CROSS CULTURAL MEDICAL AND NATURAL KNOWLEDGE EXCHANGE ON
THE MISSISSIPPI FRONTIER BETWEEN GIDEON LINCECUM AND THE
CHOCTAW NATION: 1818 TO 1833

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A THESIS APPROVED FOR THE DEPARTMENT OF HISTORY OF SCIENCE

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Abstract

This paper closely investigates the natural and medical exchange of knowledge and its social and historical context between Gideon Lincecum (1793 – 1874) and his Choctaw neighbors in Mississippi between the years 1818 and 1833. In his book *The Roots of Dependency* (1983), Richard White suggests that the Choctaw were compelled to increasingly adopt European and Euro-American economic models at the expense of their traditional notion of reciprocal exchange. This resulted in a critical loss of their traditional means of subsistence and thus diminished political power compared to the United States. White is quite persuasive on the macroscopic level of his investigation, but this paper shows that in the interaction of Gideon Lincecum with the Choctaw, this broad view becomes more complex and problematic. Lincecum and the Choctaw elder Alikchi Chitto create a mutually satisfactory (though far from perfect) exchange of medical and natural knowledge by hybridizing Euro-American market exchange and Native American reciprocity. In addition to examining the content of this knowledge as well as the historical and social context of the exchange, this paper will investigate what knowledge was valued by each party as a function of their cultural perspective and why Lincecum marginalized and thus suppressed the mystical elements of Choctaw natural knowledge.
Introduction

Post-colonial scholars have discussed at great length the influx of Europeans and European Americans who settled the breadth of the North American continent, typically at the expense of previously settled Native American peoples. The immensity of the tragic loss of Native American life and culture makes for a heartbreaking and daunting tale. By now, the familiar narrative of pervasive intentional and inevitable subjugation of one culture by another, seems difficult to challenge. Yet by moving away from high-level historical narratives and exploring particular individuals and the story of their relationships, it becomes possible to understand more clearly the ways that power imbalances could emerge, even under circumstances of considerable mutual respect. This thesis will explore knowledge exchange between an Anglo-American naturalist, Gideon Lincecum (1793 – 1874), and the Choctaw people, in particular a Choctaw healer and medical teacher, the Alikchi Chitto of the Choctaw Nation Six Towns District.

In his book *The Roots of Dependency*, author Richard White persuasively and meticulously argues that a combination of cultural, ecological, and economic factors slowly but surely created a political imbalance between the pre-removal Choctaw Nation and their European and later Euro-American neighbors, leading up to, and facilitating that nation’s removal to what is now
the Southeastern corner of the U.S. state of Oklahoma.\textsuperscript{1} Central to White’s argument is the idea that a pervasive and fundamental misunderstanding between the cultures concerning the exchange of material goods is a significant underlying cause of such factors.

Specifically, White investigates what he claims to be the mutual incommensurability of European (and Euro-American) market exchange and the Native American paradigm of reciprocity. In general, the market trading of material goods entailed the rigorous negotiation of a specific quantity and perhaps quality of commodities for an exchange of goods or perhaps services acceptable to each party. It did not require any other level of interpersonal relationship to exist outside the explicit terms of the contract. The Choctaw concept of reciprocity, however, only superficially resembled this; material goods changed possession, but the idea of “mere” quid pro quo does not capture the deeper interpersonal (and sociological) significance of the act of exchange. Traditional exchange relationships among the Choctaw involved creating and maintaining bonds of friendship and trust over time. Such exchanges strongly implied continual mutual and reciprocal obligation and duty to continue providing gifts and services as tangible signs of wanting to maintain

\textsuperscript{1} Richard White, \textit{The Roots of Dependency: Subsistence, Environment and Social Change Among the Choctaws, Pawnees and Navajos}, 1. paperback ed (Lincoln: Univ. of Nebraska Press, 1988) 1 - 146. In this book, White demonstrates how cultural, environmental and economic factors effected a shift in the balance of political power between three disparate Native American tribes and the United States. Through these three examples he suggests that this theme is common amongst the subjugation of Native American populations by the American government.
the relationship. White contends that these two systems were so deeply embedded into their respective cultures that it required many generations (and ultimately even the existence of mixed-blood generations) for the market and reciprocity cultures to begin to understand the cross-cultural implications of such exchanges. White suggests that all-too-frequently recurring misunderstandings thwarted well-intentioned interactions, and they also enabled less honorably-intended exchanges. These misunderstandings nearly always favored Euro-Americans.

The centuries of this “exchange disconnect” helped fuel the downward spiral of ever-increasing economic, ecological, and eventual cultural and political imbalance between the Choctaw Nation and Europeans and Euro-Americans. This imbalance facilitated the eventual, and White seems to suggest inevitable, subjugation of the Choctaw by the remaining “European” colonial power, the United States, resulting in the removal of the Choctaw Nation from their historical lands in Mississippi to Indian Territory (present day Oklahoma).

Narrowing the Focus

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2 Greg O’Brien, *Choctaws in a Revolutionary Age, 1750-1830* (University of Nebraska Press, 2002), 110 - 112. O’Brien cites Lincecum’s mixed-blood friend and distant relative Peter Pitchlynn and his family as particularly successful (in Anglo-American terms) at adopting the market exchange culture.
As much as White’s story can help us understand the ways that the dynamic of exploitation between Anglo-Americans and the Choctaw emerged, the lives of individual actors might not fit well into this narrative. What are we to make of relationships that seem to have been both mutually respectful and mutually satisfying? Are such stories just exceptions? I argue that they can reveal the challenges of cross-cultural interactions on the American frontier even when White’s theory of misunderstanding does not apply. In the life experience and personal interactions of Gideon Lincecum, we see evidence of this more complex picture. Lincecum seems in some ways to be an iconoclast, although he may not have been as unusual in frontier society as he might first appear. Through Lincecum’s experiences we see an individual actor whose participation in the early nineteenth century Mississippi frontier contrasts sharply with the economic, ecological, and cultural model that White posits as an explanation for the tragic outcomes of Euro-American and Choctaw interaction. Yet his interactions with the Choctaw nevertheless had outcomes that were troubling too, in ways that have implications more broadly for the survival of Native American knowledge in the nineteenth century.

Gideon Lincecum

During his approximately twenty years living among the Choctaw, Lincecum developed a close association with many members of the tribe. An accomplished, largely self-taught frontier polymath, Lincecum intentionally and systematically became fluent in the Choctaw language, culture, cosmology,
herbology, and healing arts. At the same time, he embodied the emerging culturally-European proto-scientific naturalist and natural philosopher who was strongly influenced by Enlightenment thinking. Yet his keen interest in Choctaw knowledge suggests that he was open to actively re-evaluating the validity of European and Euro-American knowledge.

Lincecum’s origin and early childhood seemed fairly unremarkable for a member of an American pioneer family. He was born of French, English, Dutch, and Scots ancestry in Warren County, Georgia in 1793. His paternal grandfather and two uncles had been killed in action during the American Revolution. Lincecum reported that his mother Sally was illiterate and his father Hezekiah was barely literate and uninterested in books. Both, however, were exceptionally physically robust, intelligent, and industrious. Hezekiah had spent a short term as a particularly promising and charismatic Baptist minister until he was voted out of his congregation for baptizing a favorite cat. There can be little doubt that Hezekiah’s bitterness towards his former congregation contributed significantly to his son’s antagonism towards spirituality in general and organized religion in particular.

Lincecum’s accomplishments as a scientist set him well apart from other European Americans of his acquaintance and eventually garnered him

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international accolades (and controversy) within the wider English and Anglo-American scientific community. In addition to possessing considerable skill as a frontier settler (i.e. tracking, hunting, fishing, homesteading, farming, animal husbandry, carpentry, etc.), Lincecum became a well-respected and highly successful merchant and physician. His insight and observational ability allowed his scientific outlook to aid the more practical aspects of these trades. This is most apparent with respect to Lincecum’s botanical knowledge and its value in his medical practice, a knowledge intentionally and appreciatively derived largely from Lincecum’s apprenticeship to an elderly Choctaw medicine man. In this paper, I will discuss in more detail this and similar cross cultural transactional relationships and their significance for White’s thesis about the reciprocity cultural disconnect, particularly in its importance with respect to knowledge exchange.

Lincecum’s education included learning homesteading from his parents, wood lore and hunting from Muscogee Creek Indian playmates, and leveraging five months of the most basic frontier schooling to be able to read the works of Erasmus Darwin at an early age. This unlikely, culturally diverse education set Lincecum on a life trajectory that would combine elements of Native American

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6 Lincecum, *Science on the Texas Frontier*.
and European knowledge in practical ways. Lincecum synthesized a respect for the emerging post-Enlightenment scientific method, practice, and education with Native American natural knowledge and culture, while simultaneously devaluing the authority of traditional western medical and received religious knowledge.

In terms of economic culture, Lincecum is at first glance a fairly typical free market, wealth-building, entrepreneurial frontier homesteader, who attempted to supply a whole assortment of goods and services in what he hoped would be lucrative frontier business opportunities. In this respect he typified White’s prototypical Euro-American trader looking to build wealth through market trading with Indians. However, his interaction with Native Americans on the frontier paints a much more complex and interesting picture that suggests Lincecum also understood, internalized, and freely practiced the Native American reciprocity paradigm. Furthermore, he didn’t simply reserve his market dealings to European Americans and his reciprocity actions to Indians. As we will see, many of his interactions exhibited characteristics of both. Given that Lincecum was genuinely interested in personal material gain, increasing his scientific, natural, and medical knowledge, as well as building and maintaining friendship and close community with his Indian and Euro-American neighbors, we see Lincecum employing both market and reciprocity

\[7\] White, *The Roots of Dependency*, 45, 57 - 59. Such as James Adair, and English trader who failed to understand the reciprocity paradigm in particular and Choctaw culture in general.
principles in an organic synthesis that belies White’s assumption that European behavior was characterized by disinterested market exchange. However, as I will demonstrate in this thesis, although Lincecum clearly valued the Choctaw and many aspects of their knowledge and culture, he failed to fully appreciate the culturally embedded holistic integrity of such knowledge, a failing probably prompted by his endorsement of certain strains of Enlightenment thinking.

Historiography

Richard White’s book, *The Roots of Dependency*, serves as the main foil for my work in this thesis.\(^8\) White demonstrates how environmental and economic factors effected a shift in the balance of political power between three Native American tribes (Choctaw, Pawnee, and Navajo) and the United States. By examining these three tribes, who lived in varied geographies, had distinct cultures, and whose engagement with Anglo-Americans operated on different timelines, White argues that the common explanatory factors that explain their loss of sovereignty and political agency is the market-based economic system forced on them by their interaction with Europeans and later Euro-Americans.

White focuses on the Choctaw in the first third of this book, positing that the Choctaw gradually lost their political agency not through loss in warfare to European powers or the United States, but by being increasingly compelled to

\(^8\) Ibid.
adopt the market exchange paradigm. As the Choctaw increasingly desired European-style trade goods to meet the reciprocal exchange demands of their society, the more they were compelled to engage in the European paradigm of market exchange. As Choctaw-provided services and military alliances decreased in importance to European powers, the Choctaw were increasingly compelled to barter deer skins in exchange for European trade goods. The deer population helped to maintain its own habitat as well as other important factors of Choctaw subsistence. Thus by overhunting the deer, the Choctaw gradually effected an environmental change that made them increasingly dependent on European goods, such as guns, metal tools, and alcohol, to maintain their subsistence.

White contends that this dependence required that the Choctaw increasingly adopt European notions of market exchange, especially as British and then Anglo-American power waxed in relation to the other European powers which were more tolerant of the Choctaw notion of reciprocal gift exchange. The Choctaw were (until the final decades preceding removal in the 1830s) neither completely willing nor materially able to compete in such a market, especially due to the scarcity of the deer population. White’s central thesis is that the economic dependence and loss of subsistence habitat fueled each other into a downward spiral. The Choctaw became either utterly dependent on Euro-American material goods or (as in the case of many mixed-blood Choctaw) had finally adopted Euro-American cultural notions of market exchange.
Though this grand trajectory of subjugation rings valid at the macroscopic level, it does not necessarily do so when examining the details of personal interactions. This paper disagrees with White’s implicit yet pervasive suggestion of the necessarily deterministic subjugation of Choctaw culture by Euro-American culture. Thus White may have been able to better nuance his argument had he considered such micro-narratives as the interaction between Lincecum and the Alikchi Chitto. This thesis challenges White’s overly broad and deterministic narrative by building upon White’s discussion of cultural disconnect regarding market exchange versus reciprocal exchange.

Greg O’Brien’s *Choctaws in a Revolutionary Age* makes an excellent supplement to White’s and Lincecum’s histories of the Choctaw. It goes into greater detail than White’s analysis regarding how Choctaw culture related to the changing political dynamics with other tribes and European powers prior to the American Revolution between 1750 and 1830. Unlike Lincecum’s own histories, O’Brien’s book focuses on the effects of coercive power and influence between cultures. This study adds to O’Brien’s book by demonstrating an example of a largely non-coercive co-production and exchange of knowledge.

Paul Starr’s *The Social Transformation of American Medicine*, David Dary’s *Frontier Medicine*, and Volney Steele’s *Bleed, Blister, and Purge: A History of Medicine on the American Frontier* relate how the “profession” of healing practitioners (including indigenous practitioners) in America was anything but standardized in terms of practice, methodology, and social
standing during Lincecum’s time.\textsuperscript{9} My exploration of Lincecum and the Choctaw adds to this literature by examining a particularly fruitful if imperfect collaboration of knowledge exchange between a frontier doctor and native healer. It provides a detailed case study that supports these authors’ assertions that frontier physicians routinely synthesized various schools of medicine, including that of indigenous peoples. This case study also underscores the importance that Dary and Steele place on the holistic nature of the native conception of “medicine.”

Marcel Mauss’s \textit{The Gift} as well as Harold J. Cook’s \textit{Matters of Exchange} develop concepts of reciprocal gift exchange.\textsuperscript{10} Mauss accumulated and synthesized many anthropological studies of indigenous societies with histories of ancient European cultures to formulate his theory of reciprocal gift exchange in what he termed “archaic societies”. Particularly important in this discussion of Lincecum and the Alikchi Chitto, is the way in which Mauss stresses the powerful if implicit reciprocating and enduring responsibilities of both the donor and receiver of gifts. His main point is that reciprocation inherently nurture social bonds between donor and receiver. Cook’s volume builds on Mauss’s theory by expanding his list of potential gifts to include

natural and medical knowledge, particularly in the proto-Enlightenment setting of the Dutch East Indies circa 1630. Like Lincecum, Dutch physician and naturalist Bontius engaged with and admired much of the indigenous people’s natural knowledge. Chapter two of this paper posits that Lincecum, much like Bontius, failed to value and thus record the whole cosmological range of indigenous knowledge in his “scientific” reporting, thus violating a key duty of the receiver in Mauss’s theory of reciprocal gift exchange.

The key source for Lincecum’s experience with the Choctaw is Lincecum’s autobiography, which he compiled between 1871 and his death in 1874. Additionally, Lincecum’s biography of Pushmataha is also helpful in his retelling of the Choctaw origin story told to him by Chahta Immataha in the 1820’s. This thesis uses these as the primary source documents concerning Lincecum’s interaction with the Choctaw and Alikchi Chitto. However, I frequently challenge Lincecum’s retelling of such interactions, in an effort to explain how Lincecum’s partisan but well-intentioned world-view affected the knowledge gained from, and transmitted on behalf of, the Alikchi Chitto.

