Geography in Virginia Four Hundred Years of Geography and Geography Education in the Old Dominion

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By

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Abstract

GEOGRAPHY IN VIRGINIA: FOUR HUNDRED YEARS OF GEOGRAPHY AND GEOGRAPHY EDUCATION IN THE OLD DOMINION

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This paper examines the four-hundred year history of geography and geography education in Virginia. As the site of the oldest permanent English settlement in North America, the home of many of America's most important founding fathers and early presidents, and location of many pivotal military battles of the Revolution and Civil War, Virginia was until the mid-nineteenth century one of America's leading colonies and states. It has an unparalleled and richly documented history of geographic scholarship and thought, producing a reputable geographic study written in each century since its founding in 1607. From Robert Smith in the seventeenth century, through Robert Beverly and Thomas Jefferson in the eighteenth, Matthew Fontaine Maury in the nineteenth, to Jean Gottmann in the twentieth, the Old Dominion provides the backdrop for a valuable geographic heritage that reflects the geographic "Weltanschauung" (world view) of not just Virginia, but the greater nation. Sometimes as a follower, but more often – and more recently again – as a leader, Virginia's geographically-informed Weltanschauung and the discipline's fortunes waxed and waned with the flow of people, societal norms, territorial expansion and wars, and technology.

The history of geography's evolution in the Old Dominion is traced chronologically in two ways: the formal geographic studies by Smith, Beverly, Jefferson, Maury, and Gottmann, and the examination of geography education in schools at all levels. The former approach traces the changing nature of Virginia's "Weltanschauung;" the latter approach reveals that the discipline's history in Virginia's (and the country's) educational system has been fluid, at times giving dictation regarding curriculum and pedagogy, at other times taking it. Various indicators, such as the number of schools offering geography, the number of students enrolled in geography courses, and the kinds of texts used, show a close correlation between the growth and change of the *state* (and, by extension, the nation), and the growth and change of the *discipline*, both in academia and in the popular perception of the discipline.

Introduction

Chapter One

Geography in the Old Dominion reached an important milestone in its perpetual quest to regain its former academic and social standing when it was included in the state's Standards of Learning (SOL) curriculum in 2001. A seat at the educational table does not of course ensure the demise of America's geographic illiteracy. Evidence of this includes a recent <u>National Geographic</u> survey which concluded that a three-year American military presence in Iraq notwithstanding, 63% of Americans age 18-24 still could not correctly identify that country on a map of the Middle East. Nor will inclusion in the Standards of Learning likely ameliorate geography's century-old, self-inflicted identity crisis. It is, however, a positive development in the history of geography and geography education in Virginia, and, by extension, in the United States.

"As geographers and environmental scientists remind us, our lives 'take place;" we live in particular locales," in particular landscapes.¹ "In Virginia, landscape is intimately bound up with history and nationhood. As the site of the earliest Revolutionary War [and Civil War less than 100 years later] Virginia is especially suited as a microcosm of the entire developing United States. 'In the beginning, all America

¹ Stephen Adams, <u>The Best and Worst Country in the World: Perspectives on the Early Virginia Landscape</u> (Charlotteville: University of Virginia Press, 2001), 3.

was Virginia,' William Byrd II is supposed to have claimed."¹ "De nobis fabula narratur."²

If we accept this premise, then what was the state of geography generally, and of geography education more specifically, in Virginia from its earliest beginnings in 1607 to the present? How did geographic knowledge and perceptions change over 400 years, why did it change, and how did these changes manifest themselves more formally in Virginia's educational system? As Adams demonstrates, scholars can indeed trace these questions back to the earliest years of Virginia's colonial existence. What they have discovered is the "Virginians' efforts to live in harmony with the land" on the one hand, and what Jack Temple Kirby calls 'Virginians' propensity to war on nature'" on the other.³ While the Virginia landscape changed tremendously over four centuries, the *manner* in which its inhabitants viewed its surroundings (landscape) changed "perhaps even more radically, providing clues to important shifts in culture."⁴ As such, the history of geography in Virginia was shaped not only by the exponential growth of geographic knowledge of Virginia (and the country generally) over the last 400 years, but shaped by the changing *perceptions* and *attitudes* regarding the utility and necessity of geography in everyday life. Leading Virginians (and founding fathers) like George Washington and Thomas Jefferson were geographically literate men who relied upon geographic knowledge to exploit the land for economic and material gain; later, they and other American leaders also manipulated geography to advance their vision of the political,

¹ Ibid., 5.

² "Their story is our story."

 $^{^{3}}$ Adams, 6.

⁴ Ibid., 2.

economic, and cultural path they wished their colony, then state and new nation, to follow. This was reflected in the development of academic geography, and from the beginning, geography of some sort was part of the curriculum for all young Virginians (and Americans) who received formal schooling. However, the nation's perception regarding the utility and function of geography changed during the twentieth century, ushering in a set of troubling geographic contradictions.

On the one hand, this "American Century" witnessed unprecedented American involvement and dominance in global affairs, which seemed to demand increasingly sophisticated levels of geographic knowledge and mastery of global geography if the United States hoped to maintained its position in the new world order. One the other hand, power begets haughtiness, and after the Second World War, many Americans, still chained to the belief that geography was little more than "where places are on the map," did not feel the need to familiarize themselves with the trivia of geography. Compounding this belief were the century's extraordinary technological innovations in transportation, communication, climate-control, and resource manipulation which increasingly removed and insulated people from their natural environment. Formerly vast distances seemed physically conquered by railroad, air, then space travel, and virtually connected by telephone, radio, television, and the Internet; in the meanwhile, heating and air-conditioning, the Green Revolution, and irradiation tamed even the harshest climates and produced and made available foods out of season and natural origin. Finally, another explanation for the United States' ambivalence regarding geography concerned itself with the changing nature of its manifest destiny. In the

nineteenth century, manifest destiny was inherently territorial; geographic expansion begat economic expansion. By the twentieth century, however, it was becoming more subtle. After 1900, old-fashioned geographic expansion virtually ended, but America's manifest destiny continued, with the rising American Empire focused on economic control of markets rather than physical control of space. Americans were able to "expand" virtually without taking tangible possession of land. Intimate geographical knowledge of a place – so valued by Virginia and America's earliest settlers - no longer seemed necessary to control and exploit that place.

Haughtiness, technology, and virtual empire thus all colluded to create the popular perception of a "world beyond geography." If the end of the twentieth century marked the "end of history," as Francis Fukayana proclaimed, then for many it also marked the end of geography; geography was history, so to speak. With Virginia and the world largely explored and tamed, urbanized, industrialized America had become increasingly divorced from the land, and the importance of geographical literacy became less obvious, a fact mirrored in Virginia and the nation's education system. Unhappily for the discipline, this came at a time when academic geography was already suffering from an identity crisis and in-fighting which fragmented the discipline and confused the public regarding its nature and purpose even further. This made it even less able to defend itself from incorporation into the emerging field of "social studies" making inroads by the 1920s. As a result, where geography's fortunes once waxed it now waxes *and* wanes, a trend that continues to manifest itself in America's (and Virginia's) schools to this day.

Geography was arguably at its most influential when it was deliberately used – as geographers like Martin Bruckner contend – initially as a tool to promote nationalism, and later, to inspire "empire as a way of life," as William Appleman Williams described 19th century American imperialism. With virtually no *history* of its own to fall back on, *geography* became the centripetal force for rebellion, nationalism, and finally expansion. Geography of course also "mattered" when an intimate knowledge of ones surroundings was a matter of life or death. In stark contrast to the present, Virginia's (and America's) earliest white inhabitants were by necessity – and, immediately before and after the American Revolution, by design - remarkably geographically literate. As colony became state and state evolved into bona fide nation which increasingly tamed the last of its unknown and potentially dangerous frontiers, geographic knowledge increased, but not necessarily the life-or-death imperative to embrace it (this knowledge). As Virginia began to shed its overwhelmingly rural demographic in favor of an increasingly urban, i.e. non-agricultural, lifestyle, increasingly fewer people had to or cared to learn about their immediate surroundings, much less their distant ones. America was big and isolated enough to not have to bother about geography. Only her large-scale entry into world commerce and two world wars in the twentieth century ended that luxury, but even then only by a matter of degree. If Virginians, and by extension, Americans valued geographic literacy during the first three centuries of their history, then the last century has seen the gradual disappearance of this tradition.

Although Virginia's overall public educational system had not kept pace with the rest of the United States until fairly recently, geography's place within its schools has

nevertheless relatively accurately reflected the state of geography generally, both within the Old Dominion and beyond. One of the purposes of an educational system is to instill desired common values in the next generation, and from the beginning, geography was taught to all young Virginians (and Americans) who received formal schooling. While some historians contend that Virginia's relatively sluggish efforts at establishing public schooling was no accident, the state's settlement patterns were at least as much to blame. Other scholars maintain that Virginians strove throughout their colonial period to offer educational opportunities at least equal to those found in the mother country. This was by today's standard of course not saying much; for all practical purposes, the responsibility of education fell on individual families, who either had the means to pay for the few privately-run grammar schools, or for private tutors. Until the establishment of the College of William and Mary in 1693, those interested in pursuing higher education had to ship off to England.

