THE YOUNG THOMAS JEFFERSON’S
GEOGRAPHIC THOUGHT, 1743 –1784

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ABSTRACT

Thomas Jefferson has long been admired for his influence in many arenas in the colonial era of American history; however, his collection of writings has not been closely scrutinized for his geographic thought. This thesis will look at Thomas Jefferson’s early life and his writings until 1784, to provide a survey of his geographic thought. It will look at his work in surveying, cartography, climatology, his influence on military movements during the Revolutionary War, his contribution to the Public Land Survey System, and the compilation of Notes on the State of Virginia. By reviewing Thomas Jefferson’s collection of writings, we can see how his geographic thought evolved and how it may have influenced future contributions to the field of geography.
The faculty listed below, appointed by the Dean of the College of Arts and Sciences have examined a thesis titled “The Young Thomas Jefferson’s Geographic Thought, 1743 – 1784,” presented by Christina L. Anderson, candidate for the Master of Science degree, and certify that in their opinion it is worthy of acceptance.

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CHAPTER 1
GEOGRAPHY AND THOMAS JEFFERSON

Thomas Jefferson has been the subject of countless studies since he rose to international prominence as the primary author of the Declaration of Independence in 1776. Jefferson is also known for a multitude of other achievements. According to Jefferson’s biographer, Dumas Malone, “[n]o historic American, except possibly Benjamin Franklin, played so notable a part in so many important fields of activity and thought; government, law, religion, education, agriculture, architecture, science, philosophy.”¹ One field omitted from Malone’s list is geography: Jefferson was perhaps “the only president who might legitimately be called a geographer.”²

Jefferson investigated various branches of geography throughout his life. He was raised by cartographers and westward-oriented men,³ kept careful weather observations,⁴ and chaired the committee that proposed the Land Ordinance of 1784, establishing how new states joined the Union.⁵ Jefferson corresponded with innumerable people throughout his life, among them astronomers, natural historians, surveyors, and

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climatologists. This correspondence helped shape his understanding of the West, which at his explicit instructions, was explored by Meriwether Lewis and William Clark in 1804.

With abundant evidence of Jefferson’s contribution to the field, one would expect the amount of literature focusing on his geographic thought to be voluminous; however, “interest by geographers in Jefferson’s geography has been minimal, sporadic, and highly selective.”

Jefferson’s writings have not been thoroughly examined by a geographer to determine how his geographic thought was shaped. This thesis will explore Jefferson’s letters and other relevant writings to determine how Jefferson’s geographic thought was influenced by his friends, colleagues, and other acquaintances, especially in the first forty years of his life, from his early childhood until July 5, 1784, when Jefferson sailed from Boston harbor to become a Commissioner to France.

**Defining Geography, Then and Now**

To understand how Jefferson can be considered a geographer, a definition of geography should be established. The field of geography itself has evolved through the centuries. Geography’s beginning can be traced to the early Greek period of philosophy, when two fields are distinguished; the mathematical tradition of locating a place and a

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8 Koelsch, 260.
literary tradition of describing a place. The Age of Exploration added an unprecedented amount of information that furthered our understanding of locations; however, the two fields associated with geography remained static. The tradition of geography began to change in the early nineteenth century when Alexander von Humboldt and Carl Ritter began the tradition of specialization and application of theory.

The understanding of the meaning of geography during the Colonial period can be determined by examining a copy of the dictionary Thomas Jefferson held in his own Library, namely Samuel Johnson’s famous dictionary.

Geography: Geography in a strict sense, signifies the knowledge of the circles of the earthly globe, and the situation of the various parts of the earth. When it is taken in a larger sense, it includes the knowledge of the seas also; and in the largest sense of all, it extends to the various customs, habits, and governments of nations.

Jedidiah Morse, author of one of the first geographies of America, held a somewhat less expansive view: “Geography is a science describing the surface of the earth as divided into land and water. Geography is either universal, as it relates to the earth in general; or
Jefferson mentioned geography in several of his letters, and his use of the word parallels these definitions, especially the first, strict sense of Johnson’s definition. First, he referred to geography as the physical lay of the land. In *Notes on Virginia* he wrote, “[a]n inspection of a map of Virginia, will give a better idea of the geography of its rivers, than any description in writing,” and “[f]or the particular geography of our mountains I must refer to Fry and Jefferson’s map of Virginia.”

A letter written in August, 1776, gives further insight into Jefferson’s idea of geography. The letter described military maneuvers being carried out in New York by Revolutionary and British forces. Jefferson wrote that an attempt at a treaty between the Indians and the United States must be put off, but that the troops should continue their movements in the territory. He continued, “[w]ere it not that it interferes with our Assembly I would go to it, as I think something important might be done there, which could not be so well planned as by going to the spot and seeing it’s [sic] geography.” These words illustrate that geography, to Jefferson, was an understanding of the spatial disposition and the character of the terrain. Jefferson knew how important it was to be

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familiar with the area’s elevation, physical formations, vegetation, and settlements, in order to formulate a successful battle plan.

Jefferson also understood the movements of the ocean’s currents and winds, which fell under the second sense of Johnson’s definition. A long letter written to Jean Baptist Le Roy, a French scientist specializing in electricity,\textsuperscript{17} detailed Jefferson’s knowledge of how the sun heats the earth, driving the currents and winds, and how ocean winds changed depending on latitude. Jefferson wrote about his understanding of the Gulf Stream and its path along the coast of North America; he believed it may have originated off the coast of Brazil. In this same letter Jefferson spoke of the possibility of creating a canal through Panama. Jefferson suggested that the canal would alter ocean currents and winds, allowing quicker passage to Asia from the east; make the Gulf Stream cease to flow; and change the composition of the ocean floor along the coast, including fish habitats.\textsuperscript{18}

Jefferson’s descriptions of the customs, habits, and governments of an area are known not just through \textit{Notes on Virginia}, but also in letters describing his tour of the south of France in the spring of 1787. For example, Jefferson described the physical and human geography of the Beaujolais region of France: “On the right we had fine mountain

\textsuperscript{17}Complete Dictionary of Scientific Biography, s.v. “Jean-Baptiste Le Roy.”
sides lying in easy slopes, in corn and vine, and on the left the rich extensive plains of the Saone in corn and pasture."

On the status of citizens in Nice he wrote,

I am never satiated with rambling through the fields and farms, examining the culture and cultivators, with a degree of curiosity which makes some take me to be a fool, and others to be much wiser than I am. I have been pleased to find among the people a less degree of physical misery than I had expected. They are generally well clothed, and have a plenty of food, not animal indeed, but vegetable, which is as wholesome. Perhaps they are over worked, the excess of rent required by the landlord, obliging them to too many hours of labor, in order to produce that, and wherewith to feed and clothe themselves.

In every sense of the colonial era definitions of the word, Jefferson was practicing geography throughout his life. But how does he fit within more modern understandings of geography? The structure of academic geography today focuses on four traditions: spatial geography, earth science, the relationship between human beings and the environment, often called the man-land tradition, and regional studies. Each tradition describes a different focus of geography, but they are inextricably intertwined. The first tradition considers spatial or locational geography, essentially recording the geometric location of phenomena, distributions, patterns, and movement. This tradition is closely linked with the work of surveyors and cartographers, who portray physical and man-made features to scale in the most accurate form possible on maps. Maps are a means to

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21 The four traditions are based on William D. Pattison, “The Four Traditions of Geography,” *Journal of Geography* 63, no. 5 (1964): 211-216. For the purpose of this thesis, Pattison’s four traditions were reorganized. In Pattison’s original paper, the traditions were presented as (1) spatial tradition, (2) area studies tradition, (3) man-land tradition, and (4) earth science tradition.
end for geographers, a fundamentally geographic tool that allows geographers to express spatially related ideas.\textsuperscript{22}

The earth science tradition studies the physical earth and how it has been and is being changed. This tradition includes the study of four earthly spheres: the air above the earth’s surface or atmosphere, the outer shell of the earth or the lithosphere, the water on the earth or hydrosphere, and living things or the biosphere. The earth science tradition also studies the effect of the sun on the earth and each of these spheres.\textsuperscript{23}

The man-land tradition studies the relationship between humans and the physical earth.\textsuperscript{24} For the greater part of the late nineteen century and first half of the twentieth, the man-land tradition was related to environmental determinism, the belief that the environment was wholly responsible for man’s actions.\textsuperscript{25} Environmental determinism is not an accepted theory for modern scholars; in fact it is a “geographical swearword.”\textsuperscript{26} Geographers today interpret the man-land tradition as simply the relationship between man and his environment, with culture determining how one would influence the other.\textsuperscript{27}

In this context, however, environment has a broader meaning. The environment includes

\begin{flushleft}
\textsuperscript{23} Pattison, “Four Traditions,” 215-216.
\textsuperscript{24} Pattison, “Four Traditions,” 214-215.
\textsuperscript{26} Lewthwaite, 2.
\textsuperscript{27} Pattison, “Four Traditions,” 214.
\end{flushleft}
the physical or natural environment – the land, plants, and animals – and man-made environments such as cities and social structures.\textsuperscript{28}

Jefferson and his contemporaries would have interpreted portions of the spatial, man-land, and earth science traditions as natural history and natural philosophy, rather than as geography. Natural history was a significant scientific field in the eighteenth century that attempted to identify unknown flora, fauna, and all other natural products, then systematically classify them. However, the goals of natural history were also economic, for if the available natural resources were catalogued, those resources could be exploited for human purposes.\textsuperscript{29} Natural history was thus not just a matter of earth science, but also encompassed relationships between human societies and their environments,\textsuperscript{30} and Jefferson was in this sense also very much a student of natural history. Natural philosophy, an even more general term, was essentially simple natural science, or the study of nature apart from theology.\textsuperscript{31}

Jefferson illustrated his distinction between geography, natural history, and natural philosophy in a letter written to his nephew, Peter Carr\textsuperscript{32} in 1814, when Jefferson

\textsuperscript{29} Daniel Hopkins, “Danish Natural History and African Colonialism at the Close of the Eighteenth Century: Peter Thonning’s ‘Scientific Journey’ to the Guinea Coast, 1799-1803,” \textit{Archives of Natural History} 26, no. 3 (1999): 369-418, on 406.
\textsuperscript{30} Hopkins, 369-370.
discussed the possibility of another university in Virginia and the curriculum he envisaged for it. Jefferson divided the university into three branches: language, mathematics, and philosophy. In the mathematics department he included pure mathematics, physio-mathematics, physics, chemistry, natural history, zoology, anatomy, and medicine. Within the subject of natural history, Jefferson placed mineralogy and botany, which today could be considered part of the earth science tradition. Jefferson included geography within the subject of physio-mathematics, treating “physical subjects by the aid of mathematical calculation,” essentially the use of survey methods to construct maps and thus part of the spatial tradition. \(^{33}\) Natural philosophy was placed within the subject of physics; because its students would study at the properties of natural elements, again, related to the earth science tradition.

Jefferson’s distinctions among the fields are also evidenced in a catalogue he devised when he sold his library to the Library of Congress in 1815 to help pay debts. Jefferson’s system accompanied his prized possessions to Washington, D. C. He divided his books into three main categories: history, philosophy, and fine arts, according to the part of the mind needed to understand them. Under the category of history, based on memory, Jefferson included the category “Natural,” followed by “Natural history proper.” Within the category of natural history proper he included animals, followed by anatomy and zoology, then vegetables or botany, and minerals or mineralogy. Natural philosophy was included in the natural category as well; however its origin lay with

\(^{33}\)Thomas Jefferson to Peter Carr, Monticello, September 7, 1814, in *Life and Selected Writings*, 590. Jefferson also wrote about providing an elementary education for all citizens and different possibilities for higher education.
physics (in figure 1 and 2). Geography was in a separate category traced through philosophy, which utilized reason, under the mathematical and physio-mathematical class.\textsuperscript{34}

The last of the standard modern geographic traditions comprises regional studies, or the study of places. Regions can be of any size: a state, a city, a region, or a continent, or a physically defined area such as a mountain range, the drainage of a river, or a desert. Regional studies encompass all of the other traditions: spatial, earth science, and man-land. Regional geographers must describe the region’s geographic location and characteristics, the spatial tradition. Then they look at the region’s climate, environmental conditions, geology, landforms, vegetation, and soil types, the earth science tradition. They add material from the man-land tradition, such as the region’s population, agriculture, industries, settlement patterns, and urban development. Geographers practicing area studies gather information about the region’s history, culture, and political systems. All of this must be presented in a way that explains how and why one region may differ from neighboring regions.\textsuperscript{35}

As evidenced through Jefferson’s own words, his thought clearly fits within both past and modern definitions of geography. However, questions remain regarding his geographic thought. First, what have other authors written about Jefferson and his work in geography? Chapter two will answer this question in a literature review. Next, what type of geographic ideas did Jefferson’s family, acquaintances, and his education

\textsuperscript{35} Pattison, “Four Traditions,” 213.
possibly introduce him to? Chapter three will make some assumptions about his family, social life, and education to attempt to understand where Jefferson’s ideas of geography began. Third, what does Jefferson’s personal correspondence, until July 5, 1784, reveal about his geographic ideas? In chapter four, his correspondence will be evaluated for geographic evidence. Next, how does a geographer read Notes on Virginia, a topic chapter five will address. Finally, based on the information presented, the conclusion will evaluate how Jefferson’s early geographic thought can be projected forward in his work and relationships later in his life.
CHAPTER 2

LITERATURE REVIEW

To catalogue the areas of his [Jefferson’s] explorations is to list most of the principal categories of knowledge – law, government, history, mathematics, architecture, medicine, agriculture, languages and literature, education, music, philosophy, religion, and almost every branch of the natural sciences from astronomy through meteorology to zoology.¹

Thousands of books and articles have been written about Thomas Jefferson;² “[o]ne could, in fact, spend years reading the literature on Jefferson and never come close to exhausting the supply.”³ This chapter will focus on the literature that seems particularly relevant to Jefferson’s geographical work and thought.

In 2008, William Koeslch, a geographer, conducted an extensive review of this geographical literature. His article included works by historians, geographers, and natural scientists. Koelsch wrote, “[i]n the last 110 or so years geographers have made only three significant general attempts to examine Jefferson’s interest and accomplishments in this field broadly.”⁴ The articles Koelsch referred to are General Adolphus Washington Greely’s “Jefferson as a Geographer,” published in 1896, Dr. George Surface’s “Thomas Jefferson: A Pioneer Student of American Geography,” published in 1909, and “Thomas Jefferson, Geographer,” an address given by Gary

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¹ The Papers of Thomas Jefferson, 1:viii.
⁴ Koelsch, 260.
Dunbar in 1960. These articles are brief accounts of the high points in Jefferson’s interest in geography, without looking in depth at any one subject.

