

Intervals - Episode 5

Season 1: Intervals of Public Health
Lecture Title: "Which Public?: Race, Slavery, and Health in the Antebellum United States"

Q+A Taping Date: March 3, 2021

Upload Date: May 5, 2021

Guest Lecturer: Christopher D. E. Willoughby

Host: Christopher Brick

MarCom Participants: Kariann Yokota (Chair)

Preferred Citation Format

Christopher D. E. Willoughby, "Which Public?: Race, Slavery, and Health in the Antebellum United States," and Q+A interview with Christopher Brick and Kariann Yokota, *Intervals*, podcast audio, April 28, 2021, <https://rebrand.ly/x3xtarg>.

Initial Verbatim Transcript - May Contain Typos

Introduction

CHRISTOPHER BRICK: Hi everybody and welcome back to the *Intervals* podcast, a public humanities initiative of the Organization of American Historians. Season 1 on the history of public health was underwritten by the generous support of the National Endowment for the Humanities, and I am your host, Christopher Brick, here once again on behalf of the OAH Committee on Marketing and Communications.

For this episode, our fifth feature-length broadcast of the series, the *Intervals* pod is delighted to welcome Dr. Christopher D. E. Willoughby. Chris recently completed his Ph.D. at Tulane University, and this lecture is based on some of the dissertation research he conducted for

that project. The sheer enormity of sources Chris reviewed in connection with this work is remarkable, approximately 4,000 19th-century medical dissertations alone, and that's in addition to plenty of other manuscript collections as well, period newspapers, magazines, journals, and of a great deal of secondary literature. All of which is to say this this a very learned piece of work from a very remarkable scholar who helps us interconnect so many things about the antebellum enslavement system to a number of other power centers active within the 19th-century American economy, including its professional medical community and public health authorities. Medical schools taught their students that Black individuals were uniquely suited to the role of enslaved labor.

As Chris's talk argues and, in my view, does a wonderful job of demonstrating, that understanding the history of public health requires grappling with how physicians have defined the public in ways that often exclude workers of color from access to healthcare.

And when he's not making the case for the powerful relevancy of this work right now, Chris is also a Junior Visiting Fellow at The Pennsylvania State University's Center for Humanities & Information. He is the editor with Sean Morey Smith of the edited volume *Medicine and Healing in the Age of Slavery* (Louisiana State University Press, forthcoming fall 2021) and is completing a monograph entitled *Masters of Health: Racial Science and Slavery in American Medical Schools* (Under contract with the University of North Carolina Press). This lecture is partially based on materials from a forthcoming chapter of *Charting the Plantation Landscape from Natchez*

to *New Orleans* which will be published this May by the Louisiana State University Press.

And with that I give you, Dr. Christopher D. E. Willoughby on "Which Public: Race, Slavery, and Health in the Antebellum United States."

Lecture

CHRISTOPHER D. E. WILLOUGHBY: Before I start, I would like to thank you for having me, and I appreciate the opportunity to share my research during this tumultuous moment in the present.

In his 1850 senior thesis completed to graduate from the Medical College of South Carolina in Charleston, J. P. Bonner wrote, "At all events, we are certain of one fact; namely, that [enslaved people's] services are not only altogether essential to the southron, but to the whole civilized world." "Without his aid," Bonner continued, "the spindles and looms of Manchester, of Lowell and of all the large manufactories must in a great measure remain idle; the fertile plantations of the South and West must go uncultivated and our extensive forest must remain as they now are the storehouses of malaria." In many respects, this should be an odd quote for a medical dissertation. Bonner's thesis, though, was on malaria, a chronic public health problem on plantations. Enslaved labor, then, was medically relevant, because malaria could influence antebellum social and economic forces.

Public health on the plantation required a complex balance for physicians, who both treated enslaved people's injured bodies and depicted them as happy and healthy. Not unlike contemporary

debates about COVID and the economy, many physicians during the antebellum period found themselves in a complex bind. Enslavers had a vested interest in depicting plantation labor as healthy, and physicians wanted their business. After decades of political fracture in the United States over the legality of slavery, there were economic benefits for doctors to frame enslaved labor as healthy. The compromise of 1850, taking place the year Bonner completed his thesis, represented another band aid on a fractured nation. In the wake of the United States' territorial grab resulting from end of the U.S.-Mexican War in 1848, Texas joined the union as a slave state, but California entered as free, thus the compromise.

In this talk, I will first map out the major public and occupational health problems facing enslaved people during early efforts to industrialize agriculture and a slew of epidemics on plantations occurring during the antebellum era. Then, I will analyze the ideologies physicians constructed to downplay and obfuscate the reality of these problems. Despite their rural geography, the health problems of large scale sugar and cotton production—the South's most important cash crops in the nineteenth-century—were those of an increasingly capitalistic world shaped by global commerce and industrialization. Some capitalist physicians found themselves having to justify the violent norms of plantation labor while treating somewhat preventable injuries and diseases. An examination of the material and imagined features of plantation health underscores the degree to which various aspects of nineteenth-century capitalism, including global trade, industrialization, and the creation of race as science deeply affected concepts of public health

and who was a part of the public. Throughout the first half of the nineteenth century, Physicians contended with the ailments of an increasingly industrialized plantation, one with large machinery and overworked bodies. In contrast to reality, just as they responded to the illnesses common to plantations, physicians enunciated biological theories of racial difference and the health relationship of enslaved laborers to the plantation landscape. They argued that enslaved African descendants were created for the labor and environment of sugar and cotton plantations, were improved physically and morally through hard work, were naturally comfortable in sweltering heat, and were immune to the worst of local scourges. However, the reality of sick and debilitated enslaved laborers constantly undermined this imaginary landscape of healthy, happy workers. It forcefully revealed the brutal reality of plantation health and enslavers' roles in creating unhealthy environments. In total, southern physicians battled the diseases inherent to global commerce and large-scale agriculture, but they also engaged in a national debate over the rectitude of white supremacy, regularly depicting it as medically mandated.

The history of early America is also a history of epidemic disease from the illnesses that contributed to the genocide of many Native American communities to the yellow fever epidemics that struck the Northeastern U.S. in the 1790s. The antebellum era was no different, yet the increasingly global scope of trade led to the introduction new illnesses to the United States. Historians of medicine, the environment, and the South have given considerable attention to Atlantic histories of yellow fever and malaria. In many

ways, this stems from these illnesses' deep ties to the slave trade. Both emerged as forces for change in the South and other parts of the Americas, and some scholars have even argued that yellow fever epidemics led to the rise of an empowered institutional public health sector in the United States after the Civil War.

Combatting epidemics encouraged Americans to weigh health versus wealth accumulation. In antebellum yellow fever epidemics in southern ports like New Orleans, physicians routinely debated quarantine measures. In many ways, quarantine was the main tool of the city public health boards being founded during this period, but it was a tool that they were reluctant to use. Quarantine would halt trade, which made it an untenable option for the region's enslaver elite who dominated local politics and economics. Unlike *Anopheles* mosquitos—the main vector for malaria—who prefer the rural environment, yellow fever transmitting *Aedes Aegypti* mosquitos are mostly urbanites. Prior to antebellum era efforts to expand rapid inland transportation through steamboat or train, earlier yellow fever epidemics had mostly affected port cities, making plantation outbreaks uncommon. Steamboats and trains changed this dynamic quickly. Complaining of the importation of yellow fever into his small hamlet of Petit Gulf Hills (located just north of Natchez), in 1853, physician A. P. Jones pushed for quarantine. He cited his belief that this urban disease had travelled up the Mississippi River from New Orleans to his town, killing thirty people "of all ages, sexes and colors." Jones noted that the spread of yellow fever into the country would become only worse with the construction of more railroad tracks, a prophecy that came true in the terrible epidemic of 1878. In short, an

unwillingness to quarantine ports endangered the interior. Physicians were not powerless, and the lack of major epidemics coinciding with the Civil War blockade of New Orleans illustrated how quarantine could protect the city and interior's residents. Despite yellow fever and malaria's central position in the region's health history though, cholera—a novel disease at the time—provides different lessons about the modernization of Southern plantations and their deep imbrication in global trade.