A lack of Choctaw primary sources hamper any attempt to include substantial Choctaw oral traditions unmediated by Euro-Americans of Lincecum’s time or later Euro-American scholars. Choctaw children were

11 Gideon Lincecum, “Autobiography of Gideon Lincecum” (Long Point, Texas, 1874), Gideon Lincecum Collection, University of Texas at Austin.
12 Lincecum, Pushmataha.
starting to become literate in the missionary schools as Lincecum began to settle Mississippi in 1818 – and these schools were a mixed blessing at best. Furthermore, the forced migration to Indian Territory beginning in 1831 may have substantially disrupted the continuity of Choctaw oral tradition by killing many of the elders who kept such knowledge. Consequently, it is left to modern scholars to infer much of Choctaw pre-removal history by correlating what Europeans and Euro-Americans have written, with what we otherwise know is true of Native Americans. In chapter two this study draws on this wider base to offer a modest reinterpretation of Alikchi Chitto’s conception of natural and medical knowledge by engaging in a more critical reading of Lincecum. It explores how and why Lincecum removed the spiritual aspects of Choctaw cosmology from the Alikchi Chitto’s gift of knowledge.

Chapter Outline

Chapter one examines Lincecum’s experiences on the frontier, including his decision to start practicing medicine, and his multifaceted engagement with the Choctaw. The wider context of medical practice on the frontier, embracing European, Euro-American, and indigenous medical traditions, will be essential for understanding both Lincecum’s choices, and the reasons that he became interested in learning from the Choctaw in the first place. It will also explore Choctaw history, particularly in terms of their attitudes towards foreign knowledge and the ways they used that knowledge to maintain their cultural distinctiveness and sovereignty. A close look at Lincecum’s botanical notes will
demonstrate how Lincecum internalized – and sometimes failed to internalize – specific aspects of the knowledge gifted to him by the Alikchi Chitto.

Chapter two delves deeper into the social and cultural facets of the exchange relationship itself. I will explore Lincecum’s attitude towards the knowledge he received, and how this was influenced by his relationship to the Choctaw as well as his Enlightenment-inspired tendency to divorce (and differentially value) the “practical” and “factual” aspects of Choctaw knowledge from the spiritual aspects. Marcel Mauss’s theories on reciprocal gift exchange are shown to be a better model for Lincecum’s engagement with the Choctaw, both in terms of its success and its failure, than the Adam Smith-inspired market exchange emphasized by White. By showing how Lincecum’s relationship with the Alikchi Chitto quickly and thoroughly morphed from a contractual market exchange in the Anglo-American tradition into reciprocal gift exchange in the Choctaw tradition, I demonstrate how Lincecum proved to be both a worthy and unworthy receiver of the Alikchi Chitto’s gift of knowledge, and an effective, and ineffective bridge between Anglo-American and Choctaw cultures.
Chapter 1: Gideon Lincecum’s Knowledge: Natural and Medical Knowledge Exchange with the Choctaw

In his book *The Roots of Dependency*, Richard White frequently mentions the reciprocity paradigm as a culturally-based communications disconnect between the Choctaw and the Europeans and Euro-Americans. That is, when participating in an exchange, Euro-Americans tended to see this as a limited transaction that entailed no or few further obligations once it was completed to the satisfaction of both parties. Native Americans on the other hand, tended to understand even rather straightforward transactions (like the sale or trade of items) as a foundation for a relationship based on reciprocal obligations and privileges. Trade of goods might be seen in such cases as the starting point of something larger, rather than a simple transaction in itself. White suggests not only that each culture had different expectations; sometimes willful or feigned ignorance on both sides was a strategy used to induce the other party to meet their own terms and get the most out of exchange.

This communications disconnect, in White’s view, helped to fuel the exploitation of Native Americans by Anglo-American traders, with tragic consequences. White’s observations were formulated specifically with respect to trade goods, like deer skins or alcohol. What about exchange of knowledge? Should we understand it the same way? Without necessarily challenging the broader explanatory power of White’s thesis, this chapter will probe the
character of knowledge exchange through the life experiences of Gideon Lincecum, a pioneer and doctor who embedded himself in both Anglo-American and Choctaw cultures. Lincecum’s life allows us to explore the extent to which White’s views on the reciprocity disconnect are sufficient for helping us understand this important interface between Anglo-American and Native American societies.

Although his engagement with the Choctaw reciprocity paradigm was hardly isolated to medical and natural knowledge, I focus on them as particularly rich areas in which to explore the place and interpretations of reciprocity in their relationships. Both Lincecum and the Choctaw he engaged with were undoubtedly interested in this knowledge for its immediate practical applicability, yet they also clearly held the knowledge as important for more than its practical utility, though frequently for different reasons. This chapter will locate this knowledge in its broader historical and cultural context to illustrate what it was that Lincecum and the Choctaw valued and therefore sought to exchange.

Erasmus Darwin as an early influence on Lincecum

Gideon Lincecum endeavored to live his life on the frontier both metaphorically, by expanding his personal knowledge, and literally in that he changed his residence to match the westward expanding reaches of the young republic. Born in the frontier territory of Georgia in 1793, Lincecum’s education included learning homesteading from his parents, Indian wood lore and hunting
from Muscogee Creek Indian playmates, and leveraging five months of the most basic frontier schooling to be able to read some quite advanced scholarly literature. Thus Lincecum thoroughly and intentionally cultivated his own education even from an early age and actively engaged and expanded his curiosity throughout life. In Lincecum’s autobiographical account, he makes it clear that from a surprisingly early age he began reading some of the works of Erasmus Darwin as a sort of reading primer. Lincecum also suggests that he continued to read and value Darwin’s knowledge, notably in much later correspondence with Erasmus Darwin’s grandson Charles Darwin, with whom he collaborated in publishing two of his letters in the Transactions of the Linnean Society. Erasmus Darwin’s works pushed the frontiers of science and medicine, laying much of the framework for his grandson’s work on natural and sexual selection. In considering Erasmus Darwin’s own cutting-edge works we can see not only a body of knowledge that Lincecum would come to value, but perhaps even more importantly a philosophical approach to knowledge that Lincecum would come to substantially emulate, an approach that might encourage Lincecum to be unapologetically iconoclastic in his diverse and wide-ranging search for reliable scientific, medical, and natural knowledge. Jerry Lincecum (a modern day descendent of Gideon) suggests that Erasmus Darwin’s Zoonomia was particularly influential to Gideon.

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... the first edition in two volumes weighing ten pounds, and distilling a lifetime’s experience in practical medicine... [Gideon] Lincecum referred to it as “the textbook of [medical] practice for the United States.”

Jerry Lincecum suggests that Gideon mimicked Erasmus Darwin’s poetic and romantic writing style in describing natural observations. Gideon Lincecum also completely avoided alcohol consumption based on Erasmus Darwin’s recommendation.

How likely would it have been for a nine year old Gideon Lincecum to acquire access to serious scholarly works by Erasmus Darwin, much less be able to use them to not only learn how to read, but to come to understand them to such a degree that they became a foundational influence? We have little more than Lincecum’s own autobiographical account as documentation that much of this occurred. While the few Lincecum scholars have suggested that he seems to embellish his accounts at times in support of his personal hero narrative, we also know that he could be particularly self-aware and scathing in his own self-portrayal. Consequently, it seems highly possible that Lincecum did encounter Darwin’s works and attempt to read them. Darwin’s works were widely available even on the American frontier, having been published in multiple locations (as near as New York). It seems likely that Lincecum became so well acquainted with, and indeed especially internalized, Darwin’s works

14 Ibid., 8.
15 Ibid. 9.
precisely because in using them as reading primers, he would have had to read them repeatedly and consider them carefully.

Gideon Lincecum Moves to Mississippi

One of the first things Lincecum thought to do upon arriving at his eastern Mississippi homestead in 1818 was to meet with his Choctaw neighbors across the Tombecbee (Tombigbee) river. Lincecum soon found that significant Euro-American and Choctaw cultural synthesis had preceded him by a generation, notably by meeting with the Euro-American patriarch of a mixed Choctaw family. John Pitchlyn was not only wealthy, locally well-respected, and on amicable terms with both Choctaw and Americans, he was also related to Lincecum’s mother and had been a good friend of his father in their youth. John Pitchlyn and his mixed blood Choctaw son Peter Pitchlyn immediately and repeatedly introduced Lincecum into the Choctaw community.16 We should note that the Pitchlyns’ “adoption” of and familial relationship with Lincecum and his young family afforded the Lincecums the immediate social credentials necessary to be quickly legitimated within the wider Choctaw society.

Lincecum put his new social credentials to commercially profitable use by opportunistically purchasing the trade goods from another Euro-American merchant who similarly wished to capitalize on the commercially promising

16 Gideon Lincecum, “Autobiography of Gideon Lincecum” (Long Point, Texas, 1874), Gideon Lincecum Collection, University of Texas at Austin, 52.
location that would soon become Columbus, Mississippi. Leveraging the Pitchlyn family-based goodwill of the Choctaw, Lincecum quickly resold all the merchandise he had purchased and thus found himself in the mercantile trade to the Choctaw for four years.\textsuperscript{17} During this period Lincecum made a considerable profit from the store trade, but it came at the cost of his and his family’s health. Though the river site proved an ideal location for the Choctaw to trade, and for Lincecum to exchange the Choctaw items via riverine transport, the river and environs itself harbored tropical diseases such as cholera and dysentery.\textsuperscript{18} Lincecum reports that at any given time, at least one of his family was ill due to their proximity to with the river.\textsuperscript{19}

Avoiding residency in the river valleys and the tropical diseases associated with them is a practice that the Choctaw (and many people indigenous to such regions) fundamentally understood. At the very least they avoided prolonged exposure, typically staying long enough to engage in relatively short bursts of activity such as fishing or foraging.\textsuperscript{20} Lincecum would likely have known this very early in his mercantile tenure by interacting with and learning from the Choctaw, if not from his Indian friends in his youth. Yet he was torn between continuing to build wealth, and needing to spend much of it on

\begin{footnotesize}
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  \item \textsuperscript{17} Ibid., 53 – 55.
  \item \textsuperscript{18} Charles E Rosenberg, \textit{The Cholera Years: The United States in 1832, 1849, and 1866} (Chicago: University of Chicago Press, 1987) 74; Lincecum, \textit{Pushmataha}, x. It likely that any “Cholera” that Lincecum reported during this time was Cholera Morbus, what we would today term gastroenteritis.
  \item \textsuperscript{19} Lincecum, “Autobiography of Gideon Lincecum”, 54 – 56.
  \item \textsuperscript{20} White, \textit{The Roots of Dependency}, 12 -15.
\end{itemize}
\end{footnotesize}
doctors who according to him could do nothing but remove him of both blood and wealth. This was Lincecum’s first personal experience with modern medicine that led him to start questioning its value. Although he kept the trade store open another two years after seriously reconsidering the situation, at about the four-year point he resolved to remove his family’s residence to higher ground, which although not nearly as convenient for operating the store, allowed his family to regain and maintain some measure of good health.²¹

Medical Knowledge and Social Standing in the Jacksonian Democracy

The Jacksonian era in American history was characterized by an egalitarian, anti-elite cultural shift that stretched through many areas of knowledge, including medicine and science. In 1828 famed general of the Battle of New Orleans, Andrew Jackson (1767 – 1845) was elected president. His election marked a major shift in thinking among the American electorate. Poorer white males were no longer willing to rely on an elite cadre of citizens to use their purportedly superior abilities to run affairs “on behalf of” their fellow

²¹ T. Lindsay Baker and Julie Philips Baker, The WPA Oklahoma Slave Narratives (University of Oklahoma Press, 1996) 246. Chickasaw Freedwoman Mary Lindsay: “My mammy come out to the Indian Country from Mississippi two years before I was born....” Her mother came as a slave as her Mixed-blood Chickasaw owners to settle near the Red River below Fort Washita. Mary’s mother told her that they had a hard time with small pox, malaria, and “fever” when they first settled “because it was low and swampy and all full of cane brakes, and everybody have the small pox and the malaria and fever all the time. Lots of Chickasaw families nearly died off.” In this case the Chickasaw had resettled into Indian Territory and likely had little choice but to live near riverine diseases, though like the Choctaw they would not have done so back in their Mississippi homeland.
citizens. White males (of property until 1828) whose lack of social connections, fortune, confidence in their own knowledge and abilities, etc. which had thus far prevented them from entering the public sphere, found such confidence and legal standing encouraged in the emergence of President Andrew Jackson. Jacksonian Americans challenged all knowledge and authority that they believed hinted at being elitist or arcane. Jackson himself abrogated massive federal powers to himself in order to limit the power of the federal government’s other two branches: the legislative and judicial in favor of empowering his own executive power as well as that of individual states. A self-styled populist, he believed that individual states – as well as himself as President - were closer to the level of the average citizen both in terms of effect, and especially accountability. With more power and authority given to the states, there were more options for the average white male to directly participate in his local government.

Government and politics were certainly not the only spheres in which the values of Jacksonian democracy found themselves being applied. Religion, ethics, science, education, and medicine were likewise re-examined and reinvented through the lens of the enhanced egalitarian movement. It is important to note that (allowing for differences in how one might characterize

these fields of knowledge and authority suffered little if any net loss of prestige; however, the authority of the traditional experts in that knowledge certainly did. To the Jacksonians, validating the common man’s claim to such knowledge re-established its authority on newly justified grounds.

Consequently, though the Jacksonian citizenry generally viewed these fields of knowledge per se as still worthwhile, they began to perceive their specific content, practice, and development through the lens of personal and societal practicality.²⁴

The Social Status of Medical Practitioners

In terms of practice, American medicine in the time of Gideon Lincecum was anything but uniformly applied. A disparate array of competing medical theories and associated practitioners vied for recognition of authority and economic viability among the public. In the latter half of the eighteenth century, prominent American physicians practicing the “heroic” system of medicine sought to duplicate the class-based division of labor in medicine that existed in England. The system had afforded English physicians an elevated status and social rank over apothecaries, midwives, surgeons, barbers, and dentists. In the young republic, these “gentleman” physicians had succeeded in establishing some medical schools and licensing authority, yet overall they had tried and failed to produce a stable and self-propagating system that was either legally

binding or socially compelling enough to secure for themselves continued public patronage.\textsuperscript{25}

In terms of professionalization, American physicians faced numerous challenges that their English counterparts did not face (or did not face to the same degree.) For example, although they encountered a variety of competitors, including these same apothecaries, midwives, surgeons, barbers, and dentists, in England differences in social rank supported an uneasy but typically workable division of labor and authority (in kind, if not in status) between the professions. Physicians would freely collaborate with apothecaries, surgeons, and midwives, and when wealthier patients could afford the attention of multiple people, these lower-status craft healers would typically yield to a physician’s expertise and judgment, supporting the physicians’ authoritative “prescription” with their own hands-on knowledge and products (e.g. medication). Only on behalf of the lower social classes who could not afford a physician could the less-than-gentlemanly craft healers legitimately provide their own executive direction.\textsuperscript{26}

Due to an initial lack of gentlemanly physicians in the colonies, as well as sufficient wealth to pay them, such “craft healers” became established providers in the United States. Those who aspired to become gentlemanly physicians in

\textsuperscript{25} Ibid., 59.  
\textsuperscript{26} Ibid., 37 – 38.
North America faced competition without the mediating assumptions about class and authority seen in England. Craft healers in America treated any and all classes of patients, as secure in their own knowledge and social positions as were the physicians, (although in neither case was their position especially high or secure.)