While the exact course of study offered in the various Virginia schools remains difficult to discern, geography of some sort appears to have been required at all levels throughout Virginia's educational history until around 1910, when the state followed the lead of the nation's school systems generally and absorbed geography into the more encompassing field of social studies. There geography sat, lumped together with history, government, anthropology, sociology, and the like at the primary and secondary school level for nearly one hundred years until much hand-wringing followed by lobbying partially liberated and restored to it some semblance of independence and respectability. In higher education, geography peaked at the turn of the nineteenth century with an

increase in the number and diversity of geography courses, only to see many of those programs and departments shuttered outright and its severely trimmed course offerings subsumed within other disciplines. In Virginia, the College of William and Mary and the University of Virginia no longer offer geography majors.

More than a few historical geographers have placed at least some of the blame for their field's relative academic demise on geography's incessant preoccupation with defining and justifying its own existence (self-flagellance, as Herbert Jungst calls it). This "lingering sickness" especially prevalent during the 1920s and 30s caused infighting between physical geographers, geologists, environmental determinists, and everyone else who argued theirs was the true vocation. Promising to be everything for everyone, it increasingly was regarded as a "soft" discipline offering nothing that could not be picked up and incorporated into the pedagogy of other, more worthy fields like history, political science, or geology. Refusing to work with educational reformers focused on established a "social studies" curriculum, geographers simultaneously missed their opportunity to get their discipline a better seat at the table; as a result, history and historians and not geography and geographers have ever since dominated social studies.

In the early years of the Old Dominion, geography was such an organic, integral part of a Virginian's formal and especially informal education that he or she could by today's standard arguably be labeled geographers simply by the manner in which many of them lived or earned their livelihood. They "did" geography because their lives depended on it. Virginia's first settlement, Jamestown, was after all founded as an economic trade venture. Its British colonists were soon joined by French Huguenots,

German and Swiss Lutherans, and Scots-Irish Presbyterians, who spread into the Shenandoah Valley, which served as both a source of and transportation corridor for export goods to Europe and the West Indies, thereby tying Virginia's fortunes ever more closely and profitably to the world's economy. By virtue of its geographic location, Virginia enjoyed an advantage it would not relinquish until after the Civil War.

Early Virginians were quick to grasp this advantage. The few formal educational opportunities open to them reflected their appreciation of and reliance upon geographical literacy. In the 17th and early 18th century, numerous explorations produced geographical accounts and maps of the colony's expanding lands, designed to aid settlement and economic activity. By the latter half of the 1700s, the Founding Fathers, several of them Virginians, as well as other influential Americans, made a concerted effort at tapping into geography to promote a revolution, then foster post-revolutionary nationalism, and finally American imperialism. For instance, Thomas Jefferson's Notes on the State of Virginia, first published in 1783, was a geographic treatise of his home state describing its land and people, but it was also a "theoretical discourse on historical, natural, and political systems representing Jefferson's conflicted views on the present and future of the new American nation."¹ Jefferson's push for public education in Virginia (whose curriculum would have included geography), and his more successful efforts at establishing the University of Virginia (whose curriculum did include geography), his sponsorship of the Lewis and Clark expedition, as well as his surveying and meteorological activities all testify to his

¹ "Thomas Jefferson," American Philosophical Society website, www.amphilsoc.org/library/exhibits/nature/jefferson.htm

appreciation of and contribution to geography on both a regional (Virginia-) and nationwide scale.

While the passing of Jefferson and his generation of geography enthusiasts by the 1830s, as well as an increasingly civilized Virginia landscape which threatened to diminish geography's role in keeping people alive, might have also threatened geography's relevance generally, the Civil War, the opening of the American West, and the rapid succession of geographic discoveries, including some by Virginians like Richard E Byrd, managed to capture and hold the geographic imagination of Virginia and America alike for awhile longer. However, the Civil War and its outcome profoundly diminished Virginia's economic development and political importance, initiating a downward slide which did not reverse itself until the growth of neighboring bureaucratic Washington, DC during the Second World War, and the completion of two major transportation projects - a highway (the Beltway) around Washington, and an international airport (Dulles) in the early 1960s - all of which opened up Northern Virginia to residential and commercial development. The last major geographical study of the state, Virginia at Mid-Century by Jean Gottmann in 1955, anticipated the Old Dominion's spectacular demographic and economic renaissance, prompting the term "megalopolis" to reflect the region's new geographic reality. Today, Virginia as a player in the international economy and, by extension, participant in the world's globalization, has come full circle.

In matters of education, post-Civil War Reconstruction and racial segregation legislation gave a boost to Virginia's historically under-developed school system.

Happily for geography, when universal, free public education gradually gained acceptance by the 1870s, the curriculum included that subject. Even the Rosenwald (or "Sears") Schools, partially funded by Sears and Roebuck President Julius Rosenwald in the early 1900s to improve educational opportunities for the state's blacks, emphasized geography coursework. With Virginia's economic revival has come an educational one. While its educational system was considered among the weakest in the nation through the 1930s, the last four decades have elevated at least several of its Northern, DC metropolitan area counties to among the nation's best public school systems.

If Virginia's educational system has steadily improved since Reconstruction, what of geography education within its schools? As mentioned, academic geography nationwide arguably reached something of a high point at the turn of the twentieth century. By the end of the 1910s, however, a combination of factors appeared to conspire to dampen the public's enthusiasm for the subject and create something of an "image problem" from which it suffers to the present day. Virginia was not immune to this trend. Perceptions play a large role in this. Americans for instance do not perceive geography as a "real" science, but as a painful and pointless activity involving the memorization of "capes and bays" which need not be studied beyond elementary school, or then only by teachers in teaching colleges. Exactly when and how Virginians specifically and Americans generally stopped thinking geographically cannot of course be pinpointed, but a closer look at four centuries of geography in the Old Dominion can, in the best regional tradition of the discipline, hopefully bring some focus to the question.

While geography is an essentially chorological science, the study of its history demands a chronological approach. As such, this examination of the history of geography and geography education in the Old Dominion is sequential, and organized into distinct historical periods covering some 400 years from 1607 to the present. This framework allows a more manageable, detailed, and focused look at an otherwise overly broad subject. It is also an admittedly artificial construct bringing with it the usual limitations of artificial delineation of evolving thoughts and trends. These delineations, however, do not necessarily hinder and in fact serve to highlight the presence of several on-going themes in the narrative of the 400 year history of geography in Virginia. While each historical period features unique characteristics, some of these characteristics are ubiquitous, and strengthen the framework.

From Jamestown to Independence – Chapter One

For instance, the first chapter covers America's earliest colonial beginnings with the founding of Jamestown through Independence, corresponding to roughly 170 years and seven generations of white settlement under British colonial rule in the New World. During this time, geography was self-serving, used by the Virginia Company to attract settlers and aid in their success (and survival). Geography came to Virginia via European colonization and all the geographic activities this entailed. Land grants required the exploration, mapping, and delineating of physical space, which the English rapidly did, all within the confines of their unique cultural bias and in stark contrast to native inhabitants they encountered and proceeded to neutralize as quickly as possible. As D. Graham Burnett notes, the act of mapping was crucial to this process of empire-building. "By ordering chaotic space, maps created imperial places; by making distance places visible, they satisfied the scopic and gnostic drives of a conquering people; by providing a textual base map, they enabled European nations [and the future United States] to inscribe their ambitions on inaccessible places."¹

As a result, Virginia's colonial era is extraordinarily rich in maps and geographical writing, with contributions stretching from John Smith in the early 1600s, Robert Beverley in the early 1700s, through Thomas Jefferson in the 1780s. When Virginians, driven by tobacco, increasingly expanded westward into the interior, explorers such as John Lederer, the first European in the Shenandoah Valley, and surveyors like George Washington and Peter Jefferson (father of Thomas), left their impressions, accounts, even lot boundaries for contemporaries and future generations alike to insure their survival and, hopefully, future success. The opening of the Virginia frontier, as well as colonial Virginia's extensive ties with the greater world through its international trade activities left Virginians with a keen appreciation for geographic knowledge at all scales, and geography courses were a part of formal schooling at all levels during this time, including Virginia's first (and North America's second behind Harvard) institution of higher learning, the College of William and Mary, founded in 1693. While the colony's educational opportunities were admittedly severely limited, those that did exist contributed to the remarkable geographic literacy of not just Virginia, but of all the British colonies in America.

¹ D. Graham Burnett, <u>Masters of All They Surveyed</u>, (Chicago: University of Chicago Press, 2000), 6.