Unlike malaria and yellow fever's Atlantic orientation, cholera revealed the deep embedment of plantations in the structure of the global economy. Cholera pandemics served as a reminder that globalization during this period had a profound health effect. In the early nineteenth century, American physicians diagnosed many different gastro-intestinal ailments as cholera, but the disease that contemporary physicians classify as cholera often was referred to as "Asiatic" cholera due to its perceived Asian origins. From 1832-33 and 1848-49, the United States, like much of the rest of the world, suffered greatly from cholera pandemics. While physicians during this period often saw cholera as the product of the local environment or personal sin, the disease was undoubtedly imported in the bowels of agents of commerce.

Coincidence or not, these pandemics also roughly overlapped with multiple events that contributed to the fracture over slavery that culminated in the Civil War. Just a year before the 1832-33 pandemic, Nat Turner led a massive slave rebellion in Southampton, Virginia that shook the foundations of the slavocracy. Then in 1833, South Carolina's state government attempted to nullify a

federal tariff law. The so-called nullification crisis almost caused an earlier Civil War, and permanently severed the relationship of President Andrew Jackson to his Vice President, John C. Calhoun. That same year, South Carolina began a decades-long policy of illegally screening and removing from the mail anti-slavery literature that Northern abolitionists hoped they could flood South Carolinians with. So-called Indian removal, which amounted to genocide, was also spearheaded by Jackson, even ignoring an 1832 supreme court order ruling that Georgia Cherokees were sovereign. To put it mildly, Jacksonian political culture was tumultuous. As mentioned earlier, the second pandemic corresponded to the U.S.-Mexican War, whose consequences for slavery in the United States were temporarily settled in the Compromise of 1850. Thus, similar to COVID in the present, political rupture rarely waited for good health.

In the Mississippi River Valley plantation communities, the 1848-49 pandemic was particularly destructive. In the 1849 volume of *Southern Medical Reports*, two physicians' essays revealed the bacteria's spread throughout the region. Writing about cholera in St. Mary's Parish in Louisiana, local physician James B. Duncan asserted that few whites were struck by the disease, but it took an "erratic course" through the plantations, with one plantation "loosing ten or twelve" enslaved laborers while its neighbor remained unscathed. Reporting on cholera in one plantation near Natchez, physician C. H. Stone noted that "among 239 [enslaved people], 129 were attacked, of whom fourteen grown ones and nine children died," or just shy of ten percent of the enslaved population. Cholera, in short, could quickly devastate an enslaved community.

While physicians had not yet come to understand the cause and treatment for the bacteria, and enslavers could by no means completely prevent its spread, their treatment of enslaved workers likely exacerbated cholera's wide transmission. As few plantations had privies for their quarters, most enslaved residents used the woods and areas surrounding their homes to dispose of feces. Practices such as this made plantations highly unhygienic landscapes. While a waterborne illness, large amounts of human waste surrounded the quarters, and because enslaved people lived in overcrowded homes, intestinal diseases like cholera could be passed interpersonally through tainted food and physical touch. On some plantations, human feces even were used as fertilizers. This made the plantation a Petri dish for the growth of intestinal diseases such as dysentery, typhoid fever, and cholera. Through their use as fertilizer, cholera-laced feces could infect the soil, which might then contaminate a local stream or groundwater, causing the further spread of the bacteria. This relationship between sanitation, crowding, and the plantation landscape explains why physicians found beneficial the wide-spread practice of moving the enslaved out of the quarters during outbreaks of intestinal ailments. On plantations, this was one of the few public health tools physicians had to fight intestinal diseases. Outside of the crowded quarters, the enslaved were less likely to be exposed to the disease through interpersonal communication or consumption of tainted food. They even might collect water from a different source. While physicians believed that they were removing enslaved people from a "vitiating" atmosphere, this treatment might have unintentionally limited the disease's spread.

As is illustrated by a brief account of these epidemics, the health landscapes of the plantation in the Mississippi River Valley provided a meeting space for the rural South and global commerce. Physicians had to grapple with a medical landscape shaped by global trade and poor attention to basic hygiene and housing. Adequate housing, nutrition, and healthcare remain some of the best tools for public health today, and while antebellum physicians' hygienic and pathological knowledge was inadequate to face many diseases, they at least could recognize the basic value of shelter and a healthy diet. However, the poor health of the period often was exacerbated by obstinate enslavers, who invested little in the sanitation of their enslaved workers' homes or the best location for the disposal of the feces of a large labor force. As much as the health of southern plantations was defined by seeming natural causes such as disease, local enslavers, due to ignorance and neglect, created many of the underlying problems that contributed to the deadliest ailments on plantations. While contemporary tourists often focus on antebellum-era plantations for their architectural beauty, these estates were largely sites of labor and production. Their main purpose was to supply sugar, cotton, and other goods to a growing population of middle-class consumers in Europe and the United States. Similar to how plantation health was tied to global commerce, the health problems of rural plantations shared concerns with the nineteenth-century industrial economy. This trend manifested with the introduction of large machinery to the plantation in the first half of the nineteenth century.

Nowhere was this relationship truer than on the large-scale sugar and cotton plantations of the

Deep South. Throughout the antebellum era, sugar planters slowly adopted steam-powered sugar mills over ox-driven predecessors. Likewise, outside of the sea-island cotton varietal planted in select environments such as the South Carolina and Georgia Lowcountries, cotton production only became profitable in the Americas after the invention of the cotton gin in 1794. Thus, the introduction of large machinery enacted a total transformation of the plantation economy in the Deep South. It fueled westward expansion for cotton planting and increased the rate of sugar production. Through adopting industrial technologies and forms of labor, enslavers also shaped the plantation landscape and its health. Historians of slavery and capitalism have emphasized how, in addition to the introduction of new machinery, enslavers sought to increase the yields of their laborers, resorting to maddening labor quotas and intense implementation of corporeal punishment. The harsh, mechanized regimes of large-scale cotton and sugar plantations created many health problems as well as new challenges for local physicians. During the antebellum period, physicians treated industrial accidents and gynecological problems caused by malnutrition, working while pregnant, and excessive births. Unlike disease, injuries of efficiency required surgical solutions, a legitimate realm of innovation among antebellum physicians.

Nearly every aspect of cotton production—from transporting the picked product to crop scales to ginning it—had potential to harm enslaved laborers. In addition to chronically ailing backs, shoulders, and necks, malnutrition and the harsh labor regimes of enslavement abetted in the creation of significant gynecological ailments. Compounding on their roles as laborers in the house and/or field,

enslaved women also were pressured or sometimes forced into birthing enslaved offspring and as many as possible. In addition to cotton and sugar, enslavers understood enslaved people to be one of their most valuable commodities. While enslavers never possessed total control over enslaved people's reproductive habits, the need for more enslaved workers coupled with high infant-mortality rates meant that enslavers certainly encouraged women to birth many children during their lifetime, with only a fraction expected to survive. Remember, in 1807, the Atlantic slave trade had been abolished. Thus, reproduction was essential to maintaining a growing population of enslaved workers. Unsurprisingly, enslaved women experienced high rates of complications to their pregnancies. Historian Deirdre Cooper Owens even notes that the Haitian émigré-surgeon François-Marie Prevost "pioneered" the live cesarean section surgery "in Louisiana solely on enslaved women." While tempting to view complicated births as simply resulting from the poor state of medicine or ignorance, enslavers' neglect of nutrition and aggressive promotion of enslaved reproduction played a significant role in the rash of gynecological ailments on plantations.