Increasingly, Americans came to regard all those who practiced medicine as doctors, abandoning the linguistic forms that reflected traditional class distinctions in medical practice [In Britain]. All manner of people took up medicine in the colonies and appropriated the title of doctor. The boundaries between profession and trade, so assiduously preserved in Britain, became blurred in America… Eventually those who practiced did so as their primary trade, and by the mid eighteenth century emerged as a corporate group.27

In addition to competition from established craft healers, American physicians experienced profound social, economic, and philosophical competition from practitioners of indigenous American medicine, in the form of craft healers who adopted (or purported to adopt) Indian ways of medicine as well as from practitioners who were actually indigenous. Before the mid-1850’s, Euro-American valuation of Native American culture was complex. In the British colonies as well as in the early American republic, Native Americans were frequently (if never universally) highly respected as authoritative in several fields of natural knowledge, particularly knowledge of nature found in locations

27 Ibid., 39, While true throughout the colonies and young republic, the emergence of craft practitioners was further pronounced on the frontier, being even further culturally, financially, and geographically distant from the English system than was east coast medicine.
understood by Euro-Americans as apart from “civilization.”

In the colonial period and during the early republic, Native American healers sometimes enjoyed almost as much respect among Euro-Americans of various social strata as among Native Americans. However, Euro-Americans typically did not value the mystical and spiritual components thought by Native Americans to be intrinsic to the treatment. The term “medicine” in Native American cultures carried important cosmological meanings that were absent in the understanding of medicine in post-Enlightenment Western culture.

Choctaw Medicine

“The Indian word medicine probably derived from médecin, the French word for physician, which early French fur traders likely introduced into North America. The term was widely applied by Euro-Americans. In time, Indians used the word to identify their own healing methods and spiritual mysteries.”

This French origin theory suggests that Natives adopted a term with an emphasis on the person who practiced healing, as opposed to the English term’s emphasis on the practice itself. This perhaps accounts for the Native belief that all people were responsible for various aspects of healing, of themselves and each other, in what Euro-Americans must have perceived as a

28 David Dary, Frontier Medicine (Knopf Doubleday Publishing Group, 2008) 42.
30 Dary, Frontier Medicine, 4-5; Steele, Bleed, Blister, and Purge, 22-23.
bewildering mix of physical, spiritual, and natural knowledge and practices. Although almost any adult in most Native societies would have thought nothing of practicing such healing, nearly all societies had their specialists.

Indian country is full of doctors, and they are all magicians, and skilled, or profess to be skilled in many mysteries, the word ‘medicine’ has become habitually applied to everything mysterious or unaccountable and the English and Americans… have easily and familiarly adopted the same word, with a slight alteration, conveying the same meaning; and to be a little more explicit, they have denominated these personages ‘medicine-men,’ which means something more than merely a doctor or physician.  

Thus American popular use of the term medicine came to distinguish and appreciate its differing (if overlapping) meanings inherent to their own secular healing tradition and that of Native Americans.

Clearly there is much overlap in meaning in how all actors pertinent to this discussion used the term medicine, but the difference in emphasis demonstrates important points of discussion. Native American cosmology bound together in amalgam what Euro-Americans perceived as mostly separate aspects of human experience: spiritual, natural, and medical. The former emphasized the distinctiveness of such categories, while the latter emphasized reverence and continuity.

But while Native Americans reverenced nature, they did so with the full knowledge that “Nature is threatening as often as it is benevolent. Ceremonies were held to restore balance that had

31 David Dary, Frontier Medicine (Knopf Doubleday Publishing Group, 2008) 4 - 5.
been disrupted, or to assure that balance continued and nature produced the results that the people desired.”

While all persons participated in such ceremonies, the Medicine Men (and sporadically women) presided over the ceremonies. The ceremonies and resultant healing (spiritual, medical, and natural) in their turn served to reinforce the authority and status of the Medicine Men. It is perhaps ironic that “medicine men” enjoyed in their Native cultures, and even in mainstream American frontier culture, a loosely equivalent elevated social rank and epistemological authority to that afforded to English gentleman-physicians, while American would-be elite physicians often found this to be just beyond reach.

Specific practices varied between tribes and regions. By the time of Lincecum’s contact with the Choctaw, the nation’s most authoritative healers were the Alikchi Chitto (Choctaw for Big Doctor). Most of what we know of this practitioner role comes from the recollections of Gideon Lincecum of his apprenticeship to the Alikchi Chitto of the Choctaw Six Towns district. The Alikchi Chitto’s duties were three-fold: healer, pedagogue of healing, and collector of new healing knowledge. Continuously itinerant, the Alikchi Chitto toured the wilderness and settlements of his people’s region, harvesting herbs

33 Volney Steele, Bleed, Blister, and Purge: A History of Medicine on the American Frontier (Missoula, Mont: Mountain Press Publishing Co., 2005) 19, 24. This is a broad generalization of aboriginal Native societies. In fact considerable variation existed among Native tribes and regions with respect to the level of social elevation of Medicine Men and how securely they held it.
34 Leslie Caine Campbell, Two Hundred Years of Pharmacy in Mississippi (Jackson: University Press of Mississippi, 1974) 3 - 4.
and treating injuries and illnesses wherever he found them. Furthermore, he concurrently demonstrated how to harvest, prepare, and administer the herbs, intentionally diffusing his knowledge among the people in an effort to make them more self-sufficient. In Lincecum’s account there is little if any apparent conscious attention to mysticism or spirituality. Thus his description of the Alikchi Chitto’s role stands in stark contrast to the previous source’s description of the generic Indian “medicine man”, both in terms of where authority lay, as well as what the individual intended to accomplish. The Alikchi Chitto, in keeping with the general understanding of a “medicine man”, sought to directly administer treatment, with their social status perhaps reinforced by popular perceptions of outcomes. However, in the case of the Alikchi Chitto, his status was reinforced by accumulating knowledge from his people and his role as a teacher creating medical self-empowerment. And, in Lincecum’s account, there are no embedded mystical or spiritual elements of knowledge. Does the lack of attention to mysticism represent a real distinction or merely reflect Lincecum’s disdain of all things spiritual? As we will see, although it is not possible to provide a definitive answer, it is likely that Lincecum omitted or underreported spiritual elements in an act of Enlightenment censorship.

The Adaptability of Choctaw Knowledge and Practice
The five Southeast Tribes were notable for their willingness to consider and accept new ways of thinking and doing. By the time of sustained Anglo-American contact in the seventeenth century, the Choctaw tribe was a sedentary (non-migratory) agrarian confederation comprised of three geographically separated, semi-autonomous political groups, each with their own leadership structures. Scholars have noted the ease with which the tribe has historically adapted to outside knowledge, customs and technologies, being opportunistic in adopting often dramatically new ways of living from other Native American tribes as well as European and Anglo-American traders, settlers, and missionaries. Their ancestral homeland having been located largely in what would eventually become the northern portion of the state of Mississippi, the Choctaw were well-situated to maintain frequent and prolonged contact with other tribes as well as Europeans via the Mississippi River and its tributaries, game trails and trade routes. By the mid eighteenth century the Choctaw began to find European finished trade goods like cloth, firearms, and other metal implements (as well as alcohol) to be highly desirable. The introduction of European-style trade induced, and the introduction of European firearms and later alcohol greatly accelerated, the Choctaw to begin overhunting deer to

35 The Choctaw, Cherokee, Chickasaw, Muscogee Creek, and Seminole tribes. Popularly but problematically also known as the “Five Civilized Tribes.”
obtain pelts as barter in trade/gift exchange, thereby fundamentally destabilizing the traditional Choctaw economy and ecology.

Until this time, Choctaw women had combined an inherently flexible process of cultivating a variety of nutritious crops while the men hunted deer partly by actively managing the deer habitat to cultivate the deer population. Additionally, in times of particular famine the Choctaw could convert to a primarily hunter-gatherer mode by dispersing into this deer habitat, allowing for a tenuous and uncomfortable but often life-preserving fail-safe option. The overhunting of deer for pelts instead of food resulted in the Choctaw becoming more dependent on European practices and technologies, and gradually losing some of their inherently self-sustainable and flexible means of survival. This in turn reinforced their dependence on European technologies and practices enabled by the tools and materials produced only in European-style workshops.

Historical Context of Choctaw Reciprocity

The Choctaw, like the other major Southeast Indian nations, had traditionally been opportunistic in acquiring and adopting other native knowledge, practices, and associated cultural values into their own, perhaps stemming from, as well as perpetuating, a diversity of thought and practice that

37 White, The Roots of Dependency, 29 - 32.
38 Ibid. Another of White's central assertions.
particularly enabled the Choctaw to weather the changing fortunes of climate, pestilence, and warfare. For centuries, contact with Europeans generally continued along this trajectory as to the Choctaw such contact remained consistent with their traditional dealings with neighboring tribes which included trading, access to hunting grounds, and military alliances. In this context, despite their odd customs and impressive technologies, Europeans were initially viewed by Choctaw as only marginally different from the indigenous tribes with whom they interacted. Until the end of the eighteenth century, Europeans typically lacked the regional population and permanent infrastructure that would lead the Choctaw to perceive the Europeans as a serious threat to their sovereignty and culture. Until this time, the Choctaw played European powers and neighboring tribes, as well as occasionally elements within their own nation, against each other to achieve the most favorable short-term material benefits. Typical in Native American societies, Choctaw leaders reinforced their power by giving material gifts to tribal members who demonstrated loyalty, bravery, service, or similar admirable social qualities. These individuals could then further distribute to reinforce their own social positions. It was incumbent upon a chief to obtain and award these goods as part of the social contract with his followers. Failure to do so could cause a lapse in confidence in his leadership and consequently a loss of influence or

even position.\textsuperscript{40} Into this context entered European explorers, traders, diplomats, missionaries and military with their particularly desirable manufactured goods and military-political-religious rivalries. The European colonial powers themselves differed in their own perceptions of what exactly occurred when such material changed hands; the pre-French Revolution (1789) French, perhaps being relatively less culturally removed from the paradigm of lordly patronage than the British and their colonists and less intrinsically tied to the market exchange paradigm, generally better and earlier understood the Choctaws' perception of reciprocal exchange. \textsuperscript{41} The British, however, thought more in terms of purely material exchange. In this system material was traded not for such nebulous notions as the cultivation of favor and friendship, but instead for specific goods and services, and occasionally to reinforce military alliances. For these reasons, the French initially enjoyed particular favor and influence among the Choctaw leadership relative to the English. This pro-French balance of power gradually gave way to English industry's ability to produce the daily wants of the Choctaw people more efficiently and in greater numbers than the French, whose industrial base specialized more towards expensive, fashionable, hand-crafted items. By demanding from their leadership

\textsuperscript{40} White, The Roots of Dependency, 66. Originally, the redistributed items were the meat gained from hunts and loot gained in war that required large numbers of Choctaw men. European manufactured goods (particularly firearms) and eventually alcohol, gradually supplanted these as the primary item of distribution.

\textsuperscript{41} The French in New France were actively practicing a form of feudal land-tenure in the Seigneurial System of land management and ownership.
more of the English produced items such as metal tools and cookware, glass beads, and especially firearms, the Choctaw effected a gradual power shift away from the French towards the English. In this respect Choctaw chiefs might have liked to remain loyal to the French, but well-entrenched, traditional tribal power relationships compelled them to be responsive to the needs of their people, lest they lose political influence.42

Gifts given to the tribe (typically to ameliorate intertribal relations) and plunder taken in battle or raids (both being relatively infrequent), served to supply tribal leadership with the material goods that increasingly became the preferred currency of intra-tribal social interaction. The English could deliver more of what the average Choctaw wanted in material terms, which to the Choctaw represented the most tangible sign of friendship.43 Over time the English came to better understand and appreciate the Choctaw notion of gift giving while the Choctaw gradually came to a better cultural understanding of the British – and later Anglo-American - notion of market trade. This thereby further harmonized Anglo-Choctaw relations to the point that by the time of the French and Indian War (1754 - 1763), the French could no longer count on Choctaw military assistance against the English. France’s capitulation and consequent departure from the Mississippi region dramatically devalued the Choctaw Nation’s traditional (de facto) foreign policy of playing one colonial

43 Ibid., 49.
power off against the other. This coupled with the first appearances of British pioneers starting to settle near the Choctaw homeland created a more immediate perception that Europeans could pose a threat to the Choctaw.

The Choctaw did not, however, entirely give-up their heretofore successful diplomatic trick. Given the widening rift between the British crown and their colonial subjects, they attempted to play these two sides against each other, achieving ever diminishing returns as the Euro-Americans’ power waxed in proportion to their increasing regional population and especially when they gained their political independence during the American Revolution and as confirmed by the end of the War of 1812. This last war resulted in the British crown going the way of the French nearly half a century before, at least from the Choctaw perspective in that they were no longer available to be played against their former colonial subjects. Thus the Choctaw’s substantial efforts to aid the Americans in their bid to oust the vestiges of British regional power at the Battle of New Orleans turned tragic during the American removal of their erstwhile Choctaw allies during the “Trail of Tears” years about two decades later.

The Treaty of Ghent with Great Britain (December 24th, 1814) left the United States as the only purveyor of European-style material technologies within practical contact of the Choctaw Nation. Previously, Choctaw/American

44 Ibid., 100 – 102.
relations had been generally amicable, particularly considering their recent alliance against the British in which the Choctaw played a significant role in the decisive American victory at the Battle of New Orleans in 1815, which gained the Choctaw admiration among such Americans as future President and eventual Choctaw antagonist Andrew Jackson. It is against this backdrop that the Choctaw felt they could continue to negotiate in good-faith and on reasonably equal terms with the people and government of the United States.45 As the Choctaw would soon find, their dependence on American material culture created an unequal power dynamic which would dramatically hinder the practical limits of Choctaw sovereignty. Many in the Choctaw leadership perceived that this quickly emerging imbalance would severely threaten the Choctaw ability to safeguard not only their nation’s borders, but also their cultural distinctiveness. They realized that significant cultural synthesis was in many ways preferable, eventually unavoidable, and already consistent with the Choctaw tradition of adaptive flexibility in such matters. Thus began their multifaceted and mostly enthusiastic engagement in Euro-American politics, culture, and cosmology as a means of preserving Choctaw autonomy and cultural identity within the context of maintaining friendly relations with the United States and obtaining the means to become materially self-sufficient. To

remain sovereign, the Choctaw nation embraced certain aspects of Euro-American legal, political, technological, religious, and economic paradigms.\textsuperscript{46}

In becoming the dominant culturally and materially “European” power in the region, the Americans decreasingly valued the Choctaw as an ally, and increasingly viewed them as an obstruction to settlement in prime cotton territory. In addition, politicians such as Andrew Jackson viewed sovereign Indian nations, even the closely allied Choctaw, as a threat to American sovereignty and internal cohesion if located adjacent, or especially within, American political boundaries.\textsuperscript{47} In the case of the Choctaw, the Americans were not immediately concerned with a possible military threat (though undoubtedly this was always a vague future possibility), so much as a competitor for resources and a hindrance to prosperity in the forms of homogenizing and streamlining free-trade, travel, internal communication, legal jurisdictions, etc. in the way that even friendly and cooperative yet separate political entities are apt to do.\textsuperscript{48} Thus the Choctaw had good reason to fear for the future of their sovereignty.