This introduces one characteristic, or theme, of geography in Virginia that simultaneously transcends the Old Dominion's history. "Geography for Survival and Profit" was of course not solely confined to Virginia. Yet Virginia, as Britain's first enduring North American colony and arguably its most influential one, by virtue of its early founding and influence took the lead in shaping and propagating a more general American attitude towards geography and geography education. As Virginia's interest in and appreciation for geography cyclically waxed and waned, so did America's. As such, there is validity in extrapolating the findings from a regional (Virginia) study of the state of geography to a national (United States) one.

From Independence to Civil War – Chapter Two

If the first chapter on geography and geography education in the Old Dominion covers the period between Jamestown and the American Revolution, then the second chapter spans the Revolution through the Civil War, or roughly 75 years. In the immediate post-Revolutionary period, the United States' Founders and early presidents, many of them Virginians, used geography to solidify democratic ideals and cultivate an "American" identity. From the attempted expansion of public schooling (Jefferson) through the establishment of a national university (George Washington) to the mentoring of territorial expansion (Jefferson again), these were all geographic attempts to foster American nationalism and nurture that unique, fledgling creating called the United States, whose survival was far from assured. After the War of 1812 – America's second war of

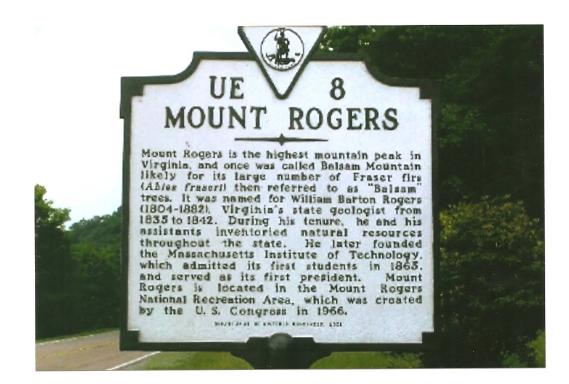


Figure 1 - Mount Rogers, the highest maintain peak in the state, is part of the Appalachian Mountain range that runs southeast to northwest along the Virginia-West Virginia border. The Appalachians posed a formidable barrier to westward expansion until after the American Revolution.

independence – put the nation on firmer footing, geography was increasingly used to justify America's manifest destiny of territorial expansion.

As it pertains to Virginia, the most important geography of this period was Thomas Jefferson's <u>Notes on Virginia</u>, completed in 1781, and first published in 1784. Arguably the most influential American natural history of the 18th century, it was also far more than a simple natural history. Some historians consider it among the greatest expressions of the American Enlightenment.¹ As important a contribution to Virginia geography as it was, however, Jefferson's contributions to the field did not end with his <u>Notes</u>. This chapter considers two other seminal geographical events of this period facilitated and mentored by Virginian Jefferson, the Louisiana Purchase and the subsequent Lewis and Clark Expedition. It is aided by William Koelsch's recent scholarship on "Jeffersonian geography," which brings to the fore Jefferson's credentials as both a geographer and geographic educator.

Jefferson's book was of course not the only geography book to emerge during this period, or the only one to influence academic geography in Virginia. The late 1700s and the first three decades of the 1800s witnessed a profusion of school texts from such prominent personalities as Jedidiah Morse, whose school geographies were so widely adopted he is popularly considered one of the fathers of American geography. An examination of his and other geography texts that emerge during the 19th century forms an important component to the study of geography education in Virginia not only in this

¹ "Notes on the State of Virginia," Academy of Natural Sciences website, www.ansp.org/museum/jefferson/otherPages/notes_VA.php

chapter, but for the remainder of this study, thus making it another transcending theme in the overall narrative. The content and pedagogy of school texts are among a society's best reflection of its ideals because they convey the kind of knowledge and morality a nation wishes its future generations to possess. Geography books and classes are both shaped by and shapers of society. Indeed, a perusal of American geography texts from the late 1700s through the early 2000s shows the changing nature of both geographic thought (such as Darwinism and environmental determinism) and accumulating knowledge (the discovery of new lands or geographic forces such as plate tectonics), and American education's handling of these. Interestingly enough, while primary and secondary public educational opportunities remained very limited in Virginia, the 1830s and 40s saw the birth of many private colleges and universities, such as Richmond, Old Dominion, Emery-Henry, and Roanoke. In keeping with a more general American trend, and for reasons unknown, the number of geography courses offered by many of these institutions of higher learning actually declined during the middle decades of the 19th century until rebounding during the closing two decades. Overall, however, Virginia's rich geography tradition during the two periods (chapters) from 1607 to 1865 gives credence to the phrase, as Virginia goes, so goes the nation.

From Civil War to the Twentieth Century – Chapter Three

The third chapter spans approximately 35 years, from the end of the Civil War to approximately the turn of the twentieth century. This period proved pivotal for geography and geography education in the Old Dominion as the surrender of the Confederacy on Virginia soil in 1865 exposed an already devastated land to Northern reconstructionist policies and the new economic and geographic realities of industrialization, immigration, and urbanization which characterized the latter half of the 19th century. If the first two chapters illustrate Virginia's rich geographic activities and scholarship, then the third chapter is remarkable for the state's demotion from geographic leader to follower. Loosing one-third of its territory and one-forth of its population with the creation of West Virginia in 1863 did not help. Virginia's early geographic advantages evaporated, and blacks, who were previously prized for providing the free labor force necessary for the state's economy, were now considered an economic and political liability. Reconstructionists were continually pushing for equality between the races, which practically translated into such requirement as providing blacks educational opportunities.

The Civil War's impact on geography in Virginia is discernible in other ways. For instance, Virginia's geographic location made control of its territory vital for Confederates and Federalists, and there was near continual warfare in the state between 1861 and 1865. The war in fact began and ended in Virginia. As a result, the state was subject to intense geographic scrutiny, and mapped with unprecedented accuracy and prodigiousness. These activities bred advances in cartography and cartographic reproduction, and trained a generation of cartographers like John Wesley Powell, who would go on to geographic fame outside Virginia. There was no shortage of work for mapmakers during the later half of the 1800s. Proof of this includes the establishment of the United States Geological Survey in 1881.

The Civil War left its geographical mark in a third way. Its devastation combined with America's rapid industrialization to produce the next generation of Virginia geographies. The most significant of these was written by Matthew Fontaine Maury, and was designed to showcase to the rest of the nation and the world Virginia's potential transportation and natural resources calling for development.

A final and positive legacy of the War and the Reconstruction era was the slow but steady establishment –"imposition," many white Virginians undoubtedly felt - of free and universal public education for whites **and** blacks, as well as the founding of two land-grant universities (Virginia State and Tech). As the price for re-admission into the Union, Virginia adopted the Underwood Constitution, which mandated a free, comprehensive school system by 1876. While bitterly opposed by many Virginians – including geographer Matthew Fontaine Maury, who taught at VMI – William Henry Ruffner, the state's first school superintendent, accomplished his mandate on time. A preliminary study of the school curriculum reveals required geography courses through the primary level; the secondary level shows mixed results. At the college and university level, however, academic geography in turn-of-the-century Virginia not only regained its former standing, but arguably surpassed it, reaching something of a peak around 1900. The United State's growing economic, political, and military participation in the world scene through the First World War undoubtedly contributed to this.

The Twentieth Century – Chapter Four

The fourth chapter examines the state of geography and geography education in Virginia during the twentieth century. In the early part of the 1900s, the nation's perception regarding the utility and function of geography began to change, and not necessarily for the better as far as geography's fortunes were concerned. This was the era of the American Century, of the United States' rise to global power; it would be reasonable to assume Americans would be more geographically-minded than ever. However, with Virginia and the world largely explored and tamed, urbanized, industrialized America became increasingly removed and insulated from the land, and the importance of geographical literacy became not more but less obvious. Compounding this, academic geography was suffering from an identity crisis and in-fighting which fragmented the discipline and confused the public regarding its nature and purpose to the point where it was perceived as little more than "where things are on the map," boring stuff sufficiently addressed and terminated at the elementary level.

Virginia made great strides in its economic recovery and educational system during the former half of the 1900s. Unfortunately, beginning in the 1920s and 30s geography as a school subject began a decline, and began loosing prestige and influence. America's inner-war isolationist tendencies, as well as a series of educational reforms in the 1910s which subsumed the subject within "social studies," are contributing culprits. In an interesting and seemingly contradictory dichotomy, popular interest in geographic exploits such as Virginian Richard E. Byrd's Antarctic expedition continued to capture the public's imagination. While undoubtedly geographical, Byrd's exploits would however in later years become increasingly regarded as entertaining but frivolous, and not serious and "scientific," a fate suffered by the field as a whole. This chapter examines the reasons behind the subject's decline in greater detail, as well as its sudden but brief resurgence during the two World Wars. As will be seen, where geography's fortune once waxed it now waxed *and* waned, a trend that continues to manifest itself in America's (and Virginia's) schools to this day.