The first article Koelsch mentioned, written by A. W. Greely, discussed the tie between Thomas Jefferson and his father, Peter Jefferson, who had a long career in surveying and cartographic endeavors. Greely wrote that Jefferson’s understanding of geography and view of the West most likely came from studying Peter Jefferson’s Map of Virginia. The younger Jefferson may have studied the map, especially the depiction of previously unknown western portions and “stored geographic facts and ideas that better fitted him for his life duties.”

In an expanded version of Greely’s article published in the introduction of Volume Thirteen of The Writings of Thomas Jefferson, he included Jefferson’s work in demography and surveying territorial boundaries. As the first United States Secretary of State, President Washington charged Jefferson with overseeing the first census. Later Jefferson directed the demarcation of “the boundaries between the United States, the Indians, and the British possessions.”

The article by George Surface began with the statement that “very little has been written about his high attainments as a thorough and practical student of geography and science.” Of Jefferson’s book Notes on Virginia, Surface noted that “[o]n the various

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7 Greely, “Jefferson as a Geographer,” in Bergh, iv-v.
subjects discussed, eighteen foreign authorities are cited.”¹⁰ Surface, however, did not discuss who those authorities were and what type of information they provided. He also addressed Jefferson’s work in meteorology and climatology, writing, “[i]f there was any one geographic subject in which Jefferson was more interested than another, it was the study of weather and climatic conditions.”¹¹

The last article mentioned was an address given to the Washington Chapter of the Special Libraries Association’s Geography and Map Group in 1960 by Gary S. Dunbar. Dunbar agreed with Greely and Surface that “Jefferson’s work in natural history—botany, zoology, and geology—was essentially geographical.”¹² He described the process in which Jefferson used information from travelers in the West to explain climate differences between the Ohio Valley and the Atlantic Coast.

Besides these four writers, most authors on Jefferson and geography generally address the same subjects; Peter Jefferson and his surveying career, Jefferson’s work in natural history,¹³ *Notes on Virginia*, his observations on weather and climate,¹⁴ Jefferson’s own education as well as his interest in geographic education,¹⁵ his interest in the West, and the Lewis and Clark Expedition.¹⁶

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¹⁰ Surface, 744.
¹¹ Surface, 746.
¹³ Dunbar, 11.
¹⁴ Surface, 744-748.
¹⁵ Koelsch, 273-274.
¹⁶ Surface, 748-749.
Peter Jefferson and Surveying

Silvio Bedini included a chapter in *Jefferson and Science* entitled “Surveying.” Bedini mentioned the appointment of Jefferson as County Surveyor of Albemarle County. However, he added that there is no record of Jefferson actually recording or attempting a survey in this role. After Jefferson left his post, he made surveys of his properties at Monticello and Poplar Forest. 17 Bedini wrote that *Notes on Virginia* was the first public glimpse of Jefferson’s interest in natural science and that Jefferson “managed to amass nearly all the knowledge of geology and zoology available in his time.” 18 Bedini also discussed the map of Virginia included in the original publication of *Notes*, writing that Jefferson drew the map himself using his father’s map of Virginia as a base map, adding information supplied by the cartographer Thomas Hutchins and then information about western lands yet to be added to the Union. 19

Coolie Verner wrote about the cartographic achievements of Peter and Thomas Jefferson in the cartographic publication, *Imago Mundi*. In 1959 Verner wrote “Mr. Jefferson Makes a Map” about revisions to the Fry-(Peter) Jefferson map when Thomas Jefferson published *Notes on Virginia*. 20 In 1967 Verner followed up with “The Fry and Jefferson Map.” 21 Verner’s articles are thorough discussions of the evolution of the maps themselves.

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18 Bedini, 49.
19 Bedini, 49-50.
Natural History


Notes on Virginia

Many studies of *Notes on Virginia* have been published, including works by historians, literary scholars, and, in brief mentions, by geographers. Geographers have disagreed on the book’s importance. George Surface called it a “distinctly . . . geographic contribution of great merit” and “the most logical treatment to be found in any book on geography published in the eighteenth century.” The noted geographer Ralph H. Brown disagreed with Surface, writing that *Notes on Virginia* only obtained popularity because of its author, not its content.

Brown addressed *Notes on Virginia* again in 1943, writing, “the first eight questions cover geographical matters and are presented in the best traditions of the subject,” closely following similar books of the time. More modern writers share the geographer David Livingstone’s view. In 1992

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23 Surface, 744.
Livingstone wrote that *Notes on Virginia* provides proof that “Jefferson’s personal fascination with the brute geography of the continent . . . provided the template for the science of the entire Jeffersonian era.”

Douglas L. Wilson wrote an article in 2004 tracing the evolution of *Notes on the State of Virginia*. Wilson does a thorough evaluation of the changes *Notes* underwent from the lost first draft sent to Francois de Marbois in 1781 until it was published in 1784. Wilson mentioned that “Jefferson consulted with several people he considered experts on specific subjects.” He specifically cited Archibald Cary, who provided information on particular animals, and Thomas Walker, who provided information on Native Americans. Other individuals mentioned in the footnotes, Wilson writes, were explicitly asked for information, but he does not state what information was requested of whom. Wilson adds that “the manuscript . . . has never been studied intensively or in detail.”

William Peden edited and provided an introduction for Jefferson’s *Notes on the State of Virginia* in 1955. Peden’s edition of Jefferson’s publication included original drawings, such as an image of Madison’s Cave, and tables, including one on Virginia’s population. It is the Notes section of Peden’s edition that provides a wealth of information for the reader. Peden indicated where the print edition differed from the

26 Livingstone, 145.
28 Wilson, 108.
29 *Notes on Virginia*, 23, 83.
original manuscript and provided references to letters in which Jefferson sought information for his book.

**Public Land Survey System**

Jefferson’s involvement in the public land survey system, which governed settlement of the West by dividing the land into sections, townships, and ranges, started with his dual membership in 1784 in committees charged with disposing of the western territories and Indian affairs. Two documents written in the late 1800s trace the Land Ordinance of 1787: “Evolution of the Ordinance of 1787,” by Jay A. Barrett in 1891, and *The Legislative History of the Ordinance of 1787* by John M. Merriam in 1888. Both give the history to the Land Ordinance of 1787 by tracing the ideas and components of the Ordinance. They provide reasonable possibilities for the origin of the rectangular Public Land Survey System.

Robert F. Berkhofer, Jr., also wrote about this system and Jefferson’s involvement in it, in “Jefferson, the Ordinance of 1784, and the Origins of the American Territorial System” in 1972. Richard P. McCormick wrote “The ‘Ordinance’ of 1784?” to describe “how the Confederation Congress struggled to define its ambiguous authority and how it chose to frame its decisions,”30 not the survey, division, and distribution of western land seceded by the states.

Amelia Clewley Ford published “Colonial Precedents of Our National Land System as it Existed in 1800” as her doctoral dissertation in history in 1908. Ford looked

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not only at the public land survey system as implemented in the West, but at other boundary delineation methods used on the Eastern Seaboard. Ford’s work provided documentation for various theories regarding the origin of a rectangular survey system based on latitude and longitude.  

In 1957 the geographer William Pattison completed his doctoral dissertation, “Beginnings of the American Rectangular Land Survey System, 1784-1800” in which he conducted a thorough investigation of the politics behind the original Land Survey of 1784 and the surveying process that continued for the next two decades. Pattison first looked at the original committee, including Thomas Jefferson, which proposed the land survey system. Pattison revealed that Hugh Williamson of North Carolina deserved credit along with Jefferson for the survey system that evolved in the Land Ordinance of 1785. How exactly did Williamson and Jefferson devise our complex system of section, township, and range? Pattison included a section entitled “The Questions of Origins.” He wrote that the English system of ‘hundreds’ could be the source of Jefferson’s inspiration; however, Pattison concluded, “[u]ntil further research produces final answers, the present author would suggest that the issue of origins is likely to be more entertaining than instructive.”

32 Pattison, Beginnings, 1-2.
33 Pattison, Beginnings, 38.
34 Pattison, Beginnings, 43-46. Jefferson envisaged land division in units of tens and hundreds, in an effort to introduce a decimal system.
35 Pattison, Beginnings, 64.
Little has been written about Thomas Jefferson and his detailed weather observations. H.E. Landsberg, former director of the Office of Climatology at the U.S. Weather Bureau, mentioned Jefferson in two of his articles, but the information provided is limited. Landsberg mentioned Jefferson in describing the history of climatology:

The interest in the atmospheric environment in the outgoing 18th century was quite universal among the well-educated. Thomas Jefferson considered climatic observations important to “increase the progress of human knowledge.” From data collected at Williamsburg, Virginia, in the years 1772 to 1777, he prepared one of the first climatic summaries for North America.36

In another article published in 1964, Landsberg wrote about Jefferson’s order to Lewis and Clark about keeping “temperature records during their expedition.”37 The purpose of these articles, however, was not specifically to inform the reader about Jefferson’s work in the study of climate, but merely to place Jefferson in the field of climatology.

David M. Ludlum wrote the next treatment of Jefferson and weather in 1966. In a two-page article, Ludlum wrote about Jefferson’s acquisition of instruments, the exchange of weather observations with contemporaries, and his role as a climate expert in Virginia.38 Ludlum also mentioned the existence of a Weather Memorandum Book, currently owned by the Massachusetts Historical Society in Boston. Jefferson kept this

notebook to record temperature and barometric pressure, no matter where he was. The notebook is not available online, nor has it yet been published for scholarly review.39

The American West and the Lewis and Clark Expedition

William Koelsch observed that one area of Jefferson’s work in geography had not been overlooked by historians and geographers, namely his involvement in the Lewis and Clark Expedition and Western exploration.40 Three authors merit special attention for their geographical perspective; Donald Jackson, John Logan Allen, and James Ronda.

In 1981 Donald Jackson wrote Thomas Jefferson and the Rocky Mountains: Exploring the West from Monticello.41 The book examined specific episodes in Jefferson’s early life and their direct relationship to his attitudes toward exploration of the West. In the first chapters of his book, Jackson described how geography played an integral role in Jefferson’s early life. In “Growing up with Geographers,” Jackson discussed how Peter Jefferson, Joshua Fry, Thomas Walker, and James Maury influenced Jefferson’s geographic vision of the West.42 “Some Notes on Virginia” identified how Jefferson’s ideas of the West and were founded in Notes on Virginia.43 In “A Geographer’s Bookshelf,” Jackson chose sixteen books Jefferson either used or owned that he believed had the greatest influence on Jefferson’s vision of the West.44

39 Ludlum, 974.
40 Koelsch, 260.
42 Jackson, 4-12.
43 Jackson, 25-38.
44 Jackson, 86-96.
The seminal works of geographer John Logan Allen, such as *Passage Through the Garden* and *North American Exploration*, are considered by Koelsch as “major and distinctive contributions” for their examination of Jefferson’s geographical thought. The bulk of Allen’s works provide background, analysis, and geographical observations in connection to Lewis and Clark and other expeditions. Further works by Allen explain how Jefferson’s relationship with geographically minded men, such as his father and James Maury, provided the fuel for his ambition to find the elusive Passage to India.46

Another prolific editor and writer on Thomas Jefferson, Lewis and Clark, and the American West is James Ronda. In *Thomas Jefferson and the Changing West*, Ronda collected and edited articles from multiple authors to support his view that Americans identify Jefferson as the founder of the American West.47 In an earlier article by Ronda, he drew a direct connection between the instructions Jefferson gave to Lewis and Clark and the ocean expeditions of Captain James Cook. Ronda makes this connection based on several pieces of evidence, including the six accounts of Cook’s voyages found in Jefferson’s library. While in Paris, Jefferson spoke directly to John Ledyard, an officer in Cook’s third voyage.48 The article lists other explorers who had also been tasked by Jefferson to document different portions of the American West.49

45 Koelsch, 269.
46 Allen, “Imagining the West,” 6.
49 Other explorers under the direction of Thomas Jefferson include William Dunbar, Zebulon Pike, Thomas Freeman, and Peter Custis. Ronda, “Knowledge of Distant Parts,” 6.
Other Works

In 1780, Thomas Jefferson was asked to join the American Philosophical Society; a scientific society founded by Benjamin Franklin and meant to rival European scientific societies. A chapter in Daniel J. Boorstin’s *The Lost World of Thomas Jefferson* is devoted to Jefferson’s correspondence with other members of the Society. Boorstin outlined how Jefferson and a select few members exchanged ideas ranging from climate, to theology, politics, and surveying. He wrote; “[t]he group of philosophers whose thought will concern us we have christened the Jeffersonian Circle, for [Jefferson] stood at the center . . . . He was the human magnet who drew them together and gave order and meaning to their discrete investigations.”

Boorstin documented the practice of passing knowledge and information between key intellectuals in Colonial America.

The most complete biography of Thomas Jefferson to date is the six-volume work completed by Dumas Malone, for which he received the Pulitzer Prize. Malone spent thirty-eight years compiling information about Jefferson’s life. The volumes are well researched, with excellent source material. Malone, however, was not writing about Jefferson’s view of the land, but constructing a historically accurate account of Jefferson’s whole life. The information found in Malone’s work is important to an understanding of the relationships between Jefferson and other key figures.

Gilbert Chinard, in 1926, published *The Commonplace Book of Thomas Jefferson: A Repertory of His Ideas on Government*, a collection of writings Jefferson copied down while he was studying law under George Wythe and serving in Virginia’s

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House of Burgesses. Of the over nine hundred entries, almost seven hundred were recorded before 1770 and show how Jefferson not only prepared “for the law, but also the way he was training his mind to focus on essentials.” Historians have studied entries made after 1770 to see where Jefferson may have drawn his inspiration for *A Summary View of the Rights of British America* and the Declaration of Independence. Many of Jefferson’s entries are foreign languages and Chinard does not provide translations for these, making it difficult to understand what Jefferson felt inclined to copy.52

In 1989, Douglas L. Wilson published Jefferson’s *Literary Commonplace Book*. This book represents approximately 160 sheets of paper, with quotations from texts Jefferson was studying written on both sides. While neither this nor Chinard’s book contains any original writings of Jefferson’s, we can begin to understand exactly what Jefferson was studying and, through the aid of handwriting analysis, determine the approximate time period, as well. These sheets provide valuable information for the period prior to 1760, for which no correspondence from Jefferson survived because of a fire at his mother’s home.

The American Philosophical Society commissioned Edwin Morris Betts to edit and annotate Thomas Jefferson’s *Garden Book*, a notebook in which Jefferson kept records of flowers, plants, trees, and other vegetation growing at Shadwell and Monticello. Betts included material from other sources when large gaps in Jefferson’s

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records begin to appear in the *Garden Book*. Betts also edited another of Jefferson’s notebooks, his *Farm Book*. Unlike the *Garden Book*, the *Farm Book* is not in chronological order. It has been arranged by Betts by subject matter.

