: Sukker, Krydder, Slaver og Misjon*. Solum Bokvennen Vidarforlaget.
[5] Highfield, A.R. (Ed.). (2004). *Hans West's Accounts of St. Croix in the West Indies*. The Virgin Islands Humanities Council.
[6] Stevenson, B.E. (2015). *What is Slavery?.* Polity Press.

different definitions and concepts involved, including modern variants such as human trafficking can be found in Quirk.[7] Understanding slave society within the Danish Virgin Islands has been vital in working with my thesis, and as such the works of the Jamaican historian Nevill T. Hall is central.[8] Hall examined the development and downfall of slavery on the islands and how the institution was a foundation to Danish colonial society. An interesting perspective pointed out by Hall is that the three different islands had their distinct history including different histories related to slaves and slavery. Hence, this book gives a unique theoretical framework to understand institutional slavery on the islands.

For historiography on smallpox, an index of various research and studies on the development of the vaccine can be found in James N. Parker & Philip M. Parker (2004).[9] Additionally, I will be using Andrea Rusnock (2009) as an introduction and guide to the early development of the smallpox vaccine.[10] Rusnock also portryed the vaccination processes, clinical trials, ways of transporting of the vaccine, and how the relation between smallpox and cowpox was discovered. For more general history on the disease, Mary Lindermann (1999)[11] and Michael Bliss (2011)[12] both briefly portray the global impact of smallpox and how it helped to modernize the study of medicine.

Other research includes Meredith Reifschneider (2018) who explored the impact of Danish healthcare policies on enslaved inhabitants of the West Indian islands. She did so by looking into archeological research to determine the degree to which enslaved nurses still used more traditional African Diaspora healthcare systems (such as plants and animal-based resources) in their treatments. For this reason, the article is an observation on how medicine in the Danish West Indies of the 19th century cannot simply be viewed by Western, clinical structures and healthcare policies.

Niklas Thode Jensen's *For the Health of the Enslaved* (2012) is the most extensive work

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[7] Quirk, J. (2011). *The Anti-Slavery Project: From the Slave Trade to Human Trafficking*. University of Pennsylvania Press.

[8] Higman, B.W. (Ed.). (1992). *Neville A. T. Hall: Slave Society in the Danish West Indies: St. Thomas, St. John & St. Croix*. The University of the West Indies Press

[9] Parker, J. N., & Parker, Philip M. (2004). *Smallpox Vaccine - A Medical Dictionary, Bibliography, and Annotated Research Guide to Internet References*. ICON Group International Inc.

[10] Rusnock, A. A. (2009). Catching Cowpox: The Early Spread of Smallpox Vaccination, 1798–1810. *Bulletin of the History of Medicine, 83*(1), 17–36.

[11] Lindemann, M. (1999). *Medicine and Society in Early Modern Europe*. Cambridge University Press.

[12] Bliss, M. (2011). *The Making of Modern Medicine: Turning Points in the Treatment of Disease*. The University of Chicago Press.

on the topic of medicine in the Danish West Indies. [13] It is an empirical study, drawing on several archival sources of different records and various publications. By doing so, Jensen depicts the development of western medicine, medicinal traditions of the enslaved, an overview of contemporary diseases and therapies, administrative structures and much more. Finally, the book includes an extensive introduction to the historiography on the field. A more extensive depiction of the historiography of slavery in the Danish West Indies is presented in *Introduction: The historiography of slavery in the Danish-Norwegian West Indies*. This is a collaboration between Jensen and Prof. Gunvor Simonsen, that locates and discuss various historiographical trends seen in Caribbean and Danish-Norwegian slavery between 1672-1848.[14]

Jensen divides his source material into two categories. First, he uses doctors' annual medical reports, records from plantation hospitals and the plantations' records, and church records. This is primarily used to map out patterns of disease, therapy and causes of death. The second category is also divided into two subcategories: writings between public authorities (correspondence, legislations etc.) and publications of authors visiting St. Croix between the 1820s and the 1840s. This suggests that other perspectives, such as those from the enslaved, is missing from the Jensen's narrative. Jensen does comment on this, as is seen on his remark on the contemporary doctors (especially during the first few decades of the 19th century) mainly writing down what they found interesting or worthy to note, thus giving an imbalanced perspective on recorded disease patterns.[15]

Jensen's thorough research of doctors' journals and various official documents indicate that health and slavery on the Danish Virgin Islands has been thoroughly explored. Still, I found that his work included little about the official debate and the newspapers' role in disease control, namely during the smallpox pandemic. Thus, my contribution to his research will be to see how these papers were used to control the spread of the disease and ensure vaccination of the African/Afro-Caribbean population.

[13] Jensen, N.T. (2012). *For the Health of the Enslaved: Slaves, Medicine and Power in the Danish West Indies, 1803-1848*. Copenhagen

[14] Jensen, N.T & Simonsen, G. (2016). Introduction: The historiography of slavery in the Danish-Norwegian West Indies, c. 1950-2016. *Scandinavian Journal of History, 41*(4-5), 475-494.

[15] Jensen 2012: 11-12

Theory

Smallpox and Healthcare

The science and understanding of medicine and human physiology was in the early modern period based on humoral medicine. This tradition was built upon the idea that the body had four liquids, or *humors*, known as black bile, yellow bile, blood, and phlegm. Imbalance between these four fluids could result in both mental and physical illness. To prevent disease, humoral medicine argued to practice moderation in all things such as diet, exercise, and passion. Each of the humors was constituted of one of the elements – earth, water, fire, or air. Each part of the body, along with age and sex was defined by these qualities.[16] The notion of God and religion was also connected to medicinal understanding and diagnosis, as pain, illness or deformity was accepted in the name of God's grace.[17]

The enlightenment created a more positive view on medicine based on the belief that health was a natural state of the body and that all disease could therefore be eradicated with enough knowledge.[18] Studies of diseases now focused on careful observation of individual patients in order to discern symptoms and signs of the disease during clinical trials. Based on these trials, diseases were categorized and classified into anatomical, symptomatic, and pathological criteria.[19] Generally speaking, perception of health and the importance of medicine was one part of the enlightenment's ideology of human progress toward perfectibility. Religion and medicine became separated concepts to the enlightened West-European and hygiene, lifestyle, medicine, and scientific knowledge became central concepts.[20]

The new clinical approach to medicine and epidemiology allowed for a closer study of smallpox and new treatment against it. Smallpox was an ancient disease, known to have existed as far back as two millenniums BCE.[21] The disease was caused by a virus which invaded a host cell to reproduce within the body. The virus consisted of DNA/RNA around a strain of protein, which allowed it to penetrate the host cell and use its biological mechanisms to replicate itself.

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[16] Lindemann 1999: 10-12
[17] Lindemann 1999: 28
[18] Risse 1992: 150
[19] Risse 1992: 168-169
[20] Risse 1992: 195
[21] Aberth 2010: 73. The first evidence of Smallpox was discovered in Egypt, on mummified remains where positive identification of the virus was made. Contemporary writings and medical manuscripts also describe ailments that match the description of the virus.

Eventually, the host cell ruptured which allowed newly manufactured cells to spread within the body. As with other viruses, smallpox was prone to develop mutations, allowing for new virus strains that made the virus harder to treat as it evolved.[22]

The first traces of the disease were found in mummified remains and medical scripts from Egypt, along with other recorded outbreaks around world. These included the Plague of Athens of 430-426 BCE, the Plague of Antonine which impacted the Roman Empire from 165 CE, along with various outbreaks recorded throughout the Middle Ages.[23] The disease was first given the name smallpox in the 15th century to differentiate it from syphilis, and eventually measles. From the 15th to the 16th century, smallpox intensified within Europe, India, China, and southwestern Asia. Furthermore, it spread to the Caribbean and mainland Americas within the first quarter of the 1500s through colonization and exploration. By the 18th century, smallpox had become a major endemic disease throughout the world (except for Australia).[24]

The virus spread through droplet infection. This meant that it could spread through secretion from the throat, lungs, or nose of an infected. The infection was split into two categories: *variola major* and *variola minor*. The first was most deadly, with mortality rates reaching 30%. Comparatively, *variola minor* was much less virulent, with milder symptoms and a mortality rate of 1%.[25] For the research done in this thesis, the *variola major* will be the implied form of the disease when referring to smallpox. The lesser variant was mostly seen in European countries in the 19th century up until the eradication of the disease. Smallpox was finally eradicated through vaccines in the 1980s.

WHO describes how the symptoms of Smallpox developed through different stages.[26] It had an incubation period of 12-14 days, followed by influenza-like symptoms. This included fever, headaches, and severe pains in the limbs and back of the infected. Within two to five days following contamination, the symptoms worsened, and the characteristic red rash manifested itself on the body of the infected. The severity of the rash could range from a few, mild pustules on the face, hands and/or legs, to more severe pox covering most of the body. In these cases, the rash could produce scarring, loss of skin, or blindness. Most fatal of the outcomes were internal

[22] Aberth 2010: 73-74
[23] Aberth 2010: 76-77
[24] Geddes 2006: 153
[25] Lindemann 1999: 48
[26] WHO 2022

organ failure, where the virus attacked the liver, lungs, or intestines of the infected.[27] Surviving the disease resulted in a lifelong immunity for the infected.

The disease devastated the world in the 18th century. In Europe, the disease caused 10-15% of all deaths, with 80% of those deaths occurring in children younger than 10 years.[28] The issue of disease control was arguably more complex in colonies that had a lot of transit or import of enslaved workers from Africa. Most Caribbean colonies were examples of this, where the influx of people meant high risks of new epidemics. Due to the sanitary conditions of the enslaved, they were in high risk of infection during both the voyage to the island and on the plantations where they worked. The enslaved thus had high mortality rates, resulting in new workers being needed. This created a vicious circle of infection and death that created an urgency for a cure.[29]

Public healthcare on the Danish Virgin Isles was built into a specific system. Each island had their own King's Physician, which I will henceforward refer to as the "Landfysikus". The Landfysikus was responsible for overseeing all other healthcare personnel and services provided on the island. There were four public health services directly under the Landfysikus: the private doctors or the plantation doctors, the military surgeons, the royal midwives, and the royal apothecaries. Each of these had subordinate healthcare workers or structures that they were directly responsible for.[30] The Landfysikus was thus the highest-ranking medical official on their island and the individual with most responsibility for managing public health and vaccination during the smallpox epidemics.

In addition to the official system of medicine and health control, non-western views and practices of medicine existed among the enslaved. This was referred to as "obeah medicine" which was both a religious and an herbal practice.[31] Obeah had been used by Africans for a long time and was viewed as dangerous by the Europeans/Euro-Caribbeans due to it being superstitious and a way for their workers to hurt themselves. Most sources of Obeah are secular and written from Europeans that had observed and criticized the practice. Additionally, archeological studies have extended the knowledge of tools and objects used in their practice,

[27] Lindemann 1999: 49
[28] Jensen 2012: 195
[29] Jensen 2002: 195
[30] Jensen 2012: 57
[31] Jensen, Simonsen & Olsen 2017: 234

and the knowledge of which plants they used in their healing rituals and procedures.[32] Due to the Africans and Afro-Caribbeans increased affiliation to churches, the belief in Obeah slowly decreased from the 1830s.[33]

Slavery

Slavery is a broad term that is often associated with the transatlantic slave trade.[34] Still, there are other categories with unique terminology and definitions. Forced labor, sex slaves, bounded labor (or peonage), and the use of child soldiers are some distinct examples.[35] Thus, it is a misconception that slavery is a thing of the past. Ironically, some forms of slavery have received more attention during the latter decades without necessarily being referred to as slavery. An example of this is human trafficking and forced prostitution, which has been an issue throughout most of human history, being recognized as a global issue following the global migration in the post-Cold War world.[36] The specter of ethnicities, cultures, ideologies, and historical periods involved in the various forms of slavery creates complex terminology that needs to be sorted before progressing further into my thesis.

The form of slavery discussed in this thesis was rooted in the transatlantic slave trade. The name stems from the trade that took place over the Atlantic Ocean between the 16th and the 19th century, also known as the triangular trade. Traders would buy unfree individuals from Africa and travel with them to the Americas. There, the enslaved was traded for various goods, usually exotic wares such as sugar, cotton, and indigo, that was brought back to Europe to be sold. Workers were desperately needed in America, where the reduction of indigenous people had made the workforce too small for the plantations. Similarly, most European colonies did not have enough volunteers or convicts to work on their plantations. Though most of the enslaved ended up in the Americas, some were sent to other continents and colonies. The first transatlantic voyage happened in 1525 followed by almost 350 years of slave trade until the last registered voyage in 1866. In the span of three and a half centuries, more than 10million enslaved was

[32] For more on the enslaved use of plants on St. Croix, see Reifschneider & Bardolph (2020).
[33] Jensen 2012: 70-71
[34] Quirk 2011: 140
[35] Stevenson 2015: 1
[36] Quirk 2011: 158

registered to embark on voyages across the Atlantic.[37]

The enslaved located on the Danish Virgin Isles were people forcefully removed from Africa and put into the transatlantic slave trade.[38] They were sent to the island to, almost exclusively, work on plantations. The enslaved were met with harsh conditions, resulting in high mortality rates throughout the 17th and 18th century and high import of new enslaved.[39] Once on the island, the enslaved had no individual rights or say on how they lived they lives. They had become part of a large Caribbean economic network consisting of sugar, cotton, tobacco, indigo, spices, and humans.[40] In this perspective, they had become commodities and property of whoever had bought them. Owning enslaved as property is known as chattel slavery and is a tradition that can be tracked back to ancient Greco-Roman slavery where the enslaved could not own property, marry, or have family that they themselves had control over.[41] The same concepts would apply to most enslaved stationed in Caribbean colonies, up until the mid-1800s.

Being commodities with no legal rights, the lives of the enslaved was unpredictable. During their lifespans, they could be sold multiple times and be forced to leave their communities and families without any warning.[42] Life within the plantation was hard, with heavy and physically taxing work for ten to eleven hours in the fields each day during the 1700s.[43] Though the enslaved were bound to their plantations, Afro-Caribbean societies that crossed the boundaries set by the plantations arose. This was more present on St. Croix, as the plantations lay closer to each other than on St. Thomas where the enslaved were typically more isolated to their assigned plantation. Thus, African/Afro-Caribbean population would forge families and friendships, as well as religious and learning communities.[44] The enslaved also made up the majority of the populous and continued to grow even past the abolition of the slave trade in

[37] All statistics and information on the transatlantic slave trade is collected from SlaveVoyages (n.d.).
[38] Simonsen 2017: 17
[39] Simonsen 2017: 34
[40] Gøbel & Sebro 2017: 70
[41] Stevenson 2015: 9
[42] Stevenson 2015: 111
[43] Simonsen & Olsen 2017: 164
[44] Simonsen & Olsen 2017: 175. "African" refers to those born in Africa and transported to the islands as part of the transatlantic slave trade. The "Afro-Caribbeans" were either those born by African parents on the Danish Virgin Islands or in some cases those born to parents of mixed African and Caribbean descent.

1803.[45]

Method

In order to identify newspapers referring to smallpox management, I have used the digital collection of the Danish Royal Library. Using their digital archive allowed me to more easily navigate through the large number of newspapers printed throughout the 19th century and find articles relevant to my research. I used certain keywords when searching through the archive that I systematically went through based on island of origin and chronology. The keywords were related to various subjects including smallpox, vaccine, health officials, and the enslaved. The keywords used consisted of the words or variations of the words most typically used in the papers, including: "smallpox" (or "pox"), "vaccine", "inoculation", "slave" (also using contemporary variations, such as "negro" or "black"), "Landfysikus" and names of specific doctors. All result were written down into categories and structured chronologically to navigate my findings more easily. My research on the newspapers has thus been qualitative in nature which has given me the opportunity to evaluate and discuss the developments seen during the period and attempt to create a narrative based on the contents of the newspapers. The strength of my method thus coincides with the four functions of a qualitative research method identified by Alan Kazdin: the ability to inform, intrigue, inspire and incite.[46]

All of my source material has been treated as a trace of the past: They can tell us of how the epidemics were handled. To illustrate, many advertisements I have examined was written by a Landfysikus. This has allowed me to draw certain conclusions on how the Landfysikus thought and operated and to say something regarding his intentions and goals. Some of the newspapers have also been used as accounts of disease patterns or as accounts of the measures implemented as a response.[47] To illustrate, chapter 5 examines the accounts given by the court proceedings discussing the future of the Landfysikus that told of vaccination efforts after the emancipation. Most of the newspaper articles that has been analyzed as part of this thesis have been

[45] See Simonsen & Olsen 2017: 190 for table on demographic statistics of Christiansted and Frederiksted, 1758-1803.
[46] Brinkmann & Tanggaard 2015: 458
[47] Both the "trace" and "account" are my own translations of the Norwegian terms "levning" og "beretning". These will be discussed further under *Method* later in this chapter.

informative, not normative, and often referring to something that had already happened.[48] This includes announcements of smallpox having arrived on the island or people not showing up for check-ups. Sources that can be used as an account gives me an opportunity to add them into a bigger picture, a larger narrative. Both categories does however allow me to evaluate and discuss the role of the newspaper in regard to disease control.