In response, the flexible and opportunistic Choctaw accelerated their assimilation of Euro-American technology and culture into their own, resulting in an increased dependence on trade to obtain American finished goods with the

\textsuperscript{46} Ibid., 108 – 110.
\textsuperscript{48} White, \textit{The Roots of Dependency}, xiv - xv.
simultaneous loss of indigenous technology, cultural practices, and access to
natural resources that had typically produced a reasonable prosperity in times
of plenty and provided for life-sustaining redundancy in times of famine.
Coupled with the tradition of Choctaw leadership obtaining gifts to reinforce
their popular mandate, the increasing dependence on American trade goods
further limited the Choctaw leadership’s popular mandate to bargain with the
American government as an equal. Choctaw leadership understood that this
trend would eventually fail to sustain their sovereignty while reinforcing the
American rationale for desiring Choctaw land: that the Indians neglected to use
it “properly.” Consequently the Choctaw intentionally refocused their
technological and cultural assimilation to become much more like their Euro-
American neighbors as not only consumers of their technology, but skilled users
and even producers in an effort to become simultaneously less dependent and
to forestall American arguments that the Choctaw were not “civilized” in their
usage of the land, and consequently worthy to keep it.49 Here the multiple
layers of irony are striking: the Choctaw intentionally sought to sacrifice one
portion of their cultural heritage (the tendency to do so itself being a significant
part of their culture) in order to safeguard other parts of their cultural heritage,
especially that of remaining sovereign in their sacred land. Unfortunately during
the 1830s, they would have to choose between retaining their sovereignty and
remaining in their ancestral lands. It was in this political climate that Lincecum

49 Ibid.
would engage the Choctaw in his search for authoritative medical and natural knowledge.

Gideon Lincecum and the Problems of Medical Knowledge in Frontier America

Lincecum’s medical career, which began in earnest in 1830, not only offers us insight into Choctaw medicine, but also began amid tensions over the frameworks of medical knowledge among Europeans and Euro-Americans. The competition between heroic medicine and Thomsonian medicine (a botanically-based practice) were particularly germane to Lincecum’s intellectual formation, and may have played a significant role in shaping his attitudes towards Choctaw medicine as well. As previously mentioned, Jacksonian popular culture increasingly fostered a growing distrust of elitist or arcane knowledge in any field. Medicine was no exception. As common citizens felt increasingly empowered to take on family medical care, both craft and professional physicians suffered, although craft physicians suffered somewhat less. Historians of medicine generally agree that a growing lack of confidence in the long-dominant “heroic” medicine approach was a significant factor. The public at large, rival practitioners, and gradually the heroic practitioner community itself increasingly found that the outcomes of the application of heroic regimens ranged from ineffectual to fatally counterproductive.

Competing Schools of Medicine
By the early nineteenth century, “heroic” medicine, based primarily on the humoral theory of medicine, was the dominant school of medical theory in Europe and Euro-America. Emerging in Hellenistic Greece in the time of Hippocrates (460 – 370 BCE), humoral medicine represented the first known attempt to establish bodily and environmental causes of disease and disassociate (or at least distance) illness from spiritual or mystical causation. Hippocratic medicine likewise enjoyed the distinction of being considered “scientific” insofar as causal factors were understood to be natural, observable, and manipulable by humans. Whether humoral, and by extension heroic, medicine ought to be considered “scientific” now seems a matter of cultural perspective. Physicians including Dr. Benjamin Rush, a famously progressive late eighteenth century U.S. physician, were convinced that humoral medicine represented the cutting edge of scientific knowledge. Current scholarly consensus leaves little doubt that eighteenth and nineteenth century heroic medicine based on this theory almost always hurt the patient more than it helped, sometimes killing patients who might have recovered if physicians had never been involved.

Humoral theory remained remarkably unchanged in its basis since the time of Hippocrates. It held that four humors (or liquids) within the human body maintained a kind of homeostatic equilibrium during periods of good health. The

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50 Dary, Frontier Medicine, 28.
four humors: blood, phlegm, yellow bile, and black bile, corresponded to the four elements (respectively): fire, air, water, and earth. Just as one could observe such elements working mechanically as forces in their outer physical world, a physician could observe the effects of these same forces within a human body in microcosm to that body’s immediate (and wider) surroundings.51

One’s health directly corresponded to the relative balance and harmony of humors within the body. Indeed there was believed to be connection between the microcosm and macrocosm such that one’s location with respect to that location’s particular balance of elements could alter (either for good or ill) a human body’s balance. Yet changing a patient’s location for the specific purpose of convalescence frequently improved their condition since it often accompanied restful and relatively healthful living, as for example in a spa treatment. Treatments associated with re-establishing balance directly at the microcosmic (inside the body) scale were far more invasive, dangerous, painful, and all too frequently anything but helpful.

Physicians attempted to restore balance by removing the excess of humor(s) that existed during illness. Excess humor could be removed primarily through the application of emetics to induce vomiting, purgatives (laxatives) to evacuate the bowels, blistering to remove liquid through the skin, and most notoriously sanguination to remove excess blood, typically by opening a vein.

Scholarship suggests that such practices may have been employed rather gently in ancient Greece in keeping with the Hellenistic ethos of moderation and balance in working with nature. Yet by the time of Lincecum, it seems that Heroic physicians generally took the view that more aggressively applied treatments, e.g. letting more blood, and earlier intervention were preferable.

Heroic medicine found its main competitor in the nineteenth century in Thomsonian medicine. A radical botanic movement begun by New Englander Samuel Thomson, Thomson’s *New Guide to Health* (published in 1822) sought to restore heat to the afflicted body part(s) to facilitate digestion by removing obstacles in the digestive tract or by inducing perspiration. The primary medication was lobelia inflate; red pepper; also known as Indian tobacco. Thoroughly Jacksonian in philosophy, Thomson taught that mineral medications were deadly and that “Medicine, like religion and government, had been shrouded in unnecessary obscurity and controlled by an “elite” few.”

Thomsonians… sympathies were with the laboring classes, to overthrow the tyranny of priests, lawyers, and doctors. The protest was directed, however, not at “science”, but at a particular way in which knowledge was controlled. It was a “common sense” interpretation of Enlightenment thinking. It was fully Jacksonian in its appeal to common people. Circa 1835, as the Thomsonian method began to gain mainstream appeal… [some practitioners] began to call for exclusive professionalization and planned for a medical school by which they could confer credentials. Thomson himself repudiated these ideas, sticking to the Jacksonian ethos.52

Liberty, Equality, Fraternity, and the State of Medical Knowledge

The French Revolution brought about a revolution in scientific medicine in France, where physicians increasingly emphasized local medicine (local as in specific to parts or regions of the body) instead of systemic medicine (e.g. humoral and heroic). Between 1800 and 1830, French physicians coupled clinical observation with pathological anatomy, correlating signs and symptoms of patients with internal lesions disclosed at autopsy. Additionally, the Parisian school of medicine began to statistically evaluate the effectiveness of traditional therapeutic techniques versus the new therapies. The early empirical investigation confirmed that neither long-accepted heroic practices nor much of the various botanical practices held much legitimate therapeutic value.\textsuperscript{53} Beginning in the 1820s American physicians who had travelled to Europe returned with French skepticism concerning traditional “heroic” practices. Jacob Bigelow of Harvard acknowledged that disease left unchecked was preferable to these long-accepted heroic therapies. Increasingly, American physicians began to realize the “poverty of their current medical knowledge” and by 1850 “heroic” medicine was in dramatic decline.\textsuperscript{54} Popularly accessible science (as with politics, religion, law, government, industry), was upheld as a democratic

\[\textsuperscript{53} \text{Ibid., 53 - 54.}\]
\[\textsuperscript{54} \text{Ibid., 56.}\]
principle. Medicine - as one of many important practical sciences – was regarded as something that should be open to all with common sense.

The Beginning of Gideon Lincecum’s Medical Career

Lincecum’s medical career began among the tensions described above; he began practicing however as a way of making a secure living on the frontier. In addition to possessing considerable skill as a frontier settler (i.e. tracking, hunting, fishing, homesteading, carpentry, etc.), Lincecum became a well-respected and highly successful farmer, merchant, and physician. His keen insight and observational ability allowed his “scientific” outlook to aid the more practical aspects of his trades. This is most apparent with respect to Lincecum’s botanical knowledge and its value in his physician practice, knowledge intentionally and gratefully derived predominantly from Lincecum’s apprenticeship to Alikchi Chitto. It may be tempting to suppose that Lincecum was rather unique among the Euro-American practitioners in his absolute willingness to not only seriously consider the value of indigenous knowledge and practices, but to outright prefer it. Conversely the same might be said of the Choctaw with regards to valuing and adopting Anglo-American knowledge and practices. Yet as we will see, neither Lincecum nor the Choctaw were so idiosyncratic in this regard.

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Lincecum’s six year trade with the Choctaw was highly successful in market terms. Lincecum mentions that he came to be “... known by most of the Choctaws.” What Lincecum does not explicitly mention is the social and cultural knowledge he accrued through these numerous commercial transactions. We can however read into one of Lincecum’s statements about his standing policy concerning business with the Choctaw. “I bartered with them for every kind of produce and every article brought cash at 100 pr. cent [sic] on cost.” Although I feel that the wording of this passage is slightly vague, other scholars have interpreted this statement to mean that Lincecum paid well for every single item that the Choctaw brought in regardless of its resale value. This certainly would have made no sense in a purely market driven economy in the Wealth of Nations mold, and as such we can interpret Lincecum’s mercantile philosophy as not embodying a pure market exchange economy.

I suggest that Lincecum had learned to incorporate Choctaw cultural notions of reciprocal gift exchange into his mercantile trade with the Choctaw. He understood that his long-term success as a merchant to the Choctaw had as

56 Lincecum, “Autobiography of Gideon Lincecum”, 54. If Lincecum intends that most in the Choctaw Nation knew him or knew of him, he might not have been far exaggerating, given his frequent forays into the heart of the nation, and the inclination of the Choctaw to travel to his store. According to Lincecum, the Choctaw named Lincecum “Shappo-to-hobe”, meaning “White Hat.” Shappo was probably derived from the French word for hat: “le chapeau.”

57 Jerry Bryan Lincecum, ed., Adventures of a Frontier Naturalist; the Life and Times of Dr. Gideon Lincecum, 1st ed. (College Station, TX: Texas A&M University Press, 1994) 74.
much to do with the relationship of reinforcing friendship through reciprocity as it
did by making each separate transaction numerically profitable. For example,
did he find that in gaining the goodwill of the Choctaw, that they came to trust
that his exchanges were inherently fair? Furthermore, by bartering “every kind
of produce”, Lincecum would likely have found himself with Choctaw foodstuffs
and medicines. Certainly the knowledge to prepare and use such material could
not have been too far behind in the interaction of the inquisitive Choctaw with
the ever-curious Lincecum. Thus reciprocal knowledge exchange would have
become an implicit yet vital commodity of this hybrid commercial and social
exchange of material. In the next chapter we will discuss in greater detail the
social implications of such reciprocal knowledge exchanges.

Despite Lincecum’s general mercantile success his wealth did not last
due to lingering illness, numerous bad loans to fellow Anglo-Americans, the
need to move his family’s residence to the healthier upland, and an employee’s
embezzlement of store goods. His own health had become so miserable that he
realized the mercantile trade could not be sustainable. Meanwhile he had
commissioned various area doctors to make him well. According to Lincecum,
“The opinions and prescriptions of the Doctors were as variant as their faces.”
Initially acting on their advice, Lincecum reports that he bled himself every day,
resulting in the loss of twenty two and a half pounds of blood total. Additionally,
he took “10 grain doses of calomel,” and rubbed on himself “one and a half
pounds of strong blue ointment.” Although at this point Lincecum still valued the
heroic regimen and its practitioners, his wife eventually lost patience and begged Lincecum to travel to Columbus to see a Dr. Hann.\textsuperscript{58}

Dr. Lincecum’s First Patient: Gideon Lincecum

Instead of prescribing more of the heroic regimen, Dr. Hann considered Lincecum’s detailed and knowledgeable account of his own case history, gave him access to his own pharmacy, and invited him to treat himself. Lincecum mentions that by that time he had already read all the medical literature he could find.\textsuperscript{59} It is interesting that Dr. Hann had allowed Lincecum free license with his medicinal stores, and there is no indication that the doctor prescribed anything of the heroic regimen. Was there something in this distinction that Lincecum’s wife had known when she suggested that he seek help elsewhere than from the local heroic practitioners? Lincecum mentioned that his wife possessed a practical and resourcefully clever insight regarding matters of survival. Regardless, Lincecum in the fall of 1829 began to seriously consider becoming a physician himself, and tried again to collect the substantial debts owed him to be able to afford the necessary pharmacy. It is a testament to his dire situation that at this point he conceived of raising a professional touring Choctaw stickball team to make ends meet. For the next eight months Lincecum managed the team which played stickball and demonstrated war

\textsuperscript{58} Lincecum, “Autobiography of Gideon Lincecum”, 56. This exact measure of blood exemplifies Lincecum’s scientific quantitative mindset. The calomel was used as an emetic while the blue ointment was likely a blistering agent.

\textsuperscript{59} Ibid., 56 – 57.
dances to townsfolk on the American frontier. The enterprise made only enough money to cover its own expenses, keeping everyone in the party well fed, healthy, and clothed, thus Lincecum made no financial profit, but he did fully regain his health in the process.\(^{60}\)

**Lincecum as a Full-Time Physician**

Having missed out on the Spring planting season during his stickball team’s tour, Lincecum was considering his barely improved financial situation and urgent need for employment when he once again found himself in the role of physician. Acting as lay-doctor to a neighbor who enjoyed the prosperity necessary to keep a substantial personal pharmacy, Lincecum was able to nurse the man back to health. The grateful neighbor not only encouraged Lincecum to go wholly into the practice as a full-time professional, but financed his initial pharmacy – which in itself became a “local marvel.” Lincecum reports that his new practice grew quickly, allowing him to board his children at the locally renowned “Seminary” school in Columbus, Mississippi. Fully expecting that the children would learn practical, academic knowledge, he was heartbroken to learn that the children had learned little more than what he considered to be trivial Bible stories, e.g. that Esau was the “hairy man.”\(^{61}\) This underscores Lincecum's disdain for spiritual knowledge in general, and

\(^{60}\) Ibid., 56 – 59. Lincecum reports that he returned to his family to find that through his wife’s clever industry and thrift, the family was rather well fed, clothed, if not financially wealthy.

\(^{61}\) Ibid., 59 – 61.
organized religion in particular, especially that of his own Euro-American tradition.

Lincecum’s practice continued relatively successfully but some patients he had lost to cholera made him rethink his medical practice. As was not uncommon of physicians of his period, he cites a particular case as having shaken his faith in the heroic method.