In 1943 Congress appropriated funds to publish a new edition of writings by Thomas Jefferson as part of the Thomas Jefferson Bicentennial Commission. The new edition was to include “additional material and unpublished manuscripts preserved in the Library of Congress and elsewhere” to provide the most complete edition of Jefferson’s writings. Princeton University was selected to begin this project under the editorship of Julian P. Boyd. Boyd has added notes to many of the letters, providing historical context and other information for clarification. Extensive introductions for larger works such as “A Summary View of British Rights” and legislation introduced by Jefferson provide political and historical background. Thirty-eight volumes have been published to date, covering Jefferson’s writings from 1760 until November 12, 1802. This Princeton edition of Jefferson’s writings has been the primary source for Jefferson’s writings up to 1784 used in this thesis.

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56 *The Papers of Thomas Jefferson*, 1:xix.
CHAPTER 3
THE FORMATION OF A GEOGRAPHER’S MIND

In a small wooden house called Shadwell, owned by Peter and Jane Randolph Jefferson in rural Virginia, Thomas Jefferson was born in the spring of 1743.¹ He was surrounded by geographers until he left for the College of William and Mary in 1760.² Jefferson’s father was a well-known surveyor who worked on several cartographic projects in his life. After his father’s death in 1757, his primary guardian, Dr. Thomas Walker, himself a surveyor and westward explorer, ensured that Jefferson was schooled by a geography minded man, Reverend James Maury.³ Maury introduced Jefferson to texts on geography and encouraged his curiosity about what lay west of the Appalachians.⁴

To assume these that individuals were the only geographical influences on Thomas Jefferson would not paint a full and accurate picture. There were other individuals who influenced Jefferson, in terms not only of geography but of his view of the land itself, his attitudes towards the West, his interest in natural history, and his overwhelming sense of pride in his home state of Virginia. These men, and perhaps one woman – his mother, and classical writers endowed Jefferson with a broad, highly sophisticated geographical view of his world.

In order to understand how Jefferson’s geographical view was formed, we must first develop an understanding of what geographical knowledge was available. The

¹ Malone, 3.
² Malone, 49.
³ Allen, “Imagining the West,” 7.
⁴ Jackson, 12.
Enlightenment had spurred increased interest in many fields of science. By the early eighteenth century, there had been numerous scientific advancements in chemistry, biology, and geology, but “geography remained almost entirely in the hands of textbook writers who produced compilations of regional descriptions and showed little concern with the theory of the subject or its relation to significant issues in the scientific thought of the time.”

In British America, much geographical work focused on the lands westward of the colonies. This geographical study relied heavily on textbooks, speculation, some logic, and traveler’s accounts of interior of the continent. Knowledge of the settled colonies was less speculative: the colonists knew about their soil, the climate, and native vegetation because they had to, in order to survive.

**Jefferson’s Paternal Influence: A Legacy of Service and Surveying**

The paternal side of Thomas Jefferson’s family in America reached back to Jefferson’s great grandfather, whom most biographers refer to as Thomas Jefferson I. He was a landholder in Henrico County, which today surrounds the city of Richmond to the north of the James River. Jefferson purchased his first parcel of land from William Byrd in 1682 and was able to purchase more property through profits from various enterprises, including collecting bounties for wolves and surveying, however, little is known about

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the types of surveys he completed. Upon his death, his estate was left to his son Thomas, later known as Captain Jefferson.

Captain Jefferson was commander of the local militia and sheriff in Henrico County, Virginia. He was the first ancestor named in Jefferson’s autobiography: “the first particular information I have of any ancestor was of my grandfather, who lived at the place in Chesterfield called Ozborne’s, and owned the lands afterwards the glebe of the parish.” Captain Jefferson enjoyed an elevated social position due to his appointment as Sheriff and was granted several thousands of acres farther west in Virginia. One of his land grants included fifteen hundred acres along Fine Creek, which he left to his youngest son, Peter Jefferson, upon his death in 1757.

Peter Jefferson was a well-respected surveyor and Virginian pioneer, a man known for his physical stature and strong character. The only substantive passage in which Thomas Jefferson referred to his father was in his autobiography: “[m]y father’s education had been quite neglected; but being of a strong mind, sound judgment, and eager after information, he read much and improved himself.” To assume from this passage that Jefferson’s father was not a learned man would be incorrect.

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7 Malone, 6-7.
9 Life and Selected Writings, Autobiography, 7.
10 Kimball, 12.
11 Bedini, Jefferson and Science, 15.
12 McDonald, 31.
13 Life and Selected Writings, Autobiography, 7.
14 Malone, 9. Peter Jefferson’s formal education may well have been neglected, since he was the third son. Formal education in the early eighteenth century would have been saved for the eldest son and primary heir, not the third son, who would be expected to make his own way.
Despite Peter Jefferson’s lack of formal education, he was a well-read man and understood arithmetic. An inventory of Peter Jefferson’s books, forty-two in all, completed after his death revealed that he was a man of many interests. His library included books on a variety of topics, including history, geography, literature, mathematics, and several maps. By today’s standards, forty-two books may not be seen as a large library, but a survey of other wills drawn in the same time period revealed that Peter Jefferson’s library could be ranked among those of the upper class. The wills of his neighbors revealed that many owned no more than three books.

Peter Jefferson followed his father by serving as sheriff of Goochland County, where his inheritance at Fine Creek lay, in 1737, and his grandfather by learning the craft of surveying. Thomas Jefferson followed the pattern by becoming Lieutenant of Albemarle County, Albemarle County surveyor, and serving the people of Virginia in the House of Burgesses.

Jefferson’s Maternal Influence:
Geography and Botany

Up the James River from Peter Jefferson’s Fine Creek plantation was Dungeness, the home of Isham Randolph. Isham Randolph’s daughter Jane married Peter Jefferson in 1739. Isham Randolph had been educated at the College of William and Mary and was the Colonial Agent to London. Thomas Jefferson’s great granddaughter, Sarah

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15 Bedini, Statesman of Science, 10.
16 Kimball, 13.
17 Kimball, 14.
19 Malone, 13.
20 Malone, 13.
Randolph, recalled that aside from his official duties, Randolph “devoted much time to the study of science.”\(^\text{21}\) Randolph’s role as Colonial Agent required him to make frequent trips to England. Through these many trips to London, Isham Randolph became well acquainted with Peter Collinson, an English botanist and frequent correspondent of Carl Linnaeus, the world renowned botanist.

Peter Collinson was a London merchant and a gardener who was interested in plants from foreign lands. He corresponded with a network of suppliers, especially in America, to obtain new seeds. Collinson also used his own money to support scientific endeavors in America, a practice which was unheard of in the early eighteenth century. He worked with one of the first scientific institutions in America, the Library Company of Philadelphia, as an advisor. Collinson recommended books, instruments, and other materials he felt would further the Company’s scientific endeavors. It was through this relationship that Collinson began a correspondence with John Bartram, the Philadelphia botanist, and Benjamin Franklin himself. Collinson was responsible for sending a glass tube to Franklin that he used to begin his experiments with electricity.\(^\text{22}\)

Perhaps the greatest scientific and geographic contribution by Collinson was acting as a conduit for information between his contacts in America and the European scientific community. Collinson also served as a guide for the emerging number of American scientists, particularly botanists, moving them to classify their discoveries in the system devised by his friend Carl Linnaeus. The goal of many of these men,


\(^{22}\) *Complete Dictionary of Scientific Biography*, s.v. “Peter Collinson.”
however, was not just the categorization of plants, but the use of plants from other lands in their native countries to see if they could become economically beneficial.\textsuperscript{23}

In Colonial America, no botanist was better known than John Bartram, a frequent correspondent of Collinson. As a result of their exchange, many American and Canadian trees, shrubs, and plants could be found throughout Britain. Vegetation was not the only subject matter interesting to this group: animals and minerals native to America were also great curiosities to these European scientists. Any specimens or papers on natural phenomenon not native to Europe were of great interest. \textsuperscript{24}

Collinson’s relationship with Isham Randolph is recorded in several letters. In a letter to John Bartram, Collinson recommended that he stay with Randolph during his travels through Virginia. Collinson’s high regard for Randolph is shown when he asks Bartram to dress appropriately because Virginians often look “more at a man’s outside than his inside,”\textsuperscript{25} and he did not want Bartram to embarrass him in front of Randolph.

Isham Randolph died in 1742,\textsuperscript{26} just a few months before Thomas Jefferson was born, so Randolph was not able to directly impart his botanical knowledge to his grandson. What Randolph did leave Jefferson, perhaps through his mother, or perhaps through the general climate in which he moved, was a desire to take plants native to other areas and test them in the climate and soil of Virginia.

\textsuperscript{24} Michael Kraus, “Scientific Relations Between Europe and America in the Eighteenth Century,” \textit{The Scientific Monthly} 55, no. 3 (September 1942): 259-272, on 263-264, 267-269.
\textsuperscript{26} Malone, 17.
Peter Jefferson:  
Pioneer Surveyor and Land Speculator

Peter Jefferson took his new wife and settled his family in the Piedmont, on what was then the western edge of Virginia. Peter Jefferson was among many Virginian farmers who had begun to move west along Virginia’s rivers in search of fertile soil, having exhausted their current land by growing tobacco or other soil-depleting crops. Peter Jefferson’s estate, Shadwell, was built on the Rivanna River, a tributary of the James, at the foot of the West Mountains in Goochland County. Thomas Jefferson’s experience of the western frontier was thus quite direct.

Peter Jefferson is well known for his survey work. He mostly likely learned the surveyor’s trade from William Mayo, his neighbor at Fine Creek, who was “probably the foremost Virginia surveyor of his time.” Mayo had surveyed the island of Barbados, a feat which earned him an appointment to the important task of establishing the first dividing line between Virginia and North Carolina. Malone believed that Mayo probably trained Peter Jefferson, because it is recorded that Jefferson accompanied Mayo on surveying trips.

Peter Jefferson had many adventures in the course of his surveys. In 1746 two surveying parties were assigned to find the boundaries of Lord Fairfax’s landholdings. The original five-million-acre land grant in Virginia was given to supporters of King Charles II in 1649. It was to be bounded by the Rappahanock and Patawomeck

27 Malone, 5.
28 Allen, “Imagining the West,” 5.
29 Malone, 12.
31 Malone, 12.
(Potomac) rivers, from the Chesapeake Bay to their headwaters. The headwaters of both rivers had previously been located and surveyed in 1736 by William Mayo, but “the ‘back line’ connecting the two headsprings . . . had no natural boundary”\textsuperscript{32} and required an additional survey. Lord Fairfax was allowed to choose his own surveying team, namely Colonel William Fairfax, Colonel William Beverley, Benjamin Winslow, and Thomas Lewis. The colony of Virginia assigned the task to Colonel Lunsford Lomax, Peter Hedgman, and Joshua Fry. These men picked Peter Jefferson and Robert Brooke to be the lead surveyors on the project.\textsuperscript{33}

The surveying teams worked for two months in treacherous conditions. Having completed their work in the field, the surveying teams met at Tuckahoe, the plantation where Peter Jefferson and his son Thomas were staying, to draft the map. While the younger Jefferson did not participate in the field surveys, it is quite likely that he was present when the men compiled the map.\textsuperscript{34} Watching his father draft the map, Jefferson would have been introduced to cartographic drafting methods. Peter Jefferson did more than teach his son the fundamentals of surveying and cartography, however; he gave Thomas Jefferson his “attitudes toward land and its measurement, exploration, and husbandry.”\textsuperscript{35}

Peter Jefferson’s surveying partner, Joshua Fry, had been a mathematics professor at the College of William and Mary. Together they conducted numerous surveying and

\textsuperscript{33} Bowman, 253.
\textsuperscript{34} Verner, “The Fry and Jefferson Map,” 73; Bedini, \textit{Statesman of Science}, 9.
\textsuperscript{35} Jackson, 5.
cartographic projects from 1749 until Fry’s death in 1754. The best known project Peter Jefferson undertook with Fry was a survey of their home state of Virginia. This project resulted in “The Map of the Most Inhabited Part of Virginia Containing the Whole Province of Maryland,” which was published in 1754 and known later simply as the Fry-Jefferson map. It was a magnificent map that others copied and updated for the next several decades, including Thomas Jefferson, who himself modified it and incorporated it into Notes on Virginia.  

The map, which also drew upon earlier surveys completed by other individuals, accurately depicted the topography of Virginia, its major rivers, and their watersheds. The Fry-Jefferson map also made certain assumptions about the interior. By giving areas English names, it tended to exclude Native Americans from Virginia’s future. Had Peter Jefferson not been known foremost for being Thomas Jefferson’s father, he would have still been known in history through his work in surveying.

Peter Jefferson was a member of the Loyal Land Company, a group of investors from Albemarle County, formerly a part of Goochland County. The Company was initially awarded 800,000 acres in the west of Virginia by the British Crown. Many of the men involved in the Company wanted to understand what lay farther west in the hope of increasing their land holdings. One of the Company, Dr. Thomas Walker, led an expedition in 1749 which took him from Castle Hill, near Charlottesville, Virginia, to

39 Nobles, 25.
present day Kingsport, Tennessee, before ending at the Cumberland Gap. Walker was
the first European to find the gap which would allow settlers to move west to settle
Tennessee and Kentucky. When he returned east four months later, Walker told tales of
buffaloes, bears, rattlesnakes, caves, and cliffs.  

Dr. Walker began planning for another expedition in 1753 to find the Missouri River. The expedition never took place because
of the French and Indian War. Thomas Jefferson would have been a very young child
when the two expeditions were planned, but the excitement of the West would have been
forever planted in Jefferson’s mind.

How much influence Peter and Jane Jefferson may have had on their famous
son’s geographic thought will never be fully known. There are, however, some things we
can assume. Education and knowledge in these times were often passed to children by
their parents, especially in their early years, or, in the case of Jefferson, when they lived
in an isolated area. Many colonial families did not send their children away to be
schooled; they were taught reading and mathematics by their parents. Only the
wealthiest Virginians were able to hire tutors to come into their homes and educate their
children. For Thomas Jefferson, his education combined a bit of both. After the move to
Tuckahoe, the Jefferson children were schooled alongside the Randolph children by a
private tutor.

Silvio Bedini advanced an undocumented argument that Thomas Jefferson,
however, received his earliest education from his father. Bedini claims there is “ample

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41 Malone, 8.
evidence” that his father was very involved in Jefferson’s life, principally because Thomas Jefferson was the eldest son, and therefore the primary heir to Peter Jefferson. The primary piece of evidence for Bedini’s claim is the strong resemblance between Peter Jefferson’s and his son’s handwriting, “suggesting that it was Peter’s writing that young Thomas first copied.”

Donald Jackson argued that Peter Jefferson did not have so strong an influence on his son. Jackson wrote, “none of these early associations with geographers . . . played more than a small part in the early orientation of young Thomas Jefferson.” However, John Logan Allen disagreed with Jackson, writing, “I have to believe that the ‘early association’ played more than a small part. Everything I know about the ways that geographers develop their bent for faraway places with strange-sounding names tells me this was the case.” This researcher would agree with Allen. Because of the strong traditional bond between a father and his eldest son in this period, Peter Jefferson probably spent a great deal of his time with his son, teaching him his trade and imparting to him his values. As is evident through the Jefferson family itself, professional trades such as surveying were passed from generation to generation, along with all the knowledge a father would deem necessary for his son to succeed.