The newspapers printed on the Danish Virgin Islands were targeted at the European and Euro-Caribbean population of higher position. They were mostly dominated by advertisements and announcements of interest to their targeted readers, thus written on both Danish and English due to the sum of languages being spoken on the islands.[49] On St. Croix, the *Dansk Indisk Regierings Avis* was the official newspaper printed in Christiansted. It changed its name many times, starting with *The Royal Danish American Gazette* when the paper was first printed in 1770, changing to *Dansk Indisk Regierings Avis* from both 1802 to 1807 and 1815 to 1843.[50] The paper also included both local and international news coverage. It gradually grew a tabloid-like paper focusing on stories more than advertisements and announcements after the emancipation, even more so after the 1880s.[51] The was known to not blindly support the Danish government as it was also characterized by the interests of the larger plantation owners and officials located on the island.[52]

The newspaper printed on St. Thomas was first named *The Saint Thomas Gazette* and appeared in 1809. It changed into *Sanct Thomæ Tidene* after the British occupation in 1815, with a brief exception of *Sanct Thomas Tidene* from 1817 to 1828.[53] As on St. Croix, the *Sanct Thomæ Tidene* usually contained a mix of Danish and English articles and consisted mostly of advertisements and announcements. It was also similar to the paper printed on Christiansted in that it gradually included more domestic and international news. Additionally, it was somewhat independent from central governmental interests in that it targeted the "working class" of the island.[54] The *Sanct Thomas Tidene* was particularly dominated by excerpts from both Caribbean

[48] Kjeldstadli 1999: 170-175
[49] Thomsen & Søllinge 1988: 351-352
[50] Thomsen & Søllinge 1988: 352. Other names included *The St. Croix Gazette* from 1808-1813, *The Royal Saint Gazette* from 1813-1815 and finally *St. Croix Avis* from 1844.
[51] Thomsen & Søllinge 1989: 701
[52] Thomsen & Søllinge 1988: 352-353, Thomsen & Søllinge 1989: 703
[53] Thomsen & Søllinge 1988: 354
[54] Thomsen & Søllinge 1989: 704

and European (thereof mostly English) newspapers that often made up the majority of what ended up being printed. This was most likely due to the island seeing a lot of transit, with travelers often staying for longer periods at a time.

Finally, I have included vaccination protocols from the Danish National Archives into my research. The main purpose of this has been to categorize the number of vaccinations conducted, allowing me to verify or compare various findings. This is limited to St. Croix between 1820-1831 and 1848-1853 due to the availability of sources in the Danish National Archives' online collection. By including statistical data from the vaccination protocols, I have been able to further support my findings with quantitative material thus adding to the narrative. Due to the scope of this thesis, certain primary sources and archives have been but. This includes various reports and correspondence between doctors and health officials. This was done due to two reasons: First, Jensen had already utilized many of these sources in his work. Second, the amount of time and work required to utilize these sources written in gothic handwriting does not match the boundaries set by this master's thesis.

The Structure of this Thesis

To examine the role of the colonial newspapers in maintaining control on the spread of smallpox, certain elements have to be considered. In addition to that mentioned under *Theory* and *Method*, I will briefly describe two historical developments related to the topic. First, I will explain the development of healthcare in Denmark-Norway and how they dealt with previous plagues. Second, I will give a brief historical overview of the Danish Virgin Islands and their early colonization. Having presented the historical context of the island and of contemporary Danish healthcare, I will shift my attention to the newspapers. For the sake of ease, I will split my findings into two chapters: one dealing with evidence from 1800 to 1830, and one examining the 1830s to the post-emancipation period. Finally, I will combine the findings presented throughout this thesis to conclude on the narrative of disease control as presented through the colonial newspapers.

Chapter 2: Smallpox, Health, and Healthcare in Denmark Norway

Governmental control and administration of healthcare evolved in Denmark-Norway during the 1700s. In the 1600s and the early 1700s, both countries were hit by a new wave of *Yersinia Pestis* (or Y. pestis), a form of bacteria that led to plagues of various forms including bubonic and pneumonic plagues.[55] Denmark had its first outbreak of Y. pestis in 1349-1350, with 9 outbreaks following over the next 50 years. In 1625, Denmark produced the first plague legislation in the world that specified that every city should have sick-house specifically for plague patients. These houses had the responsibility of overseeing isolation and treatment of said patients.[56] The isolation of infected proved highly effective and became a standardized method of containing outbreaks in Denmark-Norway. As Denmark-Norway obtained colonies in the 17th and 18th centuries, similar methods were also introduced in these societies. The precaution would reemerge in later pandemics, such as the new Y. Pestis epidemic of 1711. Additionally, new precautions were added, such as ships arriving from other countries being quarantined for 40 days before being allowed to enter Danish harbors.[57] These measures would also reappear during the smallpox pandemic.

The earliest method of vaccination against smallpox was through a method called variolation. According to Rusnock (2007), this procedure induced a mild version of the disease. This was done by extracting lymph, a clear liquid consisting of white blood cells taken from a pock or abscess from someone contagious with smallpox and inserting it to a healthy individual through a scratch made on their arm.[58] The practice involved a high degree of risk, with mortality rates being approximately 6-7%.[59] Still, this was much lower than the mortality rate of the variola major, which made it useful first attempt to control and battle the disease. The practice of variolation had been used in China and the Middle East for centuries before its introduction to Europe in the 1720s.[60] The technique reached the Caribbean in the 1740s, first arriving in British and French colonies, where it was used to vaccinate the enslaved population. It became a common practice in the 1780s, when it also spread to the Danish Virgin Islands.

[55] Høiby 2020: 355-357. The Black Death was one variation of the Y. pestis.
[56] Høiby 2020: 357
[57] Høiby 2020: 357
[58] Rusnock 2007: 21
[59] Jensen 2012: 196
[60] Jensen 2012: 196

Use of variolation in Denmark-Norway can be traced back to the early 1750s. The first case was noted in a treatise by the Danish doctor Christen Friis Rottböll in 1766, on the inoculation of the Danish Baroness Bernsdorff that took place in 1754. Rottböll had learned about the procedure from a French pamphlet that had been translated to Danish two years prior to the inoculation of Bernsdorff. Following the procedure, dr. Rottböll became the Head Physician of the Royal Inoculation House in Copenhagen from 1755 until it was closed in 1760.[61] From its introduction in the early 1750s, variolation became a common process in Denmark. To illustrate, 170 people was registered as inoculated in Copenhagen in 1766, and approximately 200 persons on the island of Funen in the mid-1750s.[62] According to the Norwegian Institute of Public Health (NIPH), variolation was first used in Norway in 1755. Smallpox was prevelant in both Denmark and Norway throughout the 1700s and the 1800s. In 1741, 700 children died of the disease in Bergen alone.[63]

On the Danish Virgin Islands, variolation was used only for a short period because as a new treatment involving cowpox virus drastically changed the global battle against smallpox. The origin of the cowpox disease is thought to originate from the domestication of animals, eleven to twelve thousand years ago. Accordingly, versions of the virus may be found in livestock, predominantly cattle.[64] In 1796, Edward Jenner, a British scientist and physician, demonstrated how the cowpox virus would lead to immunity to smallpox without the risk involved in variolation.[65] As a result of this discovery, vaccination based on human-to-human transfer of cowpox spread and eventually overtook the role of variolation.[66]

Questions regarding healthcare and the extent of government responsibility in providing it intensified in the 1700s. Though the smallpox pandemic helped push this issue, the question was raised due to multiple circumstances. First, western medicine, scientific research and knowledge of anatomy expanded due to scientific observations, experiments, and analysis. As a result, universities began to expand their teaching and examinations of medicine. Additionally, pandemics such as smallpox, Y. pestis, and syphilis ravaged Denmark-Norway, creating a

[61] Eriksen 2016: 232
[62] Eriksen 2016: 234
[63] NIPH 2018
[64] Aberth 2010: 74
[65] Aberth 2010: 85
[66] Rusnock 2007: 19

demographic crisis that the government was forced to handle.[67] Thus, smallpox was a part of a larger picture that helped establish both institutions (new hospitals and universities), and new ideas regarding medicine, health, hygiene, risk of infection and treatment of young children (seeing as they were the most exposed to smallpox).[68]

Following Jenner's rediscovery of cowpox as a proactive treatment for smallpox, Denmark-Norway eventually stopped using variolation. In 1801, the first vaccinations using cowpox was seen in both Denmark and Norway.[69] Subsequently, the Vaccine Institute of Copenhagen was established as part of the Royal Danish Vaccine Commission's efforts in spreading vaccine matter to all their provinces and colonies.[70] In 1810 (improved in 1811), a new law was passed that made vaccinations mandatory in Denmark-Norway by requiring a certificate of vaccinations to be allowed a Cristian confirmation and marriage.[71] Though shipping vaccine matter to West Indian colonies would become an issue, the amount of government initiative in advancing healthcare and vaccination shows that Denmark took a proactive role in dealing with smallpox.

Due to the long voyages required to the hot and tropical lands of European colonists, transporting the vaccine was difficult. According to Andrea Rusnock (2007), there were three methods of transporting the vaccine.[72] The first method involved creating a dried vaccine matter by soaking a thread in cowpox lymph. When received, the pieces of threads were cut into portions and moisturized before application. The second method consisted of transmission of cowpox in a liquid state by storing the virus on a lancet. This was mostly used over short distances as the lancet would rust and render the vaccine useless after a few days. Finally, the third method involved people infected with cowpox. A modified version of the second method discovered by Dr. Jean De Carro became the most successful way of transporting the vaccine matter over long distances. His method constituted of placing a sample of cowpox between two pieces of glass, sealed with oil. This was packed in dark paper, and finally waxed into a ball. Doing so protected the liquid from direct sunlight and heat, preserving the matter in its state.

[67] Moseng et al. 2003: 259-265
[68] Moseng et al. 2003: 265
[69] Bennet 2020: 183, Tryland 2001: 3546
[70] Jensen 2012: 197
[71] Moseng et al. 2003: 263
[72] Rusnock 2007: 24

Denmark did not use this method, thus failing to ship a live sample of the virus before 1803.[73] Due to the difficulty in transporting vaccine matter, maintaining an active chain of cowpox infections for human-to-human vaccination was integral to the vaccination processes such as those of the Danish Virgin Isles.

[73] Jensen 2012: 197

Chapter 3: The Danish Virgin Islands: St. Croix and St. Thomas

The Danish West Indies, which I will refer to as the Danish Virgin Isles, consisted of three Islands: St. Croix, St. Thomas, and St. Jan. In 1652, the first Danish ship to set sail from Copenhagen to the Caribbean, as part of a trading expedition. The voyage became a huge success and led to years of high import of exotic goods to Denmark though the *Caribiske Kompagni*.[74] Colonization began in 1671, when the *Kongelig Octroyerende Danske West-Indiske og Guineiske Compaginie* was established, funding new expeditions to the Caribbean. The first major task of this company was to begin the colonization of St. Thomas. This task was given to the successful tradesman Jørgen Iversen Dyppel.[75] The colonization was a long and difficult process where prisoners were brought from Denmark to be used for forced labor. The prisoners sent to the colony was usually sentenced to death or life-long imprisonment, thus "pardoned" to instead work for the rest of their lives.[76]

Though the governor of St. Thomas laid claim on St. Jan in 1675, it took 46 years from Denmark aquired its first Caribbean colony in 1671 to its second in 1718. Twelve years after the colonization of St. Jan, 109 plantations had been established with approximately 1100 enslaved workers producing sugar and cotton.[77] St. Croix was annexed by Denmark in 1733 after being owned by France since 1665. Due to fear of the English fortifying their position in the Caribbean, France sold the colony to Denmark as they were viewed as a much less dangerous competitor than other colonial powers in the Caribbean.[78] Denmark seized the opportunity, turning more than half of St. Croix's tillable land into plantations by the late 1740s. This increased to 95% in 1755, the same year that the Danish government bought the islands from the Danish West India-Guinea Company (DWIGC).[79]

The Company selling the islands to the Danish government was a result of DWIGC's economic policies leading to turmoil amongst the plantation owners. Following the purchase of St. Croix, the Company initiated policies to attract more colonists to the island in order to better exploit the potential for plantations. This was done by removing the DWIGC's monopoly on the

[74] Løken 2020: 43. Most notable of these goods were tobacco, sugar, ginger, and indigo. The Danish traded these for various drinks, dried meats, and dried fish.
[75] Løken 2020: 45-46
[76] Løken 2020: 47
[77] Løken 2020: 50
[78] Løken 2020: 51
[79] Simonsen & Olsen 2017: 160-161

import of enslaved workers that were in high demand on the plantations. Additionally, all tolls on wares were removed in 1734. When the Company attempted to reinstate some of those policies and collect the revenues produced by the plantations in the 1740s, protests ensued that eventually led to the Danish state purchasing the islands from DWIGC.[80]

The Danish Virgin Island's involvement in the Transatlantic Slave Trade began in 1674 when enslaved Africans were bought and directly transported to St. Thomas. The trade continued for a while after the abolition in 1803, reaching at least 85.650 imported slaves in 1806.[81] Denmark quickly utilized St. Thomas' shoreline and the island's natural harbor to create a fort that markws the beginning of the island's role as an international harbor for trade. Still, St. Thomas' economy was primarily centered around its plantations. Following the war between France and Britain in 1756, St. Thomas became a favorable center for trade in the Caribbean due to its neutrality. Additionally, the profits from their plantations were declining following excessive use of their soil, leading to increased commitment to the commercial aspects of the island's economy. Thus, St. Thomas was made into a free port in 1764, becoming a place for trade, commerce, and transit, in other words becoming an entrepôt.[82]

Demographic data presented by Neville A.T. Hall adds to the differences of these two islands.[83] In 1755, 22 years after the annexation of St. Croix, the island had 8897 enslaved individuals. Comparatively, St. Thomas had 3949 – less than half of their neighboring island. The majority of the population in the Danish Virgin Islands continued be enslaved after the abolition of 1803. By 1815, the population of the southmost isle had grown to 28.650, with 24.330 of those being enslaved. Comparatively, St. Thomas had 8799 inhabitants that same year with enslaved totaling half of the populous. This comparison reveals that the enslaved population was much higher on St. Croix than on St. Thomas.

The islands had a steady demographic decline throughout the rest of the 19th century. Up until the emancipation in 1848, the number of enslaved dropped rapidly on St. Croix, while the number of free individuals grew on both islands. After the emancipation and up until the sale of the colonies in 1917, the population on all three islands dropped from a total of 40.000

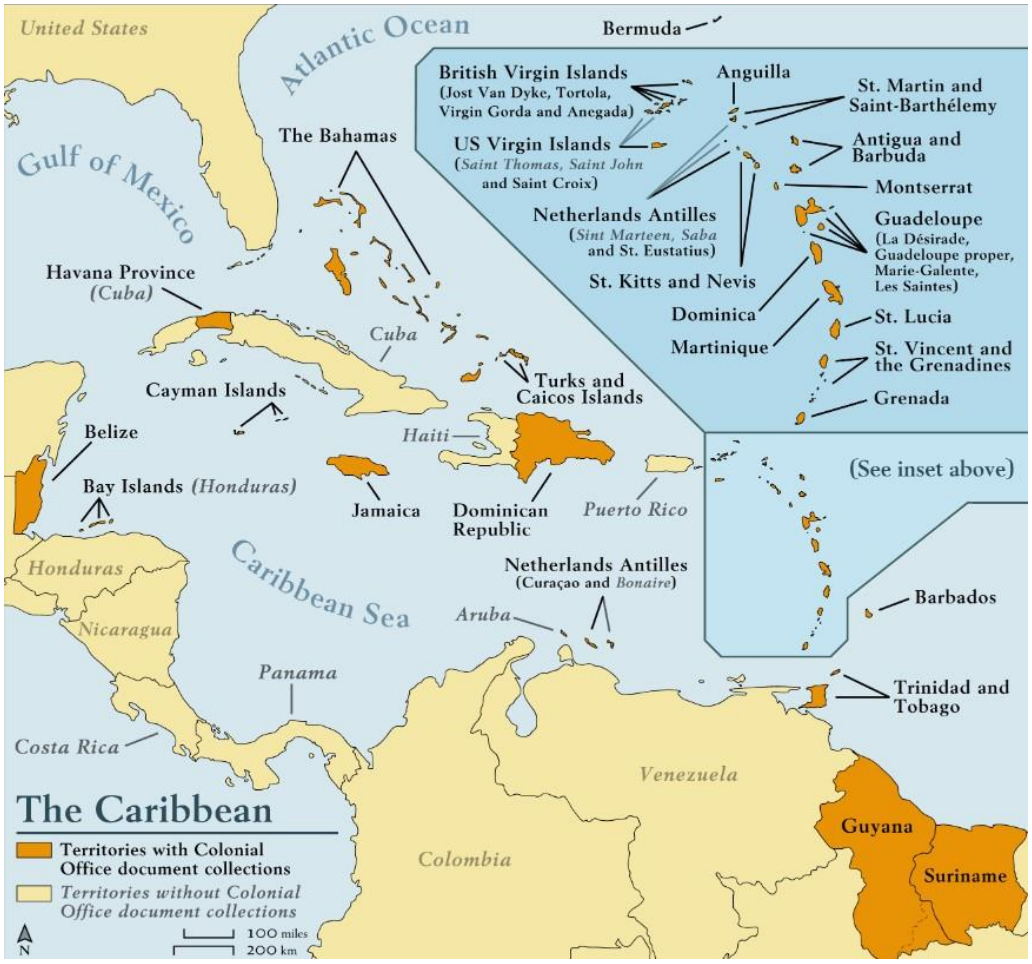
[80] Simonsen & Olsen 2017: 139-140
[81] Gøbel & Sebro 2017: 56
[82] Simonsen & Olsen 2017: 183
[83] The data used in this paragraph can be linked to *Table 1.1: Slave, White, and Freedman Populations of the Danish West Indies, 1688-1846* in Higman 1992: 5

individuals to an estimated 26000.[84] Both St. Croix and St. Jan saw a decline of more than 50% in their rural districts, compared to Charlotte Amalie growing by 32% in the same period of time. This trend was a result of plantations becoming less profitable, emigration following the emancipation, excess mortality, and the harbors of St. Thomas providing more opportunities that the declining plantations.