... A large muscular man about thirty years of age fell into my hands. I staid with him and done my very best for him. He died under circumstances that left me but little grounds to doubt the fact that the Calomel and other poisons I gave him hastened his dissolution. I was greatly discouraged. This, and the hundreds that were dying (due to the cholera epidemic) all around me in the hands of other physicians, convinced me that our remedies were impotent. I felt tired of killing people, and concluded to quit the man killing practice and try to procure a living by some other method.62

Lincecum recounts that he had long desired to have access to medical and pharmacological knowledge specifically of the Southern region, complaining that all the medical books were written from a Northern perspective.63 Location-specific medical and botanical knowledge had been privileged at various points in European culture, notably by Paracelsus (1493 – 1541).64 However, we should note that various points within the long-standing

62 Ibid., 62.
63 Ibid., 62.
64 Alix Cooper, Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe (Cambridge; New York: Cambridge University Press, 2007) 30 - 31. Paracelsus’ full name was Philippus Aureolus Theophrastus Bombastus von Hohenheim
humoral tradition also valued the palliative effects of specific (local) location, although to balance the body’s humors with prevailing atmospheric conditions. Lincecum’s immediate recourse was to consult with a Choctaw Alikchi Chitto “… an Indian Doctor of great reputation”, who resided in the Six Towns Choctaw Nation, and learn what he knew of medicine and disease.”

Lincecum’s desire to seek alternative methods of practicing medicine was undoubtedly due to the increasingly obvious systemic failure of heroic medicine, his general high esteem for his Choctaw neighbors, his preference for local, Southern American knowledge, and his general disdain for unexamined received knowledge in his own Euro-American tradition (e.g. organized religion). All contributed to Lincecum’s desire to consult with a Choctaw healer.

Alikchi Chitto

Lincecum’s single most influential mentor in the medical profession was the Alikchi Chitto of the Choctaw Six Towns district, a Choctaw healer whom Lincecum had specifically sought due to recommendations from his Choctaw neighbors as the most respected healer in the Choctaw nation. The Alikchi Chitto accepted Lincecum as an understudy for six weeks. The course of study included extensive field work in how to find, identify, and harvest botanical samples in their natural state. The latter portion of the course included

\[ \text{___________________________} \]

\[ ^{65} \text{Lincecum, “Autobiography of Gideon Lincecum,” 62.} \]
instruction in preparing the botanical samples into effective medications, and (we may infer from Lincecum’s later botanical notes) how to map patient symptoms to the appropriate treatments.

… he unrolled his specimens of medical plants and laid them in order. He then took them up one by one, described the kind of soil they were found in, their uses, the season to collect them and what other plants they were sometimes combined with. I wrote down all he said and took a specimen of each plant. I spent the greater part of the time hunting and thereby managed to keep him well supplied in meat. Each night he would have some new specimens and would attend to nothing until he got through with his lecture. He seemed to be familiar with every branch and creek in the whole country. He would not go to any house or suffer me to do so, saying that it would spoil the knowledge he was teaching me and make me forgetful. At the expiration of six weeks, he told me that there were not more medical plants this side of the Mississippi river for me to study and as soon as I read what I had written our investigations would close.67

What started as a clearly negotiated quid pro quo market-contract grew to favor notions of reciprocity, even as the contractual basis for the exchange became marginalized. I will expand on the social and cultural aspects of this meeting in the next chapter. Let us now take a closer look at the specific nature of the knowledge itself.

Botanical Knowledge

By the mid-1840’s, Lincecum had been practicing his own brand of frontier medicine and had compiled systematic notes and samples of medicinal remedies. In these notes, Lincecum provides personal observations regarding the efficacy of such remedies as well as the regard he holds for the knowledge received from other authorities. In these documents, Lincecum rarely misses an opportunity to extol the virtues of Southeastern Indian remedies while deriding remedies preferred by his “own” Euro medical culture.\(^{68}\) While the commentaries on native remedies rarely explicitly extol their perceived value, we may infer Lincecum’s regard because of his conspicuous lack of criticism of those remedies, about some of which he reports that he himself possessed only limited first-hand knowledge.

The Botanical Tradition

By the time of Lincecum’s practice, botanicals had been a centuries-long tradition in Europe. Originating as predominantly scholarly works in the Enlightenment, the cataloging of local flora and associated identification and geologic properties gradually expanded to include medical treatment applications. The early modern period saw medical concerns begin to predominate in botanical literature, largely in conjunction with the professionalization, specialization, and corresponding elevated status of the physicians’ craft, as well as the gradual democratization of European

\(^{68}\) Ibid.
indigenous knowledge valuation and that of its “unlearned” lay-practitioners. Originating in central and western Europe, the practice had spread to Britain by the late early modern period and thus made its way to England’s (and subsequently Great Britain’s) American colonies.

This migration of the practice of creating botanicals corresponded roughly to the increasing specialization, standardization, and (perhaps most significantly) professionalization of scientific practice, and the view that common medicine should be advanced through the scientific approach of careful, systematic observation and experimentation whenever applicable.

The practices of gathering, presenting, and valuing mineralogy and geology as products of specific location underwent simultaneous and parallel processes that overlapped, complemented, and (in medicine) frequently competed with the perceived value of botanical knowledge and its medical applications. In his book *Frontier Medicine*, David Dary describes several major competing medical philosophies whose practitioners employed some mix of botanical and mineral substances, whose practitioners competed for validation and market share on the American frontier. Whereas, “heroic” medicine employed bloodletting and toxic metals such as mercury to relieve symptoms, allopathic physicians treated disease by administering minute quantities of

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69 Cooper, *Inventing the Indigenous*, 30. Paracelsus particularly valued the knowledge of “peasants and other inhabitants of the land.”
substances whose effects mimicked the disease’ symptoms allowing the body to return to its normal balance.\textsuperscript{70} In his own Botanical notes, Lincecum relates his eventual (1840’s) condemnation of these two theories:

\begin{quote}
Fruit narcotic – Herb – Poison – A deadly poison. Yet it is extensively used by the old school [heroic and allopathic] doctors. It is not medicine. All poisons diminish the vital energies – lessens the principle of life. So does disease. When you find the vital action already considerably diminished by the disease, there is no sense in giving the patient an article that is known to have power to diminish vitality further. But the doctors will tell us that in some cases the patient has too much of the living principle, and it becomes necessary to deplete. Pshaw!\textsuperscript{71}
\end{quote}

Alternatively, Thompsonian medicine used remedies that were administered in heated baths and herbalists favored the use of treatments originating from single-herbs. Native American medicine as practiced by indigenous peoples had enjoyed varied levels of authority within “mainstream” American medicine, especially on the ever westward-advancing frontier. Additionally, the independently-minded and geographically isolated nature of life on the American frontier privileged generational remedies, with each marriage further amalgamating ancient European folk-remedies into the proverbial American melting-pot. As one might expect, doctors on the frontier in the early nineteenth century subscribed to some particular combination of any and in some cases all

\textsuperscript{70} Dary, Frontier Medicine, 28, 68 - 69.  
\textsuperscript{71} Lincecum, “Autobiography of Gideon Lincecum,” 33. This is a rare discussion by Lincecum about the underlying causes of why heroic and allopathic medicines are so harmful. Typically he is content to accept that they are harmful, as based on his first-hand observation.
of these schools. The adherents of these disparate philosophies could not help but influence each other, even as they competed for supremacy. It was into these mixed and seemingly contradictory western medical and scientific (and American-indigenous knowledge) traditions that Lincecum’s botanical notes (and continually evolving medical practice) are situated.

By the time Lincecum began writing his now extant botanicals in the mid-1840s, he had coalesced into synthesizing the Thompsonian, herbalist, and local native medical knowledge into his own practice. All three emphasized a plant-based holistic approach to healing that included more than mere medical knowledge per se. Lincecum frequently attempted all manner of treatments that required a sustained, personal emotional connection; he at times held patients’ hands, told them jokes, sang songs and played the violin at their sick-beds. These actions were undoubtedly influenced by traditional Choctaw healing practices he had experienced himself:

I remember now, though the time has long passed, with feeling of unfeigned gratitude the many kindnesses bestowed on me and my little family in 1818 and 1819 when we were in their neighborhood, before the country began to fill up with other white people…. While we resided in their country my wife had a very severe spell of fever that confined her to her bed for several weeks. During her sickness the good, kind-hearted Chahta women would come often, bringing with them their nicely prepared tampulo water for her to drink, and remaining by the sick bed for

72 Dary, Frontier Medicine, 28 - 39.
hours at a time would manifest the deep sympathy they felt by
groaning for the afflicted one, all the time of their protracted visit.\textsuperscript{73}

Lincecum’s hyperactive empathy contrasts sharply with the lack of concern he attributes to heroic doctors, as well as many of their “admirers”:

“Deadly Poison, The plant, Discutient, noreatic. The botanic physician sometimes use it in the form of discutient ointment. Always externally. It is not often resorted to.

It has not gained much reputation with the poison doctors as yet. The wonder with me is, that it has not; for, with them, the more poisonous an article is, the better they like it. And this is poison enough for any purpose of destruction, God knows. I have many times thought, -- and it may seem uncharitable to me to say so, but really [sic] it looks so to me, -- that the more cases the physician loses, the more popular he became; for while there are very few who really do sincerely mourn, there are a great number who do actually rejoice at the prospect of inheriting the plunder of the deceased.”\textsuperscript{74}

Here we can see that Lincecum reserves his criticism, often in the form of scathing, elaborate diatribes, for his own traditional Western medical tradition, and in doing so he makes his general contempt for the traditional Western “poison” doctors clear. In the quote above “Deadly Poison…” Lincecum relates that the item of botanical medication may be of some limited value if applied topically, and yet he explicitly includes a tangential and elaborate condemnation of traditional Western medicine by suggesting that the

\textsuperscript{73} Lois Wood Burkhalter, \textit{Gideon Lincecum; A Biography} (Austin: University of Texas Printing Division, 1965), 30. We may suppose that the wailing of the women almost certainly contained a spiritual component that Lincecum had neglected to relate.

\textsuperscript{74} Lincecum, “Autobiography of Gideon Lincecum”, 24. Botanic doctors would use this dangerous herb only topically, carefully, and only rarely. A discutient ointment would be used to eradicate a cyst, tumor, or other abnormal growth much in the way that today, targeted radiation, though also toxic, would be carefully and minimally used to destroy growths.
“poison doctors” must wish their patients harm. Placed in context with Lincecum’s other writings and correspondence, I doubt he is suggesting true malicious intent, but instead hyperbolically attacking these doctors’ competence. Lincecum is less opaque, however, concerning the patients’ mourners’ motives. In this it seems that Lincecum suggests a method by which the destructive traits of traditional Western medicine might have been propagated: by impatient inheritors’ choice of physician. Even though the “quack” might naively view his practice as being reinforced by popular demand for his ability to heal, popular demand itself was perhaps not so naive.

Lincecum readily and frequently employed the Choctaw remedy in his practice, even when stating that he would typically use an alternative.

The berries. The root, Stimulant, Expectorant Good in female weakness, in coughs, and as a general tonic. It is taken in decoction or syrup.

The Choctaws use it for many complaints among their children. In all cases where we would use the paregoric, Bateman’s drops, Godfrey’s cordial etc. They use the spikenard, and it a superior article. For this purpose they boiled a little of the root in clear water. Sweeten the decoction and give it pretty freely to children of any age. Who are troubled with gripes colic etc. It is an excellent article. I have tried it often. In bad cases of putrid sore eyes, the chocktaws boil up a quantity of the root, and while it is boiling hot steam their eyes over it. Two or three applications generally cures them.\(^75\)

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The lack of negative description regarding the Western “paragoric” remedy suggests that Lincecum holds it as a respectable treatment. Yet the glowing (for Lincecum) description of the Choctaw method demonstrates his clear preference. For Lincecum, who thought of himself as both practical frontier doctor and field scientist, there can be no better commendation for a medicine’s efficacy than being confirmed repeatedly by his own senses. The vast majority of useful medication descriptions credit Southeast Indians (generally Choctaw or Chickasaw) as authoritatively pronouncing useful value. It is telling that Lincecum links no useless or poisonous medication to native use.

While “I have tried it often” is Lincecum’s final stamp of approval, the next example demonstrates Lincecum’s willingness to take seriously the claims of native medicinal knowledge when venturing into unknown territory.

“75 18-5 The root---- Sudorific-stimulating
This as a species of asclepias with fibrous roots, a rarity in that family.

The tea taken freely is a most valuable daphoretic, and may be resorted to in all cases. Requiring sweating medicines.

The Chocktaws esteemed it among their most valuable remedies for snakebite, --they administered it in strong decoction, and chewed the root, swallowing the saliva while chewing. It needs further investigation.76

In needing “further investigation”, we see that Lincecum is not content to merely blindly apply even Native received knowledge. Despite the apparently

76 Ibid., 26.
credible source and complimentary description, he feels compelled to experiment with the medication on his own, both to satisfy his own critical concerns, and even more likely to build upon the benefits of native Choctaw knowledge. His openness however is notable, and suggests Lincecum’s respect for the authoritativeness of Choctaw medical knowledge.

As demonstrated by these vignettes taken from Lincecum’s botanical notes, we can see that he tremendously values the practical aspects of Choctaw culture as well as Choctaw natural, botanical, and medical knowledge. However, notably absent from these passages, as well as any mention in his diary, is mention of or appreciation for the spiritual or cosmological context of this knowledge and culture. As mentioned in the section about Indian “medicine”, the Choctaw closely integrated the spiritual aspects of their cosmology with the practical aspects of healing to such a degree that it is inconceivable that the Alikchi Chitto or other Choctaw sources of medical or natural knowledge might have failed to relate them to Lincecum. Given Lincecum’s disdain for the spiritual/religious knowledge of his own culture, it is more likely that Lincecum pruned this aspect from Choctaw knowledge that he otherwise valued tremendously. In the next chapter we will take a closer look at how and why Lincecum’s failure to credit the full cosmological range of Choctaw natural knowledge problematically subverted the paradigm of reciprocal exchange.
Chapter Two: Investigating the Cultural and Social Significances of Lincecum’s Reciprocal Engagement with Choctaw Knowledge Exchange.

Chapter one investigated the exchange of medical and natural knowledge by emphasizing the historical and practical context in which the knowledge was situated. This chapter will explore the social and cultural implications of the knowledge exchange relationships introduced in chapter one. Even given that Lincecum clearly respected and understood the Choctaw reciprocity paradigm, and the Choctaw he engaged equally clearly valued their relationship with the courteous Lincecum, this was not enough to guarantee that the process of knowledge exchange was entirely even-handed or as mutually enriching as it might have been. The products of the knowledge exchange could be understood and valued by the participants in ways unintended and in significant respects unsanctioned by the donor, an outcome that seems to have been troublingly common in the interactions between European Enlightenment thinkers and non-European knowledge-holders, whether in colonial or non-colonial settings. This chapter will therefore take a more detailed look at the relationship between Lincecum and the Choctaw, and Lincecum’s subsequent appropriation of Choctaw aboriginal knowledge. Clearly, Lincecum did not fully appreciate, nor faithfully relate, all aspects of the Choctaw knowledge he encountered even as he fundamentally valued and credited the Choctaw as legitimate sources of valuable knowledge. Why was this so? And what are the
consequences of Lincecum’s acts of erasure? I use the subject of reciprocal knowledge exchange to investigate this further.