The latter half of the twentieth century was a period of unprecedented demographic change and economic growth for Virginia, particularly in the northern third of the state around Washington, DC, and was due to the transformation of the nation's capital from a quite, small, southern town before the war to a dynamic, internationally important city encircled by a rapidly growing suburban population after the war. After a long absence, geographic location once again favored Virginia, allowing the state to resurrect its activities in the international economy. Northern Virginia's increasingly diverse population is one reflection of this. The major geographical work of this period is Jean Gottmann's seminal <u>Virginia at Mid-Century</u>, published in 1955, which predicted Virginia's rapid change, and coined the phrase "megalopolis" to describe it.

The Second World War influenced geography in Virginia beyond its demographics and economy. At all levels, educational opportunities - including geography education - improved dramatically from mid-century onward. Northern Virginia's public school system today consistently ranks among the nation's best, while enrollment at George Mason University, a public/state institution of higher learning established in the region in 1966, has in only 40 years grown into one of the largest

universities in the state. In keeping with many other Virginia schools, George Mason has offered geography courses since its inception, but only relatively recently (1991) created a stand-alone geography department. In contrast, Mary Washington's department was established in 1959, Radford's in 1966, James Madison's in 1970, Virginia Tech's in 1975, and Old Dominion's in 1980.

In an opposite but simultaneous trend during this period, other Virginia colleges, including its oldest and most venerable, William and Mary and UVA, effectively dismantled their geography programs and handed over their classes to the College of Humanities, and the School of Education, respectively. This recent establishment of geography programs and departments on the one hand, and the concurrent razing of others on the other hand, are symptomatic of Virginia's and America's current ambivalence regarding geographic literacy.

For instance, a 1970 study by the Association of American Geographers attributes this ambivalence to an "image problem," which includes a lack of nationally recognized geography "heroes," poor instruction and texts, and the poorly articulated "content" of geography by both other academicians and the public. This last point is crucial, for it seems to underlie not only what bedevils academic geography but geography generally in the United States: Americans no longer think geographically. Several reasons for this are discussed in this chapter. One hypothesis states that, while Enlightenment-era Virginians, perhaps fueled by territorial and economic expansion, were fascinated with the accumulation and classification of natural knowledge, 20th and 21st century Americans, for whom this work has been done, and who technology has increasingly insulated from their natural surroundings, believe they no longer need geography because the connections between geography and their daily lives are lost to them. What other cultures recognize as geographic Americans perceive as historical, political, geological, economic, etc. They understand that their participation in the global community demands familiarity with that community, but they do not look to geography as their guide. In that sense, Virginia is simply following the lead, not leading the followers.

Academic geography deserves a fair share of the blame for this. In their illconceived drive towards specialization during the 20th century, their incessant preoccupation with defining themselves, and their unwillingness to work with educational reformers as they created the framework and content for the "social studies" curriculum into which geography as a school subject was about to be subsumed, geographers failed to make their case before Americans became increasingly confused about what geography actually was and why it mattered. With the "social studies" rubric ultimately dominated by historians and firmly entrenched within the American (and by default, the Virginia) public school system by mid-century, academic geography faced the difficult task of distinguishing itself from history, archeology, sociology, geology, environmental sciences, political science, and all the other disciplines related to it. Little wonder Americans no longer think geographically; they do not know what that means.

Some Conclusions – Chapter Five

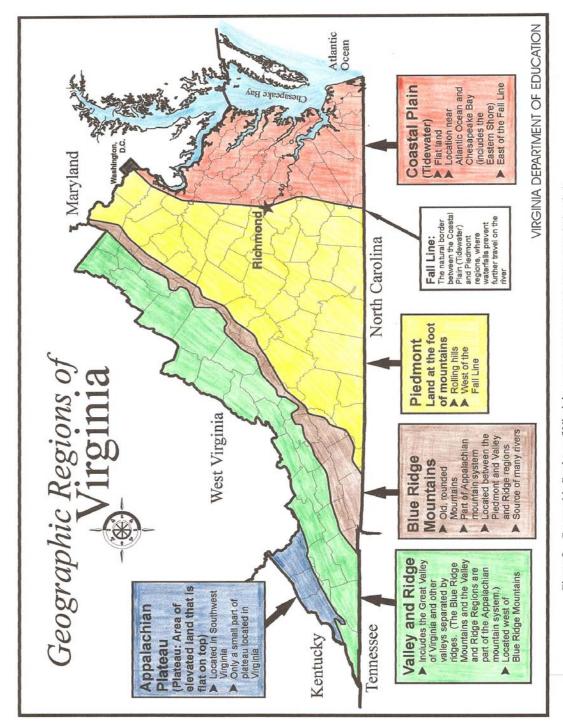
This concluding chapter discusses the state of geography and geography education in Virginia in the "post-Gottmann," twenty-first century. Three points stand out particularly. Firstly, many of Gottmann's predictions have come true. For instance, Fairfax County has grown to well over one million residents since 2000. The northern Virginia region has high quality schools and a highly educated workforce. The Old Dominion has indeed "grown younger," and become a part of Eastern North America's Megalopolis.

Secondly, geographic literacy and geography education appears to be enjoying a waxing phase in the Commonwealth. In a happy example of how location matters, the Old Dominion's proximity to Washington, DC has turned it into something of a GIS (Geographic Information Systems) Capital. The CIA, Pentagon, NGA (National Geo-Spatial Intelligence Agency), and numerous other governmental as well as private users and producers of GIS are concentrated in the nation's capital and suburban regions. Geotechnology is currently one of the fastest growing employment fields in the country, prompting an increasing number of partnerships between higher education and employers to increase and improve specialized geography training in schools to prepare graduates for professions in geography. This renewed enthusiasm can also be found at the primary and secondary school levels where, in 2001, Virginia incorporated geography into its Standards of Learning curriculum as a "core" subject.

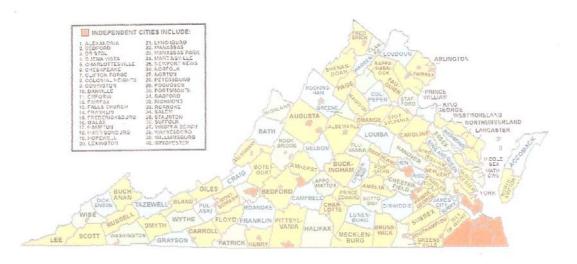
Thirdly, it has been more than fifty years since the publication of Gottmann's book. While Virginia has in many ways dutifully evolved according to his predictions,

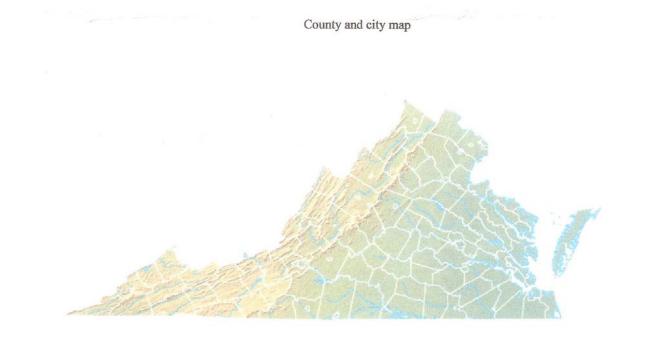
these are beginning to run out. If the Commonwealth's tradition of producing a reputable geographic study every century of its existence is to continue, then the time has come to launch another inquiry into geography in Virginia. Not only has the look of the land has changed significantly since the 1950s, but the way in which Virginians perceive this land - their geographically-based "Weltanschauung"- has evolved over the last half century. Virginia is once again part of the global economy, an important citizen of the global village, and thus an eminently suitable microcosm for the study of the field of geography in the United States. A timely geography of Virginia in the tradition of Jefferson and Gottmann may rekindle further interest in the rich geographic literacy tradition created by the Old Dominion's – and the nation's – Founders.

Finally, Chapter Five reiterates and summarizes the main themes of each period delineated in the paper, was well as those themes which transcend those periods. These include Virginia's alternating role as leader and follower in geographic literacy, the cyclical rise and fall of geography in the American consciousness, and how these and other trends influenced - and were in turn influenced by – geography education at all levels in Virginia specifically and the United States generally. As it turns out, accounting for academic geography's fortunes has been much less straightforward and intuitive than anticipated. Geography's current upswing notwithstanding, if history is any guide, then the field's academic and popular standing is far from assured.









Physical relief map

Figure 3 - Political and Physical Relief maps of Virginia

From Jamestown to Independence

Chapter Two

Four hundred and one years ago, the one hundred and four men and boys who settled Jamestown imported all the tools, weapons, animals, and provisions deemed necessary to ensure their colony's survival and launch a fiscally successful venture. Contrary to popular belief, the Virginia Company did not thrust their people overseas unprepared. By 1607, the Company had enough accurate British accounts of the Roanoke colony as well as Spanish reports on the Chesapeake Bay to have a fairly good idea of the conditions they would encounter. In that sense, the Virginia Company held a definite advantage over Sir Walter Raleigh's ill-fated 1585 Roanoke colony. Twenty-two years previous to Jamestown, the first British attempt at colonization in a similar geographic region had failed not only for lack of better "intelligence on the ground" - to use modern parlance - but due to unrealistic expectations, lack of financial resources, and Britain's on-going war with Spain, which prevented Raleigh from re-supplying his colony at a critical juncture. By the time supply ships finally reached Roanoke in 1590, all the settlers had disappeared and the venture was abandoned. The only reason Jamestown did not suffer a similar fate was the timely arrival of supply ships from the Virginia Company in 1610, who convinced the colonists to return to their settlement even after they had already begun sailing back to England. The geography and inhabitants



Figure 4 - Captain John Smith's 1612 Map of Virginia.