This thesis will focus on two of the islands: St. Croix and St. Thomas. One important distinction between these two islands was that St. Thomas was a free port and center of commerce while St. Croix was centered on its plantations. Ships docking at St. Thomas contained both inter-Caribbean traders, European merchants and African enslaved. The island was thus more susceptible to diseases such as smallpox. Additionally, St. Thomas was a place for transit of enslaved workers that were later sent to the other two islands.[85] Enslaves arriving in St. Croix had thus been through quarantine if contamination was discovered or the risk of an epidemic was heightened. Moreover, St. Croix was much larger than St. Thomas and with a much higher percentage of enslaved. Their population lived more geographically spread due to the island's plantations, thus creating natural cohorts that made it easier to control the spread of smallpox.

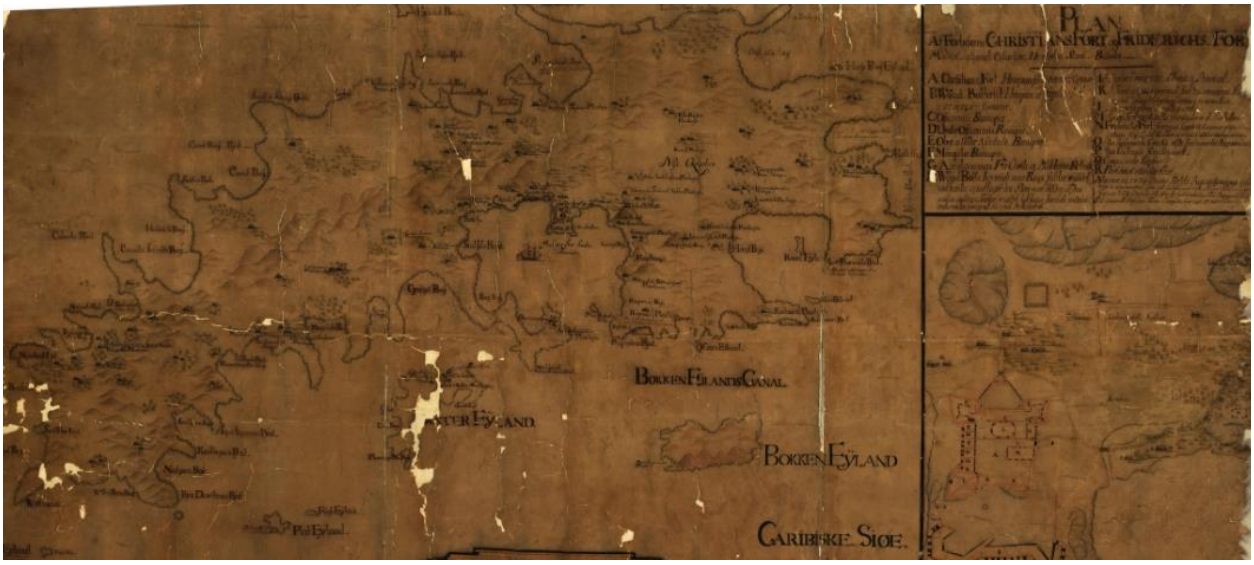
[84] The Danish National Archives n.d. (a)
[85] Simonsen & Olsen 2017: 208

Picture 1: A Modern Map of the Caribbean



Source: Map of the Caribbean. The National Archives. (2009, April 3rd). Map, Caribbean, Colonial Office. The National Archives: London.

Picture 2 Map of St. Thomas, 1730.

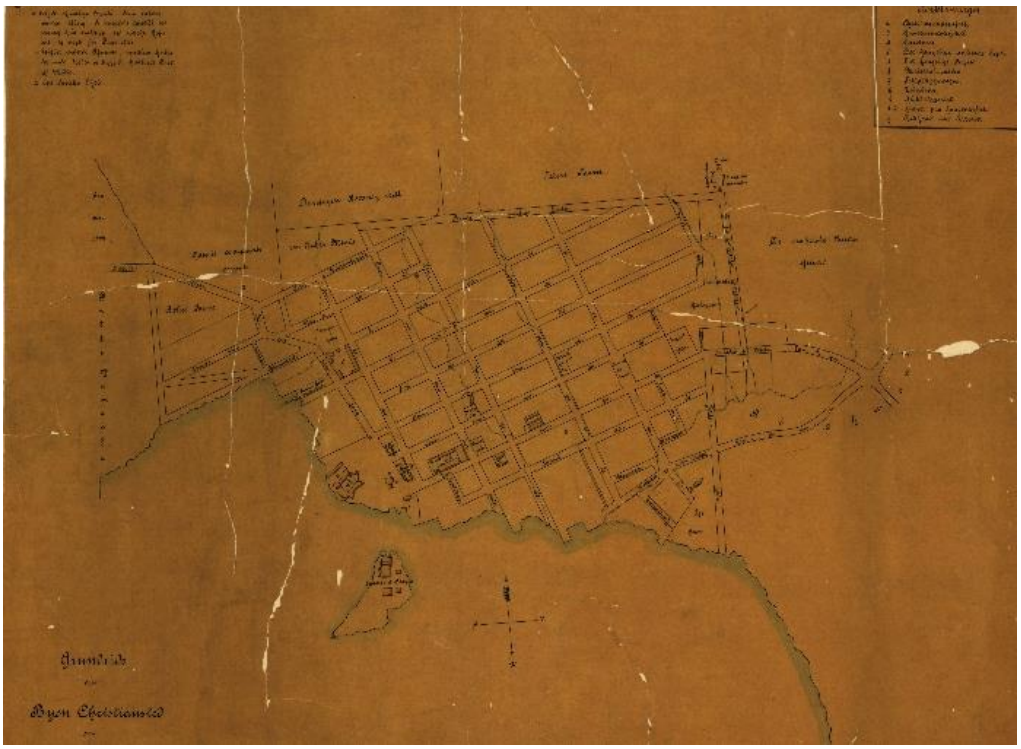


Source: Kort over St. Thomas, indsat er kort over Christiansfort i Charlotte Amalie. C. von Neno. (Around 1730). 337 43: Maps and Drawings – Chamber of Revenue. Danish National Archives: Copenhagen.

Picture 3: Map of St. Croix, 1754

Source: Kort over St. Croix med byplanerover Christiansted og Frederiksted. Jens Michelsen Beck. (1754). 337 1: Maps and Drawings - Central Directorate for the Colonies, The Colonial Office. Danish National Archives: Copenhagen.

Picture 4: Map of Christiansted, 1856



Source: Bykort over Christiansted på St. Croix. Christian Ludvig Schellerup. (1856). 337 10: Maps and Drawings - Central Directorate for the Colonies, The Colonial Office. Danish National Archives: Copenhagen.

Chapter 4: Newspapers and the Introduction of Vaccines, 1800-1830.

Through the continuous import of infected African enslaved, the Caribbean eventually became a hotspot for the pandemic.[86] In the 1740s, the Danish Virgin Islands were faced with the threat of the disease now existing on the neighboring islands. The local administration of St. Croix enforced quarantine for ships entering the harbors of the islands. This prevented smallpox from gaining a foothold on the island from 1742 when this repercussion was initiated.[87] The use of pro-active quarantine can be seen in connection to how Denmark had previously dealt with the arrival of epidemic diseases.[88] Despite this measure, smallpox arrived on St. Thomas in the 1750s, quickly followed by an outbreak on St. Croix a few years later. Due to St. Thomas being a hub for commerce and transit in the Caribbean, total isolation of the island was never an option.

Variolation has been recorded in the British West Indian Islands since the 1740s. Though it would take time to become a standardized practice on the Danish Virgin Islands, it confirms that of variolation existed in the Caribbean from the mid-1700s. According to Jensen, this practice arrived on St. Croix in in the 1780s.[89] Following Edward Jenner's publications of his trials on cross-immunity using cowpox, the use of vaccines eventually arrived in the Caribbean. Though it was difficult to transport the virus over the Atlantic Ocean and the Caribbean Sea, live samples of cowpox finally arrived on St. Croix in 1803. The doctor who managed to transport the virus in a living state used it to vaccinate his children and set up a chain of infection by using the arm-to-arm method, allowing the treatment to spread to St. Jan and St. Thomas.[90]

According to Jensen, two measures were commonly initiated to contain the spread of smallpox. First, the administration on St. Croix imposed a system of total quarantine as proved effective in the history of pandemics in Denmark. Total quarantine was aimed at all inhabitants on an island who caught the disease or had been in contact with it. These individuals were to be isolated in special accommodations located in the towns and on the plantations. Second, the Landfysikus' monopoly on administering the vaccine could temporarily be removed to effectively speed up the vaccination process. To illustrate, both measures were quickly implemented in the face of a new epidemic in 1827, resulting in smallpox being gone less than a

[86] Jensen 2012: 194-195
[87] Jensen 2012: 195
[88] See Høiby 2020
[89] Jensen 2012: 196
[90] Jensen 2012: 197

year later.[91] Finally, it is important to note that St. Croix and St. Thomas were unequally affected the various epidemics that occurred the Caribbean. This is mostly tied to the fact that St. Thomas was an entrepot, thus having a higher risk of contamination.[92]

This chapter will examine the role of the newspapers during the battle against smallpox from 1800 to 1830. These three decades were shaped by large changes to the Danish Virgin Islands. First, smallpox epidemics were more frequent and larger in scale than before. Second, the arrival of the vaccine meant that a new method of treatment had to be supported through infrastructure, information campaigns and logistics. Third, the British occupation created administrative change on the islands which was reverted in 1815 following the islands' return to Danish rule. Finally, as part of the increased efforts in disease control and shifting administration, new laws and comprehensive measures were introduced within this timeframe. I will attempt to evaluate the newspapers' part in these changes by examining various articles and entries printed during these three decades.

Increased Funding of Healthcare on the Danish Virgin Isles: A New Hospital at Christiansted

The increased attention and governmental spending in connection to healthcare seen in Denmark-Norway throughout the 1700s were also applied to the Danish Virgin Islands. Research by Jensen suggests that there was a slight decline in the number of inhabitants per doctor on the islands from 1800 to 1830.[93] This correlates with the increased hospital funding, rise in hospitals, and number of doctors on the plantations throughout the first half of the century.[94] One example of hospital funding can be seen the case of the hospital at Christiansted. From the late 1790s, a complete remodeling and renovation of the hospital was in development. A complete blueprint of the façade was presented in 1802, along with a calculation of required building materials totaling

[91] Jensen 2012: 206. This was publicly announced in the papers, as seen in *Dansk Vestindisk Regierings Avis* (June 7, 1827). Similarly, the paper was used to announce the redaction of said exception following the containment of the outbreak. This can be seen in *St. Croix Avis* (January 22, 1844). These cases are examined further later in this chapter, and in chapter 5.

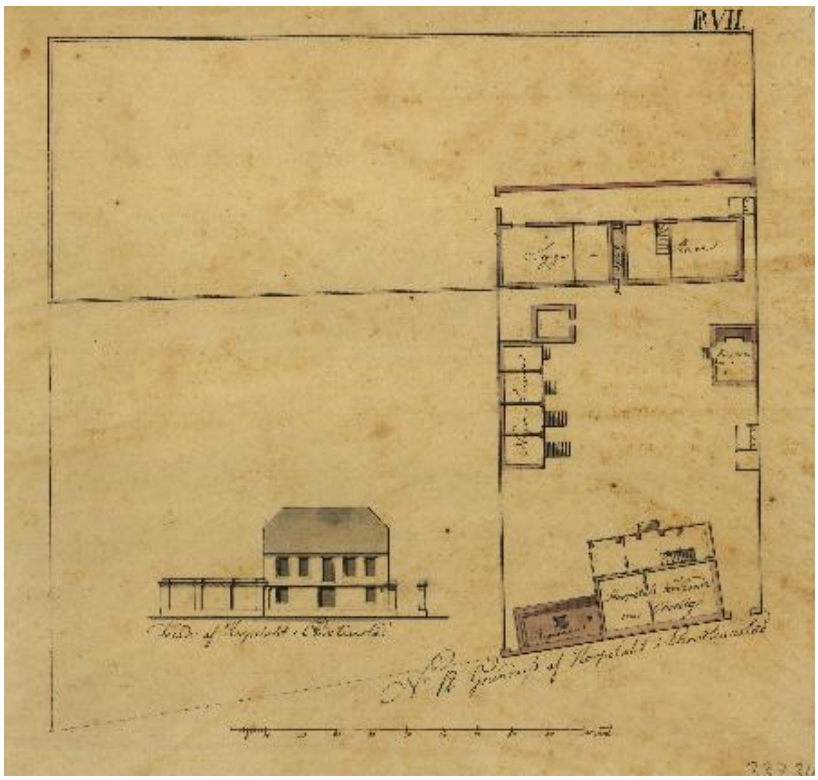
[92] The implication of St Thomas being an entrepôt has been central to my work and will be further discussed throughout the thesis.

[93] Jensen 2012: 59. Figure 2.11.

[94] Jensen, Simonsen & Olsen 2017: 232-233

11.250 daler.[95]

Picture 5: The Hospital at Christiansted, around 1780



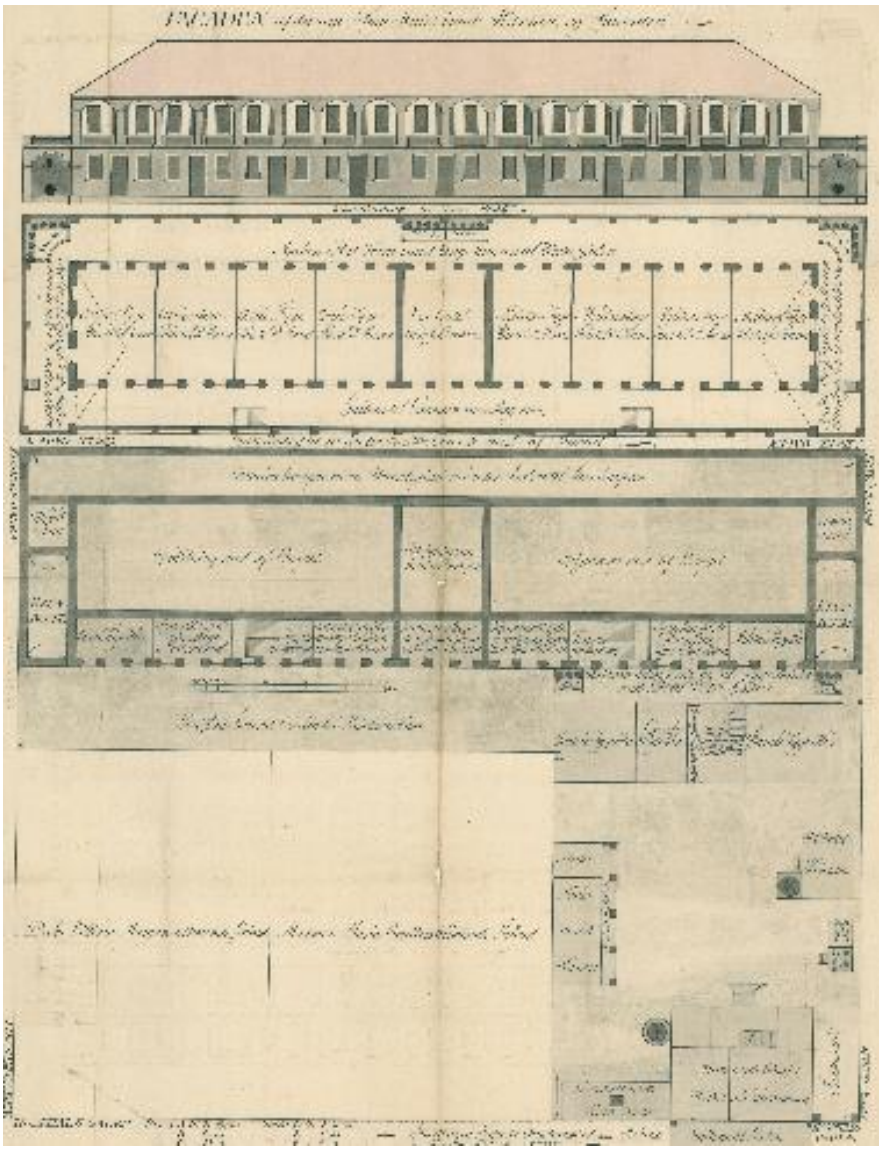
Source: Hospitalet i Christiansted på St. Croix, situationsplan og facade. Peter Lotharius Oxholm (1778-1780). 337.316: Rentekammeret – Dansk Vestindien – Kort og Tegninger. Danish National Archives: Copenhagen.

Floor plans of the hospitals from 1778-1780 show the ambitious plans for a new hospital at Christiansted.[96] These drawings present a simple living arrangement for the stationed doctor where he could receive and treat patients, two separate parts of the hospital for the white and the colored, in addition to necessary facilities such as kitchens and outhouses. Comparing the floor plans, the number of available rooms and facilities increased to more than five times of that present in the 1788-1780 sketch. Rooms were divided between civilians and soldiers, each with room for eight persons. The number of rooms reserved for the enslaved also multiplied. These

[95] Calculations of Lumber Requested for Building a Hospital at Christiansted. John Fleen. (1802, July 26), 365: Generaltoldkammeret – Ældre del – Vest-Guineisk Renteskriverkontor, The Danish National Archives: Copenhagen.
[96] Hospitalet i Christiansted på St. Croix, situationsplan og facade. Peter Lotharius Oxholm (1778-1780). 337.316: Rentekammeret – Dansk Vestindien – Kort og Tegninger. Danish National Archives: Copenhagen.

were divided between those of color who worked at the hospital or those who were slaves of the crown, and the other enslaved workers mostly consisting of plantation workers.[97] Expansion of healthcare following an ever-increasing global pandemic and the ongoing development toward abolition of slave trade were signs of the Danish government seeking to control the disease and the health of the enslaved.