Acts of Exchange

It is useful to start the analysis by considering the motivations and social context of both Lincecum and the Choctaw that shaped these exchange relationships, as we have started to do in chapter one. Lincecum brought to the meeting an insatiable curiosity about all practical aspects of nature, and a regard for the credibility of the knowledge of his Indian neighbors from a young age. We also know that he was increasingly desperate, after his experiences with illness in the Mississippi region, to learn a mode of medical practice that would be both helpful and non-destructive, particularly in comparison to Euro-American heroic medicine. Therefore, although Lincecum brought to this meeting considerable medical and natural knowledge in the Anglo-American vein, his regard for the Choctaw in general and the Alikchi Chitto in particular was considerable, and demonstrated by the respectful way he engaged with them. Certainly the Alikchi Chitto found Lincecum to be a most apt and enthusiastic pupil. From the Alikchi Chitto’s perspective, Lincecum apparently knew and honored the Choctaw customs for building friendly, trusting, and reciprocal exchange relationships. As discussed in chapter one, the Choctaw people in turn were open to learning, indeed valued learning from those outside their own communities, making engagement with Lincecum, a foreigner with
distant yet important familial social credentials, well within traditional Choctaw cultural norms.

Lincecum approached the elder only after being invited to do so, by undertaking the task of crossing the river to meet the Alikchi Chitto, which may have involved some danger, or at the least, major inconvenience. Lincecum (according to his autobiographical account) made a great effort to ensure the elder’s comfort, particularly by hunting the game that would keep the Alikchi Chitto well-fed as the elder gathered botanical specimens for lessons. The few Alikchi Chittos were itinerant doctors and pedagogues throughout Choctaw territory staying as particularly honored guests in whichever Choctaw home they temporarily resided and taught from. The Alikchi Chitto would, as mentioned in the previous chapter, teach individuals – often women who were primary medical care givers in the homes - knowledge of health matters to allow them to be both healthy and independent. However, there is reason to think that the Alikchi Chitto may have envisioned Lincecum more as a kind of apprentice in the work of the Alikchi Chitto himself, rather than as a more usual interlocutor. In Choctaw culture the females owned the houses and thus would have been the primary host of the Alikchi, as the men were often on extended outings hunting game, making war, politicking, trading, or playing stickball.

77 River crossings were notoriously unpredictable, time-consuming, and stressful events. Lincecum would have had to make special provision that his food, note-taking supplies, and botanical samples would stay dry.
Choctaw women maintained a leadership role over their husbands within the home environment, even tasking them with helping in the fields while having her male siblings teach her male children skillsets that fathers might teach in more patrilineal cultures. For Choctaw hosts, it was incumbent upon them to feed their guests as well as their means allowed.

In providing for the Alikchi Chitto, Lincecum was playing host in the wilderness, a place that both men considered homely. So in some respects, he might have seemed to play a more traditionally feminine role. However, Lincecum hunted meat which was well-within masculine norms. And the elderly Alikchi Chitto might certainly be expected to insist that tradition be fully observed, as for example when he would not allow Lincecum to enter any dwelling during his tenure as student, requiring that they both remain within nature, where males were more frequently the primary medical care givers for fellow members of hunting and war parties. Thus it seems likely that the Alikchi Chitto would have regarded Lincecum as much an understudy for his own male-centric Alikchi role, rather than as someone whose intentions and needs might pattern that of Choctaw women. Although both kinds of relationships were

80 Clara Sue Kidwell, *Choctaws and Missionaries in Mississippi, 1818 - 1918* (Norman, OK: University of Oklahoma Press, 1995) 71, 84. The ABCFM missionaries at Elliot learned this the hard (and none-too-quick) way every time a Choctaw pupil’s family arrived to visit, often unannounced. This case exemplifies the category Richard White spoke of when he said the reciprocity paradigm was woefully misunderstood by Euro-Americans. The Choctaw shown a lack of victual hospitality considered it a base insult. Later missionaries to the Choctaw, e.g. Cyrus Byington, were much better received partly because they visited the Choctaw in their homes and towns, thereby fulfilling the guest role.
immensely important to the Alikchi Chitto, the idea of Lincecum operating as a quasi-apprentice suggests something deeper than a more limited offering of knowledge in exchange for a fee and “daily expenses.”

I wrote a letter to P. Juzong a half breed asking him to see the Doctor [Alikchi Chitto] and enquired if he would meet me in the woods and stay with me until he had taught me his system of medical practice… He informed me… that he [the Alikchi Chitto] would stay in the woods as long as I wished and that I must pay him 50 cents a day and furnish provisions.81

A key principle of the reciprocity paradigm is that goods and services are given as much to build friendship and trust as to exchange merely commensurate goods and services. In this case, what was originally framed much in terms of market exchange quickly and thoroughly morphed into a reciprocal exchange more in keeping with the Indian paradigm. I contend that knowledge exchange was made more valuable to both by the relationship they cultivated. Both participants established sufficient trust, respect, and even friendship and altruism to create a beneficial outcome in which each walked away with more value than they had strictly bargained for. Yet even in such a setting, it was possible for the reciprocal exchange to falter on differing worldviews. Lincecum’s personal, probably Enlightenment-influenced disregard for spirituality harmed his ability to fully take up Choctaw medicine, ultimately

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creating a disconnect that made deeper cross-cultural understanding impossible.

Choctaw Cosmology: Spiritual / Natural Practices

Between 1823 and 1825 (more than a decade prior to his tenure with the Alikchi Chitto) Lincecum invested considerable time and effort studying Choctaw culture by requesting knowledge from another Choctaw elder by the name of Chahta Immataha. Lincecum’s transcription provides an aboriginal account of Choctaw spiritual practices, albeit one still mediated by Lincecum himself.82 Lincecum narrates what he sees as the Choctaw’s admirable qualities and less admirable (although not necessarily unforgivably bad) qualities through his particular slant on Chahta Immataha’s stories. Lincecum’s narration tells us as much or more about Lincecum’s own biases as it does about Choctaw beliefs themselves.

[Choctaw] knowledge of the stars and of woodcraft was developed to an extraordinary degree, and if they made no progress in the arts and the sciences, they could travel for hundreds of miles with unerring precision, having no other guide than the sun and the stars or some peculiarity in the appearance of the trees… [but] like the white man the [Choctaw] Indian had his superstitions.83

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82 Ibid, 64; Both the Chahta Immatahah and Alikchi Chitto accounts were written in Choctaw. Lincecum states that it was his practice to record Choctaw conversations by transliterating phonetic Choctaw using English letters.

In routinely belittling Choctaw spiritual beliefs as idle and frequently deleterious superstition, Lincecum was hardly singling out the Choctaw, as he witheringly marginalized European spiritual beliefs and practitioners as well, in keeping with some elements of Enlightenment critique. Yet Native American spiritual and natural beliefs and practices are inseparably bound together. Lincecum’s account of Chahta Immataha’s Choctaw origin story amply demonstrates Lincecum’s attempt to distinguish between what he viewed as the laudably practical Choctaw knowledge of nature (botany, herbalism, medicine, etc.) and their spiritual beliefs. Nowhere does he ever betray an appreciation for the fundamental indivisibility of Choctaw knowledge.

Lincecum’s particular biases can be seen in his choice of Choctaw stories to narrate, and the interpretation he gives them. The Chahta Immataha’s account of how the Choctaw decided to create and subsequently settle near the Nanih Waiya mound after forty-three years of migration in the wilderness is a good example. In the Choctaw account, the Isht Ahullos (spiritual leaders of the Choctaw) had exhorted the people to literally carry the bones of their ancestors

84 Harold John Cook, Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age (New Haven: Yale University Press, 2007) 380-81; Peter J. Bowler and Iwan Rhys Morus, Making Modern Science: A Historical Survey (University of Chicago Press, 2010) 48-49. Cook discusses that some Enlightenment natural philosophers such as Balthasar Bekker sought to employ Enlightenment views as a way to cleanse and apologize Christianity, continuing the work of the Protestant Reformation. Other natural philosophers such as Benedict Spinoza are associated with Radical Enlightenment notions of dispensing with the supernatural elements of Christianity, in Spinoza’s case, by equating God with nature. In Making Modern Science, Bowler and Morus discuss that Enlightenment natural philosopher Isaac Newton actively questioned received religious authority in much the same way as Balthazar Bekker in that as an anti-Trinitarian, Newton attempted to cleanse the Judeo Christian tradition of what he believed to be false creation doctrines propagated by the early Church leaders who did so to mystify and control its followers.
on their backs during the long migration. The Minko (head chief) had thought this practice too much of an unnecessary “burthen” and spoke against the practice at about the time the Choctaw were passing through an unsettled but unusually fertile region. He proposed that the Choctaw bury their ancestors’ remains in honor by constructing a large, dignified mound over the mass grave. Although the Minko was successful in convincing the head Isht Ahullo, many of the lesser Isht Ahullos balked at this plan; Lincecum argues that their reason was that they would lose authority in the new arrangement through not being able to exhort the people continuously onward while carrying their ancestors’ remains. Through good example, plain speech, and Choctaw good sense (as Lincecum saw it), the Minko was able to convince the tribe, and they built Nanih Waiya mound over their ancestors’ remains and successfully settled the region.\(^85\)

The Minko then charged the Isht Ahullos with building a complementary mound nearby as they had not helped in the construction of the main mound. Although the head Isht Ahullo and some lesser Isht Ahullos kept faith with the tribe by laboring dutifully at the task, most shirked the honest work by escaping into the countryside, frequently convincing young women to abandon their husbands, children, and crops in the field to accompany them. They did this by telling the women that the forest spirits spoke to them of dire futures if they

\(^{85}\) Lincecum, *Pushmataha*, 1 -12.
failed to do so. Much of the tribe wanted to take revenge on the remaining faithful Isht Ahullos but the Minko convinced them that this would be unjust. These Isht Ahullos, being greatly diminished in number and not being previously much experienced in manual labor, nonetheless eventually completed their mound in good order, thereby confirming their honorable state as individual Choctaw. The social status and authority of the Isht Ahullos however, nonetheless became greatly and irreparably diminished by the behavior of the others. 86

A rational, authoritative man standing up to priests and missionaries figures prominently in Lincecum’s personal hero narrative. A good example of this can be found in Lincecum’s account of his friend and Choctaw principal chief Pushmataha (1760s – 1824):

Being opposed to the missionaries, [Apushimataha] made many brilliant speeches and arguments at the councils got up by them [the missionaries] for the purpose of enriching themselves at the expense of the nation… He warned the Chahtas against their machinations and did what he could to enlighten his people on the subject. 87

In this passage we can see how Lincecum thoroughly conflated the Choctaw Isht Ahullos with contemporary Christian missionaries, particularly in their “unrighteous” preying on the “superstitious” Choctaw, many of whom were led

86 Ibid. 14 - 20,
87 Ibid., 86 – 87.
astray as in Lincecum’s account of Chahta Immataha’s migration story. Lincecum casts the Isht Ahullos in much the same light that he casts Christian clergy. According to Lincecum, some are decent, well-intentioned, and hard-working. They contribute to improving the human condition even as they deceive themselves and others with respect to mystical and spiritual reality. The bulk of them, however, are deceitful and lazy, using spiritual beliefs as a means of aggrandizing power and authority for themselves to escape honest work and community relationships. According to Lincecum, all are fundamentally misguided in their beliefs, but some are redeemable as worthwhile individuals and citizens.88 Thus it is clear that Lincecum was applying the same desire to divide natural from spiritual knowledge (and at the same time to underscore the connection of spirituality to social harm and bad behavior) to the Choctaw as he did to Anglo-Europeans. The decision to divide “good” natural knowledge from “untrustworthy” spiritual knowledge would be deeply and obviously troubling to Choctaw themselves (and likely to most Native Americans who operated with similarly holistic cosmologies.) Yet those raised in European intellectual traditions might see such a decision as innocent, and, if less than culturally respectful, otherwise harmless. To think more clearly about the consequences of Lincecum’s efforts to divide the medical from the spiritual for audiences raised in intellectual traditions, who may see such reductive thinking as normal, 

88 Gideon Lincecum, “Letter to Lincecum’s Daughter Sarah,” September 6, 1872, Gideon Lincecum Collection, 7-9. For example, Lincecum expresses admiration and even affection for his friend Parson Lewis for his practical horticultural knowledge and generosity in sharing cabbage seeds.
it is helpful to consider this history in light of theories of knowledge exchange. By comparing the assumptions of Smithian market exchange to the more socially complex understanding of gift exchange derived from Marcel Mauss, the significant problems created by Lincecum’s choices become more evident.

Concepts of Exchange

In the early nineteenth century, the dominant British and Anglo-American paradigm on market exchange derived from the work of Scottish philosopher Adam Smith (1723 - 1790). In *The Wealth of Nations*, published in 1776, he outlined what he believed to be the most moral and productive means of conducting exchanges of materials and services in society.\(^8^9\) He argued that in a large society, many who conducted business exchanges could not be expected to know each other well enough to build relationships of trust and friendship through the exchanges themselves, and that market transactions should entail no moral or social responsibility outside of strict fulfilment of the terms of each contractual bargain. Already the contrast with Choctaw thinking, which prioritized the creation of such relationships, is clear. He used the term *utilitarian* to describe the orientation of the parties in the exchange: each ought to maintain a self-centered focus on the goods and services themselves and what the finite exchanges could do for their personal efforts to build wealth (the

goal that it was assumed all shared.) On a macroscopic scale, the aggregation of self-focused efforts like this would produce the most wealth for society as a whole, thereby benefitting all of its individual members. The limits of reciprocal social engagement required the fulfillment of the exact terms of any contract, and no more. In short, notions such as charity or gift-giving out of a sense of social obligation or friendship held no place in the market exchange as it would tend to short-circuit the necessary focus on self-love. Furthermore, such behavior carries a whiff of the immoral as it would inhibit the building of wealth at the cumulative societal level.

Smith hardly disapproved of charitable giving and bonds of social obligation and mutual trust per se. In fact he simultaneously argued that such things were the crucial other side to the morality of his market utility. Legitimate quid pro quo transactions, after all, could not be conducted void of trust and mutual respect, and cumulative wealth building was only one aspect of a just society. Market utility owed its moral authority to the service it could do to all members of society, especially those most dispossessed of wealth. Smith however emphasized that such social responsibility be cultivated through robust social relationships and philanthropy conducted outside of transactional market relationships.

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90 Ibid.,
91 Ibid.,
93 Ibid., III.I.121.
It is well known that Smith’s views became dominant in the political economy of the British Empire, and indeed in the Anglo-influenced world more broadly, including Lincecum’s Anglo-American frontier. As has already been discussed, it is clear that the relationship between Lincecum and the Choctaw, especially his acts of knowledge exchange with the Alikchi Chitto is not well-modeled by the idea of Smith’s utilitarian markets. More helpful is the work of French Anthropologist Marcel Mauss, which (along with other thinkers like Engels and Marx) constituted a signal critique of Smith. Mauss would come to challenge Smith’s notions that utilitarian market exchanges were the best for society by exploring the character of exchange within indigenous cultures. Framed in terms of “gifts” rather than markets, Mauss’s work has offered an enduring critique of market logic both in terms of the adequacy of its representation of practices of exchange, and its social consequences.