Controlling reproductive labor also represented a point of enslaved women's expertise and ingenuity. Pregnant enslaved women unwilling to birth a child into bondage used an "infusion" of cotton seed oil to induce abortions. Enslaved women's knowledge of and skill in producing these herbal abortive concoctions drew attention to long streams in African diasporic medical and intellectual history, where enslaved healers, herbalists, and midwives had a profound (if less visible) impact on the health cultures of southern and Atlantic World plantations.

The needs of efficiency and high agricultural yields also led to industrial accidents. Once the cotton had been dried it would be ginned, making it marketable but exposing enslaved workers to health problems resulting from the mechanical process. By 1860, enslaved workers using a gin could remove the seeds from four to six bales per day, each bale representing 400 pounds of seedless cotton. Cotton gins were powerful machines. They transformed the regional (and global) economy, making cotton a viable cash crop along with sugar. They also caused significant industrial accidents, creating hosts of enslaved people with disabilities.

While sugar had long been a viable cash crop in the Latin American tropics and the Caribbean, its wide cultivation in Louisiana came about almost simultaneous to the rise of cotton due to technical innovation. Widespread sugar cultivation was primarily the result of the successful granulation of sugar in New Orleans in 1795. Thus, the American sugar industry, like cotton, relied on industrial and mechanical innovation for its success.

This success and wealth came at a shocking price. Physicians commonly amputated or operated on smashed or shredded limbs. Discussing the frequency of ginning accidents in his 1857 medical thesis at the Medical College of South Carolina, J. A. Hewell of Tuscaloosa, Alabama, noted, "We can scarcely find a cotton plantation of any size but has one or more 'hands' maimed by one of these machines, most generally, too, by the loss of a finger, hand, or forearm." Hewell went on to assert that amputations related to industrial accidents provided for "nine tenths of the surgical practice" of plantation physicians. Following these broader claims, Hewell examined a case that had occurred in New Prospect, a town in north-central Mississippi, where a ten-

year-old enslaved child "got his hand caught" in the gin, the claws then pulled in his arm up to the humerus and slashing the child's chest. Hewell's description of the child's limb was nothing short of lurid. The gin cut "his fingers literally to pieces, diving through and through the palm of the hand, injuring the metacarpal bones, injuring the wrist slightly, but tearing the skin from three fourths the circumference of the fore arm for its whole length, splitting the muscles into thin, slender strips, cutting into the bones at many points." Hewell's thesis drew attention to important yet often forgotten features of antebellum plantations, the health effects of industrialized labor and the proximity of children to these machines. Hewell's lurid prose captured the sheer horror of these so-called accidents, creating yet another poignant reminder that enslaved people suffered the brunt of early industrial agriculture's health effects.

Industrialization had a similar effect on sugar plantations, maiming the enslaved yet offering gruesome opportunities to improve physicians' amputation techniques. Historian Richard Follett explains, "The constantly moving cane carrier and flywheels required highly attentive workers to keep an ever-watchful eye on the turning belts and spinning gears that raced along at breakneck speed." The design of these new steam sugar mills actually increased the likelihood of accidents, compared to slower, ox-drawn predecessors. During this period, enslaved workers engaged in agricultural and industrial labor, while suffering the injuries and ailments of both. In a letter to the *New Orleans Medical and Surgical Journal*, physician R. H. D. of Pattersonville, Louisiana (located in St. Mary's parish) noted the

neighborhood's general health in the winter of 1847, excepting three surgical cases, two of which were related to milling sugar. Sugar mills provided multiple dangers to limbs as can be seen in R.H.D.'s letter, which covered a mere two months of practice. In the first case, an unknown worker's hand was "caught with the cogs" and "mashed and lacerated." Given other possible outcomes, this first case was relatively mild, as R.H.D. only had to amputate the middle and index fingers. In the second injury, an enslaved worker's hand became "entangled in the rollers of a sugar mill and crushed to pieces." Less fortunate than the previous patient, the worker lost his entire hand and forearm, up to above the elbow.

During their daily lives, enslavers, physicians, and enslaved workers lived or witnessed the brutal realities of industrialized agriculture. Enslaved people were maimed by whippings, childbirths, malnutrition, disease, and amputations, yet their health concerns largely existed outside of the purview of antebellum public health. Indeed, this contradiction reminds us that administering public health is an active process that is shaped by contemporary social ideologies. Just as with COVID, diseases, workplace accidents, and doctors' decisions do not exist outside of prevailing political and economic concerns. These forces shape how health is understood and societies' willingness to protect the health of their politically and economically vulnerable members.

Just as the means of production were mechanizing on southern plantations in the first half of the nineteenth-century, physicians in the United States were defining race, public health, and how the two informed each other. Not just a

pro-slavery plot, ethnologists, also known as racial scientists, were important and legitimate figures in antebellum America. They held professorships in elite universities and medical schools throughout the United States and Europe. Their work informed public discourse about slavery and Black people's future in the United States. The popular racial science debate of the era was whether all races were the same species and shared a common origin. Putting the question of origins and species aside though, medically speaking, antebellum physicians generally agreed that different races were physically and intellectually different, and they had distinct health relationships with each climate. According to antebellum physicians, Black people were believed to have smaller skulls and thus brains, and were physically and medically suited for life and manual labor in the tropics or subtropics. Whites on the other hand had the largest brains, and were best suited for temperate zones. Today, this would be certainly considered pseudo-science, but in 1850, it was accepted science and routinely taught in U.S. medical schools. Belief that this was legitimate science, by extension, gave credence to enslavement. Moreover, with a handful of exceptions, Black people were not included in the roughly forty thousand graduates from U.S. medical schools between 1820 and 1859. These theories were cooked up in almost exclusively white, male spaces. Thus, while some white doctors might have disagreed with slavery in principle, most believed that Black people were medically suited for labor in sweltering heat. In short, leaving the overt sectional politics aside, doctors of most political stripes were racial essentialists.

As evidence of this national trend, in his 1857 thesis, Tully S. Gibson, a Mississippi medical student studying at the University of Pennsylvania, argued for polygenesis, that is, that each "race" was a distinct species that God created separately. This was the most popular belief among American naturalists in the 1850s, prior to Darwin publishing *On the Origin of Species* in 1859. Thus, rather than just making science speak to the crass needs of slaveholders, Gibson believed his ideas put him on the Academy's intellectual forefront. Deeply influenced by the famous Swiss naturalist and Harvard professor Louis Agassiz, Gibson argued that God had created each race separately. Like other species of animals, God suited each race for the specific climate and geography where they were first formed. Thus, black people were created in and for the tropics. According to polygenists, this initial choice by God shaped the course of black health and labor for eternity. Gibson explained, QUOTE "A black skin seems best suited for a hot climate; and for this reason, we may suppose that a special creation of black races took place in Africa. The strictly white race live mostly in the temperate zone, where they flourish best; and they certainly deteriorate physically and mentally when transferred to a hot climate." ENDQUOTE As the sugar and cotton plantations of the South were in some of the hottest and most humid parts of the United States, these arguments were particularly relevant for local physicians who relied enslaver customers. Moreover, like many other contemporary doctors, Gibson understood enslaved people's health as rooted in deep questions about the origins of the human races. In these discourses, each race could only remain in optimal health in their native environment, and the sub-tropical plantations of the Lower South were an ideal space for white and

black people, blending the torpid with the temperate.

Pro-slavery politicians used these positions to their advantage and to overtly defend slavery. When seceding from the Union in January 1861, Mississippi's representatives sounded eerily like Gibson and other physicians of the period. Specifically, the Mississippi Secession convention asserted that both African bodies and the local cash crops were built for warm weather. As Gibson and Mississippi's leaders evidenced, in the United States, antebellum medical, political, and racial worldviews were connected deeply.