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43 Bedini, Statesman of Science, 8.
44 Jackson, 12.
45 Allen, “Imagining the West,” 8.
Jefferson’s Formal Education

After Peter Jefferson’s death, Reverend James Maury, another member of the Loyal Land Company, took Thomas Jefferson into his home to continue his education. Rev. Maury was not just a priest, nor just a land speculator. Maury was one of the leading scholars in Albemarle County, amassing a library of over four hundred volumes.46 One text Maury studied was *A description of the English Province of Carolana, by the Spaniards Call’d Florida, and by the French La Louisiane*, by Daniel Coxe, which described the geography of the American West as understood in the mideighteenth century.47

Coxe’s book described “the concept of symmetrical geography – the idea that all major American rivers flowed from a common source area.”48 The idea of symmetrical geography, when applied to a continent, would imply not only that all major rivers originated from the same area, but that if there were major rivers flowing east into the Atlantic, then there should be rivers flowing from this same source to the west, into the Pacific. Thus if one were to travel up east-flowing rivers to their source, one should be able to find the elusive passage to India, the westward passage to the Pacific,49 the same passage Lewis and Clark were instructed to seek by President Jefferson early in the 1800s. While Jefferson spent only two years with Rev. Maury, he “had the interest and knowledge to imbue [Jefferson] with a romantic curiosity about the inner continent.”50

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46 Bedini, *Statesman of Science*, 16.
47 Jackson, 8, 90.
48 Allen, “Imagining the West,” 6.
49 Allen, “Imagining the West,” 6.
50 Jackson, 12.
After Jefferson’s time with Rev. Maury, he enrolled in the College of William and Mary in Williamsburg, Virginia, where Jefferson was a student from 1760 until 1762. While at the College, he became close to Dr. William Small, a professor of mathematics and natural philosophy. Jefferson spoke very highly of Dr. Small in his Autobiography:

“It was my great good fortune, and what probably fixed the destinies of my life, that Dr. William Small of Scotland, was then Professor of Mathematics, a man profound in most of the useful branches of science, with a happy talent of communication, correct and gentlemanly manners, and an enlarged and liberal mind. He, most happily for me, became soon attached to me, and made me his daily companion when not engaged in the school; and from his conversation I got my first views of the expansion of science, and the system of things in which we are placed.”

Dr. Small was Scottish by birth and was educated at Marischal College in Aberdeen, Scotland. Geography was an important portion of a student’s studies at Marischal, and even required, as of 1593. In 1752, a year after Small had enrolled at the College, the curriculum was revised by the professors and administration to have a more progressive approach to the study of sciences. The included a second year focused solely on history, geography, and natural philosophy. This approach, favoring science over religion, would follow Small across the Atlantic. Jefferson was taught by a man

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52 Life and Selected Writings, Autobiography, 8.
who thought rationally and scientifically, rather than religiously. Jefferson learned “mathematics, natural philosophy, and natural history” from Dr. Small.  

After only six years at William and Mary as the Professor of Natural Philosophy at the College of William and Mary, Dr. Small left America and returned to Britain. In 1774, Small became a founding member of the Lunar Society of Birmingham, a unique organization at the time because it combined science with advances in manufacturing. The society was formed by a group of learned friends which included Erasmus Darwin, a physician, grandfather to Charles Darwin; James Keir, a chemist and geologist; and Joseph Priestly, the chemist who discovered oxygen.

The Lunar Society did not keep formal records, so it is impossible to know what these men discussed in their meetings. Robert Schofield, a historian of science, thought that the meetings themselves were unimportant, but that the formal society was merely “social cement for keeping the group together.” It happened that Dr. Small had the closest relationship with Erasmus Darwin, who considered Small an accomplished man of no equal. It was Small and Darwin who brought together James Watt and Matthew Boulton to develop the steam engine.

Although Dr. Small’s relationship with the Lunar Society was after his return to Britain, the workings and the members of the Lunar Society provide insight into Dr. Small’s intellectual interests and cannot be overlooked. It can be noted in passing that

56 Von Baeyer, 346.
58 Schofield, 411.
one of the many topics on which Alexander Hamilton and Thomas Jefferson most disagreed was the development of industry in America, and that one of the men Jefferson most admired most helped bring about the production of an engine which stimulated the growth of industry to new heights.

After his time at college, Jefferson wrote only one letter to Dr. Small in 1775; it did not reach him until after his death, so there is no record of what may have passed between the two. However, Small was responsible for introducing Jefferson to Francis Fauquier, the governor of Virginia from 1759 until 1768. Jefferson would often spend evenings at the governor’s home, along with other intellectuals and politicians of the day. Governor Fauquier was an amateur meteorologist and has been credited with teaching Jefferson to keep weather records and instilling a general curiosity about climate. Governor Fauquier was also a member of the Royal Society in London, to which he once submitted a letter regarding a hailstorm in the colonies.

A frequent guest at Governor Fauquier’s dinners was George Wythe, with whom Jefferson later studied law. After two years at William and Mary, Jefferson left and began studying the law with Mr. Wythe. Wythe used “history, philosophy, and ethics, to provide intellectual context” in his teaching of the law. This field was not a natural choice for Jefferson, who preferred the study of science; it was a choice that would provide a livelihood. The colonies did not have professional scientists in Jefferson’s

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60 Bernstein, 90-91. Jefferson felt that agriculture should be the foundation of the new nation, while Hamilton sought an economy based on agriculture and industry.
62 Bernstein, 6.
63 Peterson, 12-13.
time, as some European countries did, and his father had not left him a large fortune, so
Jefferson needed to choose a profitable profession to support his farms and scientific
pursuits. After five years with Wythe, Jefferson passed his exams in 1767.64

Jefferson continued to rely on George Wythe for advice in legal affairs, especially
when dealing with complicated land issues. In the spring of 1775, Jefferson submitted
“Resolution on Land Grants,” that questioned whether the Crown had the authority to sell
vacant land in Virginia, as the Royal Privy Council had proclaimed in April, 1773.65
Soon after, Jefferson wrote to Wythe about gathering historical government documents
which had directed the complicated practice of handing out land grants in British
Colonial America.66 Their correspondence was not limited to legal matters, however. In
1770, Wythe sent Jefferson “some nectarine and apricot graffs and grapevines”67 for his
garden.

Although the evidence of Jefferson’s relationship with geographical thinkers is
well documented, we cannot conclude that their interests were imparted to young
Jefferson. We can only speculate on the information shared with him by the elder
generations. We do know that from Dr. William Small Jefferson learned a scientific and
rational approach to evaluate the world, that from George Wythe he learned ancient

64 Bernstein, 7.
65 “Petition of George Mason for Warrants for Lands in Fincastle County,” June 1774, in The Papers of
Thomas Jefferson, 1:115n.
66 “Resolution on Land Grants,” March 27, 1775, in The Papers of Thomas Jefferson, 1:162; George Wythe
to Thomas Jefferson, Williamsburg, April 5, 1775, in The Papers of Thomas Jefferson, 1:163; George
Wythe to Thomas Jefferson, April 6, 1775, in The Papers of Thomas Jefferson, 1:163.
67 George Wythe to Thomas Jefferson, March 9, 1770, in The Papers of Thomas Jefferson, 1:38.
history as traced through the law, and that from Governor Francis Fauquier he learned about meteorology and was introduced to a wider social circle.\textsuperscript{68}

What we can assume is Jefferson was aware of surveying techniques and the art of cartography and knew there was more to the New World than the Thirteen Colonies. As a historical geographer has written, a

geographer’s spatial perspective, an innate sense of place and scale and spatial organization, was early on a vital part of Jefferson’s formidable intellectual inventory; it later became what may have been both his well developed intellectual sense and his most important contribution to the future of his country – the Declaration of Independence notwithstanding.\textsuperscript{69}

\textsuperscript{68} Peterson, 15.
\textsuperscript{69} Allen, “Imagining the West,” 4.
CHAPTER 4
THE GEOGRAPHIC THOUGHT OF THOMAS JEFFERSON
AS SEEN THROUGH HIS WRITINGS, THROUGH 1784

One of the best and most direct ways to study how Thomas Jefferson was gaining geographic knowledge and forming his geographic thought is to study his papers. A comprehensive collection of Jefferson’s writings was collected from around the world and published by the Princeton University Press beginning in 1950. Although future discoveries may show that the collection is not complete, this edition of Jefferson’s incoming correspondence, along with his outgoing letters and political writings, is now the standard scholarly resource.

For the purpose of this paper, it was extremely important to read every known piece of correspondence and writing related to Jefferson, in order to understand the scope of his geographical thought. There are, however, literally thousands of these items. One of the first decisions made in this thesis research was to set a specific time constraint in order to narrow the amount of material to be read. It became evident that a natural break in Jefferson’s life came in the summer of 1784, when he left the United States and began his time in Europe. By utilizing this timeframe, it increased the originality of the thesis by researching topics largely bypassed by other geographers, as well as narrowing the number of Princeton volumes to six and a half, instead of thirty-eight. The scope of this study of Jefferson’s papers is thus the first forty years of his life and intellectual development.
Other Writings

It must be noted that there is no recorded correspondence prior to 1760. The lack of writings is attributed to the loss of his family home at Shadwell. In a letter to childhood friend John Page, Jefferson wrote:

My late loss may perhaps have reac[hed y]ou by this time, I mean the loss of my mother’s house by fire, and in it, of every pa[per I] had in the world, and almost every book . . . . [o]f papers too of every kind I am utterly destitute. All of these, whether public or private, of business or of amusement have perished in the flames.

Two commonplace books written by Jefferson have been published which predate his first known letter to John Harvie on January 14, 1760. In Jefferson’s literary commonplace book, he recorded some of his favorite passages from books of classical literature and philosophy that he was studying from 1758 to 1772. By examining what Jefferson was reading, we can make some basic assumptions as to who was influencing his geographic thought.

Many of Jefferson’s early quotations are from The Philosophical Works of Henry Saint-John Bolingbroke, an English statesman and philosopher during the late seventeenth and early eighteenth centuries. Jefferson recorded approximately fifty passages attributed to Bolingbroke, of which most were related to theological questions.

1 Malone, 19.
2 Thomas Jefferson to John Page, Charlottesville, February 21, 1770, in The Papers of Thomas Jefferson, 1:34-35.
3 The first entry in The Papers of Thomas Jefferson, is to John Harvie, one of Jefferson’s guardians. Thomas Jefferson to John Harvie, Shadwell, January 14, 1760, in The Papers of Thomas Jefferson, 1:3, 1:3n.
5 Literary Commonplace Book, 155.
Many of the first passages Jefferson copied were in relation to nature, nature’s place in relation to a creator, and nature as a system, taken from Bolingbroke’s first essay, “Concerning the nature, extent, and reality of human knowledge.” It was probably copied sometime during Jefferson’s apprenticeship to George Wythe.  

Other works, by Homer, Herodotus, Cicero, and Euripides are found throughout the commonplace book. Jefferson believed that these Greek historians were the masters of history. These writers were not merely historians, however, they were writers of geographical descriptions: Homer’s descriptions of distant lands in his Odyssey; Herodotus’s works, blending geography and ethnography with his histories; Cicero’s model of country life for gentlemen, and Euripides’s plays, which included geographical descriptions. These authors are those most copied by Jefferson, and we can assume their words left the greatest mark on his evolving geographic thought.

Another commonplace book, recorded Jefferson’s ideas about government and the legal system. This edition, published in 1926, does not identify the original authorship of each entry, but the editor does note several passages from the political philosopher Montesquieu. In his book The Spirit of Laws, Montesquieu connected climate to politics, making him an early environmental determinist. Chinard notes, however, that while

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6 Literary Commonplace Book, 11.
7 Literary Commonplace Book, 163.
8 Elizabeth Rawson, Intellectual Life in the Late Roman Republic (Baltimore: Johns Hopkins University Press, 1985), 250.
9 Literary Commonplace Book, 159.
“Jefferson was certainly interested in these theories of Montesquieu, . . . it does not appear that he accepted them and made them his own.” 

Although Jefferson’s commonplace books provide a direct link to what Jefferson was studying, we must be wary of drawing direct conclusions between the ideas of the various authors from whose works he made excerpts and the evolution of Jefferson’s geographic thought. The majority of passages recorded were from politicians, poets, or historians, of which only a few may be considered as writers with a geographer’s way of thinking. Jefferson would most likely have used their writings to build on basic geographic ideas already firmly in place in his mind, formed by his father, his instructors, and his notions of the American West.

Although few of Jefferson’s letters and papers survive from his early law career, he kept some records that reflected his interest in the importance of the soil. One of these commenced in 1766, when Jefferson began making notes in a garden book about plantings at Shadwell. Jefferson’s first entry that year recorded that the purple hyacinth bloomed on March 30. Subsequent entries note when the narcissus, honeysuckle, violets, and other flowers in his garden both bloomed and faded away. After only eight entries in 1766, Jefferson noted he was going on a “journey to Maryland, Pennsylvā, New York . . . so observations cease.”

11 Commonplace Book, 262n.
12 Wilson, “Early Notebooks,” 437. Handwriting analysis suggests that Jefferson probably took notes about his garden from 1766 until 1774 and transferred them to a notebook referred to as the Garden Book.
13 Entry from May 5, 1766, in Garden Book, 1.
Over the next two years, Jefferson did make more entries. He did also began to record when various fruits and vegetables were planted in his garden, as well as when they were harvested and their yield. Jefferson’s first entry in 1769 indicated that his observations were made at Monticello, where he took up residence in 1770 after Shadwell had burned down.\textsuperscript{14} These entries record the types and locations of fruit trees planted around his estate. Betts attributes the lack of entries to Jefferson’s new law practice, which took him to several different counties and cost him considerable time preparing for cases, and to his election to the House of Burgesses.\textsuperscript{15}

After making no entries in 1770, Jefferson began to add more detail to his garden book. In the March 7th entry Jefferson wrote, “rain snow & hail with an Easterly wind for 4 days.”\textsuperscript{16} Weather entries similar to this continued until 1772, with brief mentions in 1774 of “a frost which destroyed almost every thing . . . in all other places in the neighborhood the destruction of fruit was total. this frost was general & equally destructive thro the whole country and the neighboring colonies.”\textsuperscript{17} Jefferson concluded 1774 with another mention of a frost, “the first frost sufficient to kill any thing.”\textsuperscript{18} In 1775, Jefferson made only three entries in his garden book, two of which concerned the weather.