"The mildness of the aire, the fertilitie of the soile, and the situation of the rivers are so propitious to the nature and use of man as no place is more convenient for pleasure, profit, and mans sustenance," Smith described Virginia in 1612.

While his is a detailed and remarkably accurate map, the convention of north pointing up is not yet applied here.

encountered by British colonists of Roanoke and Jamestown were similar, but better luck and a stronger commitment favored the latter.

Despite Roanoke's obvious failure, the first-generation geographic descriptions of greater Virginia by Arthur Barlow, Ralph Lane, Thomas Harriot, and others involved in the Roanoke venture were generally upbeat, positive, and useful, highlighting the region's many positive natural attributes ripe for the picking. They provided not only the "intelligence" reports crucial for successful colonization, but more significantly served as the basis for the next generation of Virginia historical/geographical accounts spanning the period from Jamestown through the American Revolution, and beyond. Taken collectively, they offer an ongoing insight into the geography in Virginia from 1607 to the present. But what was the state of geography **before** Jamestown?

Geography before Jamestown

When Virginia was first settled at the end of the Renaissance, the field of geography was in the midst of its own rebirth. While people have been "doing geography" since well before classical times, the European Renaissance's interest in its Greco-Roman roots resulted in a rediscovery of the geographic contributions of such "natural scientists" as Herodotus, Aristotle, Eratosthenes, Strabo, Ptolomy, even Alexander the Great and Euclid. For instance, Ptolomy's <u>Geographia</u>, written in the first century, and the most comprehensive geography text with the best maps Europeans would have for the next thousand years, was translated into Latin as early as 1410. The 1505 Latin translation of Euclid's <u>Elements</u> reintroduced Europeans to a work whose

logical development of geometry made it one of the most influential contributions to science, including surveying and cartography. With ecclesiastical pressures upon all the sciences easing and printing on the rise, the work of these early natural scientists was increasingly available to a growing, though still very small, audience of scholars who studied and then built upon them. Sebastian Muenster's <u>Cosmography</u>, for instance, the earliest German-language description of the world, was first published in 1544, and, with some 40 editions over the next 80 years to its credit, was one of the most widely read books of its time.

By the mid-1600s, the works of Philip Cluever (or Cluverius, another German), Nathanael Carpenter, who wrote one of the first substantial geographies in English, and Bernhard Varen (Varenius) began to find their way into the libraries of the educated classes. Varenius' <u>Geographia Generalis</u> in particular "did much to bring order and logic to geographic thinking."¹ He made two significant contributions to geography by, firstly consolidating contemporary knowledge of astronomy and cartography and subjecting them to sound critical analysis, and secondly by dividing geography into "general" and "special" sections which led to what is today called systemic and regional geography."² As William Warntz states, <u>Geographia Generalis</u> "was in so very many ways typical of the new knowledge, the organization of thought, and the philosophical attitudes that constituted the intellectual framework for not only the academic origins of geography and

¹ Geoffrey J. Martin, "The Emergence and Development of Geographic Thought in New England," <u>Economic Geography</u> 74 (March 1998): 1.

² Arild Holt-Jensen, <u>Geography – Its History and Concepts</u> (New Jersey: Barnes and Noble Books, 1980), 15.



Figure 5 - John Farrer's 1651 Map of Virginia.

Farrer was a prominent member of the Virginia Company of Virginia. His map is significant for the narrow depiction of North America with a Northwest Passage shown as a river connecting the Hudson to the "Sea of China and the Indies."

the organization of the colleges, but especially the political origins of the new American republic..."¹ Varenius' book thus set the standard for more than a century.

These scholarly geographies were both inspired and supplemented by the findings of the great sea voyages during the Age of Discovery. David Livingstone argues that Columbus, Magellan, Hudson, et al made vital contributions not only to the development of geography but to science generally. Many of these men

saw themselves as involved in world-scale experiments to test the accuracy of Renaissance concepts inherited in the ancient classical world. That is not to say, of course, that they all thought of themselves as proto-scientists; many were just lustful for adventure on the high seas and greedy for the untold riches of exotic kingdoms. But the information they gathered helped challenge the scholarly authority of the day.²

They also contributed to geography's rebirth as an intellectual activity. By filling in the large gaps at all scales, they enabled cartographers like Waldseemueller in 1507 and Mercator in 1569 to produce increasingly accurate and useful maps which inspired and guided future geographic adventures such as the British colonization of North America.

Yet mapmaking was aided not just by the increasing amount of information gathered by these explorers. The advancement and popularization of basic geometry and arithmetic skills - which made the task easier and more exact - combined with the enclosure movement in England, as well as Henry VIII's confiscation and subsequent sale of church lands – which brought increasing amounts of land into the market there –

¹ William Warntz, "*Geographica Generalis* and the Earliest Development of American Academic Geography," <u>The Origins of Academic Geography in the United States</u>, Brian W. Blouet, ed. (Hamden, CT: Archon, 1981), 260.

² David N. Livingstone, "A Brief History of Geography," <u>The Student's Companion to Georgraphy</u>, Alisdair Rogers, Heather Viles, and Andrew Goudie, eds. (Oxford: Blackwell, 1999), 28.

to provide what Sarah Hughes calls the "intellectual foundation for the development of modern surveying,"¹ Once Europeans were comfortable with the notion of land as commodity, and an increasingly valuable one at that, they demanded increasingly accurate ways of measuring it. By 1523, the first surveying textbooks were being printed in England. With the granting of impossibly large tracts of land by the king to his favorites in the New World, colonial Virginia appreciated and made good use of this specialized geographic skill to civilize its territory.

The leading figures responsible for organizing and leading the Jamestown colony at the turn of the seventeenth century came of age at a time of this expanding geographic knowledge and awareness. As gentlemen of the learned classes, they were simultaneously consumers of and contributors to geography. The successful, permanent populating of North America by Europeans and all the activities this entailed required a solid understanding and lively appreciation for what geographic knowledge provided, while by default these activities generated more and better data, which ultimately demanded a better system for collecting, generalizing, explaining, and communicating this data. This would not occur until the Scientific Revolution - whose early beginnings correspond roughly with the British colonization of Virginia - and the contributions of such natural scientists as Immanuel Kant.

¹ Sarah S. Hughes, <u>Surveyors and Statesmen: Land Measuring in Colonial Virginia</u> (Richmond: Virginia Association of Surveyors, 1979), 30.

Before the existence of this "new geography," however, Virginia's earliest chroniclers had no "scientific" organizational framework to make sense and use of their findings. This preserved them from the inevitable breakdown of their universal knowledge into specialized subjects once the Scientific Revolution gained traction. Men like Thomas Jefferson and his friend Alexander von Humboldt would be among the last great figures who could claim universal scholarship.¹ Already the next generation contained geographers - in the modern meaning of the term – who produced modern, "scientific" geographic studies and text books. Before Karl Ritter, Arnold Guyot, or Virginian Matthew Fontaine Maury, however, there existed the geographical accounts of the pre-Scientific Revolution era unencumbered by the narrow focus of specialization. If less "scientific," they provide more insight into the prejudices, expectations and beliefs – the Weltanschauung – of the people who penned them. The writings from Smith to Jefferson are crucial to understanding geography in Virginia for two reasons. Firstly, beyond a strictly observational, non-judgmental, i.e. scientific, treatment of the field, the relatively more subjective, opinionated, agenda-driven geographies of this period offer a more personal discourse on the nature of geography and its role in the daily lives of its writers. Secondly, these writers were men of considerable standing and influence. While their books cannot be considered school texts per se, their accounts were widely read among the elite and studied, like Varenius or Kant, by ensuing generations; professional

¹ Geoffrey J. Martin and Preston E. James, <u>A History of Geographical Ideas</u> (New York: Wiley & Sons, 1993), 137.

geographers and others contributed to America's geographic literacy. No student of Virginia geography past or present would dare skip them.

Nor should those interested in colonial American geography or history generally bypass these accounts. It suffered a slow start, but within one hundred years Virginia was Britain's largest (in population and size), wealthiest, and most important colony in North America, making it an ideal microcosm of the larger developing United States. "As goes Virginia, so goes the nation," at least through the American Civil War. The narratives of Virginia's leaders can thus be reasonably extrapolated to expose and trace a greater Anglo-American "Weltanschauung," one in which geography held a central place. Indeed, the post-Jamestown Virginia geographies of John Smith, Robert Beverley, and Thomas Jefferson combine with those of Varenius and Kant to show an orientation that is alternately "practical, religious, imperialistic, nationalistic, economic, and adventurous."¹ This orientation, like all societal values, slowly but demonstratively manifested itself in Virginia's educational system. Geography was learned – if not formally taught - at all societal levels because all understood that it mattered; for most, their very lives depended upon it. What then, was this particular "world view" at the beginning of the seventeenth century, and how did it change over the next seven or eight generations? Restated, what was the state of geography in Virginia, and by extension, Britain's North American possessions through 1776, and how did Virginia's choose to formally educate succeeding generations in it?