Through medical defenses of slavery, physicians marketed themselves as indispensable to the slaveholding elite. While some physicians certainly lent their expertise to the pro-slavery cause, the forms that their arguments took were more complicated than doctors merely bending science to the political needs of Southern enslavers. Instead, changes in pro-slavery theory tracked alongside the medical profession's evolving beliefs about health and climate. Gibson wrote his thesis at the University of Pennsylvania, far from the radical secessionists who led Mississippi, Gibson's home. Yet, Gibson's northern professors schooled him on the supposed medical meaning of race and its connection to climate. The link among the national medical profession, the production of racial science, and an exclusionary approach to public health was simply profound, a fact that has often been overlooked in favor of a focus on racial science and the pro-slavery movement. Moreover, historian Mark Harrison has noted that during this same period, British colonial physicians in India were beginning to see Indians' bodies as inherently linked to the local climate, evidencing the global

appeal of these medical constructs of race. While slavery and empire certainly influenced medical thinking, the same was true of the corollary. In defending slavery, local physicians used widely-accepted medical theories to depict racial difference.

Following the increasingly capitalistic nature of local plantation society, physicians saw racial expertise as a route to gaining legitimacy and, by extension, enslaver customers. It was this need for enslaver customers combined with a sincere belief in white supremacist racial science that informed many antebellum physicians' racially exclusionary approach to public health. George B. Wood's two-volume textbook *A Treatise on the Practice of Medicine* reflected how these ideas became a set of practices for physicians. By this period, Wood was the highly influential Professor of the Theory and Practice of Medicine at the University of Pennsylvania, the nation's leading medical program. Largely uninterested in race, Wood geared his text toward a medical audience, one more absorbed in general practice than the politics of slavery. But that did not mean that Wood never mentioned race. On the issue of malaria, Wood explained his belief that Black people were protected from the illness, making them valuable laborers in South Carolina Rice fields. Wood trained thousands of physicians—hundreds from Mississippi and Louisiana alone—during his tenure at the University of Pennsylvania from 1835 to 1860, and this claim evidenced the mutual influence of medicine and racial thought throughout the nation. In fact, in my book project on the history of racial science and slavery in American medical schools, I focus my research on how medical students wrote about race, having analyzed more than 4,000 medical student

dissertations from the antebellum era. A subset of this sample focuses on race, yellow fever, and malaria. Of the twenty-eight Medical College of South Carolina and Medical Department of the University of Pennsylvania students who discussed differential immunity to malaria, only four believed that black and white people were equally susceptible. Likewise, of the seventeen students who discussed yellow fever and racial immunity, sixteen argued that black people were less susceptible than whites or that when black people got yellow fever, their symptoms were much milder.

Returning to Wood's textbook, the Professor also noted his belief that people of African descent were inherently predisposed to tetanus, tacitly excusing how inconsistently enslavers provided enslaved people with shoes. Wood displayed how racial difference was in many ways an unquestioned aspect of medical thinking and training. Further, Wood's text received a glowing review in the *New Orleans Medical and Surgical Journal*. While local practice in the South inspired racial approaches to yellow fever and malaria, this racially exclusionary approach to public health was broadly accepted and reproduced throughout the medical profession and its system of training physicians.

When epidemics struck plantations, physicians' reactions revealed their willingness to use racial theories to blame epidemics on enslaved victims. In an 1850 article on treating cholera in the *New Orleans Medical & Surgical Journal*, an anonymous physician noted that it was important to treat slaves psychologically during epidemics, as QUOTE "cholera creates a panic, which powerfully predisposes them to the disease." ENDQUOTE Statements such as this not only reinforced

physicians' attempts to control enslaved workers' minds and bodies, it also shifted blame away from their inability and to some extent unwillingness to stop these epidemics.

Writing that same year about cholera in Bayou Lafourche Louisiana, Dr. William A. Booth argued that the problem was not the effects of panic but rather apathy toward obtaining treatment. Where the anonymous author in the *New Orleans Medical & Surgical Journal* depicted enslaved workers as frightened children in need of management, Booth described enslaved people as only seeking treatment from cholera due to enslavers' compulsion. Worth noting, neither suggested ambitious public health measures such as improving sanitation or quarantining the port of New Orleans. Instead, according to Booth, all Black people QUOTE "are fatalists, and this fact renders the idea that they are scared into cholera perfectly ridiculous. *The worse it rages, the less they regard it.*" ENDQUOTE While Booth and the anonymous author reveal some fissures among physicians' racial ideologies, they also displayed doctors' tendency to blame enslaved people for their ill-health.

When theorizing about disease and racial difference on the plantation, physicians in the South utilized biased observational experience and internationally-influential racial science. Through these prisms, physicians constructed an image of African descendants' bodies as inherently fit for slavery. Despite lacking significant political, social, or economic power in the South, enslaved Black people, doctors insinuated, were responsible for their own deaths. By connecting enslaved people's bodies to certain diseases, physicians alleviated enslavers' responsibility for the high mortality rates among the enslaved population. In

this frame, unclean and overcrowded quarters were only a part of the problem, as doctors believed African descendants' psychiatric state increased their likelihood of contracting cholera. They even contended that enslaved people were either innately irrational or predisposed to morbidity.

In conclusion, centering the enslaved population as a group that was overworked, malnourished, maimed by industrial machinery, and suffering from preventable ailments illustrates how enslaved people were excluded from the concern of public health officials who primarily focused on urban health during this period. In contrast to this harsh reality of an agricultural society whose health was defined by forced labor, epidemic diseases, and industrialization, physicians aided in the construction of enslavers' propaganda. The physicians discussed here should serve as a reminder that doctors' fictitious plantation landscape of healthy and contented enslaved people existed in sharp tension with the actual labor that physicians performed. In one sentence, a physician could praise the health of the plantation system and in the next paragraph could recount two recent amputations. In short, public health on nineteenth-century plantations existed at two levels, one based in material existence and the other in a mass, racial imaginary. On the first plane, the health landscape was dotted with scarred bodies, feces, malnutrition, and rundown slave quarters. In this second landscape, however, enslaved people were perfectly suited for the plantation's ailments, remaining a happy and contented labor force. This second landscape, rather than the first, helped southern enslavers attempt to maintain moral authority during the antebellum era, as the British and French empires along with

numerous independent nations in Latin America abolished slavery.

The brutal reality of plantation slavery existed in constant tension with the political need to justify slavery as healthy and humane. Through the need for great profits, physicians aided in the construction of a fantasy public health, where happy and healthy enslaved people lived with paternal masters. In reality, however, global capitalism constantly shaped health on plantations, both how it was imagined and how it was lived. At the forefront of these local responses to global trade were physicians who were the closest thing to public health officials in the rural plantation South. Using available medical knowledge and techniques, they treated global pandemics and amputated limbs in order to keep the enslaved workforce productive. In undeniable tension, all the while doing the daily tasks to treat a sick society, many physicians claimed that slavery was healthy. Thus, they put the health of the plantation system over those of enslaved African Americans.

Q+A

[segue from lecture]

CHRISTOPHER BRICK: Listening to Chris's talk as well as just did and as I have several times now, I continue to be amazed at the ease and finesse with which he put all that stuff together -- the way that he's able to alternate between content-specific parts of his talk dealing with public health and plantation medicine with these more generalized set pieces of the period, things that

involve big events like the Mexican War or the Compromise of 1850 or the deepening sectional crisis that preceded the Civil War.

It's not an easy effect to achieve and if it felt seamless to you I think that's because Chris is quite clearly pretty great at creating that effect, at doing this work. It's something that would fail in the hands of a less skilled teacher and lecturer.

And so too with the Q+A. Kariann Yokota's going to be with us for this one and so you know it's going to be pretty fantastic.

[beginning of group conversation]

CHRISTOPHER BRICK: Christopher D. E. Willoughby, welcome to the podcast!

CHRISTOPHER D. E. WILLOUGHBY: Thank you for having me.