Picture 6: Plans for the new hospital at Christiansted: May 13, 1798.



Source: Facaden af det nye Syge Huus imod Havnen og Gaarden. C. F. Brandt. (1798, May 13). 365: Generaltoldkammeret – Ældre del – Vest-Guineisk Renteskriverkontor, The Danish National Archives: Copenhagen.

[97] Facaden af det nye Syge Huus imod Havnen og Gaarden. C. F. Brandt. (1798, May 13). 365: Generaltoldkammeret – Ældre del – Vest-Guineisk Renteskriverkontor, The Danish National Archives: Copenhagen.

The First Vaccinations and Dissemination Before the British Occupation

Vaccination commenced instantly following the arrival of Cowpox on St. Croix. The first reference to the vaccination program can be seen in the *Dansk Vestindisk Regierings Avis* on February 18, 1803. The vaccine itself was referred to as "one of the greatest benefits to mankind that has taken place since the appearance of smallpox".[98] The announcement stated that all who had not previously had the disease were to receive the vaccination free of charge. This applied to all inhabitants of the island: the whites, the free colored and the enslaved. The paper further specified the location of the procedure, and that it would take place every day at eight in the morning. Finally, it promised life-long immunity for those who underwent the procedure. Not only does this tell us of the newspapers' role in broadcasting information, it also portrays the governmental initiative for the newly acquired procedure. Publications on mass vaccinations at a regular schedule would become one of the most common features in the use of newspapers in battling the pandemic.

In addition to the vaccination campaign of 1803, there was at least one other case of a large-scale vaccination on St. Croix before the British occupation. Through an advertisement in The St. Croix Gazette dated April 7, 1809, it was noted that an unknown number of children were vaccinated in 1806.[99] The newspaper did not, however, give information on whether these children were free or unfree. Any proceedings related to this was not present in any newspapers at that time. Moreover, there was a lack of reports on vaccination between 1803-1806. Jensen argues that the lack of vaccinations and reports during this period could be explained by the relatively small population on St. Croix, which was too small to maintain an arm-to-arm chain of infection. Furthermore, the Napoleonic Wars made the acquisition of new vaccine matter more difficult.[100] In general, the papers printed between 1800-1807 indicate that there was little information being shared on the accessibility and distribution of vaccines throughout the Danish Virgin Islands. On the other hand, information regarding the virus and global developments of the vaccine, notably in Britain and her colonies, was regularly printed.

The *Dansk Vestindisk Regierings Avis* posted one such article on on March 13, 1804. The entry was an excerpt from a publication by Dr. Jenner, the doctor who popularized the use of

[98] Dansk Vestindisk Regierings Avis February 18, 1803: 3.
[99] The St. Croix Gazette April 7, 1809: 1.
[100] Jensen 2012: 198

cowpox in treating smallpox. It discussed a letter that Dr. Jenner received from a Doctor in Vienna, who stated that the vaccine had been proven highly effective from multiple sources. The letter gave attention to the vaccination campaign in Constantinople, where 6000 people has been vaccinated without any falling ill to the plague.[101] Additionally, it informed of an experiment involving vaccinated infants that drank milk from infected nurses without falling ill to the disease. The information was presented as both sensational and educational, intended to both notify and instruct the reader on the advantages of the vaccine that was still new and unfamiliar to most of the inhabitants on the islands.

Furthermore, *Dansk Vestindisk Regierings Avis* included many excerpts from English newspapers that portrayed the vaccination campaigns in Britain and her colonies. One such example, published on October 18, 1804, described efforts made by the government in colonial India. This article, originally posted in a London paper, focused on the campaign that had succeeded in overcoming religious resistance to the procedure and the use of virus material found in cows, in addition to the difficulties of attaining live vaccine matter.[102] An excerpt from *Lloyd's Evening Post* included in the January 23rd, 1806, issue, wrote of the aftermath of an epidemic in England that left 213 dead in four weeks. The excerpt blamed these deaths on the "ignorance and prejudice" of the" unprincipled and inconsiderate men" who refused to have themselves or those under their care vaccinated.[103] The excerpt highlights two important considerations. First, the head of the family had the final saying on whether a family member, or an enslaved under their ownership in the context of the Caribbean, received the vaccine. Second, it emphasizes the newspapers' role of broadcasting the importance of the vaccine to an audience largely consisting of men fitting the aforementioned category.

[101] Dansk Vestindisk Regierings Avis March 13 1804: 3-4
[102] Dansk Vestindisk Regierings Avis October 18, 1804: 3
[103] Dansk Vestindisk Regierings Avis January 23, 1806: 3

1807 – 1815: British Occupation and Maintaining the Vaccination Efforts

As part of the Napoleonic Wars, Britain seized control of the Danish Virgin Isles in 1807. The occupation lasted until 1815, when the islands once again were returned to Denmark. Britain was already battling smallpox both within their mainland and their colonies at the time of annexation. An example of this was their struggle with religious resistance to the cowpox vaccine in colonial India.[104] Their experience with vaccine resistance and high levels of infection made them attentive to the issue of disease control. As a result, the chain of infection was maintained throughout the occupation in addition to the continuation of vaccination campaigns. The British administration also engaged some of the most ambitious attempts of controlling both the disease and the population with various degrees of success.

In 1808, a proclamation was posted in the *St. Croix Gazette*, commanding all residents of the islands to give the Landfysikus, Dr. John Keutsch, immediate notice should any resemblance of a smallpox infection take place.[105] The proclamation was signed by the government secretary, and the article was only preceded by news of the ongoing war in the newspaper, which reflects the importance attached to it.[106] Advertisements of public vaccinations were posted in the gazette during the occupation, similarly to those seen before it. These public vaccinations were free to those who could not afford it, referred to as the "indigents".[107]

The first new cases of smallpox, that would later become epidemic on the island, were reported in the press on February 21, 1809. The article reflects the strong fear that the disease would spread, and all estate owners, managers, and overseers were ordered to notify the Landfysikus should they or any person to their knowledge fall ill.[108] In order to enforce this order, the government declared that any who failed to comply would receive a significant fine. The advertisement also informed of the arrival of new living vaccine matter, referred to as "genuine Vaccine Pock", that was to be used for immediate vaccination. Similar reports were printed during the first few months of the epidemic on the first page of the paper. This report had

[104] Aberth 2010: 86. To handle the resistance against vaccines, the British collaborated with Hindu inoculators known as "tikadars". Due to the sacred aspects of cows, as well as contemporary protests in Europe, much of the colonial Indian population refused to take the vaccine and preferred their local traditions of variolation. To battle the disease, the British occupants recruited these tikadars to perform vaccinations.
[105] All names of doctors presented in this thesis has been found in *Den Danske Lægestand 1786*-1838 by Kristian Carøe (1905).
[106] The St. Croix Gazette September 26, 1808: 1
[107] The Royal St. Croix Gazette March 5, 1814: 3
[108] The St. Croix Gazette February 21, 1809: 1

been royally signed the day before its first print, indicating both the urgency attached to the outbreak and the intent to handle the epidemic with all available means.

Vaccinations began immediately following the decree. Dr. Keutsch announced on May 3, 1809, that vaccines would be administered free of charge and at regular hours each day of the week. Interestingly, the Landfysikus made a special appeal to those skeptical to the vaccine. All "anxious parents and the unbelieving" were invited to observe how the vaccine was administered and the effects it had on others, arguing this to be a free opportunity to be convinced of the safety and simplicity of the operation.[109] Announcements and articles in the newspapers shows that skepticism towards the vaccine did not disappear during the 1809 outbreak. In an excerpt from a correspondence letter addressing the cowpox virus printed in the gazette on February 28, doubt of the vaccine was compared to a man denying "that the sun is the source of light and heat in the visible creation".[110] The excerpt then portrayed narratives of sensational success and of the unnecessary grief that had fallen upon the parents who kept their children from the procedure.

The March 3rd report concluded with a request for all owners of enslaved workers and all parents on the island to allow those under their care to be inspected by the doctor to validate the effect of the procedure. This request shows that the Landfysikus was heavily invested in maintaining control of the epidemic as this would take a lot of his time. On the other hand, the request also indicates a lack of control and missing attendance. A week later, on March 10, Dr. Keutsch confirmed that few had complied to the request of bringing in vaccinated individuals for inspection, speculating that the cause could be lack of insight.[111] His urgency and dedication to the issue was noted in his entry as he allowed for children to be brought in at any day or hour of the day to receive injection of the cowpox virus.

The case of the March 3rd and March 10th announcements reveals how Health Authorities actively used the newspaper to inform the population of the St. Croix and St. Thomas. Additionally, the fact that the Landfysikus himself wrote these announcements can be seen as an early form of public relation. The Landfysikus was well known within his geographical area(s) of responsibility, as supervisor of general state of health and the highest-ranking figure in public health services on his respective island (or islands during certain periods of time).[112] From the

[109] The St. Croix Gazette February 28, 1809: 1
[110] The St. Croix Gazette March 3, 1809: 4
[111] The St. Croix Gazette March 10, 1809: 1
[112] Jensen 2012: 57

British occupation and onward, most announcements regarding the various vaccination campaigns was signed by the Landfysikus, or other certified doctors.[113] Seeing that the St. Croix newspaper for the most part wrote for the interest of the government and the plantation owners, most who read it would have good knowledge of the doctor in question.[114] Additionally, all doctors, surgeons, midwives and apothecaries answered to the Landfysikus, meaning that everything he said applied to health workers the reader was personally associated with, such as the plantation doctors.

The most elaborate plan for disease control during the British occupation was also revealed in the March 10th Gazette. The Acting Government Secretary Henry Adams announced that all births on the island were to be charted to control the spread of the disease. Each estate proprietor, in addition to all "heads of families" from the towns, was tasked to send a signed list containing information on all infants born under their supervision every week. The plan specified this as "all Births whatsoever", thus applying to both free and unfree infants.[115] The plan was argued to be "interesting under every consideration and extremely advantageous to the public". By tracking all newborns, the Landfysikus would have complete control of infants requiring the vaccine, thus being able to protect the key demographic when it came and susceptibility to the disease.

Few such lists were ever handed in, which Jensen attests to the ambitious nature of the scheme. Jensen further argues that most unvaccinated during this timeframe were enslaved infants.[116] This was because most adults were already protected through vaccination, variolation or naturally acquired smallpox. Since most adults were immune, chains of arm-to-arm infections became more difficult to manage. In fact, because of the difficulties in obtaining vaccine matter, Jensen argues that it was desirable for the colonial government to maintain a group of unvaccinated children who could potentially constitute a chain of arm-to-arm infections in case of emergency. Jensen's observation that most unvaccinated individuals were enslaved infants concurs with a statement by Dr. Kutsch posted in the Gazette of April 7, 1809. In that entry, Dr.

[113] Before 1819, all certified doctors could administer the vaccine to anyone. In 1819, a law was passed that gave the landfysikus monopoly on vaccinating the enslaved populous. Temporary license for all certified doctors to administer vaccines would become a standardized practice during epidemics after the 1819 bill. This is further discussed later in the chapter

[114] Søllinge & Thomsen 1988: 352

[115] The St. Croix Gazette March 10, 1809: 1

[116] Jensen 2012: 199

Kutsch asserted that the spread of smallpox had effectively been halted, though not before killing two infants in one month. Kutsch blames this on the "ignorance and prejudice of their Parents",[117] again circling back to the issue of vaccine skepticism that had been repeatedly addressed during the occupation.

1815 – 1830: New and Old Strategies Facing Epidemic Outbreaks

Creating comprehensive response tactics and proactive measures to battle smallpox became a priority following the end of the British occupation. The government reformed both organizational and legal structures that echoed the focus and execution of vaccination seen on the Danish mainland from 1810 to 1811.[118] The suggestion of establishing vaccine institutes was met with the critique that it would be too expensive and elaborate considering the number of inhabitants and of private doctors (such as those stationed on plantations) would make it hard to keep track of who was vaccinated and not. The Landfysikus was given the exclusive right to vaccinate the enslaved, thus giving them responsibility for keeping a comprehensive list of all unvaccinated individuals, became the solution.[119] As will be examined in this thesis, this rule would be exempt in cases of epidemic outbreaks.

Other preventive measures included use of vaccine certificates that would be required to be allowed into schools or confirmed in church.[120] This was a drastic action as confirmation had large implications on acquiring marriage and education, thus affecting work- and family life for the free population.[121] Additionally, the certificate was required for slaves to be sold, unless a certificate of having previously had natural smallpox was provided.[122] This gave the slaveowners an increased incentive to vaccinate their enslaved work force. Variolation, which had rarely been used since the arrival of the cowpox virus, was banned from being practiced by anyone. Finally, the Danish tradition of using quarantine during pandemics would once again be implemented and strengthened. This is particularly prevalent in the 1820s when total quarantine was again being used. To examine governmental control during these 15 turbulent years, I will examine

[117] The St. Croix Gazette April 7, 1809: 1
[118] Jensen 2009: 200
[119] Jensen 2009: 201
[120] Jensen 2012: 201-202
[121] Moseng et.al 2003: 255, 328. Niels 2009: 185.
[122] Jensen 2012: 201-202

newspaper entries as well as the lists and protocols that eventually became a common practice.

Newspapers and Vaccine Protocols: Disease Control on St. Croix & St. Thomas, 1815-1830

Smallpox returned to St. Tomas in 1818, pressuring the island to reevaluate their vaccination systems and regulations.[123] In response to this outbreak, the King and the General Governor of the Danish Virgin Islands issued a royal decree detailing the protective measures that were initiated to battle the new epidemic. The decree was issued on the September 5, 1818, and was first announced in the *Dansk Vestindisk Regierings* two days later.[124] One drastic change was the extensive use of vaccination protocols required to be kept by all who perform the procedure. As before, any certified doctor was allowed to administer the vaccine as a response to an outbreak, though they were now required to keep lists of all individuals who received the inoculation alongside other relevant information. It was also designed to track all unvaccinated children who had not yet had the disease.

The vaccination lists developed into more detailed protocols that were required to face the increasing threat of the disease. The first of these protocols found in the Danish National Archives is from 1820, written by the Landfysikus Poul Elias Wintmöhl Schlegel.[125] The protocol contains the following information: (i) the chronological number of each vaccinated, (ii) the name of the patient, (iii) the name of the parent(s), (iv) name of the plantation, the owner's name, whether the patient is (v) white, (vi) free-colored or (vii) a slave, (viii) if the vaccine has taken effect, (ix) whether a certificate has been granted to the patient, (x) if the vaccination has been paid for, and finally (xi) if there is something else to note. The latter was mostly used to note whenever a patient did not return for a follow-up inspection. Certain aspects of the protocols would change during the years of vaccination, though the key information presented above would be maintained.

The decree of September 5, 1818, continued by banning the practice of variolation, noting that any doctor caught practicing it would lose their legal status. Any non-licensed person

[123] Jensen 2012: 202
[124] Dansk Vestindisk Regierings Avis September 7, 1818: 1
[125] Vaccinationsprotokol. Poul E. W. Schlegel. (1820). 683: Medicinalvæsenet på de Vestindiske Øer – Landfysikus. The Danish National Archives: Copenhagen.

caught performing variolation would be punished due to breaking royal law.[126] Finally, the decree firmly reminded all inhabitants, regardless of color and social status, to get vaccinated. Thus, the responsibility of the slaveowners was highlighted, reminding them that vaccination also applied to their property. The head of every home was made responsible to notify the Landfysikus of any smallpox occurrence, whereas failure to do so would be met with "imprisonment with water and bread".[127] On September 9th, the Landfysikus set a deadline for handing in lists of all unvaccinated enslaved and of those who had not yet had the disease. Additionally, these lists were to include the name of the quarter, the enslaved and their owner, and the name of the estate they resided in.[128] A reminder of the deadline was posted on September 21, 1818.[129]

Sanct Thomæ Tidene continued the trend previously found in the *Dansk Vestindisk Regierings Avis* of broadcasting international developments on vaccination and spread of the disease. One such example can be found issued on May 22nd, 1824, that featured a report from the London Vaccine Institution. The feature depicted developments seen in London, the British Colonies, Prussia, and Russia, and included estimates on the numbers of infected, numbers of vaccinated, and of the monetary impact that the pandemic had caused in these areas.[130] Additionally, the *Sanct Thomæ Tidene* tracked the spread of the disease within the other non-Danish Caribbean colonies. This was the case on May 21, 1819, when the paper covered an outbreak on the French colony Martinique and the British colony St. Lucia that had spread to St. John through a trading vessel.[131] Articles that tracked international and inter-colonial developments show that the inhabitants of the islands were well informed of the disease's pandemic status.