¹ Adams, 111.

Seventeenth Century Virginia Geographies

One way of understanding the earliest European settlers' conception of their new home is by examining their expectations of it. In the case of Jamestown, Stephen Adams maintains that since its colonists had a fairly definite idea of what they were getting in to, they arrived determined to see Virginia in certain ways.¹ When the reality on the ground failed to match their preconceptions, adjustments followed. As a result, the numerous surviving accounts "reveal considerable variation and complexity, and competition among different scripts or mythologies that claim to present the 'true' Virginia (a refrain echoed in many titles from this period .²² For instance, some saw Virginia as little more than a route (and, soon, an impediment in the way) to the Orient. Others believed the land itself could mimic the treasures of the East. The first generation did not envision themselves as farmers; instead, they planned, like the Spanish to the South, to extract gold, silver, and other treasures from the natives. Still others were lured by tales of the land's abundant natural resources. Their accounts

share a tendency towards hyperbole, an emphasis on marketable commodities, and the catalog rhetoric familiar from the Roanoke texts (long lists of goods available from the new land.) The first English perceivers of Virginia resemble Ichabod Crane, turning Sleepy Hollow into stores of commodities before he moves further west to convert more land into vendible merchandise.³

If the accounts are taken at face value, even more colonists initially regarded Virginia through a Biblical lens, prompting the well-known comparisons to Eden or Canaan. If

¹ Ibid., 111.

² Ibid., 113.

³ Ibid., 141.

Eden was the popular perceptional metaphor, then Virginia was a virgin, uninhabited land so bountiful further cultivation was unnecessary; like the natives, one could simply forage without breaking a sweat (Paradise unfallen). If the comparison was with Canaan, then Virginia was the Promised Land of Milk and Honey, although it had to be wrested from the indigenous population, in this instance the American Indians instead of the Canaanites or Philistines (Paradise conquered). As Adams emphasizes, "religious rhetoric abounds in many of the texts that have survived."¹

Both official Virginia Company statements and private scripts emphasize the primacy of spreading Christianity (and shedding England's excess population) over profit, and attempts were certainly made to "civilize" the natives and acculturate them into British society. However, the general scholarly consensus is that the acquisition of wealth, not souls, was in reality the colony's primary concern. At least, it became so once the natives "refused to play the roles assigned them in the benevolent [first-generation] scripts of the English. They never were grateful recipients of salvation or civilization...."² This reality on the ground prompted a perceptual shift that justified the removal and near complete expulsion of the Indians from Virginia soil within the next century. The natives were not the only uncooperative elements who failed to live up to the settlers' initial expectation (or scripts). Virginia did **not** offer access to the Orient; it did **not** offer any gold or silver. It **did** offer a relatively mild climate and fertile soils, but, as John Smith contented, it **did** require cultivation if the colony hoped to survive.

¹ Ibid., 124.

² Ibid., 128.

Smith's contention, which of course proved correct, is one reason his accounts of Virginia ranks among the most complex, realistic, and scientific of the earliest Virginia geographies. They also rank among the most influential and typical. Like most of his contemporaries, for instance, he provides little in the way of aesthetic appreciation for the landscape. Given that Virginia was both beautiful and exotic, this may at first seem odd. However, its early chroniclers were practical men on a practical mission. They regarded the land from a military and economic perspective, not an aesthetic one. It is worth noting that during the ninety-two years that Jamestown served as Virginia's capital, there is no known landscape image of it or any other place in the colony. "Even more surprising is that during the eighty-one years that Williamsburg was the capital (1699-1780), there is no image of it."¹ As James Kelly states, "the aesthetic appreciation of the land for its own sake had not yet developed... The English were more interested in the bounties than the beauties of nature."² This would come later during the Romantic Age and its genre of travel writings; until then, "Geography for Survival and Profit" was the watch-word. Smith knew the purpose his accounts and maps (generally considered the best of the area until the 1670s) was not only to attract more immigrants, but to help those immigrants survive and thrive. He describes places, but also the struggle for food, interactions with the natives, and political wrangling with Jamestown's inept leaders.³ Throughout his narratives, "the land for him is mostly a backdrop to dramatic human action."⁴ In the

¹ James C. Kelly and William M.S. Rasmussen, <u>The Virginia Landscape: A Cultural History</u> (Charlottesville: Howell Press, 2000), 2.

² Ibid., 2.

³ Adams, 148.

⁴ Ibid., 148.

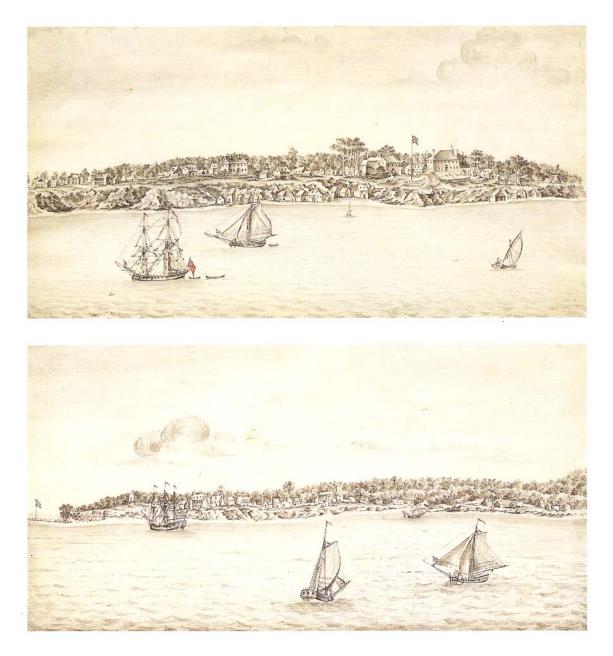


Figure 6 - "A View of the Town of York, Virginia from the River" and "A View of the Town of Gloucester, York River, Virginia," ca. 1755.

These are the first known true landscapes of Virginia, drawn by Captain Thomas Davies, a British topographical artist. Landscape art at this time was still primarily documentary, not aesthetic. (Figures in Kelly's <u>The Virginia Landscape</u>, 5)

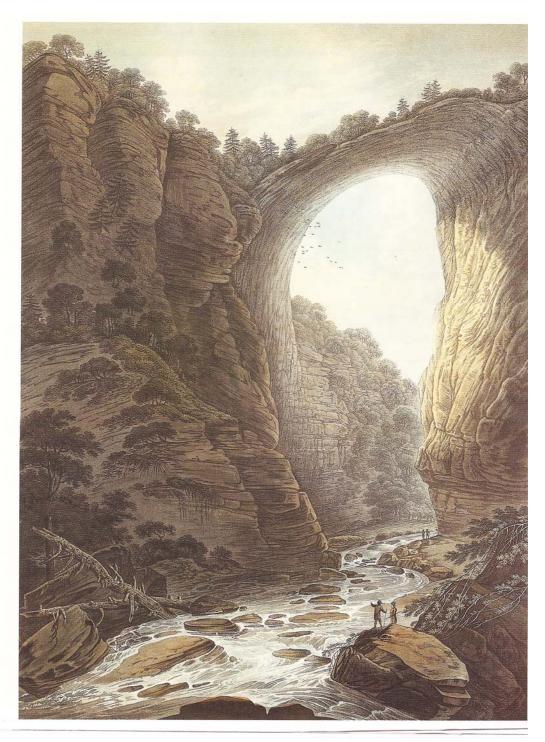


Figure 7- William Roberts, "Natural Bridge," 1808, is an example of a sublime landscape portrayal. "The most sublime of Nature's work, "Thomas Jefferson described it in his <u>Notes</u>. "The rapture of the spectator is indescribable." (Painting in Kelly's <u>The Virginia Landscape</u>, 12)



Figure 8 – William Sullivan's "Aerial View of Orange County" (1989) portrays man's harmonious union with nature. Sullivan presents the panorama of a distant yet settled landscape. (Painting in Kelly's <u>The Virginia Landscape</u>, 190)

humanist tradition, **man** and his activities is the central theme. His writings are thus less straight-forward geographic descriptions of the land than histories with their basis in geography. This interconnectedness of geography in human endeavors is clearly shown in the later works by Beverley and Jefferson. <u>The History and Present State of Virginia</u> and <u>Notes on the State of Virginia</u>, respectively, like Smith's various accounts, do not confine their examination of Virginia to its history, geography, or politics, but deem it important to cover all these subjects to provide a "trew" picture of the land and its inhabitants.