CHRISTOPHER BRICK: My pleasure. And joining us in the virtual jungle studio today is our illustrious chair of the Marketing & Communications Committee, Kariann Yokota. Madam Chair, welcome! How are you today?

KARIANN YOKOTA: Aw, Thanks so much. It's really great to be here.

CHRISTOPHER BRICK: Yeah, it's always good when you're around for these!

Chris -- I wanted to start -- Well, first-of-all I should thank you because the talk was great and I in particular feel like there's one piece of it

that I think I'll always take with me into my classrooms moving forward, not just in the year 2021, but like I said moving forward because you --

We talk so much about the enslavement economy -- you talk so much about that in here -- and what you described, really--I don't know if you ever used the word complicity in your talk, but it is an astonishing degree of complicity both in terms of the work that these physicians are doing to sustain the system, and also to promote it, to take the public health branding as a way to market the sustainability and vouchsafe the sustainability of this economy, and this mode of production, of enslavement.

I just wonder if you could -- I mean is that an accurate characterization of what you're describing?

And if you could talk a bit more about complicity as a theme, I'd be curious to hear just more of your thoughts about that.

CHRISTOPHER WILLOUGHBY: Yeah, that's a that's a really great kind of setup and segue to my--not only this this particular talk--but also my broader research interest is in how the medical profession in particular in the United States evolves with the slave system.

And I think complicity is certainly there. For example, medical schools in this country at that time particularly catered to southern students. The leading medical school and the first medical school in the US the University of Pennsylvania's medical school, founded in 1765--by the 1840s and 1850s half

of its couple hundreds of students every year from the South.

After Pennsylvania, not too surprising, the largest group of students from any location is Virginia. So, there is a very clear way in which not only I would say is the medical profession complicit in that, on the day-to-day operations of working in the plantation, they are trying to keep the system going, keep peoples' bodies going, even give advice on the most efficient ways to exploit bodies.

In some ways that can be saying to be less abusive, but it's in the service of keeping the institution together longer, but more so than just this kind of practical complicity, I would argue there is an active solicitation of enslaver patronage when you look at a lot of the figures who are kind of underneath. Especially in the later half of my talk. Those who kind of use rhetoric and media to justify enslavement, and the violence, that's just the day-to-day operations of the plantation, are constructing broad racial theories during this. And you can see not this kind of—somebody like Samuel Morton, a Philadelphia physician, some of the few specific ideas we have from him about his views on slavery, or that he might have probably opposed it, and certainly did in general, or certainly did at one point in his life. But he also sends a copy of I think it's his second book, *Crania Diptycha*, to John C. Calhoun. The vice president Andrew Jackson and kind of leading proslavery theorist up until his death after the compromise of 1850.

So, on the one hand you're totally right, and then there is this just day-to-day operational complicity of being a doctor in the South. Your main patrons, the people who can afford to pay your

bills are enslavers. And also, you can get an annual contract with an enslaver to work on their plantation and get a lump sum. And then second, this is also a period where Madison is trying to assert itself as a social organizing institution and there are very direct connections to leading enslaver politicians in that time period, like Calhoun, and well I'll just leave it there right now.

But, yes, I think complicity and also direct courtship of that wealth and power base are a key part of this story.

CHRISTOPHER BRICK: So because of that, by virtue of the fact that these are sites of mechanical industrial production there's also a lot of workplace hazard around and that's where these injuries come from, many of them, and past what I was thinking about -- this is a historiography question -- because another thing that your talk raised for me, or concept that kind of came to mind as I was listening to it, is that by virtue of these hazards anybody who's really writing about this history is also you know kind of like almost by default having to address issues of disability too.

I'm just curious is that historiography coming in more too when we read histories of enslavement?

CHRISTOPHER WILLOUGHBY: Yes, actually there is a growing literature and I think often feel like the southern history is about 10 years behind the rest of U.S. history it may be harsh to my own to my own people at times but in the last decade or so it really has exploded and I think that's where a lot

of the history of medicine folks there's a good chunk of that people going in that direction.

But it still remains one of the fundamentally under-theorized even in slavery medicine which is a under discussed topic that's growing right now very much under analyzed because we don't actually have good numbers on how many people had disabilities obviously enslavers we're not particularly distressed other than from a monetary perspective about disability and many people who had occupational health disabilities like back pains the things that would potentially get you out of we work in the president would not have counted so it only folks who are too old to work had lost limbs potentially.

But even someone who is an amputee like some of these really lurid descriptions that come out in some of these dissertations of peoples arms being shredded it's likely that person still had to work for most of their life just with one arm so I think on the one hand I would say there are a lot of really great scholars emerging right now particularly PhD candidates who are doing work on disability history in Jennifer Barclay has a book coming out I think in the fall with the University of Illinois on disability and slavery but it is a profoundly understudied topic.

KARIANN YOKOTA: I just wanted to follow up also with another historiography quotes not a question but just to hear what you think about the confluence of your work with say the historiography on you know technology and when you talk you're talking about the cotton gin right so the introduction of mechanical devices how it affects

the health and the life of people in the lives of people and in this case the enslaved population I thought that was really interesting because I often read on they put history of medicine and history of science technology all in that same unit yeah and I was wondering if there's work being done on the confluence of all those fields?

CHRISTOPHER D. E. WILLOUGHBY: I would say it's more separated than it should be as is historiography, but I think there is a lot of interesting ground to cover in how technological advancements in means of production did affect people's health that hasn't been done.

I would like to think this, I mean I don't want to overstate it, there's certainly disability histories, those folks who are coming up right now, and doing it are talking about the ways that the gin affected health and disability on plantations. I wouldn't say there's an overt history of technology angle on it but I think that relationship between the rise of technology, industrial technology, is essential and I think it also gets to a problem that I think Chris hinted a little bit earlier is that a false urban rural dichotomy in the way we talk about industrialism, and industrialization of means of production, because obviously the southern plantation was not a textile mill in Lowell MA but nor was it a 17th century plantation either.

It's something that I wish I had thought of this earlier or wish I could have when I was writing this but that's also struck me about the nature of change and health in covid is there's also technologies that are be arising in the slave system that are very clear but they're not kind of

industrial technology but the technology of Labor organization that Caitlin Rosenthal talks so eloquently about.

In accounting for slavery of these in addition to not just mechanical innovation there is a management an innovation that demands higher and higher labor costs and organizes and demands a certain quota from laborers that's not necessarily, it's feasible, but it leads to far more accidents for more people like Richard Veillette have discussed.

This also in sugar plantations but this dynamic of turning the plantation economy into a much more industrialized base in the way that time is managed and the way that labor regimes are managed, these have profound health effects, but it's never been framed, to my knowledge I don't want to completely you know self-congratulate too much but, been framed as a direct relationship between these evolution of the labor mechanisms of the plantation and the actual health of laborers other than kind of passing phrases from those who have focused on the actual labor history.

KARIANN YOKOTA: That's fascinating. I mean, also you mentioned for instance, how the expansion of railroads and you know connectivity and the transportation revolution that's occurring changes the health issues that a population is facing, and you think about that in terms of today's pandemic and how it's such a, you know, we travel in airplanes across continents on a daily, weekly basis and thus we are facing new problems. And also thinking about environmental history, the encroachment on wild lands, and the forced connection, or the forced interaction between

humans and wild animals, and how that influences health and public safety. And creates pandemics, so, that your talk made me think about the current situation as well which, I thought was interesting.

CHRISTOPHER D. E. WILLOUGHBY: Yeah, and I think one of the things that I couldn't get into the lecture but wanted to and I mentioned this when I first talked to Chris on the phone a couple of months ago, but is that there's a really interesting connection when we look at previous pandemics, prior to really the 1823 Cholera epidemic, there is the interior of the country is much more isolated and access is much slower than once you have steam ships going up and down the Mississippi River on a daily basis, and it reminded me a great deal of what's been happening in primarily meat processing plants during covid.