Despite the intensive vaccination campaign, the vaccination coverage following the 1818 outbreak had been inadequate.[132] In particular, many enslaved had not yet been vaccinated. Not only newly born but also newly arrived slaves. A placard issued by the Christiansted Office of Police, printed on April 22, 1819, ordered all owners of untreated enslaved to have them

[126] Dansk Vestindisk Regierings Avis September 7, 1818: 1
[127] Dansk Vestindisk Regierings Avis September 7, 1818: 1
[128] Dansk Vestindisk Regierings Avis September 9, 1818: 1
[129] Dansk Vestindisk Regierings Avis September 21, 1818: 1
[130] Sanct Thomæ Tidene May 22, 1824: 4
[131] Sanct Thomæ Tidene May 21, 1819: 1
[132] Dansk Vestindisk Regierings Avis April 22, 1819: 1

vaccinated or to face prosecution. Moreover, the placard was written in a large and bold front visually separating it from the other advertisements and articles of its corresponding newspaper. This seemed to have become less of an issue the following year when the only entry on the topic of vaccination was aimed at children who had not yet received it.[133] The entry marked the last vaccination date of 1820, making it one of the quietest years since the British occupation considering newspaper coverage. Both the newspaper from September 7, 1818, and April 22, 1819, show that St. Croix took a much more aggressive stance in their disease control. Additionally, they were early examples of the newspaper being used as communication by the police to the slaveowners of the island.

Governmental control related to general health and healthcare was once again increased in 1821. The Danish Royal Chancery had during the previous year developed a list of responsibilities for the surgeons and doctors present on the Danish islands, as well as more specified responsibility for the landfysikus that was added to their preexisting obligations. This included (i) tracking all doctors practicing on their island, (ii) tracking all practicing midwives, (iii) taking note of any instances of quackery and (iv) misuse of pharmaceuticals, and (v) to look after anything that may improve the healthcare and hospitals of the islands. In addition to the five exclusive responsibilities, all educated medical practitioners were requested to provide certain information to the Danish Ministry of Health (Sundhets Collegiet i Kiöbenhavn) and the Chancery to maintain disease control.[134] Extending the vaccination effort to all doctors during epidemics suggests that more drastic measures were needed to gain control of the disease. Maintaining control was a central concern as independent doctors were now included into the large vaccination campaigns.

Among the eight new responsibilities placed upon the doctors, two were directly related to the control of smallpox. First, each doctor had to chart all diseases that developed on the island, with smallpox being given high priority. Second, all vaccinations had to be categorized into race and social status (whites, free-colored, and enslaved) in addition to being listed. The latter was likely linked to accounting, due to the owners being responsible to cover the expenses related to the procedure. Other factors relevant to controlling the spread of smallpox included the

[133] Dansk Vestindisk Regierings Avis October 5, 1820: 1. The same entry was posted four days later. The only other post discussing vaccines in *the Dansk Vestindisk Regierings Avis* of 1820 was a short report of the total vaccinations seen in Copenhagen the previous year (Dansk Vestindisk Regierings Avis November 16, 1820: 4).
[134] Dansk Vestindisk Regierings Avis January 23, 1821: 1

doctors tasked to track: (i) the origin of all diseases occurring under their supervision, (ii) child mortality and (iii) the doctor(s) responsible for any given plantation and the amount of enslaved under their supervision. All information assessed by the individual doctors was sent to the Landfysikus who was tasked with sorting all of it before sending it to Copenhagen. Thus, the Landfysikus was entrusted with major responsibilities in maintaining both population and disease control over smallpox as the highest-ranking health official on a given island. The *Dansk Vestindisk Regieverings Avis* was thus central in both broadcasting the new laws and in distributing responsibility amongst the healthcare workers on the island in 1821.

Dr. Schlegel was the Landfysikus on St. Croix from 1820 to 1823. Upon his resignation, he wrote an advertisement for the newspaper stating that "very few" of the plantation owners had settled their debts regarding the vaccination of their enslaved that had happened under his watch.[135] As chattel slaves, they were property of their owner. This meant that the owners were responsible to pay for the procedure. Thus, the poor and needing referred to the free colored.[136] Schlegel declared that the vaccine/smallpox certificates would be handed to them upon delivery, though this was dependent on the result of their previous examination. The advertisement showed that there had been regular procedures on the various plantations during the period in question, though full control of the situation had not been achieved. The newspaper had this played a less significant role in the vaccination campaigns during Dr. Schlegel's time as Landfysikus.

In 1824, the American ship Logan arrived at Frederiksted with a crew infected by smallpox. This was immediately announced in the *Dansk Vestindisk Regierings Avis* on March 25th. All owners of enslaved and heads of families were recommended to have those under their care still vulnerable to the disease receive vaccination and all doctors on the island were once again given temporary authorization to perform the procedure.[137] Interestingly, the procedure was recommended, not obligatory. Additionally, the procedure was not free of charge and all doctors received a recommended fee to charge for it. Vaccination fees were common though they had periodically been removed. To illustrate, vaccination had been free during the first vaccination campaign on St. Croix in 1803 and during the epidemic of 1809. Due to the

[135] Dansk Vestindisk Regierings Avis April 24, 1823: 1
[136] This social class mostly refers to Afro-Caribbeans in this context, though they could also be Euro-Caribbean. Jensen 2012: 2-3.
[137] Dansk Vestindisk Regierings Avis March 25, 1824:1

Landfysikus falling ill, the military surgeon Dr. Rasmus Petersen Worm was given temporary responsibilities equal to that of the Landfysikus. He dedicated one hour, two days a week, for vaccination.[138] The right for all educated doctors on the island to administer the vaccine was withdrawn eight months later.[139] After the withdrawal, doctors were requested to send in all protocols that they kept during this timeframe to the Landfysikus. The entire process was continuously broadcasted in the newspaper, revealing that the media was used as a communicative channel to both the general population and the healthcare workers of the island.

A new royal decree was announced in 1825, that tasked the landfysikus of each island to make sure that all enslaved were vaccinated. As a consequence, all owners were asked to submit a complete list of all their subjects who had not yet received the treatment nor developed immunity following earlier infection.[140] The landfysikus would operate with a set price of three Danish rigsdaler per procedure, with the exception of poor who could receive it for free. The guidelines presented in the royal decree of 1818 still applied. The only real change was that owners of enslaved or estate proprietors had to keep track of their subjects themselves. Enslaved newborns were of particular interest as they were the fastest growing source of unvaccinated individuals and the most vulnerable group. On September 1st, 1825, the Office of Police on Christiansted released an announcement communicating that all enslaved children born after the previous vaccination campaign had ended, or any child that for some reason had not yet received the vaccine, had to notify the landfysikus to receive it hastily.[141] According to a bulletin posted the following month, few of these individuals showed up for their procedure or check-up, continuing the pattern of reluctance among slave owners to engage in official vaccination efforts.[142] The newspaper was thus again used in the push for vaccination and the battle against vaccination skepticism.

Advertisements for unscheduled vaccination appointments specifying the hours of the week in which they took place were printed on St. Thomas throughout the period. Compared to St. Croix, similar advertisement were scarcer on St. Thomas even though smallpox was a larger issue there. Moreover, people on St. Thomas received later notice for available vaccination

[138] Dansk Vestindisk Regierings Avis March 29, 1824: 1
[139] Dansk Vestindisk Regierings Avis November 25, 1824: 1
[140] Dansk Vestindisk Regierings Avis May 30, 1825: 1
[141] Dansk Vestindisk Regierings Avis September 1, 1825: 1
[142] Dansk Vestindisk Regierings Avis October 13, 1825: 4

appointments, due to the schedule varying each week. This contrasted the set times that would often last for months on St. Croix. This trend was most noticeable on St. Thomas during periods where multiple doctors were allowed to perform the vaccine, as can be seen printed on March 9, 1819, and on May 8, 1824.[143] This was also the case during quieter years, when there were no epidemics.[144] This was likely due to St. Thomas having less plantations than St. Croix and more travelers coming through the island, making it more difficult for long-term steady vaccination campaigns.

The newspapers' role in convincing the inhabitants of the effectiveness of the vaccine, promoting vaccination schedules, and tracking domestic developments can be illustrated by looking into the 1826 epidemic. On July 26, 1826, a case of smallpox was registered on St. Thomas, with the infected immediately put into a house of quarantine. This was mentioned as a sidenote in an advertisement for vaccinations by the Landfysikus Johan Peter Nissen. The open appointments were a response to the new threat, recommending the public to "take timely advantage" of the offer following the confirmed case.[145] Less than a week later, new advertisements recommended all inhabitants to partake in the vaccination efforts due to "several cases" that had occurred in Charlotte Amalie.[146] It received even greater attention the following week, when it was revealed that a child had died of the disease and that more had been infected.[147] The feature also noted that two of the infected children had since received an injection of the cowpox virus, which had returned them to good health.

On the 16th of August, one week after the previous article, a new summoning for vaccination was printed in the *Sanct Thomæ Tidene*. Dr. Nissen notified that all children vaccinated during the previous weeks should return to have the effect of their procedure ascertained. The Landfysikus further instructed that the pustules resulting from the injected cowpox virus should not be scratched, arguing that it would "destroy the protective power" it possessed.[148] Three months later, the Royal Council on St. Thomas issued a decree ordering all owners of enslaved workers to provide a list of all their unvaccinated individuals to the Tax

[143] Sanct Thomæ Tidene March 9, 1819: 4, & May 8, 1824: 1
[144] 1825 is one such year. During the year, vaccination took place during the month of April and had a total of four advertisements published in the *Dansk Vestindisk Regierings Avis* on April 9, April 16, April 23, and April 30.
[145] Sanct Thomæ Tidene July 26, 1826: 1
[146] Sanct Thomæ Tidene August 2, 1826: 1
[147] Sanct Thomæ Tidene August 9, 1826: 1
[148] Sanct Thomæ Tidene August 16, 1826: 1

Commissions within five days.[149] These were similar to that seen on St. Croix from 1825. [150] The decree from the Royal Council was the first time anything published on the outbreak was presented as the main feature of the front page. For the two years that followed, the Landfysikus requested similar information to be handed in from the owners of the enslaved. This reveals that the newspaper was an important tool for the administration and for the health officials of the islands for the implementing important strategies during epidemics.

In 1827, new cases of smallpox appeared on St. Thomas. Similar actions to that of the 1818 epidemic was introduced as a response.[151] Infection rose, leading to all certified doctors once again being allowed to administer the vaccine to the enslaved. In return, the doctors kept detailed protocols for the Landfysikus.[152] This time, the temporary annulment of the Landfysikus' monopoly lasted almost a full year before being reinstated.[153] However, the protocols written by the medical practitioners were often forgotten or not handed in, as seen in Landfysikus Schlegel announcement that the protocols of the previous year had not been handed in.[154] Similarly, the Office of Police issued another announcement in the summer of 1828 requesting owners of unvaccinated enslaved to come in for questioning, risking to be fined should they refuse.[155] Table 1 shows how the number of vaccinated varied from year to year. An obvious trend was that non-epidemic years saw less vaccination. There are many possible explanations to this tendency. First, vaccinating enslaved plantation workers meant taking away precious work hours in an economy already staggering. The lack of an immediate threat also made vaccinations less pressing. Finally, due to the high intensity of vaccinations administered during years containing a smallpox epidemic, less people than normal needed it during non-epidemic years.[156]

[149] Sanct Thomæ Tidene November 8, 1826: 1
[150] Dansk Vestindisk Regierings Avis May 30, 1825: 1
[151] Dansk Vestindisk Regierings Avis March 5, 1827: 1
[152] Dansk Vestindisk Regierings Avis June 7, 1827: 1
[153] Dansk Vestindisk Regierings Avis March 31, 1828: 1
[154] Dansk Vestindisk Regierings Avis March 27, 1827: 1
[155] Dansk Vestinding Regierings Avis July 14, 1828: 4
[156] Jensen, Simonsen & Olsen 2017: 240

Table 1: Vaccinations on St. Croix (1820, 1825-1831)

Year:	Vaccination (enslaved)	Certificates (enslaved)	Vaccinations (total)
1820	705	370	824
1825	674	180	721
1826	167		280
1827	782	164	1049
1828	538	106	667
1829	635	151	794
1830	495	140	558
1831	556	57	675

Source: Vaccinationsprotokol. (1820-1831). 683: Medicinalvæsenet på de vestindiske øer – Landfysikus. Danish National Archives: Copenhagen.

Conclusion:

Denmark-Norway and their colonies increased their commitment to public health and healthcare infrastructure during the 1700s. This was on the Danish Virgin Islands manifested in hospitals being built and renovated, and newspapers expanding their focus on health and epidemiology. Following the arrival of cowpox matter on St. Croix in 1803, the newspapers began to print news and data on the procedure, trying to convince their readers of its effectiveness. This was often done by highlighting the discovery that it gave life-long immunity to the disease, and by covering international vaccination trials to create sensational narratives of the vaccine's potency. Additionally, inter-colonial disease patterns were closely monitored, and domestic outbreaks met with increasingly detailed and complex measures to halt the disease. The newspaper had thus early established itself as a tool to inform and convince the inhabitants of the island of the vaccination effort.

The newspaper played an increasingly central role during the British occupation in 1807-1815. Britain, carrying experience from their battles with smallpox in their other colonies (particularly in India), had no interest in letting smallpox tear through the islands now under their care. The newspaper coverage of the epidemic in 1809 provides insight into British attempts at disease control using newsletters. First, they began an intensive vaccination campaign where vaccines were administered each day for free, with requests that all patients were to meet for check-ups. Additionally, newspapers were used actively to inform people of the benefits of vaccines. Finally, the British attempted to attain weekly lists of all children born under each

estate, though this failed as few lists were ever handed in. Still, the newspaper was the focal point for distributing information from the British occupants to the inhabitants of the islands.

Following the end of the British occupation, new protective measures were initiated with the newsletters being integral in their execution. One of these measures, that would later become a standardized procedure on the islands, was the 1819 decree that allowed the Landfysikus' monopoly on administering vaccines to the enslaved to be exempt during epidemics. To maintain control, lists of vaccinated individuals were kept by the doctor(s) administering them. The Landfysikus was tasked to administer these protocols, though they were rarely handed in on time or handed in at all. As a result, the newspapers became a communicative channel between the Landfysikus, often through the office of police, to the certified doctors who administered vaccines during epidemics. The requirement to maintain protocols of all vaccinated individuals became a royal decree in 1825 and broadcasted in the papers. On St. Thomas, the newspaper mostly focused on tracking international developments of the disease, with few vaccine advertisements being posted before the epidemic of 1826 which became a turning point for the islands use of the medium as a tool for disease control.

It is apparent that the newspaper targeted the European men of the island, mostly family fathers and estate owners who oversaw an enslaved workforce. These men held power and responsibility, thus becoming middlemen for information shared to the public while also controlling the enslaved population. As the enslaved were legal property in which the government now imposed sanctions, the newspapers became the communicative channel between them. The function of the newspaper that developed during this period can be summarized in four points. First, they spread information about the disease, international and domestic developments, and the effects of the vaccine. Second, they were used to announce vaccination schedules and campaigns, in addition to inform of any changes to the procedure – such as temporary annulments of the Landfysikus' monopoly on vaccinating the enslaved. Third, it provided the Landfysikus and other government officials with a platform to remind those responsible for handing in vaccination lists or have their subjects vaccinated to do so. The newspaper thus became a communicative channel for announcing laws related to the vaccination campaign and punishments for breaking them. Finally, the fourth function was the newspapers indirect confrontation of vaccine skepticism, attempting to convince a hesitant populous of its benefits. The police using the media more actively was one example of the two later points.

Chapter 4: 1830-1848: Vaccination Systems Under Pressure

In 1848, slavery was abolished on the Danish Virgin Isles. The idea of emancipation had been brewing since the abolishment of the slave trade in 1803. Discussions intensified during the 1830s and 1840s and the Danish government initiated a gradualist approach to achieve emancipation over time.[157] The gradualist approach was rooted in the King's idea to postpone the emancipation for as long as possible was rooted in economic issues and his view of the enslaved as immature and not ready for complete freedom. Thus, a proposition was made in 1847 for a period of transition to take place. The transition would last 12 years, where any child born after July 28th the same year would be born free, and after the period, all enslaved would receive equal status.[158] However, the enslaved demanded freedom and formed an opposition that began an uproar on St. Croix in 1848, which eventually led to the emancipation of the enslaved.[159]

The narrative of the emancipation has often been centered on the enslaved rebellion leader known as "General Buddo" who planned and led the non-violent rebellions, and of general governor Peter von Scholten who officiated the emancipation.[160] Though the narrative is much more complex, the total abolition of slavery in the Danish Virgin Isles was official on 1848. It happened quickly and for the most part peacefully, with a total of 40 casualties.[161] The emancipation had an enormous impact on the islands. First, the legal status of the enslaved changed from "property" to "free". Though this had little to say for their living conditions, it meant that their previous owners did not have any right to control them and were no longer responsible for, among other things, bringing them to vaccination. Emancipation also meant an overall reduction in population due to excess mortality and emigration, and economic hardship in the plantations as workers now had to be paid. On St. Croix, which was based on plantation production, this resulted in economic downturn. In general, the Danish Virgin Islands became a continuous financial deficit.[162] Due to the Afro-Caribbeans' poor living conditions, previously dormant diseases started resurging and pandemic diseases such as smallpox and cholera became an even larger threat.[163]

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[157] Jensen, Simonsen & Olsen 2017: 220-221
[158] Jensen, Simonsen & Olsen 2017: 272
[159] Jensen, Simonsen & Olsen 2017: 275-279
[160] Løken 2020: 383-387
[161] Løken 2020: 392. All those who died during the rebellion were enslaved.
[162] Jensen & Olsen 2017: 284-285
[163] Jensen & Olsen 2017: 292

Between 1830 and 1848, smallpox ravaged the Caribbean. As an entrepôt, St. Thomas struggled with the disease that came in constant waves from trading vessels arriving at their ports. St. Croix however had relatively quiet years, though the last few cases of smallpox to ever surface on the island occured. Still, the vaccination efforts continued, keeping up the pace that was set in the 1820s. The use of newspapers in the period between 1830 and 1848 was similar to that discussed in the previous chapter. This changed after 1848 when the enslaved was granted freedom, meaning that the plantation owners no longer had responsibility for maintaining their health. The control and communicative channel provided by the newspaper thus lost its grip on the majority of the population that was also the most vulnerable group. The newspapers' role in disease control thus shifted, arguably becoming less directly involved. The post-emancipation newspapers instead focused on the public debate regarding the Landfysikus' role. Still, vaccination was an important issue on the islands. Advertisements for vaccination appointments continued on St. Thomas, while St. Croix for the most part addressed the issue indirectly through informing its readers of the schools requesting vaccination certificates for entry.