There were no entries in Jefferson’s garden book for 1776 or 1780. The lack of entries in 1776 corresponds with Jefferson’s time in Philadelphia working with the

\textsuperscript{14} Garden Book, 15.
\textsuperscript{15} Garden Book, 16n.
\textsuperscript{16} Entry from March 7, 1771, in Garden Book, 22.
\textsuperscript{17} Entry from May 5, 1774, in Garden Book, 55.
\textsuperscript{18} Entry from November 17, 1774, in Garden Book, 56.
Continental Congress. In 1780, Jefferson would have been busy with the affairs of Virginia as its governor and the effects the Revolutionary War was having upon the state. In the four years between, Jefferson recorded few entries. There was only one entry for 1781, probably because of Jefferson’s fall from his horse and subsequent confinement to his home. It was during this time that Jefferson began in earnest to complete *Notes on the State of Virginia*.

In 1783, only a single entry was made, followed by six years of silence. During those years, Jefferson was not able to watch the progress of his garden, as he was abroad in France, Italy, Great Britain, and The Netherlands. This in no way meant that Jefferson was not thinking of Monticello while in Europe. In 1785, Jefferson wrote that he was going to a vineyard where the owner was “making for me a collection of the vines from which the Burgundy, Champagne, Bordeaux, Frontignac, and other of the most valuable wines of this country are made. Another gentleman is collecting for me the best eating grapes, including what we call the raisin.”\(^{19}\) Jefferson’s intent was to send these vines back to Virginia and test their viability there, thus introducing the “best products of the Old World into the young country.”\(^{20}\) His experiments with growing foreign varieties of plants effectively made Monticello a laboratory in which plants from across the globe were planted and tested.\(^{21}\)


\(^{21}\) True, 945.
Jefferson’s experiments with foreign plants extended to his friends in France. In 1786, Jefferson requested seeds of magnolia trees and the *Dionaea muscipula*, or Venus fly trap, from a friend in South Carolina.22 Other requests were made for pecan nuts and other flower seeds to meet the requests of French acquaintances.23 Jefferson continued adding entries to the garden book until 1824. It perfectly illustrates his “close contact with plants and with the earth.”24

Jefferson began keeping another notebook, the farm book, probably sometime during 1774, and he continued to make entries until 1826. It was very similar in arrangement to the garden book; however, it contained more detailed information on animal husbandry, his farm equipment, buildings, and roads, and extensive information regarding his slaves.25 Both the garden and farm books are full of tables illustrating Jefferson’s real passion, not for government, but for agriculture. Jefferson later wrote to John Jay, lawyer, foreign diplomat, and future Chief Justice of the Supreme Court:26

“[c]ultivators of the earth are the most valuable citizens. They are the most vigorous, the most independant, the most virtuous, and they are tied to their country and wedded to it's [sic] liberty and interests by the most lasting bands.”27

24 True, 945.
It would be stretching the imagination to conclude that the garden and farm book were formal works of geography. They are, however, a remarkable record of Jefferson’s careful observations of his land and everything that grew in on it. The books show Jefferson’s careful eye to the details of his plantations, how those details were reflected in changes in yields, and how climate and elevation influenced his crops. They reveal that Jefferson understood how the soil, climate, and other factors worked together to produce a good crop. Moreover, they reveal Jefferson’s greatest passion: “No occupation is so delightful to me as the culture of the earth, and no culture comparable to that of the garden.”

These are the words not only of a farmer, but of an Enlightenment thinker, a natural historian, a geographer.

**Jefferson’s Correspondence**

From 1760 until the end of 1774, there are fewer than 100 documents in Jefferson’s *Papers.* References within these documents indicate that other correspondence is missing. Of the letters which survive, the correspondents are concerned with matters common to a twenty-year old colonial aristocratic: local gossip and women. Later letters written during Jefferson’s study of the law under George Wythe indicate that he was considering travel to “England Holland France Spain Italy (where I would buy me a good fiddle) and Egypt and return through the British provinces

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29 There are no letters or papers from 1767, *The Papers of Thomas Jefferson*, 1:xlv-xlviii.
to the northward home” in order to be “cured of love.” 30 Jefferson wrote again twice of his desire to visit Great Britain specifically.31 Perhaps this desire lay in Jefferson’s opinion of his mother country, of which he later wrote to his political ally, the Philadelphia publisher William Duane,32 “. . . [o]ur laws, language, religion, politics and manners are so deeply laid in English foundations, that we shall never cease to consider their history as part of ours, and to study ours in that as its origin.”33

Jefferson’s papers show he worked on many land-related disputes for his clients, beginning in 1769.34 In the next five years, Jefferson’s papers reveal that his law practice was involved in various land-related claims, including the settling of the estate of Colonel Tucker, in which there was a dispute over how his land should be used to settle debts.35 Jefferson’s understanding of the intricate laws regarding the acquisition of land in the new colonies is well documented in a petition he submitted in 1774:36 Jefferson traced the laws back to 1609, when the original Charter had been granted by King James to the Virginia Company and up through 1774, when the Privy Council had changed the steps toward land acquisition from the headright system to a public auction. These cases, however, illustrate little of his personal views of land.

33 Jefferson to Colonel William Duane, Monticello, August 12, 1810, in Life and Selected Writings, 555.
34 Jefferson to Alexander White, Williamsburgh, April 19, 1769, in The Papers of Thomas Jefferson, 1:25.
35 Thomas Burke to Neil Jamieson, August 28, 1770, in The Papers of Thomas Jefferson, 1:53.
36 “Petition of George Mason for Warrants for Lands in Fincastle County,” June 1774, in The Papers of Thomas Jefferson, 1:112.
In Jefferson’s first attempt at public works, he, with the help of Dr. Walker, was able to obtain funding from the House of Burgesses to remove rocks in the Rivanna, allowing larger boats to navigate safely up river. The river was to be widened and straightened above its falls. In a list of achievements Jefferson drew up in 1800 of things he was most proud of, this complex human manipulation of the natural environment drew higher billing than drafting the Declaration of Independence.

In 1774, Jefferson received a letter from John Blair, later Justice of the United States Supreme Court, describing an earthquake felt in Williamsburg, where there was “very moderate Trembling of the Earth. . . . Dr. Gilmer informs me it was a pretty smart Shock with You: and by all accounts it was more and more severe as You advance to the West.” In 1778, Jefferson wrote to David Rittenhouse, the astronomer who succeeded Benjamin Franklin as president of the American Philosophical Society, about missing an eclipse: “We were much disappointed in Virginia generally on the day of the great eclipse, which proved to be cloudy.”

In a letter to Giovanni Fabbroni, the Italian naturalist and scientist, Jefferson expressed his desire to turn from the practice of law and service in the Virginia House of Burgess to the natural sciences:

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37 *The Papers of Thomas Jefferson*, 1:88n.
43 *Complete Dictionary of Scientific Biography*, s.v., “Giovanni Fabbroni.”
Tho’ much of my time is employed in the councils of America I have yet a little leisure to indulge my fondness for philosophical studies. I could wish to correspond with you on subjects of that kind. It might not be unacceptable to you to be informed for instance of the true power of our climate as discoverable from the Thermometer, from the force and direction of the winds, the quantity of rain, the plants which grow without shelter in the winter &c. On the other hand we should be much pleased with cotemporary observations on the same particulars in your country, which will give us a comparative view of the two climates . . . I wish I could gratify your Botanical taste; but I am acquainted with nothing more than the first principles of the science, yet myself and my friends may furnish you with any Botanical subjects which this country affords, and are not to be had with you."\(^{44}\)

A clearer expression of Jefferson’s geographical interests at this period of his life could scarcely be found, but this is just one such indication.

Jefferson’s understanding of physical geography was not limited to America. A letter written in 1778 demonstrated Jefferson’s knowledge of Europe’s geography. He wrote of the fisheries in Newfoundland as a valuable resource and the importance of Mediterranean markets for American fish, wheat, tobacco, and rice. He thought that immigrant workers from the Mediterranean would be the best fit for Virginia as they “bring with them a skill in agriculture and other arts better adapted to our climate.”\(^{45}\)

Jefferson suggested that much of this information had been supplied to him by Philip Mazzei.

Philip Mazzei was described by his biographer as a “physician, merchant, horticulturist, Virginia’s Agent in Europe, . . . author,” and advisor to the King of


Poland.\textsuperscript{46} Italian by birth, Mazzei had traveled to Turkey, Great Britain, and France, and throughout Italy itself quite extensively.\textsuperscript{47} He was a merchant and tradesman in London when he met Benjamin Franklin and John Adams in 1767. Franklin and Adams persuaded Mazzei to move to America, where he “was to import into Virginia grapes, olives and other such plants as might be expected to flourish in the Virginia climate.”\textsuperscript{48} Mazzei agreed to this move and John Adams provided him with an introduction letter to Thomas Jefferson.

Mazzei arrived in Virginia in 1773, where Jefferson persuaded him to purchase a tract of land adjoining Monticello and, indeed, gave him an additional two thousand acres. While Mazzei was building his home, Jefferson invited him and his family to stay at Monticello.\textsuperscript{49} They soon formed a partnership for farming and making wine, oil, and silk.\textsuperscript{50} Although Mazzei was successful in producing wine from grapes grown in Virginia, his agricultural endeavors never reached their full potential. In 1779, Jefferson, Patrick Henry, John Page, and others asked him to return to Italy to help the American colonies borrow money from his European contacts to fund the Revolutionary War.\textsuperscript{51} Jefferson continued his correspondence with Mazzei until Mazzei’s death in 1816. Although much of their later correspondence focused on American and French politics,

\textsuperscript{47} Garlick, 17-23.
\textsuperscript{48} Garlick, 27.
\textsuperscript{49} Garlick, 41-42.
\textsuperscript{50} “Plan of Philip Mazzei’s Agricultural Company,” 1774, in \textit{The Papers of Thomas Jefferson}, 1:156.
\textsuperscript{51} Garlick, 51.
they spent a great deal of their early time together attempting to bring crops from Italy and acclimatized them to Virginia’s soil.

Philip Mazzei was but one of the scientists, naturalists, and philosopher’s Jefferson corresponded with during his life. A circle of correspondence existed between many enlightened individuals in the United States and Europe. The phrase had been first used by Jefferson in 1773 as a committee of correspondence, “a group of politicians who would write letters to like-minded politicians in other colonies to share ideas, spread news, and coordinate political strategy.” Aside from the political committee of correspondence, Jefferson’s scientific circle of correspondence included men such as Giovanni Fabbroni, Joseph Priestly, an English scientist, Joseph Banks, an English botanist, and David Rittenhouse, the American astronomer and natural philosopher. Jefferson could bring the ideas of these men together and envision how they would apply to “nature as a whole.”

Jefferson would continue the circle of correspondence through his membership in the American Philosophical Society. Thomas Jefferson became a member of the American Philosophical Society sometime in 1779. This society was a group of prestigious enlightened men both in America and Europe, founded by Benjamin Franklin probably sometime in 1744. Jefferson corresponded with many of its members

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52 Life and Selected Writings, Autobiography, 11.
53 Bernstein, 20.
55 Boorstin, Lost World, 13.
56 Boorstin, Lost World, 23.
throughout his lifetime on matters such as climate, *Notes on Virginia*, and expeditions to the West.  

After the Revolutionary War began, Jefferson was in Virginia, working in the House of Delegates. Jefferson was appointed to a committee of five, who were to set about revising the laws of Virginia, breaking them apart from their British counterparts. Jefferson spent the next three years, with his fellow Assemblymen, working on this project.  

There were one hundred twenty-six proposed revisions to Virginia’s laws, of which fifty-one are attributed directly to Jefferson.  

His first proposal was to set up a court of justice and the second changed the land ownership practice of entail. After reviewing each of these fifty-one proposed revisions, less than one third can be loosely tied to Jefferson’s view on the land. The most geographic proposal was Bill No. 20, “A Bill Directing the Course of Descents.”  

The bill sought to end the practice of entail, a British law that required land to be handed down through generations with no opportunity for others to acquire it. Jefferson felt that this practice allowed families to obtain excessively large tracts of land, thereby acquiring great wealth and favor with the Crown. By breaking entail he “would prevent the accumulation and perpetuation of wealth, in select families, and preserve the soil of the country from being daily more and more absorbed in mortmain.”

58 Bernstein, 37.  
60 *Life and Selected Writings, Autobiography*, 49.
Jefferson also sought to change the practice of primogeniture, whereby a deceased individual’s entire estate passed to the eldest son when there was no will. Jefferson wrote that inheritance of land should be “as personal property is, by the statute of distribution,”\(^6^1\) so as to reduce “the feudal and unnatural distinctions which made one member of every family rich, and all the rest poor.”\(^6^2\) Jefferson felt that the eradication of these two practices of landholding would lay a foundation “for a government truly republican” and “a system by which every fibre would be eradicated of ancient of future aristocracy.”\(^6^3\)

The role of geography in military matters has been somewhat overlooked, even by geographers. In this sphere also, geography was important to Thomas Jefferson. During the time Jefferson was governor of Virginia, he was responsible for procuring troops from the counties, making sure material was supplied to the troops, and providing maps and other geographic information to military officers in the field. To be an effective leader during war, one must understand the physical and cultural environment – the geography – in which one is fighting. Physical geography, such as “[r]elief, drainage patterns, geology, and soils”\(^6^4\) and cultural geography, such as the population, number of males, language, customs, and diseases,\(^6^5\) all play a vital role in military operations.

During the Revolutionary War, it was especially important to understand transportation routes, including not only the roads, but the river systems as well. For instance, if a river was fit for transporting supplies only a certain distance, then military

\(^6^1\) Life and Selected Writings, Autobiography, 44.
\(^6^2\) Life and Selected Writings, Autobiography, 50.
\(^6^3\) Life and Selected Writings, Autobiography, 49.
\(^6^4\) John M. Collins, Military Geography for Professionals and the Public (Washington: Brassey’s, 1998), 3.
\(^6^5\) Collins, 5.
commanders needed an alternative route. Here is a passage from a letter to a military officer:

Turn your attention therefore to transportation by water . . . Three routs present themselves for carrying thence either wholly or in part by water to Halifax. 1. down the black water, and up Meherrin creek or Weecansee creek both of which point far towards Halifax. Want of information prevents my knowing whether they are navigable. I fear they are not. 2. down blackwater and up Meherrin river to the nearest landing to Halifax. This will leave a considerable portage. 3. down black water and Chowan and up Roanoke. This is very long and subject to great delays from freshes.

If there was a mountain range in which only certain passes were passable by troops, then military commanders needed to know where they were. In letters to and from military personnel stationed throughout the state, it was clear that Jefferson understood the geography of his state and was able to communicate this information to his commanders in the field.

Thomas Jefferson also worked diligently to put accurate maps into the hands of his commanders. Jefferson attempted to obtain copies of the Fry and Jefferson map for Horatio Gates, a commander in the Virginian Army. Jefferson was unable to purchase the map, however, and had to substitute Henry’s map of Virginia, even though “[i]t is a mere cento of blunders. It may serve to give you a general idea of the courses of rivers and position of counties.” A map, commissioned from Colonel Senf that Jefferson commissioned, was not yet available, although it called for accurate survey of Virginia,

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including its waters and places important to the war. Lafayette was thankful to Jefferson for the maps, as “[t]hey perfectly Answer the Purpose, and My farther knowledge of the Country Must come from personal observation.”