Of these essentially rural industrial spaces where people live in much—and work in much more close and more tightly crowded quarters and have an urban epidemic experience in a lot of ways but that's isolated to one set of Labor, or one specific site of Labor. So, when they talked about those Cholera epidemics in the Mississippi River plantations, physicians described them as kind of having erratic course jumping past one is how they describe it and then popping up on another and that is because it very much is based on the idiosyncrasy or randomness of the moment.

But you have these dense populations that if an outbreak emerges in them it will burn through the population really rapidly in a way that is akin to a dense urban neighborhood. But you don't see typically think of in a rural epidemic that occur in, and I think that's where this type of crowded

unhygienic and under cared for group of laborers, both in the plantation, but also the immigrant laborers who so often are employed in our meat processing or experienced a type of epidemic that is not typical of the rural environment.

But is now that we have these amazing rapid transportation and communication technologies, so that was one thing, and then I think you also mentioned animals and that's less common of an issue, but there were actually snake bites were pretty significant problem on plantations, in these kind of pushing into particular swamps, bogs, you did have a lot of animals around that that shaped health outcomes as well. But, not on the scale of the industrial and technological changes.

CHRISTOPHER BRICK: I want to pick up on something you mentioned earlier, and it does come up and you're talk. Is it true that you read 4000 medical dissertations? Because that number astounded me.

CHRISTOPHER D. E. WILLOUGHBY: Yes, it was one long year.

CHRISTOPHER BRICK: And what is it like encountering these? You quote from some of them a bit but, I mean when you go through 4000 of them, you're really immersed in, you know, obviously the language that -- habits of mind of these practitioners -- you know, what's it like to sit with that?

Because it's very, it sounds like challenging material -- just kind of almost emotionally to come to every day, right? I'm curious to hear more about what that was like encountering that day after day

for a year? And then how it shaped the work that you ended up doing?

CHRISTOPHER D. E. WILLOUGHBY: It was emotionally challenging, in some ways. So, what I did for my dissertation and this is also the foundation for my book manuscript, which is on the history of racial science and slavery and medical schools, with under contract with UNC press.

I read all of the medical dissertations that they had at the University of Pennsylvania before the civil war, the Medical University of South Carolina for the roughly the same time period, and a decent chunk at Transylvania University, about 100 theses and the University of Nashville.

It's a very odd experience because it's on the one hand moments of kind of extreme boredom akin to grading really bad papers like a selection of you're the worst student you've ever had mixed in with the most some of the most disturbing things I've ever read.

For example, I can still remember one day I uncovered some experiments that I talk about in my book where a medical student at the Medical University of South Carolina infected enslaved people with not measles and deliberately injected an enslaved man with vial of blood infected with measles—and that's one of those moments that you can never forget. And I kind of sat alone in the Wearing Museum at the Medical University of South Carolina. On the other hand, it did allow an opportunity to find a pattern about how systemically and structurally a part of medical education these racial essentialist ideas that helped protect the plantation economy and made it

seem not only economically viable but medically and ethically viable.

CHRISTOPHER BRICK: Because it seems like one of the perspectives that I feel like I got from your talk is that one of the things going on in this dynamic, this interaction between these, you have physicians on the one hand—they're trained, they're coming out of medical schools, and they're active in the enslavement economy in these plantations etc.

And part of what they're carrying into that dynamic is this assumption that enslaved people are legitimate sites of medical experimentation. There is zero compunction about that, I'm assuming?

CHRISTOPHER D. E. WILLOUGHBY: In that particular, I found two kind of new disturbing medical experiments both at the Medical University of South Carolina. In that one there's no sort of ethical wrangling or meaningful thought other than he compares it to a similar experiment done with scarlet fever at a neighboring plantation and says they both kind of proved that yellow, ironically and there's a lot of logic I could unpack in between it, but that yellow fever doesn't affect people of African descent as much as whites.

I did find and there's no sense that is affected their medical degree in any way. I did find it in one case so where a student, I will say just deliberately induced illness amongst an infant refused to do it again, because it was disturbing in a way to him, even after he had already gone through a kind of series of experiments on enslaved woman and so this was the last straw for him.

But these moments of moral clarity or questioning seem few and far between. And maybe are it's possible it's even more performative than in the case of that many, because he wrote about it in his dissertation, and got, it's, you know, it's like apologizing after the Tuskegee experiments, but wanting to get a promotion.

CHRISTOPHER BRICK: What it also raised for me and what got me thinking about too is just how much of the medical technology that we kind of inherited from the 19th century and an earlier in the 20th century is derived from this work.

Because at one point you mentioned in the talk about live cesarian section, which brings in a whole separate issue about like this nexus between production and reproduction in the lives of enslaved women and work the labor, quite literally, that they're supposed to be doing in order to pull their weight as it were, in the plantation economy. Could you talk about that a little bit more actually? Because I do think there's going to be a lot of listeners who will be surprised to learn that. And curious to know a little bit more.

CHRISTOPHER D. E. WILLOUGHBY: Yes, so the cesarian section is an interesting one because there were cesarian sections before the 19th century, but the expectation was not that the participants would survive, or at least the mother would not survive.

And often the infant wouldn't it was more a matter of baptism in particular in Catholic societies of getting infants baptized in a timely manner before dying. And so, the plantation, a place of profound malnutrition, obviously sexual violence is well

discussed, and where people women were forced to work well into their pregnancies often. On the one hand, it created a space much like a clinic of a concentration of surgical cases.

The plantation, if anything, was that. Between amputations, much like a hospital, but on a smaller scale. Especially a large-scale plantation though, and so both the cesarian section and the cure, and this has been really well written about by Deirdre Cooper Owens in medical bondage, but the cure for vaginal, vesicovaginal fistula, were pioneered on enslaved women in the case of the fistula, it was in South Alabama where J. Marion Sims, a physician who ultimately moved to New York, and became the founder of I think the first gynecological hospital in the UU, certainly one of them. But did dozens on handful of women up to 25, 30 attempted surgical cures for it until he actually successfully did it so that means after every surgery almost there almost every surgery, they get infected their wound would reopen.

So, these are in terrible trying process for women with no minimal ability to consent. Sims said he had consent and it's not, it's certainly believable to me that he asked these women if they consented, but as we know what does that mean when we think about sexual violence on the plantation?

We don't leave it at the word of the owner of whether or not that person is really consenting. And this is just as much of a violation—and then also but kind of moving away from just sexual violence, students in those theses made clear that learning how to amputate someone's limb was something that could be perfected through plantation practice. Through consistent work.

Because amputations were such a common occurrence due to these new industrial machine machines, and the industrialization of sugar milling as well. So, there was a direct relationship between improving surgical ability and a rise in occupational health problems.

KARIANN YOKOTA: Also, I actually wanted to ask you to talk about the nationalization of medical education and medical knowledge. And I have written a chapter in my book on medical education in the revolutionary and post-revolutionary era, and I actually was working at Penn myself, and looking at how, in the colonial and early Republic eras, any American who wanted to be a professionally trained doctor had to go overseas to Great Britain to be educated.

And so, it was a very transatlantic, you know, going to the mother country, even in the years following the revolution and having to learn from them, and really being supplicants to the British knowledge. And I think when I was listening to your lecture, I felt like so much had changed in that relatively short amount of time so the people I was studying.

So, I was like looking at the Benjamin rush Benjamin Smith Barton era and the change was what you're telling is very national story and it changed also because of slavery and so it's a very particular, peculiar American institution. So I was wondering if you could talk a little bit more about that relationship to Great Britain? And whether this was really a domestic discussion?

CHRISTOPHER D. E. WILLOUGHBY: That's a great and complicated question, but I'll say it's not a

domestic story, but it is a story that's not about necessarily the relationship to Great Britain anymore. In the 19th century, the kind of seat of—so, on the one hand there is the emergence of a national medical profession roughly by from 1820 to 1860, roughly 40,000 MDs are granted in the US medical school. So, that's a huge change in the 18th century.