An additional point helps explain the geographic "Weltanschauung" as presented in the geographic narratives of John Smith and many other colonial-era Virginians. As Adams suggests, these men responded

to wild, uncultivated nature quite differently than we do today. Wilderness to most of us represents a pleasant, temporary change from our usual urban or at least tamed and controlled environment; it offers voluntary recreation, a change of pace from our controlled routines. We have been trained by over two centuries of artists and writers to see wild nature as something beautiful, valuable, and even spiritually nourishing. For the earliest Europeans in Virginia, however, the wild meant possible death. The land posed a genuine challenge to survival; it represented the chaotic, threatening, meaningless – until it was ordered, bounded, and made significant by human control (whether through enclosure and planting or even mapping and cataloging.¹

This observation is crucial to understanding the role of geography in the lives of Americans through the remainder of this study. For as long as Virginia, and America generally, was perceived as untamed and thus dangerous – the Puritans in New England spoke of the "howling wilderness" - its inhabitants had a genuine reason for being

¹ Ibid., 60.

geographically literate. By virtue of their occupation and location, everyone "did" geography. The resulting value placed upon geography knowledge is reflected in both the writing of prominent Virginians in the eighteenth century as well as the formal education system of the colony.

Eighteenth Century Virginia Geographers and Geographies

Robert Beverley

In 1705, nearly one hundred years after the founding of Jamestown, Robert Beverley published <u>The History and Present State of Virginia</u>, the next substantial contribution since Smith to the geographical literature on Virginia.¹ Like Smith before and Jefferson after, Beverley's account is not pure geography in the modern sense although there are several sections of a purely geographical nature in it - but incorporates geography into both the history and contemporary state of the colony. Beverley's <u>History</u> is divided into four "books," only the first of which covers the history of the colony. The second and third books, nearly half the narrative, deal with the geography ("The Natural Productions and Conveniences of the Country") and the native population ("The Native Indians, their Religion, Laws, and Customs, in War and Peace"). Book Four addresses

¹James Hartwell, James Blair, and Edward Chilton had at the request of the Board of Trade written a report on <u>The Present State of Virginia</u>, and the <u>College</u> in 1697, but it languished unpublished in the Board's archives for thirty years until someone thought to print it, 22 years after Beverley's book. In addition, there were a series of explorations into Virginia's interior between 1650 and 1674 which yielded more data and maps of the colony, but are not generally considered "geographies" per se. More on these at the end of this chapter.

"The Present State of the Country, as to the Polity of the Government, and the Improvements of the Land," including education.

In Book Two on the "natural history," i.e., geography, of Virginia, Beverley "endeavors to discover most of the natural advantages" of what he calls the "finest Country in the World," and "set [them] in their true Light."¹ This includes examinations "Of the Bounds and Coasts of Virginia," "Of the Waters," "Of the Earths and Soils," Of the wild Fruits of the Country," "Of the Fish," "Of wild Fowl, and hunted Game," and "Of the Temperature of the Climate." Combined they show familiar themes of past geographic literature of Virginia, as well as new ones introduced by future writers.

Similarly to Smith, for example, he fairly gushes over the land's natural bounties. "The Soil is of such Variety, according to the Difference of Situation, that one Part or other of it, seems fitted to every sort of Plant, that is required either for the Benefit or Pleasure of Mankind."² He boasts similarly of the great variety "and plenty" of foods, minerals, and other natural resources, including "all sorts of Naval Stores. "No Seed is Sowed there, but it thrives."³

Like the first-generation Jamestown chroniclers, Beverley's narrative draws upon Biblical comparisons to describe his surroundings. "As Judea was full of rivers, and branches of rivers, so is Virginia ."⁴ Even the climate was on par with that of Eden. "Heat is very seldom troublesome, and cold is never a problem [and] spring and fall

¹ Robert Beverley, <u>The History and Present State of Virginia</u> (Chapel Hill: University of North Carolina Press, 1947), 119.

² Ibid., 123.

³ Ibid., 314.

⁴ Ibid., 296.

afford as pleasant weather as Mahomet promised in his Paradise."¹ As one Beverley scholar admits, Beverley was "too honest to pretend that the country was entirely free of pests," and dutifully warned against mosquitoes and chiggers. "But these and other vermin were a negligible annoyance, and the land, as he looked upon it, was remarkably benign."²

Where Beverley's geographic treatise of Virginia begins to diverge somewhat from that of his predecessors is in his admiration for the natural beauty of the landscape, and his treatment of the native Indians.

Some of the most charming parts of Beverley's <u>History</u> are the passages describing the natural beauty of the country – the land in a state of nature before ambitious planters spoiled it. Rare in the eighteenth century, and rarer still on the frontier, was the appreciation of external nature displayed by this Virginian. With the acute attention of a Thoreau, he had observed God's creation and liked it.³

Beverley considers Virginia "as fine a Place, as any in the Universe."⁴ Even the native Indians are not a problem. In fact, he wrote what is generally regarded as a sympathetic and realistic report on the Indians widely used by historians of American Indians in that region. He portrays them as "neither noble savages nor sons of the devil, but human beings possessing some of the virtues and vices common to mankind,"⁵ who were in fact corrupted by the Europeans.

¹ Ibid., 299.

² Louis B. Wright, ed. <u>The History and Present State of Virginia</u> (Chapel Hill: University of North Carolina Press, 1947), xxxii.

³ Ibid., xxxi.

⁴ Beverley, 296.

⁵ Wright, xxvi.

Beverley criticizes his fellow Virginians not just for their negative influence on the natives, but, typical of other contemporary social commentators, on their poor showing overall in economically developing the land. "This Part of Virginia now inhabited, if we consider the Improvements in the Hands of the English, it cannot upon that Score be commended."¹ With all the advantages nature offered, Beverley found it hard to understand why his brethren had not made better use of them. "All that the English have done, since their going thither, has been only to make some of these Native Pleasures more scarce, by an inordinate and unseasonable Use of them, hardly making Improvements equivalent to that Damage."² This particular reference is to tobacco, which he already observed would be the colonists' ruin. He further accuses them of "slothful indolence" and "lethargy," and of relying on tobacco at the expense of other marketable goods such as flax, cotton, or wool. These sharp criticisms, combined with those aimed at the ruling elite such as Governor Nicholson and the Chief Master of the newly established College of William and Mary, did not endear Beverley or his History to the literate classes in Virginia, which may be one explanation for its relative obscurity today.

Who was this Robert Beverley who produced such an informative, widely circulated treatise on the history and geography of Virginia?³ In many regards, he was a very typical example of the landed, educated Virginia gentry who ruled the colony through Independence and beyond. The son and brother of surveyors, he was sent to

¹ Beverley, 118.

² Ibid., 156.

³ It enjoyed two eighteenth century editions in English, and four in French.

England for his formal schooling, and upon his return married Ursula Byrd, the sixteen year old daughter of William Byrd I (whose donated lands founded Richmond), who herself had just returned from finishing her education in England. She died one year later giving birth to Robert's only child, William, who became a successful land speculator upon his marriage into the Bland family. Robert held various clerkships in the colonial government, including that of volunteer scrivener, and Jamestown representative to the House of Burgesses in 1699. Like many Virginians, he was also land-greedy and litigious, in one instance going so far as traveling to England to plead his case before Parliament regarding a land dispute that had not been ruled in his favor. Politically ruined after run-ins with Virginia Governor Francis Nicholson and Surveyor General of Customs, Robert Quarry, Beverley retreated to his plantation in Gloucester County, and penned his <u>History</u>, before dying in relative obscurity in 1722 at age 49.

George Washington

Born eleven years and several generations later was the slightly less obscure George Washington. Like Beverley and Jefferson, Washington was a prominent, wellconnected and cultivated Virginian who wore many hats in his lifetime. "Beginning with his early career as a surveyor [in Virginia] and throughout his life as a soldier [in the French and Indian War], planter [at Mount Vernon], businessman [Potomac Canal], land speculator [in Virginia, Pennsylvania, Maryland, Kentucky, New York, and the Ohio Valley], farmer, military officer [Commander of the Continental Army], and president,



Figure 9 - George Washington, the Virginia militia colonel, by Charles Wilson Peale, 1772.

however, Washington relied upon and benefited from his knowledge of maps" ¹and the critical need for general geographic literacy. He personally surveyed over two hundred tracts of lands, most in Virginia, specifically Rappahannock, Clarke, Frederick, and Culpeper Counties, the last to which he was appointed Country Surveyor in 1749 at age seventeen.

Because they were responsible for laying out the land claims, surveyors had a unique role in Virginia society. Their appointments guaranteed a certain social prominence, since nearly all parties interested in gaining title to an area of land were required to deal with the surveyor. Surveyors were also among the best-educated [and along-side lawyers, best-paid] Virginians and were often in the best position to purchase land for themselves. It was not unusual for surveyors to acquire large estates from the many opportunities they had to patent land in their own names.