My focus for this chapter is to discuss the role of the newspapers in the years leading up to- and after the emancipation in 1848. More importantly, I will examine how the emancipation of 1848 marked a shift in vaccination strategies and how it made it more difficult to maintain disease control. I will furthermore address the differences in the two islands and attempt to explain why they became so different in their management of vaccination campaigns, their use of newspapers, and why St. Thomas was hit by multiple outbreaks while St. Croix had none. To do so, I will again keep my attention at newspapers printed on Christiansted and Charlotte Amalie, in addition to quantitative data provided by the vaccination protocols written on St. Croix.

1830-1843: Quiet Years

During the 1830s and the 1840s, advertisements recommending vaccination to those who had neither had the vaccine nor the disease were still common on the islands. On St. Thomas, such advertisements were frequently printed in the *Sanct Thomæ Tidene*. From 1828-1839, Dr. Hans Balthasar Hornbeck was the Landfysikus on the island, with the exception of the period between April 1831 to December 1832 when Dr. Peter Ravn stepped in as a temporary replacement.[164] The advertisements were usually posted right before the procedure took place on the island, each post specifying a certain date and time. The campaigns usually lasted 3 to 4 months, though this varied. To illustrate, the window of opportunity was less than two months in 1840, compared to more than five months in 1834.[165] Comparatively, similar ads became rare and far between on St. Croix. A few were issued in 1830, urging all owners of enslaved to bring "their subjects" to the Landfysikus. Everyone else was free to visit any certified doctor in accordance with the royal decree of 1819.[166] After the advertisement's final appearance on July 15, 1840, other publications regarding vaccination campaigns did not appear until 1843. The newspapers' declining involvement in vaccination strategies during this three-year period is one evidence of their diminishing role. The lack of urgency due to the absence of an epidemic or a functioning system outside of periods with risk of infection is another explanation for why no advertisements were printed during those years.

A third explanation for the lack of advertisements can be found in publications made by the Christiansted Police Office that continued to make sure that children on the island were vaccinated. In August 1836, the office of police announced that anyone with unvaccinated children under their care had to report that immediately. The goal was to enable the Landfysikus to maintain his duty of vaccinating all inhabitants of the island with more ease, transferring responsibility to the owner or the head of the family.[167] Additionally, the newspaper continued to

[164] Dr. Ravn was responsible for all advertisements for vaccinations on St. Thomas as well as administering the vaccines during this period. His first advertisement can be found in *Sanct Thomæ Tidene* (April 16, 1831: 1), his last found in the *Sanct Thomæ Tidene* (December 8, 1832: 2). During his time, he was referred to as "Depute King's Physician", which was the English translation for Landfysikus.
[165] The 1834 campaign was first advertised in *Sanct Thomæ Tidene* (May 10, 1834: 2). This was only 3 months after the previous campaign had ended. The last ad can be found on the first page in the October 15, 1834 issue. The 1840 campaign finds its first and last ad in the *Sanct Thomæ Tidene* on June 20 and August 15, respectively.
[166] First printed in *Dansk Vestindisk Regierings Avis* (July 8, 1830: 1). This was the first article in the July 15, 1830, newspaper which also marked its final appearance.
[167] Dansk Vestindisk Regierings Avis August 22, 1836: 4

be a channel for communication between the Landfysikus and other medical practitioners, particularly regarding the yearly vaccination lists. As had been the issue during previous years, these lists were often handed in late or forgotten. Such was the case in 1832 and 1835 when the newspaper recurrently requested that the medical practitioners of the island to hand in the vaccination lists for the previous year.[168] The police taking on a more direct role in maintaining disease control on the island would counteract the diminishing role of the newspaper.

From the articles mentioned thus far, it is apparent that the newspaper had an important role in communicating information on both the disease and the vaccine, and in communicating formalities to both the doctors and the general population of the islands. They furthermore played a key role in monitoring smallpox both regionally and globally, and in assessing protective measures implemented to battle smallpox. This is seen in an excerpt from the British paper *St. Christopher Advertiser*, printed on the colony of St. Kitts, that was included in *Sanct Thomæ Tidene* in 1837. The excerpt portrayed the rapid spread of smallpox on the island that had caused multiple deaths and several cases of infection. A vessel was dispatched to Barbados as a late response to attain cowpox virus as they had none themselves.[169] The excerpt was preceded by an excerpt from the *Barbados Mercury*, highlighting the high liability of infection due to "the constant intercourse between this and the neighboring islands". The increased infection risk due to being an island with high transit was thus recognized.

In 1839, an excerpt from the *Barbadian* portraying a large outbreak caused by the ship "Glengary" was printed in the *Dansk Vestindisk Regierings Avis*. The ship carried infected enslaved that were transported to a plantation named "Hopeland" where it began to spread. The excerpt concluded that quarantine and vaccination was to be implemented as a response, as they were "the only means [that could] stop or mitigate the disease" – the same actions used by Denmark and her colonies.[170] The excerpts from 1837 and 1839 not only show how the newspapers monitored the pandemic, but they also reveal how newspapers commented on the protective measures prepared in case of a new epidemic. The effectiveness of the vaccine and vaccine trials was also monitored, as seen in an excerpt from October 1836 calculating the deaths caused by smallpox globally every day before the introduction of the vaccine,[171] or in an excerpt

[168] Dansk Vestindisk Regierings Avis May 21, 1832: 1. Last printed on July 15, 1830.
[169] Sanct Thomæ Tidene February 1, 1837: 2
[170] Dansk Vestindisk Regierings Avis October 7, 1839: 4
[171] Dansk Vestindisk Regierings Avis October 3, 1836: 1

from September 1840 discussing a study on vaccination from Germany involving 44.000 patients being revaccinated.[172]

Having a certificate of vaccination became increasingly important within Denmark and her colonies. To be allowed into schools, children were required to present both a certificate of vaccination and of baptism. A similar request was made in 1834, when girls were given permission to enter the Danish School. The *Dansk Vestindisk Regierings Avis* announced this on July 30th the same year, stating that any "parents, guardians and all others" who wished to have their child attain school were "requested to send in a written petitio[n], accompanied by certificates of baptism and vaccination to the school-commission".[173] A similar requirement was set for the opening of a new school in Christiansted in 1842. It was announced that admittance for the Christiansted school would be open twice a year, on the first day of May and November, where a written petition accompanied by the two certificates were the only requirements for admission.[174] Providing a certificate of vaccination also became obligatory in the auctioning of enslaved individuals. This was declared in a set of laws authorized by the Royal West India Government on November 4, 1839.[175]

The colonial papers intermittently included tables of various expenses and revenues made by the Landtreasury. These allowed the reader to track expenses connected to the vaccination efforts. Two of these were printed on St. Croix in 1838 and 1842. Both listed the costs that had occurred for procuring vaccine matter from Porto Rico.[176] Other tables provided by the Landtreasury contained information on expenses related to children that had to travel in order to to get vaccinated outside of a scheduled vaccination campaign. Similar travels mostly took place with a child and their mother leaving from St. Thomas to St. Croix. One such case was recorded in 1837.[177] More cases occurred in the 1850s, with costs related to diet being covered.[178] These cases reveal that St. Croix was more likely to have excess of the vaccine matter, or more proficient in maintaining a successful chain of infection. Additionally, St. Thomas had a higher demand for vaccines than St. Croix due to their infection rates and status as a commercial hub in

[172] Dansk Vestindisk Regierings Avis September 14, 1840: 2-3.
[173] Dansk Vestindisk Regierings Avis June 30, 1834: 1
[174] Dansk Vestindisk Regierings Avis November 7, 1842: 1
[175] Dansk Vestindisk Regierings Avis January 13, 1840: 4
[176] Dansk Vestindisk Regierings Avis October 15, 1838: 3, Dansk Vestindisk Regierings Avis November 17, 1842: 4
[177] Sanct Thomæ Tidene April 22, 1837: 2
[178] Sanct Thomæ Tidene September 6, 1851: 3

the Caribbean.

St. Thomas struggled with maintaining control over the disease for the entire duration of its presence on the island. The infection rates indicate that the vaccination campaigns were not thorough enough. In addition to advertising campaigns and monitoring the spread of the disease, St. Thomas consolidated their push for vaccination by educating its reader on the vaccine itself. One example of this is found in a report by the London Vaccine Institution, printed in the *Sanct Thomæ Tidene* in 1837. The report depicted a thorough medical explanation of the procedure and of the physiological response registered in humans being inoculated with the cowpox virus.[179] Other articles could present breakthroughs or discoveries, such as an excerpt from the London paper *Weekly True Sun* on the discovery of cows that were given human smallpox could grow lymphs usable as vaccine matter.[180] These articles can be used as traces, revealing that people were still attentive to developments and that the newspaper thus still played a part in disease control through its dissemination of relevant information.

A few months before the final outbreak of smallpox on St. Croix, Landfysikus Schlegel announced that he had fallen ill and was about to leave for Denmark. He used this opportunity to urge all those who had still not settled their accounts with him, many of those being vaccination fees, to do so before his departure.[181] According to the notice, many were still indebted to him. The notice reveals a lot about the vaccination on St. Croix including: (i) vaccinations had taken place without being advertised in the newspaper, (ii) vaccines were administered without advance payment, (iii) certain formalities were still half-heartedly completed, such as the various lists and protocols that were to be handed in to the landfysikus, and (iv) the newspaper was still an important mean for communication between the landfysikus and the people. Though it had been a quiet period with no epidemics on the island and fewer articles regarding smallpox, vaccination had still been consolidated through the increased importance of vaccination certificates and through the newspapers' role of disseminating information and communication from health officials to the population.

[179] Sanct Thomæ Tidene June 17, 1837: 2-3
[180] Sanct Thomæ Tidene December 21, 1839: 4
[181] Dansk Vestindisk Regierings Avis June 1, 1843: 1

1843-1844: The Last Outbreak on St. Croix

The last smallpox epidemic reached St. Croix late in 1843. It lasted almost one year, and it became the last time that St. Croix used the newspaper to promote a large-scale vaccination effort. On November 6th, the *Dansk Vestindisk Regierings Avis* notified its readers that a major campaign was implemented as a response to the new outbreak: Christiansted was split into four districts for quarantine, with each district given their own doctor tasked with overseeing public health and the spread of smallpox.[182] Each district was additionally given a well-defined geographical description, with no citizen being exempt from it. Interestingly, the vaccination done by the doctors did not adhere to the rules directed to the districts. Three days after the previous notification was posted, an advertisement for vaccination informed the reader that the procedure only took place in two of them: the Landfysikus tasked with overseeing the northern half whilst Dr. Richard Forster Smith was responsible for the southern half.[183]

Whether the Landfysikus and Dr. Smith were the only two who administered the vaccine is hard to determine. The ruling of March 31st, 1819, that gave the Landfysikus the sole right and responsibility to vaccinate the enslaved, was temporarily removed between November 1, 1843, and January 19, 1844.[184] Thus, any certified doctor could lawfully perform the procedure on any individual during this period, making the notification from November 9, 1843, unusual. A notification issued two months later, targeted at the certified doctors of the island, noted that no vaccination lists were handed in to the Landfysikus from the previous year.[185] The entry highlighted that this also included lists of enslaved, indicating that other doctors than the Landfysikus and Dr. Smith vaccinated the unfree between November 1843 and January 1844 as this was the only period since 1827-1828 that the 1819 rule had been temporarily exempt. Following the notification requesting the vaccination protocols, the outbreak was no longer a concern in the St. Croix newspaper. The 1843/44 epidemic displayed that the newspaper was needed for disease- and population control during extraordinary measures. Still, the lack of vaccination lists suggests that full control was not achieved.

[182] Dansk Vestindisk Regierings Avis November 6, 1843: 1
[183] Dansk Vestindisk Regierings Avis November 9, 1843: 1
[184] St. Croix Avis January 22, 1844: 1
[185] St. Croix Avis March 21, 1844: 1

According to research done by Jensen, only 31 people were infected and four died during the outbreak on St. Croix.[186] Comparatively, St. Thomas was struck hard by the epidemic. In January 1844, *Sanct Thomæ Tidene* printed an entry by the depute Landfysikus Carl Emil Schjørring Döllner that illustrated the impact of the epidemic in the span of 45 days.[187] From December 1st, 1843, to January 15, 1844, a total of 788 cases had been registered with 62 being confirmed dead. New statistics were revealed in early February of the same year, informing of 34 new cases and two new deaths on the island from January 16th to the 31st.[188] On February 17th, smallpox was announced to be gone.[189] This marked the end of the epidemic on all the Danish Virgin Islands, though the Landfysikus waited four months before he declared the disease eradicated and the protective measures that included restrictions and quarantine retracted.[190] Jensen argues that by the end of this epidemic, the number of infected and dead had increased to more than 2000 and 280 respectively.[191] Using the 1835 census which noted that more than 11.000 inhabitants lived in Charlotte Amalie, it can be estimated that between 15-18% of the city's population got infected on St. Croix during the 1843/1844 epidemic.[192]

The epidemic had lasting effects on the island, particularly on the vaccination efforts. From February to early July in 1844, new vaccination schedules were again posted regularly.[193] These followed the typical format seen during previous vaccination campaigns on the island, with advertisements specifying the hour and day of vaccination unique to each week, though this changed when a new campaign began in December 1844. This campaign was more extensive and differed from previous campaigns in two ways. First, St. Thomas would now operate with a set day with regular hours each week, similar to that common on St. Croix. Second, this campaign ended in June 1846, thus lasting a total of 1.5 years. St. Thomas' standard of administering vaccines for a few months of the year was broken, attesting to the gravity of the 1843/44 epidemic.[194] Vaccination campaigns presented in newspapers would continue on St.

[186] Jensen 2012: 209
[187] Sanct Thomæ Tidene January 27, 1844: 2
[188] Sanct Thomæ Tidene February 2, 1844: 2
[189] Sanct Thomæ Tidene February 17, 1844: 2
[190] Sanct Thomæ Tidene June 1, 1844: 1
[191] Jensen 2012: 209
[192] Danish National Archives (n.d. b)
[193] The first advertisement for this vaccination campaign was included in *Sanct Thomæ Tidene* (February 3, 1844: 2). The final ad was printed on July 6, 1844: 1.
[194] This data is extracted from advertisements posted frequently (once a week or more) in the *Sanct Thomæ Tidene*, beginning on December 11, 1844, and ending on June 2, 1846.

Thomas long after the abolition in 1848.

Post 1848: Disease Control After the Abolition of Slavery

The suddenness of emancipation in the Danish Virgin Isles is reflected by the vaccination protocols. The goal was to keep track of all individuals that were vaccinated, and whether the procedure had been successful. In the protocols released between 1820 and 1848, all vaccinated inhabitants on St. Croix were kept on the same list where the doctor(s) noted whether the patient was "white", "free-colored", or "slave", and filled out information relevant to the specified category. This changed in 1848, when the newly emancipated were tracked in their own protocol. Thus, two lists were made each year from 1848 to 1853: one for the "whites" and the "free-colored", and one for the newly emancipated Afro-Caribbeans. The doctor(s) kept the columns from the pre-emancipation vaccination protocols, such as the name of the owner and of their plantation. In these protocols, the emancipated were still referred to as enslaved.

The protocol from 1848 had some overlap between the previous lists and what would become two distinct lists from 1849 to 1853. It did contain two lists, one being exclusively for the emancipated that contained information on the name of the plantation and the owner.[195] However, the other list was a hybrid between the two, containing tables for both the "parents name" in addition to "the owners name". This list consisted of 128 registered patients, whereas 21 of those were African/Afro-Caribbean and the other 107 were white or free-colored.[196] From 1849, the two lists became more refined. For the white and the free-colored, the protocol contained tables for (i) the date of the procedure, (ii) the name of the patient, (iii) the name of the patient's parent(s), (iv) whether the vaccine had had a desired effect, (v) if the certificate of vaccination had been handed to the patient, and finally (vi) if there was anything to note about the procedure. Apart from slight adjustments to the protocol's structure and format, this stayed the same until 1853.

The protocol for the emancipated contained the same tables as for the white/free-colored except for "parents" being replaced with "plantation" and "owner". These lists also contained a

[195] Vaccinationslister. 1848. 683: Medicinalvæsenet på de vestindiske øer – Landfysikus. Danish National Archives: Copenhagen.
[196] Vaccinationslister. 1848. 683: Medicinalvæsenet på de vestindiske øer – Landfysikus. Danish National Archives: Copenhagen.

table for checking whether a vaccination certificate was given to the patient. These were left empty each year, before finally being removed in the 1853 protocol.[197] The term "owner" could mean two things: It could refer to the owner of the plantation where the emancipated had been forced to do labor before 1848. In many cases, the emancipated still worked there though as free individuals receiving some compensation for their work. The use of the word "owner" could also be a trace of the suddenness of the emancipation and that the vaccination system struggled to keep up. Looking at the vaccination statistics presented in Table 2, it is evident that there was a lack of control in 1848 and that the system was not strong enough to support itself through such a large social change.