It's a couple hundred to make 200, 250. So, on the one hand the vast majority of people who get a medical degree are going to national medical schools, but a lot of the faculty are actually going to Paris. So, in the turn of the 19th century, Paris is the kind of center of hospital medicine.

And there are more hospitals, more hospital beds in Paris than any other city in the Atlantic world. So, what Americans go to Paris for are the same things that some doctors are trying to get on plantations. And that's experience working on people's bodies. If the plantation is a microcosm of this, Paris is the macrocosm of 10s of thousands of hospital beds being filled by new diseases, new epidemics, of this kind of robust urban culture, but industrial labor accidents as well.

On the one hand, there is a rise of this influential French medicine in terms of surgical and clinical practice, but there is a very American story that that builds out of this that has a very clear entrenchment in national medical education, and that's the rise of racial science influenced by Poly Genesis. Not that that has no traction anywhere else, but the US is the only country that combines domestically the bodies to directly

research a racist scientific project and the institutional means.

So, compared to Britain, there aren't sing huge medical schools in the Caribbean at this point. So, they don't have that direct access to bodies in the same way, so this is a place where Americans are able to establish a sort of a certain type of authority that not as available to Metropolitan physicians and scientists.

On the other hand, they're also leading an international discussion are beginning to interject themselves in an international discussion and just as American physicians are talking about race on plantations, colonial British positions in India are trying to come up with ways to justify intense labor regimes in the tropics of India as well based on racial identity.

So, there's a separate story, but in many ways, they're building off of what the Americans are doing. Especially the Metropolitan actors.

Yeah, I think that's really interesting because in the period I was studying, what you see is Americans trying -- these ambitious Americans -- trying to get an audience with people saying the Royal Society through their knowledge of Black bodies, through the knowledge of -- I mean it's Black bodies -- that's what they were calling them and so you have people from the Royal Society saying: don't tell us about your theories just get us quote unquote the "Black body" we want to measure for arms, we want- you have the president of Princeton being asked to measure the forearms of his so called "servants." And so, I think it's interesting that white Americans insert themselves

into positions of power through access, as you say, to racialized and enslaved bodies.

Yeah, and I think that's like a very really useful way of framing it. It's an American story about the presence of American medicine in an international medical community. In many ways, the way historians have often framed the rise of racial medicine in the US, it's always about southern medicine in southern physicians. Kind of as a precursor to the confederacy. Whereas even in that micro scale, they're trying to assert themselves as a part of a national medical profession, and the Americans very much want to be leaders.

They want to be accepted in Paris, they want to be accepted in Edinburgh, yet when they get there, they often find themselves frustrated by abolitionists. And at least in England there's an interesting story where William Gibson, who is a professor, I think he's a professor of surgery if I'm remembering correctly, at Penn. He has a travel account of traveling through England in the 1830s or 1840s and goes to a lecture from James Cowles Pritchard who's an abolitionist racial scientist who has his own set of problems which we could get into, but overall, in the context of being a race commentator in this period.

He argues that all changes are environmental could be changed in a generation or so, and everybody all races are the same species, same origin, and that none of this justifies slavery, and so Gibson gets up and has to kind of make an American case for why (A) slavery is no worse than industrial labor in the UK, which of course industrial labor was awful at that time, but it's not near it's not forced bondage, but there is very much, I think, this

desire to be cosmopolitan yet a frustration with having to give up some of the politics of slavery as well to be accepted in some of those cosmopolitan circles.

KARIANN YOKOTA: Yeah, well I think it's American. You see these elite, white Americans in this kind of what I was calling a postcolonial position where they're trying to situate themselves as being part of the elite ruling class, but when they go abroad they see themselves being tainted by the scar of their own birth, being born at least in the earlier period in this Savage land and the whole theories of environmentalism and if you are born and living in a Savage land among savages, will you the white men become Savage yourself?

So, I was wondering if those things carried over to your period and working so intimately, or with people of color? Whether this this desire to try to separate through these medical, pseudo medical, pseudoscientific, as you call them, theories of race and racial superiority. These are some of the things that I was thinking about us I was listening to your lecture.

CHRISTOPHER D. E. WILLOUGHBY: Yeah, and I should say that I kind of use pseudoscience very hesitantly in that this was not pseudoscience in the context of its time, that's how we should understand it if somebody brought these things up today, but it was very much accepted science in its own contemporary moment.

CHRISTOPHER BRICK: It had medical authority.

CHRISTOPHER D. E. WILLOUGHBY: Yeah, and it was self-described as scientific, at least by the mid-

19th century, and nobody was challenging the majority of people who would have self-identified as scientists would have agreed that it was sound science.

I think there is a very nationalistic yet frustrated dynamic to a lot of this. Especially in the early period, and then I think where Americans set themselves apart, and this is where it really is a departure from more degeneration kind of narratives, is in the embrace of Poly Genesis, and the notion that each race was created at the level that it existed as they understood at the time.

Each race, so Africans were created to exist in Africa, whites were created for a temperate European climate, and they are able to in some ways, that allows them to push back against notions of whites degenerating in the Americas. But it's also there where I think they release take a somewhat novel scientific for lack of a better word, to this race science in combining what they learned in the Paris medical schools, so another big part of this Parisian medical education was statistical analysis.

And statistics are a new field in the 1850s and that's also what shapes some of these labor regimes on the plantation in the 19th century is in accounting is also embracing statistics just as medicine is embracing statistics. So, these doctors like Samuel Morton Josiah Knotfur in Alabama, who ends up being the founder of the University of Alabama's medical school, they go off to Paris in the 1820s, 1830s, and train with doctors who are using statistical medicine -- not to understand race, but to understand what they perceive as the seed of disease.

So, they look for lesions on the insides of people's bodies and say we've we dissected, or atomized, or gave autopsies to 1000 people with diphtheria. We found a lesion on X organ and therefore the cause of diphtheria is this lesion on this organ, which I'm just using that as an example, I don't know that anybody wrote that book, but, or pneumonia. They found lesions on the lungs; therefore, the lesions are the cause. So, they're looking using a combination of autopsy and statistics, but to a very novel approach in that through skull measuring, and that's where Americans are at a much higher rate compared to 18th century skull collections, much larger ones.

Samuel Morton's skull collection, which is being repatriated right now at the University of Pennsylvania, was the largest in its period of over 1000 skulls in the late 1840s. So, they are able to make an intervention which makes race science, as it was called, appear scientific.

In that time, much like people who are proponents of racial essentialism today will use genetics, faulty genetic arguments, with no actual gene to identify, to make race appear real in a medical and biological sense, even though there isn't a correlation between 5 skin colors and 5 groups of people all have the same biological, medical features.

So, that's a way in which they push back against degeneration, but they also assert a kind of novel theoretical approach to understanding race that garners them considerable attention. This is all taught in medical schools, in the anatomy theater, in the curriculum and textbooks, etc. So, it's a

very deeply entrenched system of education that this race science engenders.

KARIANN YOKOTA: That's interesting. If I can just ask one more thing about race science. Did you in your 4000, in reading your 4000 theses, did you- did they talk about or were there studies about mixed race offspring? Or was that such a taboo subject in the South that they wouldn't want to acknowledge it scientifically or medically?

CHRISTOPHER D. E. WILLOUGHBY: So, I'm not 100% sure if they ever mentioned it. I'm sure actually at some point, I can't think of or identify a specific one, but that they did bring it up. Either to say that mixed race because one of the key arguments in this- So, I'll skip to the second part which is something I can answer and with more specificity. It was not such a taboo subject that they were unwilling to address it.

It was actually a core, as well as skull measuring, if there was another important principle to this debate it was whether or not people mixed race people were fertile. And thus proving- So, one of the most commonly accepted, still accepted definitions of species is whether or not two different species can successfully reproduce with fertile offspring. And if they can, they're the same species.