One of Virginia’s generals in the Revolutionary War was George Rogers Clark, older brother of William Clark of the Lewis and Clark Expedition. George Rogers Clark did not fight the British in any of the original Thirteen Colonies. He fought with the British and various Indian tribes along the Ohio River in the interior of the continent. In 1780, Jefferson asked Clark to “aim the first stroke in the western country and throw the enemy under the embarrassments of a defensive war rather than labour under them ourselves.”

Jefferson chose Clark to lead this expedition because of his knowledge of the interior. As a surveyor, Clark had been exploring the area west of the Blue Ridge Mountains since 1772. In 1775, Clark organized a government for the region of Kentucky and traveled to Williamsburg to petition for its recognition. His numerous military achievements during the Revolutionary War led some to label Clark as one of the three greatest military men of the age, alongside generals George Washington and Nathaniel Green. In 1783, Jefferson asked Clark to explore farther into the continent:

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72 Jefferson to George Rogers Clark, Richmond, December 25, 1780, in The Papers of Thomas Jefferson, 4:234.  
I find they have subscribed a very large sum of money in England for exploring the country from the Missisipi to California. They pretend it is only to promote knolege. I am afraid they have thoughts of colonizing into that quarter. Some of us have been talking here in a feeble way of making the attempt to search that country. But I doubt whether we have enough of that kind of spirit to raise the money. How would you like to lead such a party?\textsuperscript{74}

Another geographic question faced by Thomas Jefferson during his time as governor was determining the exact boundaries between Virginia and Pennsylvania. The boundary between the two states had been very vaguely defined in the original charters of the two colonies, and by 1748 the area along the line had become a disputed territory. The question that was raised to Jefferson and his counterpart in Pennsylvania was the extension of the boundary from the end of the Mason and Dixon line to a specific degree of longitude.\textsuperscript{75} Jefferson proposed that a survey be completed by Rev. James Madison and Robert Andrews, in which “the extent of the five Degrees of longitude shall be determined by celestial Observations.”\textsuperscript{76} The survey of the boundary did not begin until June 1, 1784, after Jefferson had left office.\textsuperscript{77}

Thomas Jefferson also maintained a correspondence with Marquis Francois Jean de Chastellux, a French general who fought during the Revolutionary War. Chastellux visited Monticello in early 1782.\textsuperscript{78} Chastellux had traveled through Virginia, Massachusetts, New Hampshire, and Pennsylvania and kept notes about his travels.

\textsuperscript{74} Jefferson to George Rogers Clark, Annapolis, December 4, 1873, in \textit{The Papers of Thomas Jefferson}, 6:371.
\textsuperscript{77} Crumrine, 523.
\textsuperscript{78} Malone, \textit{Jefferson the Virginian}, 391.
These notes were later published as *Travels in North America in the Years 1780, 1781, 1782*. In his *Travels*, Chastellux writes about his conversation with Jefferson about animals native to the area, climate, and the natural bridge found on Jefferson’s property.\(^7^9\) Jefferson considered *Travels* “the most flattering account of America that had ever been written.”\(^8^0\) While Chastellux is considered a military man rather than a geographer, his observations of America amount to a geography of the region, similar to *Notes on Virginia*.

At the close of the Revolutionary War in 1783, the newly founded United States of America needed to pay its war debts, especially to its armed forces. Upon Jefferson’s arrival in Congress late in 1783,\(^8^1\) he was appointed chairman of the Congressional committee tasked with devising a plan to sell land ceded from the states and to purchase interior lands from the Native Americans.\(^8^2\) Jefferson concurrently held a position on the Indian Affairs Committee, charged with establishing the boundaries of new states in the West and creating their temporary governments.\(^8^3\) Historian Robert Berkhofer maintained that discussions over land cessions, types of governments, and the size of new states had been debated before Jefferson’s arrival, so Jefferson’s contribution to these committees is most likely “less than scholars previously assumed.”\(^8^4\)
Jefferson’s primary contribution was proposing the size, boundaries, and names of “both ceded and yet to be ceded lands.” The report mandated that new states be no more than two degrees of latitude in width. The states were then to be apportioned longitudinally from the Mississippi River to the lowest rapids on the Ohio River, and thus to the western boundary of existing states (Figure 6). This would create two new tiers of states, fourteen in total. Jefferson labeled ten of the states with names such as Michigania, Metropotamia, Illinoia, and Saratoga. While these proposals were included in the initial report, they were left out of future revisions.

The original report also included five basic provisions for new states: (1) they would always remain part of the United States; (2) they were subject to the government of the United States; (3) they must be responsible for their share of the federal debt; (4) they must have a republican government; and (5) there must be no slavery in new states after 1800. These provisions were not acceptable to some in Congress, so it was sent back to the committee for revision. The report, adopted on April 23, 1784, contained slight changes. Dropped were the size of new states and the slavery provision, while clauses added to the report prohibited states from selling vacant land, a right held by the United States Congress, a prohibition of property tax on property held by the United

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85 Berkhofer, 243.
States government, and the prevention of higher tax rates for non-residents than for residents of the new state.  

A separate report submitted around the same time included a provision for the division of western lands into squares. This proposal, written “entirely in Jefferson’s hand,” would have divided the western lands into hundreds, or units ten miles on a side. The squares were to be further subdivided into one square mile units. Jefferson’s thought can be seen throughout this statement, in future proposals for universal education and standardized weights, measures, and currency.

Today, there is a common misperception concerning Jefferson’s involvement in the current rectangular land survey system, which is based on units six miles on a side. The basis for the confusion is twofold. First, as noted above, Jefferson’s committee had indeed proposed the division of western lands into a rectangular grid. Secondly Jefferson wrote to Joseph Priestly in 1800: “about 20. years ago I drew a bill for our legislature which proposed to lay off every county into hundreds or townships of 5 or 6. miles square.” However, it was in fact the Land Ordinance of 1785, enacted while Jefferson

91 Pattison, Beginnings, 37.
93 Notes on Virginia, 146; Bedini, Statesman of Science, 205. See also Pattison, Beginnings, 43-46, for a full treatment of Jefferson’s interest in the concept of ‘hundreds.’
was in in Europe, which was responsible for changing the division of land into six square mile areas.\textsuperscript{95} Jefferson’s role in this particular legislation appears uncertain.

Regardless of specific origin, the Land Ordinances profoundly changed the landscape of our country west of the Appalachian Mountains. Jonathan Hughes, Professor of Economics at Northwestern University, likened the effect of the Land Ordinances on the United States to that of European colonization in Arica, forever changing the way land was viewed.\textsuperscript{96}


CHAPTER 5

NOTES ON THE STATE OF VIRGINIA

Thomas Jefferson published only one full length book, *Notes on the State of Virginia*. It is, in the simplest of descriptions, a list of answers to queries about Jefferson’s home state of Virginia, covering topics from caves to commerce to manners. *Notes on Virginia* has been studied by scholars in many different disciplines because of the breadth of its subject matter. Geographers have regarded the text as an early regional geography of Virginia.

The impetus for *Notes on Virginia* came late in 1780. Francois, Marquis de Barbé-Marbois (or Francois Marbois), came to the United States to serve as the secretary to the French ambassador. Marbois, on the instructions of his home government, sent an extraordinary list of queries to prominent men. The learned person to whom Marbois chose to send his questionnaire in Virginia was Judge Joseph Jones, about whom very little is known. Jones passed Marbois’s questionnaire on to Jefferson. We must assume that Jones was satisfied with Jefferson’s knowledge of Virginia and thought he was better suited to the job of answering the queries.

Jefferson recalled in his *Autobiography*, that “M. de Marbois . . . had been instructed by his government to obtain such statistical accounts of the different States of

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1 Jefferson also wrote his *Autobiography*. He began the book in 1821 as a way to record his memories, dates, and facts for his family and his own reference. *Life and Selected Writings, Autobiography*, 7.
our Union, as might be useful for their information; and address[ed] to me a number of queries relative to the State of Virginia.”

Gilbert Chinard speculated that the queries in the questionnaire were suggested by scientists working with the French naturalist, Comte de Buffon, who had described America “as afflicted with a sort of natural blight.”

Regardless of who devised the list of queries, Jefferson set out to answer them to the best of his knowledge:

I had always made it a practice, whenever an opportunity occurred of obtaining any information of our country, which might be of use to me in any station, public or private, to commit it to writing. These memoranda were on loose papers, bundled up without order, and difficult of recurrence, when I had occasion for a particular one. I thought this a good occasion to embody their substance, which I did in the order of Mr. Marbois’ queries, so as to answer his wish, and to arrange them for my own use.

This is in itself evidence of the sustained consistency of Jefferson’s interest in geography, among many other subjects.

About a month after he received the queries, Jefferson was already putting together his responses: “I am at present busily employed for Monsr. Marbois without his knowing it, and have to acknowledge to him the mysterious obligation for making me much better acquainted with my own country than I ever was before.” On December 20, 1781, Jefferson forwarded his initial answers to Marbois:

I now do myself the honour of inclosing you answers to the queries which Mr. Jones put into my hands. I fear your patience has been exhausted in attending them, but I beg you to be assured there has been no avoidable delay on my part. I

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4 Life and Selected Writings, Autobiography, 60.
6 Life and Selected Writings, Autobiography, 60.
7 Jefferson to D’Anmours, Richmond, November 30, 1780, in The Papers of Thomas Jefferson, 4:168.
retired from the public service in June only, and after that the general confusion of our state put it out of my power to procure the informations necessary till lately. Even now you will find them very imperfect and not worth offering but as proof of my respect for your wishes.  

The book we know as *Notes on Virginia* was a product of much revision. After Jefferson returned his answers to Marbois, he also sent copies to Charles Thomson and Isaac Zane for their comments. These initial drafts have yet to be found, so there is no way to compare the information presented in 1781 to the information first published in 1787.

The edition used for this thesis was edited by William Peden in 1954. His publication was not complete, for a complete treatment was planned to be included in the Princeton Edition of Jefferson’s letters. This however, has yet to be accomplished. I have also used copies published on the internet by the Massachusetts Historical Society, which owns the manuscript prepared by Jefferson for comparison to Peden’s edited version. The manuscript, along with other original documents, had been donated to the Society in four installments by direct descendants of Thomas Jefferson.

The English versions of *Notes on Virginia*, included a map called “A Map of the country between Albemarle Sound, and Lake Erie, comprehending the whole of Virginia, Maryland, Delaware, and Pennsylvania, with parts of several other of the United States of

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America” was included.\textsuperscript{10} It should be recognized that by the very act of including a map as a tool to convey his image of Virginia, Jefferson has essentially proven himself a geographer, for maps are the primary tools of geographical communication.

Jefferson began \textit{Notes on Virginia} with “Boundaries of Virginia: An exact description of the limits and boundaries of the state of Virginia?”\textsuperscript{11} Jefferson instead combined the first query of Marbois, “The Charters of your state,” with the third, “An exact description of its limits and boundaries.”\textsuperscript{12} Jefferson described with a surveyor’s precision the geographic limits of Virginia at that time: bounded to the east by the Atlantic, north by the Potomac River, until it reaches the Mason Dixon line, in the west by the Ohio and Mississippi Rivers, and on the south by a line of latitude. Jefferson concluded this query by listing the land charters given by the crown in England, which together defined the state’s boundaries.

The next six queries, as arranged by Jefferson, characterized the physical geography of Virginia. Query Two, “Rivers: A notice of its rivers, rivulets, and how far they are navigable?” begins with an instruction to the reader to inspect the map of Virginia, which would give the reader “a better idea of the geography of its rivers, than

\textsuperscript{10} Mr. Coolie Verner has addressed the forming of this map by Jefferson in his article, “Mr. Jefferson Makes a Map.”

\textsuperscript{11} Jefferson took the liberty of rearranging Marbois list of queries into a format more suitable to him. Jedidiah Morse, the author of \textit{The American Geography; or, A view of the present situation of the United States of America} published in 1792, would follow Jefferson’s lead and present his information about Virginia in the same order. Jedidiah Morse. \textit{The American geography; or, A view of the present situation of the United States of America}. 2nd ed. London, 1792. \textit{The Making Of The Modern World}. Web. 1 Aug. 2011.

Jefferson goes on to describe the navigability of each river for ships of various sizes. Aside from the critical information regarding how far inland a river is navigable, Jefferson recognized the economic possibilities of major rivers in Virginia.

In Jefferson’s discussion of the James River, he mentions the possibility “that its navigation may also be made to interlock with that of the Patowmac (Potomac), and through that to communicate by a short portage with the Ohio.”14 A comparison of this statement against the map Jefferson included in *Notes on Virginia* (Figure 5) reveals Jefferson most likely intended for the portage to be from a branch of the upper Potomac, through the valley of the Cheat River in the Alleghanies, a branch of the Monongahela. Jefferson marks another possible portage farther south, where the south branch of the Potomac, the Wappocomo, is much closer to the Monongahela River. Either portage route would allow access to the Ohio River, opening the interior to commerce and settlement.

A comparison of the published edition and Jefferson’s handwritten manuscript shows that he must have received more detailed information regarding the length of the Ohio River from Thomas Hutchins, author of *A Topographical Description of Virginia, Pennsylvania, Maryland, and North Carolina.*15 In Hutchins’s book, he wrote that the

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13 *Notes on Virginia*, 5.
14 *Notes on Virginia*, 6.
15 Thomas Jefferson Papers, “Notes on the State of Virginia, manuscript,” page 5. A piece of manuscript was attached after Jefferson had written the sheet which included the distances between points on the Ohio. Peden, 10.
Monongahela is navigable for batteaux or barges up to Laurel Hill. Jefferson mentioned Laurel Mountain in his description of the Monongahela River as well, noting, as did Hutchins, that the river is not navigable above this point because of rapids and shoals. Hutchins’s opinion was well respected because had mapped different waterways in the Northwest, as well as part of Florida and Louisiana before the Revolutionary war, and received a Congressional appointment as first Geographer of the United States in 1781.

Jefferson took this opportunity to also look westward toward the economic potential of rivers outside Virginia’s borders, including the Mississippi and Missouri rivers. Jefferson understood the importance both rivers would doubtless play in future expansion and commerce: “The Mississippi will be one of the principal channels of future commerce for the country westward of the Alleghaney.” Jefferson knew, perhaps from Hutchins’s book, about the annual flooding on the Mississippi, including which side of the river was more likely to flood, how the river had changed course through the years, and the types of fish found in it.