Knowledge as Gift

In his groundbreaking book *The Gift; Forms and Function of Exchange in Archaic Societies*, Mauss provides a helpful lens through which we can view the knowledge exchange between Lincecum and the Choctaw – especially his relationship with the Alikchi Chitto. Rather than studying exchange from the

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94 Will Wright, *The Wild West: The Mythical Cowboy and Social Theory* (SAGE, 2001) 19. Author Will Wright argues that Thomas Jefferson believed that Adam Smith’s notion that a “civil, just market” could exist in its purest state only among agrarian owner-operators on the ever expanding American frontier, where there was (in principle) equal opportunity to obtain land and profit by one’s own labor. Lincecum’s entire life embodies this principle, but no less so during his homesteading in Mississippi.

95 Mauss, *The Gift*. 
perspective of political philosophy, as Smith does, Mauss focuses on the sociological context, the social understanding and expectations of gift exchange in what he termed “archaic societies”, what today might be called non-Western or, more precisely, indigenous cultures. Synthesizing reports from numerous field workers with his own extensive first-hand knowledge and wide-ranging scholarship, Mauss proposed common underlying social rules (explicit, implicit, conscious, and unconscious) defining the dynamics and implications of gift exchange in indigenous cultures. He then extended these principles to demonstrate the existence of the same patterns in the history of “civilized” Western cultures, emphasizing elements that are retained but hidden or unacknowledged and those things that have been lost, to the detriment of Western societies. According to Mauss, Western culture’s adoption of a “rational economic system” in lieu of exchange that nurtures a culturally more comprehensive and interpersonally profound social contract, was both contradictory and harmful.

In Mauss’s work, he does not include (in any obvious way) the category of knowledge among those things that can be exchanged, which otherwise

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include material objects, non-slave people (like women and children), slaves, services, currency, entertainments, courtesies, ritual, military assistance, dances, and feasts. Yet others have taken up the idea of knowledge as a commodity of exchange, in ways that build logically on Mauss’s ideas, including in the history of science and medicine such as in Harold Cook’s *Matters of Exchange*. A brief comparative look between Lincecum’s history with the Choctaw, and Cook’s exploration of exchange relationships underscores the analytical value of using the idea of gift exchange to frame Lincecum’s story.

In *Matters of Exchange*, Cook explores the concept of knowledge as a commodity of exchange between Europeans and indigenous people. He treats knowledge as something similar to goods and services, intentionally expanding Mauss’s list of categories. Of particular relevance for this story is Cook’s description of Dutch physician and naturalist Jacob Bontius (1592 – 1631). Bontius was employed by the Dutch East India Company, and when based in the city of Batavia sought natural knowledge from the people of the East Indies (primarily the Javanese). Although Bontius’s work in the Dutch East Indies predated Lincecum’s medical practice by two hundred years, his story offers significant similarities to Lincecum’s exchange with the Choctaw.

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98 Ibid., 46.
100 Cook, *Matters of Exchange*, 191, 208. Bontius was active in the Dutch East Indies between 1627 and his death in 1631. Lincecum’s medical practice in Mississippi began in earnest in 1830.
Bontius oversaw the medical effort necessary to keep as many of the Dutch East India Company employees (soldiers, sailors, merchant, and administrators) alive as long as possible to support and enforce (frequently brutally) Dutch trade monopolies with indigenous peoples. Additionally, Bontius may have been especially selected for (and eager to fulfill) this role because his pre-existing knowledge of botany suggested to the Heren XVII (the directors of the Company) that he would be eager and willing to acquire the artifacts and accounts of distant natural knowledge that were as desirable to the wealthy elites as lucrative spices. ¹⁰¹ Indeed, in his four years in the Indies, Bontius achieved much more success in accruing and transmitting local natural and medical knowledge than in managing the onslaught of tropical diseases among the transplanted Europeans in his care. In doing so, he relied heavily on information provided by indigenous populations.

In the sixteenth century, Paracelsus had popularized the notion that local “folk” populations were the most expert at understanding and using local natural knowledge, particularly with respect to medicinal preparations. ¹⁰² By the time of Bontius, it was widely accepted that the cure for diseases would most readily be found in the area in which those diseases generally occurred; as God had imbued each region with particular diseases, so he provided those regions with

¹⁰¹ Cook, Matters of Exchange, 192.
the cures for that region’s diseases. This may go far in accounting for both Bontius’ forthright and eager engagement with indigenous practitioners, as well as his immense productivity with respect to accruing this knowledge. Lincecum, on the other hand, did not see this as a matter of providence (as did his Calvinist missionary peers) so much as a matter of nature.

Both Bontius and Lincecum ascribed significant competent medical authority to “Indian” women who were largely responsible for certain sorts of health problems in both societies. Lincecum and Bontius are strikingly similar in their enthusiastic and unapologetic admiration for Indian knowledge and practices, both going so far as to assert Indian medicine as superior to European (in Lincecum’s case, Anglo-American) medicine. Bontius writes of Malay women practitioners: “… every Malayan woman practices medicine and midwifery with facility; so (I confess that it is the case) I would prefer to submit myself to such hands than to a half-taught doctor or arrogant surgeon [implying that these make up the majority of European practitioners], whose shadow of education was acquired in schools, being inflated with presumption while having no real experience.” It seems unlikely that Bontius would have thought so highly of the knowledge of those he (with conscious irony) termed as “barbarians” in his writings to fellow Europeans had he gained the majority of

103 Cook, Matters of Exchange, 196. Cook emphasizes the view of providence as a natural quality in a very similar way to Lincecum.
104 Ibid., 200, 203.
105 Ibid, 203.
such knowledge from second-hand travelers’ tales. Per the reciprocity paradigm, only within considerable personal knowledge exchange via intentionally cultivated, trust-reinforcing, reciprocal relationships, could such admiration have grown.

Most importantly Bontius, as Lincecum would do years later, separated what he viewed as observably verifiable “fact” from any accompanying mystical cosmology. Cook quotes this sample of Bontius’s thinking on this matter: “This herb is considered sacred among the old Indian women, which they have in common with our own old [Dutch] women… I am not one of those who has a propensity to superstitious belief about the natural power of medicines.”¹⁰⁶ Cook ascribes much of Bontius’ effort to divest “matters of fact” from mystical “belief” to the desire to make it commensurable with other practical knowledge gained in the wider, culturally diverse world and to make it possible for Europeans like the Heren XVII or the intellectuals in Leiden and elsewhere to both understand this knowledge and add it to their own fund of natural knowledge. As previously mentioned, the de-mystification of natural knowledge had became a fixture in Enlightenment natural philosophy and had been long-established as the modus operandi of the proto-scientific intellectual culture inhabited by Gideon Lincecum. Cook’s attention to exchange helps us to see how Bontius’s subtraction of spiritual meanings served the purposes of Europeans. By

¹⁰⁶ Ibid., 207 – 208.
contrast, Lincecum’s story makes it possible to look at knowledge in light of gift exchange to understand more clearly what was lost, and why that loss would have mattered to the Choctaw (and by extension, other indigenous peoples.)

Lincecum reports that upon first meeting, the Alikchi Chitto remarked, “I know who you are, and what a pity you are a white man, because you would have made such a good Indian.”

That the Alikchi Chitto had just met Lincecum for the first time suggests that Lincecum’s reputation for engaging the Choctaw in a way that respected cultural norms preceded him. It is certainly possible that the busy and important Alikchi Chitto knew of Lincecum’s stickball team adventure and his fair business practices, and was therefore amenable to meeting with Lincecum. Certainly, Lincecum’s appreciation for Choctaw culture empowered him to treat the Choctaw elder with due reverence which undoubtedly enriched the experience of both parties. As a previously quoted passage from Lincecum’s diary indicated, the meeting had been negotiated on a contractual basis. The importance of these terms as contractual obligations began to be marginalized immediately, however. Both men acted in ways that seem predictable if one takes Mauss’s ideas seriously, and clearly show the deeper significance of the work being done. Both Lincecum and the Alikchi Chitto showed tremendous dedication to and enthusiasm for their roles in this

107 H. B. Cushman and Angie Debo, History of the Choctaw, Chickasaw, and Natchez Indians (Norman: University of Oklahoma Press, 1999) 74 - 75. Cushman (born 1822) was a missionary near contemporary of Lincecum who lived with the Choctaw both in Mississippi as a child and long after their migration to Indian Territory.
exchange partnership which does not seem strongly enough motivated purely by the payment itself. Lincecum exceeded his contractual responsibility to feed the elder, thus confirming and accepting his responsibility as a host to feed his guest in a way that would be particularly appreciated by a Choctaw. Lincecum’s enthusiastic, even extravagant fulfillment of the contract makes it a gift in Maussian terms.\textsuperscript{109} In turn, the Alikchi Chitto’s enthusiastic sharing of his knowledge, at some cost perhaps to his own comfort, was a reciprocal gift.

Just as he did as a merchant and stickball team manager, Lincecum behaved in ways that are better modeled by a Maussian gift exchange, rather than a Smithian contract. As a merchant, Lincecum had often sacrificed short-term profit for long-term personal relationships by accepting all trades with the Choctaw, regardless of specific market value. As a stickball manager, Lincecum had failed to make any profit from the venture, although the enterprise certainly increased his reputation among the Choctaw, which likely contributed to his being able to meet with the Alikchi Chitto.\textsuperscript{110} Similarly, it was not in Lincecum’s short term, strictly utilitarian interest to spend so much time and energy providing for the Alikchi Chitto, likely at the expense of his own learning opportunity and seemingly unnecessarily prolonging the duration of the course.

\textsuperscript{109} Mauss, \textit{The Gift}, 79-81.
\textsuperscript{110} Lincecum, “Autobiography of Gideon Lincecum”, 58 - 59. It is not a stretch to suppose that Lincecum learned considerable Choctaw medicine and botany during the stickball tour from the Choctaw ball players, which Lincecum may have credited towards his restored health.
Yet in doing so Lincecum seems to have evoked a similarly enthusiastic response from the Alikchi Chitto.

At the end of the six week period, the Alikchi Chitto informed Lincecum “… there were not more medical plants this side of the Mississippi river… to study.” Lincecum synthesized his accumulated notes into a manuscript while reading it to his mentor, who made corrections and other recommendations. Upon finishing the manuscript, Lincecum reports that Alikchi Chitto “was greatly pleased, taking the manuscript and seeming to weigh it in his hands”, saying,

How strange, that this small bundle holds all the knowledge I ever possessed. Oh had I the power to do that: I would have been one of the renowned men of the world. Will you take good care of it, he inquired? Ah, yes, said I. I shall soon have it translated into English and it will then be printed and made so plain that every body can understand it; and I will say that Elichcho chito Ok. la-hunale taught it to me. Well, well said he, that is wonderful. I told him when the books were printed, I would send one to our friend Perre Juzong and he would read it to him. Then the time for me to go to the good hunting ground will have come, said he.111

The manuscript clearly made a favorable impression on the Alikchi Chitto. Indeed the possibility that it would make his knowledge widely known seemed to be appealing, a reaction that is not surprising considering the pedagogical duties of the Alikchi Chitto. Just after this exchange, Lincecum faithfully paid the full amount contractually owed, some twenty-one dollars.

111 Ibid., 64.
Lincecum describes the Alikchi Chitto’s reaction this way: “Looking steadily at the money a moment, he handed back ten dollars of it, saying, ‘you are a young man and will need this. I only owe for two blankets, that I must pay for as I go home.’” I find it especially notable that the Alikchi Chitto seems to weigh the manuscript in his hands, as if attempting to understand the significance of the entire experience of sharing, and manuscript production; the manuscript was heavy in terms of its importance as well as its physical heft. The manuscript as a material artifact, particularly in its promise of being published, printed, and distributed, in some sense mimics the original process of transferring Alikchi Chitto’s implicit knowledge to the manuscript in the first place. Lincecum uses material gifts of food and wealth to facilitate the manuscript’s production, yet the manuscript itself without passing into the Alikchi Chitto’s hands, becomes a gift to him, eclipsing the comparatively mundane food and money. It underscores Cook’s point that knowledge, in this case codified in a form meaningful to Europeans, could constitute a meaningful gift commensurate with material goods and services, to this Choctaw man who clearly saw what it could mean.

Sadly, either Lincecum or his descendants lost the manuscript, and in turn the clearest record of this knowledge and the relationship between the Alikchi Chitto and Lincecum at this moment.\textsuperscript{112}

By the end of their time together, the importance of the market contract paradigm may have been greatly diminished by reciprocity, but it was at no point altogether forgotten by either party. It may seem unremarkable that Lincecum, given his cultural roots in Anglo-American economic culture, intended to uphold his own end of the contract, but let us not fail to appreciate that in this vignette the Alikchi Chitto also clearly valued the fulfillment of contractual terms. In his book *Choctaws in a Revolutionary Age*, author Greg O’Brien suggests that many of the Choctaw had by this time come to understand the Anglo-American perception of quid-pro-quo trading. In “looking steadily at the money”, the Alikchi Chitto fully understood the Anglo-American perception that the full twenty-one dollars was his by contractual right. By accepting only eleven dollars, he declined to act fully on that contract, making his own valuation of the appropriate terms of exchange based, probably at least in part, on his understanding of the meaningful production of the manuscript. This traditional Choctaw elder understood his right to collect the whole fee, but ultimately made his own decisions about what was suitable in the context of his relationship with Lincecum, and the meaning of the manuscript Lincecum had produced.

The relationship between Lincecum and the Alikchi Chitto was something of a hybrid; Lincecum and the Alikchi Chitto negotiated a contractual agreement

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up front, which involved a prescribed exchange of material goods and services for knowledge while at the same time building social bonds through mutually understood reciprocal acts of gift-giving. To this point (despite the eventual loss of the manuscript which it is impossible to fault Lincecum with the evidence at hand) the relationship seems entirely satisfactory.

Duty of the Receiver

Yet, the history of Lincecum’s relationship with the Alikchi Chitto is not completely finished, even though Lincecum’s own writing about his relationship with the Choctaw elder ceases at this point in his diary. Mauss argued that the gift itself possesses mystical and spiritual qualities, qualities that survive and transcend the gift exchange. The giver retains some level of spiritual ownership of the gift while the receiver incurs a duty to properly revere and care for it. This duty goes beyond any person-to-person social obligation built or reinforced through the gift exchange. It seems closely tied with the Indian concept of medicine, where an object may be imbued with mystical and spiritual properties. According to Mauss, the act of giving in itself adds to or otherwise alters the mystical significance of the item. In the act of giving, the giver passes along a duty to care for and revere the object with an emphasis on using and caring for the gift in a responsible manner. Such care and use constitutes an important part of the reciprocal relationships on which exchange was based.\(^{114}\) In the

case of Lincecum and Alikchi Chitto, we can apply this concept not only to goods and services, but thanks to Cook, also to knowledge. Recall that when the Alikchi Chitto looked at the manuscript that Lincecum had produced he asked Lincecum: “Will you take care of it?” As a dutiful receiver of the Alikchi Chitto’s gift of knowledge, we can see that Lincecum simultaneously succeeded brilliantly and failed miserably.