Obviously as John Bachman, a mono Genesis opponent of all this in the 1850s who has his own racist problems, but he's from Charleston and said, you know, there are seven generations of mixed-race people here. How can we say that they are not fertile? So, in that sense it was very much a key part of this discussion. On the other hand, in

comparison to other aspects of medical thought, it doesn't affect the day-to-day operations of the plantation in the same way.

As to whether or not people get yellow fever, malaria, Cholera -- but it's very much talked about, but primarily in theoretical context, debating whether or not white and Black people are the same species, and they never really- I mean, it's been settled today, but in the 1850s, it does not get settled and a lot of people, a lot of pro polygenists arguers will just say it doesn't really matter after they lose the debate.

Essentially what happens, and it's anatomy that defines difference, not procreation. But that has not been where human Sciences have gone afterwards, thankfully.

CHRISTOPHER BRICK: Are you finding there are differences between the way like, are there regional variations to this, these sources and these materials?

Like, will a medical school in Charleston, will it narrate one of these medical histories in the same way that one you would find in say like Boston or elsewhere the North?

CHRISTOPHER D. E. WILLOUGHBY: Oh, that's a really useful question in that yes and no. I think when I set out as a dissertation to look at this, I, especially 10 years ago, I think we didn't have quite as many arguments arguing that the North are deeply enmeshed in the profitability of slavery. So, that was something I set out to prove, was that the northern schools were teaching racial science, and that schools were writing about it.

Where there's a significant difference, well first of all, there is no medical experimentation that I was able to find it in northeastern medical school. Like what I found in the Medical University of South Carolina, and I think that has to do a lot with access on a day-to-day basis to enslaved people. But it's also possible that some of those experiments might push folks who don't own slaves a little further in what is ethically permissible. In terms of racial science, there's not a significant,

I would say, on the one hand, I found more dissertations, overtly about Poly Genesis and racial science in Philadelphia than I did in the Deep South. But I found more dissertations about practicing on enslaved people and kind of racial essentializing around diseases like yellow fever, Cholera, malaria, in southern schools.

So, I think when it came to the biggest differences, and they're really shades of grey, not Black and white, for lack of a -- no pun intended -- is that southern students tended to think more about racial education as something that they would take onto the plantation. And northern schools certainly didn't focus as much on that.

Although they certainly talked about it. But a student at Philadelphia isn't going to write a dissertation about practicing on a plantation unless you're from South Carolina. So, they're less common. They exist and just like racial science, dissertations existed in South Carolina, in the University of Nashville, but they were much more practice based in those southern institutions compared to the northern institutions, which had larger skull collections. Harvard also had a

collection of, by the end of its construction, after the civil war, of 150 plus skulls.

The Medical College of Cincinnati had 17 skulls, kind of sourced from all over the world, not just Black, white, Native American. So, there is a difference, but it's more emphasis than kind.

CHRISTOPHER BRICK: Right, so sectionalism is there but it's not quite some coarse binary at all. I mean, it's all on this continuum of sort of white racial privilege and race science.

CHRISTOPHER D. E. WILLOUGHBY: That's a great way of describing it. And I think there are moments where it looks like there might be a sectional conflict. Even the civil war isn't quite the sectional conflict for medical elites, I would argue, as it was for the average American. But some of those moments there right before the civil war, there's a very much, historians of talked a great deal about a mass exodus from northern medical schools of southern students, but in many ways for a lot of these southern students, this is a joy ride, and they go back to school the next Fall. So, a lot of southerners still did graduate from these schools after this heavily discussed exodus.

CHRISTOPHER BRICK: I love a great segue. And that was a great one. Thank you, Chris. Because another project in which race is like intensely implicated in this moment is both the sectional crisis and the creation of the confederacy itself.

Were these practitioners, these professionals, these racial scientists, were they applying these ideas in a sectional way? Or were, rather, the secessionists- I mean you have this one example

where you talk about the Mississippi secession, I guess resolution, that draws upon some of these racialized ideas about Poly Genesis, and about certain kinds of people being more adapted to certain work in certain climates etc. So, it seems to me there's a very close synergy at work between this race science and the kind of race politics that we're seeing come out of the Deep South.

CHRISTOPHER D. E. WILLOUGHBY: That's one where there is, so, on the one hand, as I mentioned in my talk, Mississippi is very overtly using labor or a kind of theoretical and inaccurate notion that Black people are better suited to labor in the Deep South, in the tropics to justify secession, to preserve their economy.

They're saying slavery is so essential and the science, they don't obviously say this science, but this notion that was widely held, that science was coming up with justifications for, is a fundamental justification for a need to protect slavery.

Because it's impossible to, as they argue, it's impossible for white laborers to do this work. Although I was just teaching Eric Williams to my students, capitalism and slavery, and he points out that in Trinidad they find a way for white workers after abolition to work in the tropics, fine, but one of the ironies of this actually is, on the war front during the war, who will most aggressively employ this racial science, and be able to is actually the union army and the union.

On the one hand, their bureaucracy, which far outpaces the confederacy, and the admittance of Black soldiers, they actually have a project of measuring soldiers bodies based on race, which will

kind of create these racial studies. And I should give credit, Jim Downs has talked about this and Leslie Schwam has done really great work on the army, both the creation of the Army Medical museum, which will have a huge skull collection, but also the constructions of tables of measurements of people's bodies based on race, that will create a new set of data, even larger than that being created in the plantations.

And then second, a lot of the arguments on how to use Black soldiers during this are based on a lot of the same assumptions about ability to labor in the Deep South. That undergird enslavement, so, most Black soldiers were not, up until late in the war, put in combat situations, but were instead given grunt and drudgery work, on the same set of ideologies of what their abilities are.

So, there's an irony and it's like I always try and point out, of course, the actual enslavers are far worse, but this the scientific part of this is broadly accepted and used to underpin a variety of different ideologies from force colonization of enslaved people to labor regimes in the northeast as well. So, there is a- the South uses it politically, but I would say that there's more clear evidence of the North, or the union, using it militarily, actually, during the civil war era. So, in that sense they were very much united.

CHRISTOPHER BRICK: Wow. This is really fantastic work and I feel like you have made me a better historian by virtue of sharing this with us today. Madam Chair, I was going to wrap this up, because we're almost at an hour, but if you have anything else, I want to pass the baton to you.

KARIANN YOKOTA: No, I really also enjoyed our discussion and the lecture. Maybe just as an easy final question since we've been talking to you for almost an hour. So, did you create a database of your 4000 theses or dissertations, because I think it be so fascinating to be able to search through those, you know, and see what kinds of topics, and whether it breaks up, you know, how it breaks down in terms of region and things. What are you going to do with that large body of research that you've done?

CHRISTOPHER D. E. WILLOUGHBY: That's a great question and it's right now a spreadsheet. A beautiful, beautiful Excel spreadsheet.

CHRISTOPHER BRICK:

Well spread sheets are relational databases!

CHRISTOPHER D. E. WILLOUGHBY: It's not too far, because I did keep regional data on where people, so I could kind of correlate that, and it will, some of it will make it into the book, but mostly in footnotes. So, I mean it would be something I'd love to try and find some sort of project, or venue, or online home to clean up and make available. And I'm hoping to do a digital companion to my manuscript when it comes out, but that might be more ambitious, and it actually happens when it when it comes to trying to get it up at the same time as the book. But that's the goal.

KARIANN YOKOTA: That would be great. Yeah, well we'll look out for it.

CHRISTOPHER D. E. WILLOUGHBY: Thank you for having me.

CHRISTOPHER BRICK: Yeah, this was, again, fantastic. Thank you to my illustrious Chair, Kariann Yokota for being with us today and-

KARIANN YOKOTA: Thank you.

CHRISTOPHER BRICK: Chris, thank you to you for this amazing work and for sharing it with the *Intervals* audience. Really appreciate it.