The remainder of Jefferson’s response to Marbois’s query regarding rivers contains a multitude of other geographical observations. Jefferson compared the annual

17 *Notes on Virginia*, 14.
19 *Notes on Virginia*, 7.
flooding of Nile River to that of the Mississippi. He observed the change of the color of the Mississippi after the confluence with the Missouri because of its heavy sediment load. He described the possible connections between the western rivers, the Great Lakes, and the Atlantic, along with the importance of these connections to trade. A review of Jefferson’s manuscript reveals that the first draft was to end after his description of the Alleghany River. However, on page 9 of the manuscript, four separate attachments were affixed to add information about how the western waters are connected to the Atlantic.²⁰

The third query, as arranged by Jefferson, dealt with sea ports. Jefferson chose not to address this directly, writing, “[having] no ports but our rivers and creeks, this Query has been answered under the preceding one.”²¹ Jefferson instead wrote about the number of ships the mouths of the James, the Elizabeth (which is a tributary of the James) and the York rivers could hold. Neither the Potomac or the Rappahanock rivers, both of which are large rivers emptying directly into Chesapeake Bay, were suitable harbors. Jefferson’s notes on these two rivers indicate that their depth would hinder large ships from docking in them.²²

The fourth query was on mountains. Although the response was quite short, it is full of geographical thoughts. The opening sentence directed the reader to a map: “F[or the] particular geography of our mountains I must refer to Fry and Jefferson’s map of

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²¹ Notes on Virginia, 17.
²² Notes on Virginia, 7.
Virginia; and to Evans’s analysis of his map of America for a more philosophical view of them than is to be found in any other work.”

Jefferson, like some illustrious contemporaries, was wrestling with concepts of the drainage of geological features. Midway through an added section of text he wrote:

The first glance of this scene hurries our senses into the opinion, that this earth has been created in time, that the mountains were formed first, that the rivers began to flow afterwards, that in this place particularly they have been dammed up by the Blue ridge of mountains, and have formed an ocean which filled the whole valley; that continuing to rise they have at length broken over at this spot, and have torn the mountain down from its summit to its base.

In the closing paragraphs of his essay on mountains, Jefferson made a few illuminating remarks about the geography of mountains in general. He wrote that although the Alleghany Mountains were the highest range between the Atlantic and Mississippi, they are not as great in height as those found elsewhere; “we suppose the highest peak to be about 4000 feet perpendicular, which is not a fifth part of the height of the mountains of South America,” nor, he concluded, “one third of the height which would be necessary in our latitude to preserve ice in the open air unmelted through the year.”

The last geographic observation made in this section on mountains has to do with the location of volcanoes in relation to oceans. Jefferson wrote that a stone assumed to be pumice had been found in the Mississippi, which would lead to the conclusion that

23 Notes on Virginia, 18.
24 Notes on Virginia, 19. James Hutton’s idea about how long earth’s history really was and this history showed a series of processes, which first presented in 1785. Charles Lyell would later prove Hutton’s theory and give it the name of uniformitarianism. The English version of Notes on Virginia was published in 1787, so it is possible that Jefferson had heard of Hutton’s paper and added this information at a later date.
25 Notes on Virginia, 20.
there is a volcano somewhere in the interior. The most likely location of this volcano would be in the mountains that divided the Mexican gulf and the South Sea (by which he meant the Pacific), but there was no known report of one. “No volcano having ever yet been known at such a distance from the sea, we must rather suppose that this floating substance has been erroneously deemed Pumice.”

Based on his understanding of the geography of other regions, the possibility of a volcano deep in a continent seemed to him not possible.

The next query asked about Virginia’s cascades and caverns. Jefferson described only one cascade, that of Falling Springs on the Jackson River, a tributary of the James. After a brief description of the cascade and a comparison to Niagara Falls, he moved on to describe the state’s caverns. Jefferson’s opening comment on Madison’s Cave makes the connection between caverns and limestone rocks. He then observed that he did not think the water in the cave had its source in any surrounding stream, because the water in the cave was always cooler temperature, was never turbid, and never rose or fell with rainfall. These factors led Jefferson to conclude the water must be an underground reservoir, separate from the above ground water systems.

The last section regarding cascades and caverns was dedicated to a natural bridge on land that Jefferson had purchased in 1774. He wrote: “It is on the ascent of a hill, which seems to have been cloven through its length by some great convulsion.” Yet in a footnote to the manuscript, he referred to Don Antonio de Ulloa and his theory about

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26 Notes on Virginia, 20.
27 Malone, Jefferson the Virginian, 440.
28 Notes on Virginia, 24.
the origins of a similar natural bridge in Angarazez, South America.\textsuperscript{29} Ulloa suggested that its origin was not that of a great heaving or convulsion of the earth’s surface, but that it had been worn by running water. Jefferson said of his bridge, the erosive effect of the water would depend on the character of the rock. “I think that this does not resemble the effect of running water, but looks rather as if the two sides had parted asunder.”\textsuperscript{30}

Query Six moved from what is above the earth, to minerals found in the earth, plants and trees that grow in the soil, and the animals found in the New World. Jefferson listed gold, lead, copper, black lead, pit coal, precious stones, marble, limestone, schist, and other stones, nitre, and salt. The most important mineral mined was lead. Jefferson displayed his understanding of the importance of location of the lead mines relative to the furnaces and rivers that could transport the finished product. This knowledge had been tested during Jefferson’s tenure as the Governor of Virginia, when he had constantly tried to make sure Virginia’s army had enough lead and to find reasonable ways to the finished product to the troops. Jefferson’s discussion of iron and coal includes areas in Virginia where the minerals were mined, passages which indicate that these minerals were thought to occur in greater abundance farther west may be of greater significance.

Jefferson described a significant vein of limestone in Virginia. This formation crossed from Prince William County, in northern Virginia, progressing in a line to the south and west until it reached Otter River, in southern Virginia. The line seemed to parallel the Blue Ridge. Jefferson was “struck” by the orientation of this vein, and

\textsuperscript{29} Thomas Jefferson Papers, “Notes on the State of Virginia, manuscript,” page 14.  
\textsuperscript{30} Notes on Virginia, 264, note 6.
measuring its angle of declination, and ultimately concluded that it ran roughly parallel to the axis of the earth. There were a few irregularities in this pattern, however, in which Jefferson wondered if the rocks had been moved from their original position by means of some great upheaval.\textsuperscript{31}

There was also speculation on the composition of schist, which contained impressions of shells of various species between the North Mountain and Blue Ridge ranges. Jefferson wrote that he had received various petrified shells from Kentucky and had read about shells found in the Andes. He wrote: “[t]his is considered by many, both of the learned and unlearned, as proof of an universal deluge,”\textsuperscript{32} proof of the biblical flood of Noah. Jefferson used the weight of water, the amount of water in the world, and the heights of mountains to question whether such a worldwide flood was possible, let alone the cause for the location of petrified shells inland. He described two other proposed theories that would account for the location of the shells but concluded, “the three hypotheses are equally unsatisfactory; and we must be contented to acknowledge, that this great phaenomenon is as yet unsolved. Ignorance is preferable to error; and he is less remote from the truth who believes nothing, than he who believes what is wrong.”\textsuperscript{33}

Jefferson included descriptions of different types of springs found in Virginia – medicinal, hot, sweet, and burning, along with other oddities. The hot springs and sweet springs listed in the text were noted to have been used to treat the ill, but he doubted the effects of mineral springs on illnesses, but held that warranted further chemical analysis.

\textsuperscript{31} Notes on Virginia, 29-30.
\textsuperscript{32} Notes on Virginia, 31.
\textsuperscript{33} Notes on Virginia, 33.
Jefferson also included a description of a burning spring near the Elk River. The spring emitted a continuous stream of gas that gave the water the appearance of boiling and could ignite into a flame if one was presented. Jefferson supposed the gas was probably produced by the “decomposition of water or of pyrites, within the body of the hill.” Of all the springs listed, the burning spring was the only one for which Jefferson proposed an explanation.

In another portion of Query Six, Jefferson stated his position regarding the mammoth in North America, including a steadfast belief based on Native American tradition that “this animal still exists in the northern and western parts of America.” Jefferson then moved to a thesis rebutting observations published by Comte de Buffon that native animals and people in the New World were fewer and of slighter stature than those found in the Old World. Jefferson took great care to refute both arguments by creating detailed tables which compared the size of animals and his personal experience with Native Americans. He questioned the background of Buffon’s sources and concluded they must not have been scientists at heart.

The careful weather observations Jefferson had kept and collected were used to describe Virginia’s climate in Query Seven. Jefferson utilized five years of personal observations made in Williamsburg to create a chart that listed average rainfall,

34 Notes on Virginia, 36.
35 Notes on Virginia, 54.
37 Notes on Virginia, 54.
temperature variances, and wind direction. He then discussed the climate in other parts of the continent and assumed that the climate elsewhere was not the same: “proceeding on the same parallel of latitude westwardly, the climate becomes colder in like manner as when you proceed northwardly.”

The remainder of Notes on Virginia described the human geography of Virginia: its population characteristics, Native Americans, urban patterns, political structure, religion, and economics. Of these topics, Jefferson’s discussion on population characteristics seems to have been overlooked by geographers. This oversight is due, in part, to the lack of records during the Colonial period that provide accurate and specific demographic data:

The statistical records for the seventeenth and eighteenth centuries are very limited. Some colonial governors, especially in the North, conducted enumerations of the population, usually at the behest of the British government. These are too sporadic in occurrence, restricted in scope, and unreliable in content, however, to provide anything like a complete picture of the demographic history of the colonial period.

In Query Eight, Jefferson used public records to create a table displaying the number of settlers imported to create the colony, the number of inhabitants, and the number of tythes, or free males over the age of 16 and slaves of the same age for both sexes for 1782. Using the table, Jefferson described the natural increase of Virginia and calculated it’s doubling time to be twenty-seven and a quarter years. Jefferson did not

38 Notes on Virginia, 73, 74.
39 Notes on Virginia, 75.
stop with this simple demographic measure; however, he projected the future population of Virginia would reach over six million within ninety-five years, based on current growth rates. Jefferson then calculated the population density, based on the assumption that Virginia would eventually be bounded to the west, to be similar to that of Great Britain. He also addressed potential overpopulation, stress on land resources, and the introduction of immigrant cultures to American.  

Query Eleven characterized the Aborigines of Virginia, the people themselves and the geographical locations they considered home. Jefferson described three dominant groups of Native Americans in Virginia, the Mannahoacs, Monacans, and Powhatans, whose languages and laws he found to be of particular importance. He wrote that the three tribes spoke such different languages that interpreters were required for business to be conducted among them. Jefferson wrote that the Monacans, probable descendants of the Five Nations, along with other tribes, had probably spoken a similar original language, but that “[t]heir dialects might, by long separation, have become so unlike as to be unintelligible to one another.”

Also discussed in this query is the origin of Native Americans: “[d]iscoveries, long ago made, were sufficient to shew that a passage from Europe to America was always practicable, even to the imperfect navigation of ancient times.”  

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41 Notes on Virginia, 82-85.
42 Notes on Virginia, 94-97.
43 Notes on Virginia, 100. Five Nations was a group of Native American tribes, later called the Iroquois League, which had a cooperative security arrangement. Neta C. Crawford, “A Security Regime Among Democracies: Cooperation Among Iroquois Nations,” International Organization 48, no. 3 (Summer 1994): 345-385, on 345.
proposed two main theories; first, Norwegians had traveled the seas, from Norway to Iceland, then to Greenland and Labrador. The other theory reference to the findings of Captain James Cook, who proposed a land bridge from Asia to the Americas.

Jefferson did not decide this question of origins utilizing only physical evidence, but referred back to the Native Americans language. He lamented the disappearance of many tribal languages and the lack of written works, for reconstructions of their language would provide more documentary evidence as to the origins of tribes:

Were vocabularies formed of all the languages spoken in North and South America, preserving their appellations of the most common objects in nature, of those which must be present to every nation barbarous or civilized, with the inflections of their nouns and verbs, their principles or regimen and concord, and these deposited in all the public libraries, it would furnish opportunities to those skilled in the languages of the old word to compare them with these, now, or at a future time, and hence to construct the best evidence of the derivation of this part of the human race.44

In Query Fourteen, Jefferson described “[t]he administration of justice and description of the [law]”45 in Virginia. The scope of his response to this query included the divisions of governments, administration of the law, the judicial system, international relations, and a brief description of numerous laws, including how to formalize a marriage.

In this query Jefferson also outlined a plan to educate Virginia’s youth. Jefferson had been interested in education for many years; his Bill No. 79, “Bill for the General Diffusion of Knowledge,” proposed changes to Virginia’s laws in 1778. The plan detailed in Notes on Virginia contained slight variations from Bill 79, but its general

44 Notes on Virginia, 101.
45 Notes on Virginia, 130.
theme remained. Jefferson proposed that Virginia be by laid out into districts, five to six miles square, called hundreds. Each of these districts would have a school that taught basic education to children for three years. The best boy scholar of the district would be sent to a grammar school to be taught languages, geography, and other forms of mathematics. Only the best students from grammar school would then continue to William and Mary to complete their education. Jefferson’s goal was for all children in Virginia, despite wealth or gender, to receive a basic education at the expense of their local district, for “[i]t is an axiom in my mind that our liberty can never be safe but in the hands of people themselves, and that too of the people with a certain degree of instruction.”

Jefferson also included in the query on laws his views on African Americans. Query Six, on minerals, vegetables, and animals, had contained what Jefferson catalogued as “an anomaly of nature,” light skinned African Americans, and his musings about their physical appearance. The information Jefferson added to Query Fourteen, however, regarded slavery. Jefferson began his assessment of African Americans by writing he had made a proposal in 1778, Bill No. 51, that all slaves born after its passage be free, a proposal that never passed. Of chief concern to Jefferson were the problems freed slaves might present. Would they be integrated into Virginia society, should they

46 Notes on Virginia, 146-149.
48 Notes on Virginia, 70-71.
be relocated, or might they take up arms against their former owners? Jefferson then described physical differences between races, such as skin, hair, and sleep requirements, before moving on to cultural differences, such as creativity. In Jefferson’s concluding remarks about African Americans, he wrote:

> It is not against experience to suppose, that different species of the same genus, or varieties of the same species, may possess different qualifications. Will not a lover of natural history then, one who views the gradations in all the races of animals with the eye of philosophy, excuse an effort to keep those in the department of man as distinct as nature has formed them?

The views expressed by Jefferson in *Notes on Virginia* about different races of men have been studied to understand how someone known for his ideals in religious and personal freedom, could discuss other men in the context of animals and law. Daniel Boorstin, however, believes Jefferson’s writings should be viewed in light of his times. Jefferson’s use of words such as ‘genus,’ ‘varieties,’ and ‘species,’ can thus be regarded as an attempt to classify unexplained variations in nature in Linnaean terms, the most orderly way Jefferson understood.