The quote above underscores the Alikchi Chitto’s role as pedagogue of healing practices to larger (Six Towns) Choctaw society. Undoubtedly he had worked and travelled tirelessly for a substantial portion of his long life to enable ordinary Choctaw to heal themselves and each other. The prospect of reaching the rest of the world with this knowledge undoubtedly touched him. Lincecum failed the Alikchi Chitto most obviously by failing to publish the manuscript as he had promised, possibly by losing it or by failing to maintain it in a useable form. If Lincecum failed to carry out the letter of his promise to publish the manuscript however, he made a considerable effort to make good on the Alikchi Chitto’s intentions for the manuscript. We can see in Lincecum’s botanical notes that he continued to revere and readily use the Alikchi Chitto’s knowledge in his own medical practice. An excerpt from Lincecum’s botanicals demonstrates the Alikchi Chitto’s tutelage:

Class 17 – Order 1 – natural order 53; Cichoraceae – Erenanthis vergata? This plant blooms in November. It is a distinct species, and should have retained its old name P. Autumnales. Electchee Chitto [Alikchi Chitto] the Six Town doctor, used a decoction of the
roots and tops of this plant as a stimulating diuretic. And anodyne, taken occasionally, according to its effects on the patient. – Gid.\textsuperscript{115}

Though this is the only direct reference to Alikchi Chitto in his botanical notes, Lincecum frequently references the origins of knowledge as Choctaw or sometimes “Southern” Indians which would have included the Choctaw. Lincecum continued the Alikchi Chitto’s practice of visiting Choctaw settlements to disperse and glean botanical and medical knowledge. Additionally, he tutored other Anglo-Americans in his synthesis of Anglo-American and Indian botanical medicine, primarily in opposition to the “Poison Doctor” Heroic regimen.\textsuperscript{116}

Yet in another way Lincecum failed the Alikchi Chitto. Lincecum, by his own enlightenment tendencies, failed to appreciate and duly relate the spiritual and mystical components of the Alikchi Chitto’s natural knowledge. Mauss contended that in a proper gift exchange, the receiver should keep it inviolate, enjoying and utilizing it in its whole form. Lincecum, by rejecting and more importantly failing to pass on the spiritual and mystical components of the natural knowledge as related by Chahta Immatahah and particularly by the Alikchi Chitto, divided that knowledge in a way that would never have been acceptable to the Choctaw themselves.

\textsuperscript{115} Lincecum, “Autobiography of Gideon Lincecum”, 121. From Lincecum’s botanical notes originally written in the mid 1840’s, approximately ten years after the Choctaw began their forced migration from Mississippi, and approximately fifteen years after his meeting with the Alikchi Chitto.

\textsuperscript{116} Leslie Caine Campbell, Two Hundred Years of Pharmacy in Mississippi (Jackson: University Press of Mississippi, 1974) 14.
Is it possible that the Alikchi Chitto himself filtered out a significant portion of the mystical knowledge, perhaps in a pre-emptive attempt to accommodate Lincecum’s worldview? It is not unreasonable to assume that the Alikchi Chitto might have known Lincecum’s preference, given both Lincecum’s previous close interaction with the Choctaw, as well as the Choctaw people’s mature understanding (and even frequent adoption) of Euro-American knowledge and culture. One might suppose that the Alikchi Chitto might have (initially) felt contractually obligated to privilege the knowledge exchange towards what the paying customer expected. However, we know that despite the alikchis’ (Choctaw doctors’) extensive knowledge of healing herbs, what truly made them alikchis was their unique ability to engage with the spiritual aspect of nature.117 Given the utter importance of this charge, we can see that it would be highly unlikely for an Alikchi Chitto to significantly marginalize the importance of such knowledge.

Despite Lincecum’s otherwise laudable relationships with the Choctaw, this disregard, based in his aversion to organized religion, made a true act of reciprocity impossible. As with Bontius’s efforts to appropriate indigenous natural knowledge within the European paradigm, it is likely that Lincecum was motivated by his profound appreciation for the “practical” and “factual” content of Choctaw natural knowledge. But unlike the story of Bontius, we have a more

detailed understanding of Lincecum’s relationship with the Choctaw and can better appreciate the precise location of the disconnect that harmed this act of cultural exchange. The problem is not exploitation by Smithian contract as White has emphasized, nor was it an appropriation of knowledge for the sake of personal fame as it was for Bontius. Instead, it was Lincecum’s Enlightenment-inspired contempt for spirituality that blinded him to the full significance of the knowledge he received, preventing him from acting as the more meaningful bridge between Anglo and Choctaw culture that the Alikchi Chitto seemed to hope for. Enlightenment thinking, particularly its relentless questioning of received knowledge like that of the heroic medicine tradition may have given Lincecum the motivation to pay greater attention to the healing practices of the Choctaw. At the same time though, Lincecum's contempt for all mysticism and preference for knowledge stripped of its spiritual content (in the European Enlightenment tradition) meant that the Alikchi Chitto’s and Choctaw’s spiritual and mystical beliefs hardly stood a chance to enter Anglo-American culture, or Anglo-American knowledge despite its seamless importance to the Choctaw themselves.¹¹⁸

¹¹⁸ Burkhalter, Gideon Lincecum; A Biography, 241; Lincecum, Science on the Texas Frontier, 128 - 129. It is likely that Lincecum would have communicated with adherents of the Free Thought movement who migrated from Germany to central Texas in the mid nineteenth century. They held in common with Lincecum a critical view of organized religion coupled with a belief that rational scientific thought could perfect humankind. However, it is unlikely that Lincecum identified fully with Free Thinkers because they tended to be strongly abolitionist, anti-secessionist, and desiring equal rights for all races, including African-Americans. Lincecum was so devoted to the cause of slavery and the Confederacy that he immigrated to a Confederate ex-patriot colony in Tuxpan, Mexico in 1867, rather than renew his loyalty
Conclusion

This thesis has used the story of the relationship between Gideon Lincecum and the Choctaw people, (especially the Alikchi Chitto) to investigate Richard White’s broad claims about the cause of the power imbalances between Euro-Americans and Choctaw peoples. This study has used this micronarrative, focusing on knowledge exchange, to problematize White’s important, but ultimately too simplistic understanding of the nature of the conflict between Anglo and Native societies. White argued that the Choctaw and Europeans (and later Anglo-Americans) had incommensurable views of their relationship, with Europeans seeing it in terms of market exchange versus Choctaw understandings of reciprocal gift giving. This disconnect, in White’s view, powers the exploitation of the Choctaw people through interacting environmental and economic factors. By exploring the case of Lincecum, someone who clearly understood, valued and acted on Choctaw notions of reciprocity in his engagements (particularly with the Alikchi Chitto), I show that White’s story not only fails to help us understand Lincecum and the Alikchi Chitto’s cooperative and (as far as we can tell) mutually satisfying acts of exchange, it also fails to shed light on other kinds of cultural disconnects that could facilitate exploitation of a different kind. Both Lincecum and the Alikchi Chitto employed Maussian principles of reciprocal gift exchange to gain more to the Union. Ironically, Lincecum simultaneously renewed his long-distance relationships with his “Yankee” scientific friends.
than they likely would have by strictly meeting the terms of their contractual bargain to exchange medical and natural knowledge for money and provisions. Yet in the end, Lincecum’s failure to fulfill his end of the bargain was, wittingly or not, a betrayal of the Alikchi Chitto’s trust.

Lincecum deserves significant credit for his sincere appreciation and respect for specific aspects of Choctaw natural knowledge. Indeed, it is because too few Europeans and Euro-Americans treated Native Americans with such regard that White’s broad narrative of colonial subjugation remains - though in specific instances problematic - all too valid in general. However, Lincecum’s Euro-centric, Enlightenment-prejudiced world view of what could constitute valid knowledge doomed the exchange to fall short of what it could have been; it prevented him from appreciating the full cosmological range of such natural indigenous knowledge. Thus he neglected to include the spiritual aspects of native natural knowledge as part of the seamless whole as was communicated by the Alikchi Chitto. In Maussian terms of gift exchange, Lincecum failed to properly care for the gift given him and thus the totality of such knowledge. The tragedy of removal, when much Choctaw knowledge was lost, made this failure of care that much more devastating.

On September 15th, 2015 I attended a conference on digital humanities at the University of Oklahoma. One presenter discussed his nascent project of systematically digitizing Native American physical artifacts and oral traditions by engaging Native Americans in their homes and on their lands, recording oral
histories and making high-resolution photographs of artifacts in their possession. As with Lincecum’s interaction with the Choctaw, I pondered whether this was yet another application of the Anglo-American scholarship tradition intending well but perhaps missing the point. In this “Age of Information” how would the “native” embedded spiritual knowledge be maintained as a cohesive whole per Native tradition even as packets of data are parsed, sorted, categorized, and re-categorized through the lens of western scholarship’s latest tools of knowledge production, e.g. computer driven data analysis using complex and artificially intelligent, self-learning algorithms?

This situation feels all too familiar, like a direct descendant of historical narratives of colonialization throughout the world. White’s central thesis in *The Roots of Dependency* offers a helpful explanation. By the time of Lincecum and Alikchi Chitto’s meeting, there had continued to develop a pervasive imbalance of power (e.g. political, technological, economic) between the wider Anglo and Native cultures such that even within this particular informal, private, and mutually serendipitous reciprocal exchange, it is Lincecum’s worldview that dominates the aftermath as it survives today, notably in the form of Lincecum’s written record. As per their longstanding tradition, the Choctaw had been open to adopting alien knowledge and culture, and by the time of Lincecum’s meeting with the Alikchi Chitto, the Choctaw were thoroughly engaged in the self-directed assimilation of many aspects of Anglo-American knowledge and culture as a means of resisting Anglo-American political and geographic
assimilation. We can see hints of this even with the Alikchi Chitto’s favorable reaction to Lincecum’s having recorded his knowledge in his notes. According to Lincecum, both were quite happy with this arrangement. But here let us not un-problematically accept Lincecum’s account; it is the only extant version. Ultimately, the Alikchi Chitto’s voice in the matter is completely dependent on Lincecum, who by any reasonable measure meant well. Any natural, medical, or other knowledge transferred to Lincecum and thus to us travelled through the decidedly partisan lens of Lincecum’s world-view. Why should this be a problem? Surely this is true in any human interaction and with any exchange of knowledge.

In his Chapter on the Choctaws, White ends his narrative just as the Choctaws are forced to accept the Treaty of Dancing Rabbit Creek in September, 1830 which stipulated that any Choctaw who desired to retain their sovereignty must relocate west of the Mississippi, and those who would remain in their ancestral homeland must abide by the laws of the State of Mississippi as American citizens. In this thesis my argument has been predicated on the notion that Lincecum’s knowledge exchange with the Choctaw somehow belied White’s broad narrative of deterministic imbalance of power writ large between the Anglo-Americans and the Choctaws, and that we could investigate this by drilling down into their micro-narrative. That accomplished, I think now it is important to remember that even this particular, rather sunny micro-narrative roll-ups into an all-to familiar, grim reality for Choctaws and Native Americans in
general; the Choctaw Nation subsequently experienced extreme human loss either through marginalization by way of remaining in Mississippi, or the gauntlet of the Trail of Tears to Indian Territory. The wider cross-societal power imbalances described by White certainly manifested in the Lincecum – Alikchi meeting. Despite good intentions, Lincecum apparently failed to safeguard the manuscript that to the delight of the Alikchi Chitto he had promised to have published and widely distributed. Similarly, the subsequent mass Choctaw migration proved notoriously dangerous particularly for the very young and the very old Choctaw. It seems highly probable that the Alikchi Chitto died en route or if he remained, lost most of his Choctaw pedagogic charges. In the deaths or marginalization of their elders, the Choctaw suffered a major blow to the continuity of their oral tradition, specifically in this case the Alikchi Chitto’s knowledge.

Thus the power imbalances asserted by White disrupted oral tradition, leaving us at the mercy of the interpretive framework present in Lincecum’s autobiography and had it survived, the manuscript itself. It is certainly possible that Lincecum more faithfully (factually and empathetically) related the spiritual elements of the Alikchi Chitto’s natural knowledge in the notes he took while in the presence of the Alikchi Chitto. With the loss of this manuscript we must rely on Lincecum’s later recollections as well as his documents that were derivative of the manuscript, e.g. Lincecum’s botanical and autobiography.
So we see that in both the macro-narrative and our micro-narrative, White's power imbalance negatively affected the Alikchi Chitto's and the Choctaw's agency in representing knowledge in this exchange. Given that no exchange of knowledge relationship is ever perfectly balanced in power, how can any such cross-cultural knowledge exchange be validly undertaken? Or from the Native American perspective, how can the living spiritual essence of such knowledge and associated artifacts remain honored, inviolate, and sacred?

We have discussed knowledge exchange as a function of reciprocal gift exchange and in doing so we have examined the case study of Gideon Lincecum and the Alikchi Chitto. Though by no means perfect, we can see that the exchange did bear fruit that survives to today. Lincecum and the Alikchi Chitto must have been doing something right. In his PhD dissertation, Ian Thompson discusses how a cross-cultural epistemological synthesis between the Anglo-American science of archeology and Choctaw knowledge held in oral tradition can be brought together into a mutually productive synthesis of knowledge, such that both systems of knowledge are enriched. He argues that though these seemingly disparate paradigms admittedly may never be perfectly commensurate, with great care and respect, they may be made commensurate enough to be genuinely helpful in informing each other. Specifically, he demonstrates how Choctaw oral tradition and natural knowledge can helpfully if
imperfectly contextualize the archeological knowledge system of Anglo-America academia, and vice versa.

This is essentially what Lincecum was attempting to do with Choctaw and Anglo-American natural and medical knowledge. He valued and trusted Choctaw as a worthwhile source of authority to valid knowledge. He thoroughly engaged in Choctaw culture eagerly, even while he compartmentalized and minimalized Choctaw spiritual knowledge, thus problematically decontextualizing the whole.

I suggest that we can view Lincecum’s experiences as in part a highly useful, if far from perfect model for modern scholarly engagement with Native American knowledge. Yet we also must regard it as a cautionary tale in failing to appreciate the whole of the Native American knowledge, which is so crucial to Native American values and traditions. Although we in Anglo-American scholarship (as with Lincecum) may be embedded in and thus predisposed (or possibly prejudiced) towards what we consider to be “practical, factual, and imminently germane” knowledge, we should continually strive to be self-aware about how such prejudices affect our appreciation of aspects of knowledge we might not initially preconceive as valid or useful. In this respect, Mauss’s perspective of reciprocal gift exchange continues to be helpful, especially in that within the Native American tradition, knowledge given as a gift entails moral responsibilities towards that gift on the part of the receiver – including
maintaining the living spiritual essence of such knowledge and associated artifacts as cosmologically inviolate.

While it cannot be within the scope of this paper to thoroughly examine what a more mindful exchange might look like, I would like to suggest the scientific community ought to go beyond informed consent to thoroughly integrate Native Americans as co-producers of the products of such knowledge. Furthermore, they should be given the final say in how such knowledge is shared to the wider world. Perhaps contractual agreements can help in this respect, even if as starting points. But as with Lincecum and the Choctaw, the scientific community must continuously stress reciprocal engagement in such projects with Native Americans. Only in building and sustaining such relationships can all participants hope to fully communicate and appreciate the full cosmological range of Native American knowledge. Lastly, in dutifully reciprocating such gifts of Native American knowledge, the scientific community must continuously safeguard such knowledge, just as Native Americans do with their “medicine.”
Bibliography

Archival Sources


Published Sources