Table 1 shows that few enslaved received certificates between 1820-1831, such as in 1831 when roughly 10% was granted one. Following the emancipation, the Africans/Afro-Caribbeans took part in the booming religious societies and various Christian groups blossoming between 1848-1878.[198] Additionally, they took part in the educational system that was expanding to include them and make them "good and useful members of society".[199] It is likely that they either received the certificate regardless of what was noted in the protocols, or that they received it at a later point. The number of vaccinations stayed roughly the same as in 1825 to 1831 though the population on St. Croix had declined steadily since 1835.[200] The number of vaccines administered would however never be as high as during the epidemics between 1803 to the 1830s.

[197] Vaccinationslister. 1853. 683: Medicinalvæsenet på de vestindiske øer – Landfysikus. Danish National Archives: Copenhagen.
[198] Jensen & Olsen 2017: 290-291
[199] Jensen & Olsen 2017: 292
[200] Danish National Archives (n.d. a)

Table 2: Vaccinations on St. Croix: 1848 - 2853

Year:	Vaccinations (emancipated)	Vaccinations (total)
1848	128	624
1849	506	678
1850	533	823
1851	599	759
1852	557	785
1853	417	541

Source: Vaccinationslister. 1848- 1853. 683: Medicinalvæsenet på de vestindiske øer – Landfysikus. Danish National Archives: Copenhagen.

After the epidemic of 1843, the focus on smallpox and vaccination lessened in the St. Croix newspaper. From the latter half of 1844 to 1846, entries on the disease were limited to reminders of the half-yearly examination for school admission requiring certificates of vaccination to be granted access.[201] The legal framework for admissions and examinations was addressed in the *St. Croix Avis* in 1852, noting that schools were required to keep a list of all children attending their facilities and their attached estates, dates of birth, vaccination dates, and the church in which they belonged.[202] This law applied to all of the Danish Virgin Islands, thus *Sanct Thomæ Tidene* posted an excerpt from *St. Croix Avis* detailing the same set of rules a few weeks later.[203] Schools thus became an official institution tasked with maintaining disease control through documenting and verifying all vaccines of children under their watch. The question of African/Afro-Caribbean education, mostly of a religious nature, had existed on the Danish Virgin Islands since the mid-1700s.[204] Despite being emancipated, many of these children were restricted in their ability to go to school due to conflict of interest from the plantation owners not wanting to lose their work force.[205] Thus, schools were not fully sufficient to track all vaccinations.

Vaccinations continued on St. Thomas after the emancipation. The yearly campaigns lasted for short periods of time, usually lasting two to four months. These were advertised in a

[201] This notification was first posted in *St. Croix Avis* (September 16, 1844: 1). These were republished every 6 months.
[202] St. Croix Avis August 24, 1852: 2
[203] Sanct Thomæ Tidene September 11, 1852: 2
[204] Highman 1992: 192-195
[205] Jensen & Olsen 2017: 292

similar way to that seen in the pre-emancipation period.[206] Outside of the campaigns, vaccinations would often be unavailable due to lack of accessible vaccine matter. Those who missed the windows provided by the campaigns could be provided with travel expenses to St. Croix in order to receive the vaccine there. This was case in 1850, when St. Croix was reimbursed for the expenses provided to a mother and her child who traveled there to get the vaccine.[207] From 1852 to 1855, no advertisements regarding vaccinations were posted on St. Thomas, indicating that available appointments would have been advertised in some other way or that no vaccinations were administered during that period of time. The latter seems less likely due to the regular campaigns previously seen on the island. In any case, vaccination advertisements became less relevant as the largest and most vulnerable demographic could not read, thus lessening the importance of the newspaper in maintaining disease control.

In 1855, the *St. Croix Avis* announced that smallpox had resurfaced on St. Thomas and that necessary precautions were needed to prevent the spread of the disease to the other islands.[208] The news was met with a similar response on both islands. The St. Croix government recommended all parents of unvaccinated children to have them receive the inoculation at once. St. Thomas did not address this directly in the newspaper, though they began to advertise a vaccination campaign for the first time since 1851. Apart from the note in *St. Croix Tidene,* no cases of infections were reported in the papers. The lack of urgency on both islands suggest that this was not a large epidemic that caused much concern. It could also be a result of St. Thomas' government and healthcare being more prepared and trained in the use of protective measures such as quarantine of incoming ships, in addition to many of the inhabitants having been vaccinated through the years of intensive vaccination campaigns.

In the 1850s and 60s, smallpox epidemics were still common in the Caribbean, and both St. Croix and St. Thomas kept track of inter-island news of the disease. To illustrate, the *St. Croix Avis* printed excerpts that detailed the smallpox epidemic present in Jamaica in 1851/1852, particularly the spread of the disease and the vaccination effort present.[209] In the *Sanct Thomæ Tidene*, the resurgence of the disease on "the neighboring islands" in 1860 caused the

[206] One example is the campaign of 1851 that began on May 13th. The first ad was printed in *Sanct Thomæ Tidene* (May 14, 1851: 2). It was reprinted each week, ending on August 30, 1851.
[207] Sanct Thomæ Tidene September 6, 1851: 3
[208] St. Croix Avis August 28, 1855: 3
[209] St. Croix Avis September 1, 1851: 4, St. Croix Avis May 18, 1852: 2

Landfysikus to call all inhabitants, even adults that were vaccinated, to be revaccinated as a precaution.[210] To what degree previously vaccinated individuals were revaccinated in 1860 cannot be determined based on the available sources. The suggestion for revaccination was likely linked to research German research presented in the 1840s of mutations and variations of the smallpox virus and its conclusion that vaccines should be repeated every 10 to 14 years.[211] It is thus apparent that the Landfysikus was still monitoring the developments present in the Caribbean and using them as a basis for when to strengthen protective measures while communicating this through the newspaper. Available time for revaccination and time schedules were however not presented.

Due to this external threat of new outbreaks, the Landfysikus responsibility in maintaining protective measures was still needed. However, the question of the Landfysikus' responsibility and salary now became a larger debate, that would be discussed over multiple court cases during the next few decades. The first case to be reported in the newspaper happened in 1857, when questions regarding the duties and the salary of the Landfysikus were brought up on St. Croix before the Burgher Council. The report presented in the August 7th newspaper informed of vaccinations conducted over the previous six years, in addition to the new salary given to the acting Landfysikus Andreas Jacobi Crucau Aagaard.[212] Dr. Aagaard informed the council that a total of 2291 children had been vaccinated between 1854 and 1856, which was 206 more than in 1851-1853. Furthermore, the report noted that the Landfysikus had since 1848 had an annual remuneration of $320 from the land treasury, which replaced the previous provision-based salary that before 1848 would have been covered by the slaveowners.

The report from August 7, 1857, was a historical account that proved that vaccination campaigns continued on St. Croix even though they were not covered in the papers. It also displayed that vaccination efforts had intensified, reaching the highest number of vaccines administered since before the emancipation. The role of the newspaper on St. Croix had thus drastically changed: It was no longer central in communicating vaccination campaigns or the obligations related to it. On the other hand, the report was an account of the Landfysikus' importance and responsibility for maintaining disease control despite the contemporary

[210] Sanct Thomæ Tidene May 19, 1860: 2
[211] Dansk Vestindisk Regierings Avis September 14, 1840: 2-3
[212] St. Croix Avis August 7, 1857: 3

discussions. Control was harder to maintain in the aftermath of the emancipation, as newspapers could not reach the majority of the demographic making communication difficult. The Landfysikus consolidating the responsibility would thus allow more direct control, though at the cost of taking much time from his work.

The Landfysikus was not reimbursed for travel expenses, which was on the agenda for the Burgher Council the following year. The council decided to allow Dr. Aagard $120 for travel expenses for his business in Frederiksted and an additional $200 for "attending to the quarantine business since the year 1854" and "the precautionary measures taken against Cholera in 1856 and 1857".[213] Court proceedings on the Landfysikus' role and responsibility had also been an ongoing discussion on St. Thomas since the emancipation. A debate on whether the Landfysikus could be removed was raised during a court hearing in 1857, due to decline of vaccination subjects and post-mortem services.[214] These proceedings and evaluations were closely covered by the *Sanct Thomæ Tidene*. In 1858, new proceedings discussed his salary and jurisdiction, as most vaccination subjects were newly emancipated Afro-Caribbeans who could not afford the procedure, having to be financially covered by the landtreasury.[215] The Landfysikus thus argued he was losing revenue and needed more reimbursement for his work.

In 1861, Landfysikus Magens stood before the council himself and described his working conditions.[216] The newspaper reported his testimony, where the Landfysikus emphasized his duties to the public hospital where he oversaw "an average about 50 individuals" each day, in addition to his loss of revenues concerning vaccination.[217] Reportedly, the Landfysikus was met with the argument that vaccination was such a small part of his work and that most should afford it and would thus pay for the procedure. This meant that most emancipated would have to pay for the procedure. The Landfysikus' frustration and concern was not limited to his salary and the number of vaccines administered for free: During a later court proceeding, a letter expressing the Landfysikus' concern on the spread of smallpox within the Caribbean was addressed. He argued that those responsible for inspecting incoming ships were "incompetent" when performing

[213] St. Croix Avis March 26, 1858: 1
[214] Sanct Thomæ Tidene August 12, 1857: 3
[215] Sanct Thomæ Tidene February 24, 1858: 3
[216] I could not find the full name of Dr. Magens in any sources except from him being registered as "Magens, A. F." in: The Land Register of St. Thomas and St. John. 1864-1865. 571: Audited Accounts – Danish West Indies. Danish National Archives: Copenhagen.
[217] Sanct Thomæ Tidene March 16, 1861: 2

sanitary examinations, leading to high risk of smallpox exposure on the island.[218] In 1875, proceedings within the Colonial Council for St. Thomas and St. John discussed the future of vaccination on the island. The new ordinance allowed everyone to choose whom they were to receive the procedure from, thus absolving the Landfysikus from his monopoly.[219] *Sanct Thomæ Tidene* would follow up on these court proceedings and the future of the control of smallpox, though mostly as an informative channel broadcasting new development.

Though smallpox eventually stopped occurring on the Danish Virgin Isles, the threat of the disease was present up until the 20th century due to epidemics occurring in the Caribbean during the 1850s, 1870s and in 1902/03.[220] Maintaining an infrastructure that supported protective measures such as quarantine and thorough vaccination campaigns was thus important and arguably a reason for maintaining the Landfysikus' position. Additionally, the 1861 hearing indicate that vaccinations were no longer the main concern of the Landfysikus rather than attending to patients and the general health of his assigned island. Furthermore, cholera became a growing concern on St. Thomas from 1853 to 1868 as it appeared in sporadic epidemics. Cholera never arrived at St. Croix due to fewer ships arriving at their shores and the strict quarantine laws first implemented to control smallpox.[221] The newspapers maintained their role in reporting both domestic and inter-colonial developments related to the disease following the emancipation. However, the evidence found in the newspapers post-1848 show that their role diminished significantly when it could no longer reach the African/Afro-Caribbean population.

[218] Sanct Thomæ Tidene May 8, 1861: 1
[219] Sanct Thomæ Tidene November 17, 1875: 1
[220] Pemberton 2015: 178
[221] Jensen & Olsen 2017: 295-296

Conclusion

The role of the newspaper changed during the 1830s and 1840s, reaching its peak after the emancipation in 1848. This was largely related to the disease being more prominent and devastating on St. Thomas, as it was a commercial hub in the Caribbean. Still, the problem was also connected to how St. Thomas managed their protective measures, namely the use of quarantine and vaccination campaigns. Quarantine was a number one priority on St. Croix when faced with an outbreak, as seen in the immediate response to the 1843/44 epidemic. As it was the largest epidemic threat in many years, St. Croix initiated total quarantine for any who could potentially have been contaminated, in addition to splitting Christiansted into four districts under the watch of their own separate doctor.[222] Meanwhile, the Landfysikus on St. Thomas complained about the failing quarantine systems that made disease control problematic on their island, confirming that health officials acknowledged the issue.[223]

Furthermore, it is evident that St. Croix had a more effective way of broadcasting and managing their vaccination campaigns, though not through their newspaper. Since the arrival of the cowpox virus, St. Croix had been using regular vaccination schedules that had made it easy to know how, when, and where to receive the vaccine. From the 1830s, fewer advertisements were printed in the St. Croix newspapers, though it is evident from the vaccination protocols from 1848-1853 that the number of vaccinated individuals remained high.[224] From the 1830s, vaccination campaigns were usually just promoted during the epidemics when extraordinary measurements were initiated. Comparatively, St. Thomas broadcasted vaccination campaigns almost each year up until the mid-1870s with schedules changing constantly. Moreover, the St. Croix newspaper usually broadcasted news or advertisements regarding the disease, vaccinations, or new laws, much earlier and often on the front page. The St. Thomas newspaper often did the opposite, publishing information late and not on the front page, making the news seem less important. These factors, in addition to St. Thomas being an entrepôt, adds to the narrative of why the two islands were affected differently by the epidemic waves surging the Caribbean.

The newspaper was also an important communicative tool concerning the developing

[222] Dansk Vestindisk Regierings Avis November 6, 1843: 1
[223] Sanct Thomæ Tidene May 8, 1861: 1
[224] Table 2

school sector. With new schools being opened, and both girls and Africans/Afro-Caribbeans being allowed access to public education, the requirement of having a vaccination certificate made it even more important to get vaccinated. The notifications of half-yearly examinations became the recurring reminder of the importance to have children vaccinated. On another note, the question of disease control became more problematic after the emancipation. The Landfysikus' responsibility for vaccinating the inhabitants on his respective island became both more difficult and less profitable. It sparked court proceedings where the question of the Landfysikus' salary was raised, and on St. Thomas it evolved into a larger discussion on the future of the position.[225] Thus, the newspaper became a public forum for the future of controlling smallpox.

Certain trends regarding the newspapers' role can be identified between the 1830s to the post-emancipation years. On St. Croix, the newspaper lost much of its function as the island had a well-functioning set of strategies that allowed them to maintain control over the smallpox virus. The paper did however play an important role in disseminating important information during periods with extraordinary measures, such as during their last epidemic in 1843. St. Thomas, on the other hand, struggled to maintain control and had more unvaccinated individuals. Advertisements promoting the vaccination campaigns were thus needed, and due to the demographic of the island consisting of many Europeans/Euro-Caribbeans, the newspapers were suited for this task. Finally, St. Thomas also had a faltering quarantine system due to their economy depending on transit. After 1848, the newly emancipated were no longer under legal control of the plantation owners, which meant that newspapers no longer reached the major demographic in need of vaccines.

[225] The report from the court proceeding printed in *Sanct Thomæ Tidene* (February 24, 1858: 3) is one example.

Chapter 6: Conclusion

The role of the newspaper shifted throughout the 19th century, reflecting both domestic and inter-Caribbean developments seen throughout the period. I have attempted to identify these changes and examine how they changed the way the newspapers were used in order to achieve disease control on St. Croix and St. Thomas. The papers were just one part of the strategy to keep the islands safe from smallpox and in reaching total vaccination coverage. In this thesis, I have found at least four major strategies that the authorities engaged in as part of the overall vaccination campaign, with the newspaper playing a part in all of them. First, the authorities had to convince the inhabitants of the island of the safety and effectiveness of the cowpox vaccine. Second, they monitored the spread of the disease both domestically and internationally, the latter having emphasis on inter-Caribbean disease patterns. Third, they executed regular vaccination campaigns, usually over a few months each year so newborn children or newly arrived inhabitants could be protected. Finally, the authorities needed to have the means and infrastructure to stop the spread of smallpox and engage in vaccination efforts. This included a system of quarantine, available vaccine matter, and infrastructure that supported these protective measures.

Attempts at convincing the population of the vaccine was most present during the first few decades after the vaccine arrived in 1803. Dissemination of the vaccine's safety and effectiveness was a priority in the newspapers' early information campaigns. Papers printed before the British occupation included articles that detailed international vaccination campaigns and research, while also addressing vaccine skepticism. The latter was also commonly addressed after the occupation, often indirectly through health officials commenting on people not showing up for the procedure or for check-ups.[226] Reluctance to engage in the vaccination efforts, often rooted in plantation owners being unwilling to allow their workers time of, was one reason for the police gradually becoming more involved with its execution. Before 1830, the police on St. Croix often addressed the issue of lacking attendance by threatening to fine those refusing to allow their "subjects" to be vaccinated.[227] The newspaper thus became an important tool for authorities, such as health officials and the office of police, to convince the plantation owners and other important figures of the effectiveness of the vaccine and their responsibility to the

[226] The article found in *Dansk Vestindisk Regierings Avis* (October 13, 1825: 4) was an example of this.
[227] Dansk Vestindisk Regierings Avis: October 5, 1820: 1, September 1, 1825, July 14, 1828: 4.

safety of the islands.

The fact that newspapers targeted prominent figures of higher socioeconomic and political standing meant that the paper played a different role before and after the emancipation. This was most evident on St. Croix, where the newspaper had been used to promote and maintain the effort to vaccinate the enslaved. The plantation owners were thus the most important group to reach as they had legal obligations upon what was their property. Following the emancipation, this status was lifted thus absolving the previous owners of their responsibility to make sure their workers were vaccinated. Advertisements of vaccination campaigns stopped being printed in the St. Croix newspapers as a result of the key demographic no longer being reachable through the medium. St. Thomas was however different, seeing that they had a much larger proportion of European and Euro-Caribbean population that was changing due to immigration, emigration, and transit, thus creating a demographic with a need for vaccines that could be reached directly through the use of newspapers.