The last response, for the purpose of this thesis, summarizes Jefferson’s ideals for manufacturing and commerce. Jefferson supposed Query Nineteen would be a challenge for him:

> I mean however, shortly, to be in a condition . . . to give you . . . information as I shall be able to do on such of the subjects as are within the sphere of my acquaintance. On some of them however Mr. [Joseph] Jones will engage abler hands, those in particular which relate to the commerce of the state, a subject with

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49 *Notes on Virginia*, 138.
50 *Notes on Virginia*, 137-140.
51 *Notes on Virginia*, 143.
52 Boorstin, *Lost World*, 82.
which I am totally unacquainted, and which is probably the most important in your plan.\footnote{Thomas Jefferson to Marbois, Richmond, March 4, 1781, in \textit{The Papers of Thomas Jefferson}, 5:58.}

Jefferson wrote that Virginians, in particular, had an attachment to agriculture because of their vast lands and preferred to import their manufactured goods. In contrast, Jefferson believed Europe had turned to manufacturing because their vacant, arable land was gone; therefore they had no alternative for further economic development. Because Virginia, and the unknown expanse to the West, had limitless land, there was no reason to pursue manufacturing:

While we have land to labour then, let us never wish to see our citizens occupied at a work-bench, or twirling a distaff. Carpenters, masons, smiths, are wanting in husbandry: but, for the general operations of manufacture, let our work-shops remain in Europe. It is better to carry provisions and materials to workmen there, than bring them to the provisions and materials, and with them their manners and principles.\footnote{Notes on Virginia, 165.}

This brief analysis of \textit{Notes on Virginia} does not represent a full treatment of the geographical content of the work, but an overview. A more thorough study by a geographer, including full analysis of Jefferson’s writings, Peden’s footnotes, and the manuscript held by the Massachusetts Historical Society, has yet to be attempted.
CHAPTER 6

EPILOGUE

When Thomas Jefferson boarded the *Ceres* for bound for Paris on July 5, 1784,\(^1\) his work in geography did not stop. He continued to view the world through a geographical lens in each endeavor he undertook, beginning with his voyage across the Atlantic Ocean. According to Dumas Malone:

Jefferson . . . left a prosaic and more precise record of his first crossing. Every day at noon he recorded in his account book the latitude and longitude, the distance covered, the winds, the reading of the thermometer; and he made observations about whales, sharks, and other strange creatures as he saw them.\(^2\)

Approximately a year after Jefferson’s arrival in Paris, he arranged for the first printing of *Notes on Virginia*. Some of the first copies of the book were sent to his friends, including Marquis Chastellux, who was to deliver a copy of the book to Comte de Buffon, as well as a panther skin brought to Europe by Jefferson.\(^3\) Jefferson eventually met with Buffon and the two corresponded until Buffon’s death.

During his stay in France, Jefferson became personally acquainted with John Ledyard, a member of Captain Cook’s crew.\(^4\) During the summer of 1785, Ledyard met Jefferson and the two began to plan an expedition to the Pacific Northwest. An ocean voyage across the Atlantic and around South America to the Pacific Ocean proved an impossibility due to the expense. It was decided that Ledyard should reach his goal overland, through the Russian empire and across the Bering Strait, before then heading

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1 Bernstein, 56.
4 Jackson, 45.
south. Jefferson and Ledyard’s plan, however, was not realized. In 1787, Ledyard was arrested in Irkutsk by order of Empress Catherine and returned to France.\textsuperscript{5}

While overseas, Jefferson visited other parts of Europe, including Great Britain in 1786, the South of France and Italy in 1787, and the Netherlands and the Rhine country in 1788. The official reason for Jefferson’s visit to Great Britain was to work with John Adams in negotiating treaties with Portugal, Tripoli, and commercial trade lines with the United Kingdom. The negotiations did not fare well, but Jefferson was able to visit steam mills and purchased several mechanical instruments, including a thermometer and theodolite.\textsuperscript{6}

Jefferson’s time in the south of France and Italy was for a much different purpose. In the fall of 1786, Jefferson had injured his wrist. It was suggested to him that he visit mineral springs for quicker healing. His trip lasted more than three months, during which he kept copious notes regarding what he observed.\textsuperscript{7} About Jefferson’s trip, Bedini concluded:

\begin{quote}
Although Jefferson did not succeed in finding a cure for his wrist, the journey was nonetheless fruitful in that it enabled him to study crops, soils and agricultural methods, to collect statistics on manufactures and to observe chimneys, bridges, forests, sidewalks, aqueducts, canals, pumps and other items that he found ingenious and practical.\textsuperscript{8}
\end{quote}

\textsuperscript{5} Jackson, 54.
\textsuperscript{6} Malone, \textit{Jefferson & the Rights of Man}, 51, 59.
\textsuperscript{7} Malone, \textit{Jefferson & the Rights of Man}, 112-113.

Jefferson’s time in the Netherlands was very brief; however, he kept similar records of his observations. Bedini, \textit{Statesman of Science}, 188.
In the fall of 1789, Jefferson returned to Virginia, where an important letter was waiting for him. The new president, George Washington, had appointed him the nation’s first Secretary of State. As a result of his time and travels in Europe, Jefferson was well qualified for his new appointment. However, one of Jefferson’s greatest achievements during his tenure as Secretary of State had little to do with foreign affairs. In 1790, Alexander Hamilton was working on a plan for the federal government to assume the states’ war debt. Hamilton’s plan was facing defeat in Congress, so he approached Jefferson for support. Jefferson, along with James Madison, eventually agreed to support Hamilton’s bill in return for a southern federal capital, along the Potomac River. Jefferson worked with Major Peter Charles L’Enfant and surveyor Benjamin Banneker to design Washington, D.C.9

Along with Jefferson’s duties as liaison to foreign governments, he was tasked with other important responsibilities; including devising a plan for establishing a uniform currency, weights, and measures; creating a patent office;10 and conducting the first United States census. The House of Representatives required an accurate and geographic census to appropriately apportion Congressional seats. Jefferson and James Madison had desired a census that included information on occupations and the ages of the citizenry, but their request was denied for lack of funding.11

9 Bernstein, 86-87.
10 Bedini, _Statesman of Science_, 204, 207.
Tensions between Hamilton and Jefferson led Jefferson to resign his post at the end of 1793. Jefferson was looking forward to leaving public life and returning to Monticello. In a letter to James Madison, Jefferson wrote that his debt of service to his country had been paid and that:

[t]he motion of my blood no longer keeps time with the tumult of the world. It leads me to seek for happiness in the lap and love of my family, in the society of my neighbors and my books, in the wholesome occupations of my farm and my affairs, in the interest or affection in every bud that opens, in every breath that blows around me, in an entire freedom of rest or motion, of thought or incogitancy, owing account to myself alone of my hours and actions.

After two years away from public life, however, Jefferson began to get involved in politics again. When President Washington announced his intention to not run for a third term, Jefferson and John Adams became natural candidates for the office. Jefferson lost the election to Adams, but become our nation’s second vice president. Although Jefferson became involved in several scandals and political issues, there was very little for a vice president to do, even two hundred years ago, aside from presiding over the Senate. So Jefferson turned to other pursuits and became the president of the American Philosophical Society in 1797, a position he held until 1815.

Jefferson’s membership in and leadership of the American Philosophical Society was instrumental in the exchange of scientific, historical, and geographical ideas throughout the United States and Europe. Gilbert Chinard, former French professor at Princeton University, wrote that during Jefferson’s forty-seven year membership and

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12 Bernstein, 103.
14 Bernstein, 112, 118.
seventeen years as president of the Society, no one promoted useful knowledge more than he, “not even . . . Benjamin Franklin, our founder.”\textsuperscript{15} Aside from gaining knowledge from the Society’s members, Jefferson used them to fund and train explorers going West, including André Michaux, who was planning a journey to Sitka, Alaska.\textsuperscript{16}

After a contentious election campaign in 1800 against his longtime friend John Adams, Thomas Jefferson became our nation’s third president.\textsuperscript{17} During his first term as president, in April of 1803, Jefferson nearly doubled the size of the country by signing a treaty with France for the purchase of the Louisiana Territory. Before the Purchase became a consideration, Jefferson had already begun to plan an expedition into the territory, led by his secretary, Meriwether Lewis. Jefferson drew upon his connections within the American Philosophical Society to train Lewis and his partner William Clark.\textsuperscript{18} The expedition left Washington on July 5, 1803 and did not return to St. Louis until September 23, 1806.\textsuperscript{19} This amazing expedition represents perhaps the culmination of Jefferson’s geographic thought.

During Jefferson’s tenure as President, he received a most distinguished guest, the famed geographer Baron Alexander von Humboldt. On June 4, 1804, Humboldt dined with Jefferson and some of his cabinet at the President’s House, where Humboldt gave a presentation of his travels through South and Central America. Included in the presentation were several maps, which Jefferson requested to borrow, to help fill in the

\textsuperscript{15} Chinard, “Jefferson and the A.P.S.,” 263.  
\textsuperscript{16} Chinard, “Jefferson and the A.P.S.,” 266.  
\textsuperscript{17} Bernstein, 129.  
\textsuperscript{18} Jackson, 134-137.  
\textsuperscript{19} Jackson, 200.
gaps of his knowledge of Spanish and French colonial holdings. The two great geographers continued their correspondence until Jefferson’s death.\textsuperscript{20}

Jefferson left Washington, D.C. and public service in 1809. He once again was able to return to Monticello and pursue his true passion:

Within a few days I retire to my family, my books and farms; and having gained the harbor myself, I shall look on my friends still buffeting the storm with anxiety indeed, but not with envy. Never did a prisoner, released from his chains, feel such relief as I shall on shaking off the shackles of power. Nature intended me for the tranquil pursuits of science, by rendering them my supreme delight. But the enormities of the times in which I have lived, have forced me to take a part in resisting them, and to commit myself on the boisterous ocean of political passions.\textsuperscript{21}

Jefferson busied himself with more than the pursuit of science. During his retirement, he worked to establish the University of Virginia. Jefferson was involved with almost every portion of the planning of the university, including the course list, required readings, and its buildings’ architecture and layout.\textsuperscript{22} His passion for the project is evident by his choice to include it as one of three things he wanted carved on his headstone, “the Declaration of Independence, the Virginia Statute for Religious Freedom, and the University of Virginia.”\textsuperscript{23} Thomas Jefferson died on the fiftieth anniversary of the Declaration of Independence, July 4, 1826, after multiple ailments in his later years.\textsuperscript{24}

As we look back at the life of Thomas Jefferson and how his geographic thought evolved, we cannot presume that Jefferson would have referred to himself as a

\textsuperscript{20} Bedini, \textit{Statesman of Science}, 354-355.
\textsuperscript{21} Thomas Jefferson to Monsieur DuPont de Nemours, Washington, March 2, 1809, in \textit{Life and Selected Writings}, 545.
\textsuperscript{22} Bernstein, 174.
\textsuperscript{23} Mark R. Wenger, “Thomas Jefferson, the College of William and Mary, and the University of Virginia,” \textit{The Virginia Magazine of History and Biography} 103, no. 3 (July 1995): 339-374, on
\textsuperscript{24} Bernstein, 188-189.
geographer. Jefferson was certainly a man of many talents, including an eloquent writer, able statesman, and a man of science. Jefferson and his contemporaries, however, would have called themselves natural historians, students of the earth. Nevertheless, Thomas Jefferson was a geographer, as we view the matter today. His heart was always leaning towards the land, always yearning to learn more about the earth, and like a true Enlightenment man, always trying to improve what nature had provided.
APPENDIX

Figure 1
Library of Congress Digital Collections
Rare Book and special Collections Division
Catalogue of the library of Thomas Jefferson
http://lcweb2.loc.gov/cgi-bin/ampage?collId=rbc3&fileName=rbc0001_2007jeffcat1page.db&recNum=23

Jefferson's classification scheme as written in his manuscript catalogue.
Jefferson's classification scheme as printed in the 1815 Catalogue.

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Figure 3
Library of Congress Digital Collections
The Thomas Jefferson Papers Series 1. General Correspondence. 1651-1827
Francois, Marquis de Barbe-Marbois, October 1780, Queries on Virginia; in Hand of Joseph Jones
http://hdl.loc.gov/loc.mss/mtj.mtjbib000556
Figure 4
The Thomas Jefferson Papers Series 1. General Correspondence. 1651-1827
Francois, Marquis de Barbe-Marbois, October 1780, Queries on Virginia; in Hand of Joseph Jones
http://hdl.loc.gov/loc.mss/mtj.mtjbib000556
Figure 5
The Library of Congress Geography and Map Division
From Thomas Jefferson’s Notes on the State of Virginia, 1787.
A map of the country between Albemarle Sound, and Lake Erie, comprehending the whole of Virginia, Maryland, Delaware and Pennsylvania, with parts of several other of the United States of America. Engraved by S. J. Neele
http://hdl.loc.gov/loc.gmd/g3790.ar076200
Figure 6
Map of Proposed State Boundaries and Names as Proposed in Report of the Committee, March 1, 1784
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VITA

Christina Leann Brown Anderson was born on October 8, 1973, in Buffalo, Missouri. She was educated in a small community elementary school in Long Lane, Missouri and graduated from Buffalo High School in 1992. After a brief attempt at a local university, she took a position at a large regional bank in Springfield, Missouri. She began as a part-time balance clerk and ended her tenure there as the court representative for the bank, fulfilling legal requests and testifying on its behalf. She left the bank in 1997 and took a position as a loan clerk at a bank in Bolivar, Missouri. Ms. Anderson left the bank in 2000 as a Consumer Lender with lending authority.

While working in Bolivar, she enrolled in Southwest Baptist University to begin work on her degree in History. In 2001, she transferred to Missouri State University, where she changed her major to Geography. Ms. Anderson received her Bachelors of Science in Geography in, 2003, with a 3.34 grade point average. As part of her fieldwork at Missouri State University, she had an internship at Wilson’s Creek National Battlefield. She created a GIS shapefile for the park and mosaicked together photos of historic sites for a 360° view of each site.

After graduation, she enrolled in the Resource Planning Graduate Program at Missouri State University where she was awarded a Graduate Teaching Assistant scholarship. As a G.T.A., she taught the laboratory portion of the Introduction to Cartography course. While teaching two lab sections each semester, she completed 18 hours towards her Master’s degree, maintaining a 3.67 grade point average.
In 2004, she moved with her family to Shawnee, Kansas. There she worked periodically in the field of GIS at a local mapping agency. At this firm, she worked with many different engineering firms and government entities to produce maps and other products. Ms. Anderson left her position in the summer of 2006 and accepted a teaching position at a private Christian School, where she taught World Regional Geography for two years.

In the fall of 2007, she was accepted to the Environmental and Urban Geoscience Graduate program at the University of Missouri, Kansas City. After studying in the program for a year, she was awarded a Graduate Teaching Assistant scholarship. Her position there was to teach the lab portion of the Environmental Science course. She completed her Masters of Science degree at the university in 2012 with a 3.8 grade point average.

Ms. Anderson is currently an Adjunct Geography Instructor with Metropolitan Community College at their Blue River Campus in Independence, Missouri, where she has been since August 2010. She is currently teaching World Geography, Cultural / Human Geography, and an online course in World Geography.

Ms. Anderson presently resides in Shawnee, Kansas with her husband of 18 years, Andy, and her son, Nathan, now 15.