Monitoring domestic and inter-Caribbean developments and disease patterns was the basis for regulating the protective measures and strategies. These measures and strategies were intensified during epidemic years, or years where the external threat of the disease was heightened. To illustrate, the 1809, 1819, 1824 and 1843 epidemics on St. Croix were all followed by an increase of vaccinations and more extensive use of quarantine. The newspaper was central to the execution and maintenance of these measures, as seen during the last epidemic on St. Croix in 1843. Between the 1824 and the 1843 epidemic, the St. Croix newspapers were quiet regarding smallpox. This changed following the 1843 epidemic when the paper continuously updated its reader on the extraordinary measures that had been engaged. This included dividing Christiansted into four districts, each with their own doctor tasked with overseeing general health. Outside of epidemics, the newspapers' role in monitoring the disease was usually limited to outbreaks on the other islands in the Caribbean.

Completing vaccination campaigns and ensuring that all inhabitants was protected was the most important strategy in the battle against smallpox. The newspaper's role in this was to promote the campaigns and remind the reader to get vaccinated. Advertisements of this nature was arguably the most common newspaper entries on the topic of smallpox. On St. Croix, these advertisements were a regular occurrence up until 1830 and again during its last epidemic in 1843. Though fewer advertisements were posted, evidence from vaccination protocols reveal that

the number of vaccinated each year remained high even after the emancipation. The campaigns on St. Croix were predictable in the sense that they operated with regular hours each week during their campaigns. Seeing as most vaccine subjects on St. Croix were enslaved, or later emancipated, regular and scheduled hours allowed plantation owners to plan for their workers' vaccination appointments more easily. Comparatively, papers printed on St. Thomas included similar advertisements decades after they were last seen on St. Croix. This was due to their prolonged history of epidemics, greater threat of outbreaks due to St. Thomas being an entrepôt, and most inhabitants being able to read. The transit of people on the island meant that available vaccinations were not as strictly scheduled as on St. Croix, with advertisements being more frequent. Advertising vaccines were thus more important on St. Thomas, or at least needed for longer periods of time.

The newspapers were also a communicative channel between health officials, most notably the Landfysikus, and the population of their respective island. The purpose of the communication differed. One intention was to inform the population of the spread of the disease and of the protective actions initiated as a response, such as infected being quarantined or vaccination campaigns having begun. This communication could also be more direct, as seen when the Landfysikus or a representative from the police requested heads of families and owners of enslaved to fulfil have those under their care vaccinated or inspected. Communication could also be directed at the certified doctors, either informing them of temporary exceptions of the 1819 vaccination law or to request that vaccination lists be handed in. This use of the newspaper highlights one fundamental aspect of the colonial newspapers: They were targeted at the European/Euro-Caribbean population that held a high socioeconomic status, including plantation owners, merchants or traders, health officials and other authorities, and heads of families. Before the emancipation, this communication allowed the authorities to take control and enforce policies over the enslaved, though this ceased following the emancipation.

The newspapers continued to play a part in the vaccination campaign following the emancipation, though in a less direct way. The public debate surrounding the future of the Landfysikus and the importance of vaccination certificates became increasingly central topics. The latter was most noticeable in articles and advertisements regarding school admissions. Access to schools had been reliant on vaccination certificates since before 1820.[228] As new

[228] Jensen 2012: 201

schools were built in the 1830s, the newspapers were used to request parents to send written petitions accompanied by certificates of vaccination and baptism to be allowed entry. New legal framework presented in 1852 informed that all schools were required to keep a list of all children attending their facilities and their attached estates, dates of birth, vaccination dates, and the church in which they belonged.[229] As vaccination certificates were required to both be allowed into schools to and be confirmed in church, smallpox vaccines became an integral part of life and obligatory for life in Denmark and her colonies.

The newspapers finally played a large part in monitoring and presenting the public debate of the Landfysikus' role and responsibilities on their island. Since the beginning of the vaccination effort on the Danish Virgin Isles, the newspapers had reported on the duties of the Landfysikus and, after 1819, broadcasted the exceptions to his monopoly on vaccinating the enslaved. After the emancipation, the newspapers covered the public debate about the salary and responsibility of the Landfysikus as the vast majority of the vaccination subjects were now considered poor and eligible to receive the procedure for free. The debate revealed that the Landfysikus' job was by many considered to be tied to the pandemic, though in reality his responsibilities as the highest-ranking health official on the island included much more. After these debates, the newspapers on both islands were mostly concerned with monitoring the inter-Caribbean developments where the disease would appear up until the beginning of the 20th century.[230]

[229] St. Croix Avis August 24, 1852: 2. Link.
[230] Pemberton 2015: 178

Final Remarks

St. Croix and St. Thomas were affected differently by smallpox. Due to their geography, demography and infrastructure, the newspapers on the two islands were used somewhat different in the battle against the disease. The differences between the islands can be summarized in that St. Croix was a plantation economy, thus mostly consisting of Africans/Afro-Caribbeans, while St. Thomas was centered on trade and transit of people and goods, thus consisting mostly of Europeans and Euro-Caribbeans. It was thus natural that St. Thomas had a higher infection rate even though quarantine systems were in place. The difference in achieved disease control and use of protective measures can additionally be seen in how the two islands were affected by cholera during the 1850s and 60s, when it ravaged the Caribbean and St. Thomas while never gaining foothold on St. Croix.

The emancipation in 1848 was arguably the event that most drastically changed the role of the newspaper. Before the emancipation, the enslaved were chattels: legal property of their owners. The slaveowners thus bore responsibility for having their legal property vaccinated, making the newspaper an important communicative tool allowing the authorities to communicate with the slaveowners. Following the emancipation, the slaveowners lost their status. This meant that the authorities lost an important figure for ensuring vaccination to the African/Afro-Caribbean population, thus removing one of the most central functions of the newspaper. Vaccination certificates thus became increasingly important, due to the enslaved participating more in churches and schools which both required certificates to be able to participate. This is similar to practices seen in various countries today, where schools are important for ensuring that children receive vaccines.

Finally, my thesis has explored how vaccines has been used to exercise power over the population on the Danish Virgin Islands. Before 1848, this was done through interfering with the property right of the slaveowners and laying legal obligation upon their chattels. After the emancipation, vaccination certificates became increasingly important as they became mandatory to get confirmed in church and enter school, thus controlling the individual's opportunity for establishing families and receiving work. The Covid-19 pandemic shows that vaccination is still used as a way for authorities to control the population, as it is required to travel, go to concerts, and partake in various daily activities. Thankfully, this is the case.

Chapter 7: References

Archival Sources

Danish National Archives, London

Bykort over Christiansted på St. Croix. Christian Ludvig Schellerup. 1856. 337 10: The Colonial Office, Central Directorate for the Colonies, Maps and Drawings.

Hospitalet i Christiansted på St. Croix, situasjonsplan og facade 1778-1780. 337.316: Chamber of Revenue – Danish West Indies – Maps and Drawings.

Kort over St. Croix med byplanerover Christiansted og Frederiksted. Jens Michelsen Beck. 1754. 337 1: The Colonial Office, Central Directorate for the Colonies, Maps and Drawings.

Kort over St. Thomas, indsat er kort over Christiansfort i Charlotte Amalie. C. von Neno. Around 1730. 337 43: Chamber of Revenue: Maps and Drawings.

Land register of St. Thomas and St. Jan. 1864-1865. 571: Audited Accounts – Danish West Indies – Reviderende Regnskaper, Vestindiske Regnskaper – 1755-1915 Matrikel for St. Thomas og St. Jan (83.68-83-69).

Samlinger av Sager vedr. Hospitalet i Christiansted, specielt dets finansiering. 1790-1817. 365: Generaltoldkammeret – Ældre del – Vest-Guineisk Renteskriverkontor.

Vaccinationsprotocol, 1820-1853. 683: Medicinalvæsenet på de vestindiske øer, Landfysikus.

The Royal Danish media collection

Dansk Vestindisk Regierings Avis. 1802-1807.

Dansk Vestindisk Regierings Avis. 1815-1843.

The Royal Saint Croix Gazette. 1813-1815.

Sanct Thomæ Tidende. 1815 – 1917.

St. Croix Avis. 1844-1917.

The St. Croix Gazette. 1808-1813.

National Archives, London

Map of the Caribbean. April 3rd, 2009. Colonial Office, Caribbean, Maps.

Literature

Aberth. (2010). *Plagues in World History*. Rowman & Littlefield.

Berry, D.R. (2017). *The Price for Their Pound of Flesh: The Value of the Enslaved, from Womb to Grave, in the Building of a Nation*. Beacon Press.

Bliss, M. (2011). *The Making of Modern Medicine: Turning Points in the Treatment of Diseases*. The University of Chicago Press.

Brinkmann, S. & Tanggaard, L. (2015). *Kvalitative Metoder* (2. ed.). Hans Reitzels Forlag.

Carøe, K. (1905). *Den Danske Lægestand: 1786-1838*. Gyldendalske Boghandel Nordisk Forlag.

Danish National Archives. (n.d. a). *The population trend in the Danish West Indies, 1672-1917.* Retrieved May 9th, 2022 from https://www.virgin-islands-history.org/en/history/personal-history/the-population-trend-in-the-danish-west-indies-1672-1917/.

Danish National Archives. (n.d. b). *1911-1912: Last Census in the Danish Possessions in the West Indies*. Retrieved May 9th, 2022 from https://www.virgin-islandshistory.org/en/timeline/last-census-in-the-danish-possessions-in-the-west-indies/.

Eriksen. (2016). Advocating Inoculation in the Eighteenth Century: Exemplarity and Quantification. *Science in Context*, *29*(2), 213–239. https://doi.org/10.1017/S0269889716000028.

Geddes. (2006). The History of Smallpox. *Clinics in Dermatology*, *24*(3), 152–157. https://doi.org/10.1016/j.clindermatol.2005.11.009.

Gulløv, H.C. (Ed.). (2017). *Danmark: En Kolonimagt*. Gads Forlag AS.

Highfield, A.R. (Ed.). (2004). *Hans West's Accounts of St. Croix in the West Indies*. The Virgin Islands Humanities Council.

Higman, B.W. (Ed.). (1992). *Neville A. T. Hall: Slave Society in the Danish West Indies: St. Thomas, St. John & St. Croix*. The University of the West Indies Press.

Høiby. (2020). Pandemics: Past, Present, Future. *APMIS: Acta Pathologica, Microbiologica et Immunologica Scandinavica*, *129*(7), 352–371. https://doi.org/10.1111/apm.13098.

Jensen, N.T. (2012). *For the Health of the Enslaved: Slaves, Medicine and Power in the Danish West Indies, 1803-1848.* Museum Tusculanum Press.

Jensen, N.T & Simonsen, G. (2016). Introduction: The Historiography of Slavery in the Danish-Norwegian West Indies, c. 1950-2016. *Scandinavian Journal of History*, *41*(4-5), 475-494.

Kjelstadli, K. (1999). *Fortida Er Ikke Hva Den En Gang Var: En Innføring i Historiefaget* (2.ed.). Universitetsforlaget.

Lindemann, M. (1999). *Medicine and Society in Early Modern Europe*. Cambridge University Press.

Løken, R. (2020). *De Dansk-Norske Tropekoloniene: Sukker, Krydder, Slaver og Misjon*. Solum Bokvennen.

Moseng, O.G., Opsahl, E., Pettersen, G.I., & Sandmo, E. (2003). *Norsk Historie: 1537-1814*. Universitetsforlaget.

Norwegian Institute for Public Health. (2022, April 1st). *Kopper og Andre Poxviridae-Infeksjoner - Veileder for Helsepersonell*. https://www.fhi.no/nettpub/smittevernveilederen/sykdommer-a-a/kopper-og-andre-poxviridae-infeksjo/.

Olsen, P.E. (Ed.). (2017). *Vestindien: St. Croix, St. Thomas og St. Jan*. Gads Forlag A/S.

Parker, J. N., & Parker, Philip M. (2004). *Smallpox Vaccine - A Medical Dictionary, Bibliography, and Annotated Research Guide to Internet References*. ICON Group International Inc.

Pemberton. (2015). Disease and Intercolonial Relations: Smallpox in the British Caribbean, 1902-1904. *Revista de Indias, 75*(263), 177–204. https://doi.org/10.3989/revindias.2015.008.

Quirk, J. (2011). *The Anti-Slavery Project: From the Slave Trade to Human Trafficking*. University of Pennsylvania Press.

Reifschneider, M. (2018). Enslavement and Institutionalized Care: The Politics of Health in Nineteenth-Century St Croix, Danish West Indies. *World Archaeology, 50*(3), 494–511.

Reifschneider, M. (2019). Danish Colonial Healthcare Policy, St. Croix, Virgin Islands. *Itinerario, 43*(2), 305–326.

Reifschneider, & Bardolph, D. N. (2020). An Archaeobotanical Approach to Well-Being: Enslaved Plant Use at Estate Cane Garden, 19th Century St. Croix. *Journal of Field Archaeology, 45*(7), 512–526. https://doi.org/10.1080/00934690.2020.1792732.

Risse, G. (1992). Medicine in the age of Enlightenment. In A. Wear (Ed.), *Medicine in Society: Historical Essays* (pp. 149-196). Cambridge: Cambridge University Press.

Rusnock, A. A. (2009). Catching Cowpox: The Early Spread of Smallpox Vaccination, 1798–1810. *Bulletin of the History of Medicine*, *83*(1), 17–36.

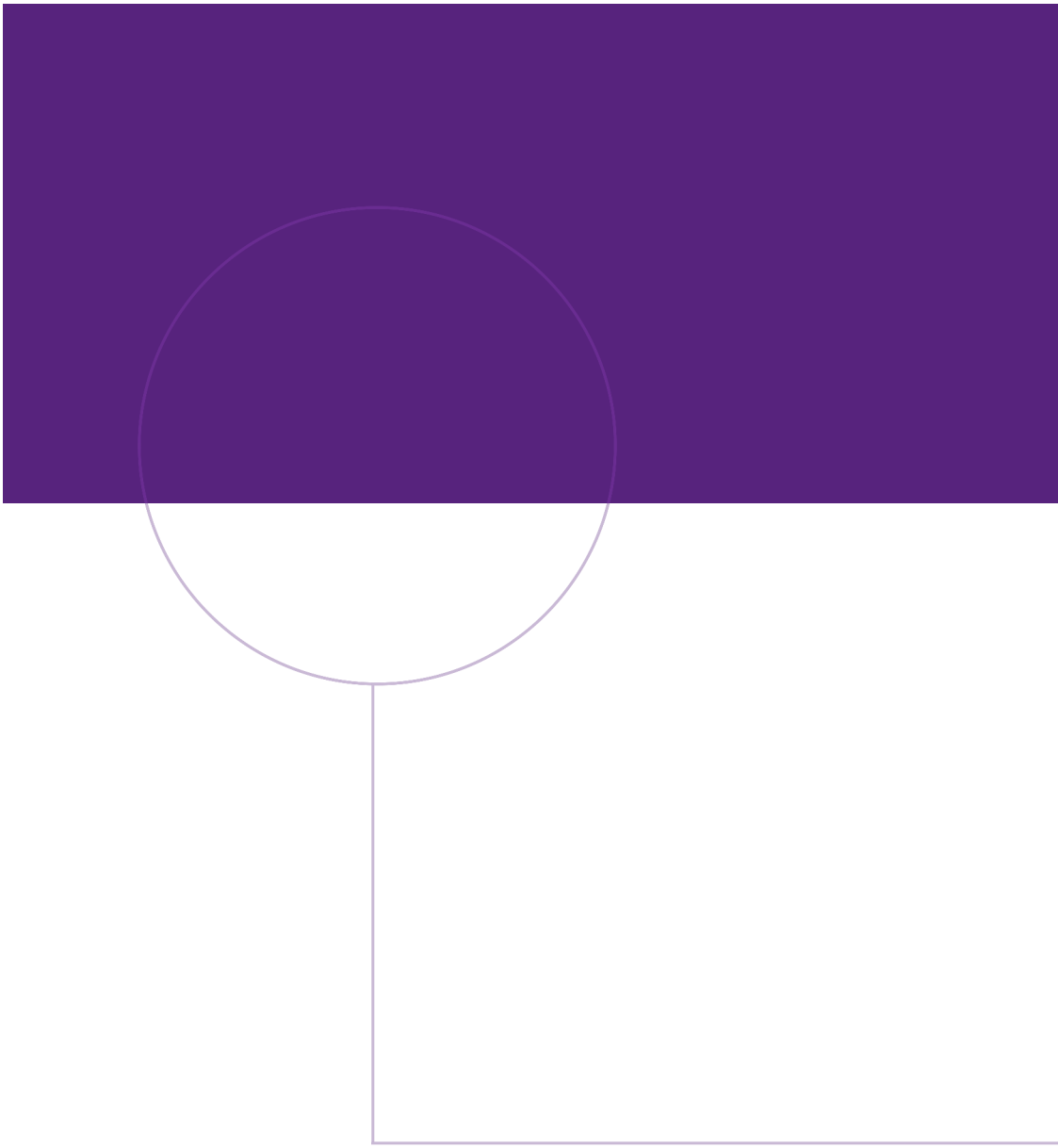
SlaveVoyages. (n.d.). *Trans-Atlantic Slave Trade – Database*. Retrieved May 12th, 2022, from https://www.slavevoyages.org/voyage/database#tables.

Stevenson, B.E. (2015). *What is Slavery?*. Polity Press.

Søllinge, J.D. & Thomsen, N. (1988). *Den Danske Aviser 1634-1989. Bind 1: 1634-1847*. Odense Universitetsforlag.

Søllinge, J.D. & Thomsen, N. (1989). *De Danske Aviser 1634-1989. Bind 2: 1848-1917*. Odense Universitetsforlag.

World Health Organization. (n.d.). *Smallpox*. Retrieved May 9th, 2022 from https://www.who.int/health-topics/smallpox.



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