Washington was no exception; over his lifetime, he owned more than sixty-five thousand acres in thirty-seven different locations.²

By 1753, Washington's surveying activities, which gained him a life-time social connection to the prominent Fairfax family and taught him cartography, resulted in a military commission in the newly formed Virginia Regiment, which was sent into the Ohio Valley to halt French penetration in the area. While his ultimatum that they leave the Valley failed, Washington's report and sketch map of this venture, printed in Williamsburg and London and widely read, represented the state of the geographical knowledge of the region at the outbreak of the resulting French and Indian War, and dramatically illustrated the French threat in the area. The map, for instance, contained

¹ <u>George Washington: Surveyor and Mapmaker</u>, <u>http://lcweb2.loc.gov/ammem/gmdhtml/gwmaps.html</u>, 1. ² Ibid., 1 & 3.

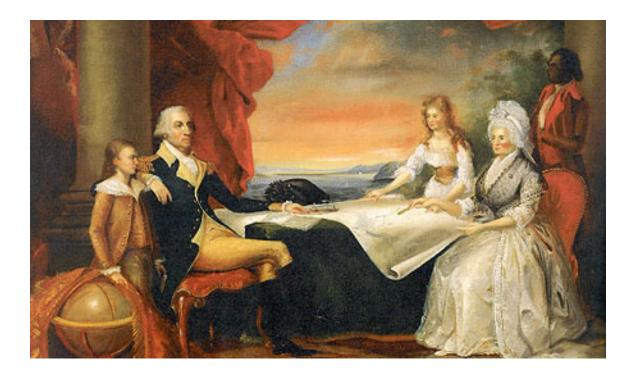


Figure 10 - The George Washington family (with globe) by Edward Savage.

the earliest warnings of the existence of a French fortification at the geographically strategic confluence of the Allegany and Monongahela Rivers, Fort Duquesne (Pittsburgh).

Washington's appreciation for - and own abilities at – cartography was apparent some twenty years later, when as Commander of the Continental Army, he was deeply concerned about the lack of accurate maps available to his army. "The want of accurate Maps of the Country which has hitherto been the Scene of War, has been a great disadvantage to me," he wrote in July 1777. "I have in vain endeavored to procure them and have been obliged to make shift, with such sketches as I could trace from my own Observations."¹ Recognizing that the maps drawn by his own hand were insufficient, he wrote Congress that "a good geographer to Survey the Roads and take Sketches of the Country where the Army is to Act would be extremely useful...," and proceeded to appoint Robert Erskine as the first "Geographer to the Main Army," the title of which after Erskine's death and replacement by Simeon DeWitt, then Thomas Hutchins in 1780, was changed to "Geographer to the United States."² Military engineers (trained in the constructions and reduction of fortifications) he had; with the addition of military geographers (who specialized in reconnaissance, mapmaking, and surveying distances) to his army staff, Washington finally had the information to make geography work for instead of **against** him. Not surprisingly, after his death in 1799, Washington's library inventory listed more than ninety maps, atlases, and geography texts, including Joshua

¹ Ibid., 1.

² W. Scott Smith, "The Cartographers and Surveyors of the Continental Army in the War for American Independence," <u>http://www.armygeographer.org/history</u>, 1.



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Figure 11 – Washington, VA roadway marker on Route 211.

Figure 12 – Example of a survey plat prepared by George Washington for John Lindsey in Frederick County Fry and Peter Jefferson's (Thomas' father) <u>Map of the State of Virginia</u>, Thomas Hutchins' <u>Map of the Western Part of Parts of Virginia</u>, <u>Pennsylvania</u>, <u>Maryland</u>, <u>and</u> <u>North Carolina</u>, and Jedidiah Morse's 1789 <u>American Geography</u>, the first "American" geography text.¹

Thomas Jefferson

While the size of his library dwarfed that of the 6487 volumes owned by Thomas Jefferson (which Jefferson sold to the Library of Congress in 1815 for \$23,950 to replace the collection burned by the British during the War of 1812), the large percentage of volumes devoted to geography were probably not dissimilar to that of Washington's contemporary and fellow Virginian. Like Robert Beverley and George Washington, Thomas Jefferson was a member of the ruling, educated elite, had a father who was a surveyor, and was involved in politics and governance. Like Beverley and Washington, he owned considerable land, earned his living off his plantation, and valued and loved his properties and Virginia enough to write about it for posterity. Geographic literacy was an essential skill for these planters; at any given time, they had to act as their own surveyors, soil analysts, meteorologists, hydrologists, botanists, etc. This reality gave them a high regard for geographic knowledge, and a significant appreciation for the geographic advantages Virginia provided. This last point is as obvious in Jefferson's accounts as it is in Beverley's.

¹ <u>http://lcweb2.loc.gov/ammem/gmdhtml/gwmaps.html</u>, 7.

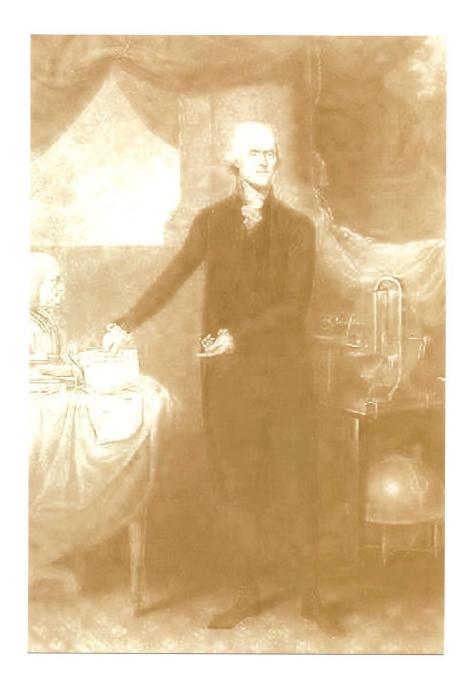


Figure 13 – Thomas Jefferson with globe.

Given their similar backgrounds, it is not surprising their respective treatises on Virginia share similarities. In its varied content and organizational structure, for instance, Jefferson's <u>Notes</u> resembles Beverley's <u>History</u> as well as other productions of its period. <u>Notes</u> begins with Virginia's boundaries, then discusses its rivers, sea ports, mountains, cascades, natural resources, climate, and population. Scattered throughout later points in the narrative are discussions on the native Indians, religion, weights and measures, manufacturing, laws, and sundry other topics, including education, not ordinarily associated with a geographic study.

Jefferson also shared with Beverley – and his readers – his appreciation of the landscape itself. Virginia should be admired not just for the sheer abundance of its natural resources (which Smith and earlier writers had emphasized), but for its sheer natural beauty. Jefferson's <u>Notes</u> for instance pays such lavish, poetic tribute to Natural Bridge -"so beautiful an arch, so elevated, so light, and springing, as it were, up to heaven, the rapture of the Spectator is really indescribable"¹ - and the confluence of the Shenandoah and Potomac Rivers at present-day Harper's Ferry - "perhaps one of the most stupendous scenes in nature"² - that Kelley refers to <u>Notes</u> as "the first American guidebook."³ Within only a few years of its publication, Americans and Europeans alike "were working their way through Jefferson's list" of Virginia's natural curiosities, such as the Peaks of Otter, the caves of the Shenandoah Valley, and Great Falls. By the end of the eighteenth century, the untamed wildness which had struck such fear into the first-

¹ Thomas Jefferson, <u>Notes on the State of Virginia</u> (New York: Penguin Books, 1999), 26.

² Ibid., 21.

³ Kelly, 49.

generation chroniclers of the New World was evolving into a mix of fear and pleasure. "It is as placid and delightful, as that is wild and tremendous," Jefferson described Harper's Ferry.¹ By then, Virginia's geography was becoming increasingly tamed. There remained of course much more to explore, map, and possess, but the initial "newness" of the place and the European's apprehension of it had begun to fade. Not coincidentally, the first landscape portraits of Virginia begin to emerge at this time. Before then, "scenery was admired for its semblance to paintings rather than the other way around... A view was 'picturesque because it was like a picture... To us today, the cart was indeed before the horse."² The shifting colonial perspective regarding the natural environment, from one of fear to admiration, would have a significant influence on their views concerning geography. As colonial leaders judged geographic literacy increasingly less necessary for survival and profit, by the Revolutionary period they would justify and use geographic literacy to foster patriotism and political and cultural independence.

If Beverley and Jefferson's works share similarities, then they are also quite different in some regards. Most significantly, Beverley is effectively ignored by most historians and geographers, while Jefferson has arguably been called "one of the greatest of American geographers," and his <u>Notes</u> "the most logical treatment to be found in any book on geography published in the eighteenth century.³ Inarguably, and the main reason Jefferson's book has remained well-known and well-regarded since its publication, is that his is simply the better of the two. <u>Notes</u> is a superior geography for providing more

¹ Jefferson, 21.

 $^{^2}$ Kelly, 3.

³ George T. Surface, "Thomas Jefferson: A Pioneer Student of American Geography," <u>Bulletin of the American Geographical Society</u> 41 (12), 743-750.

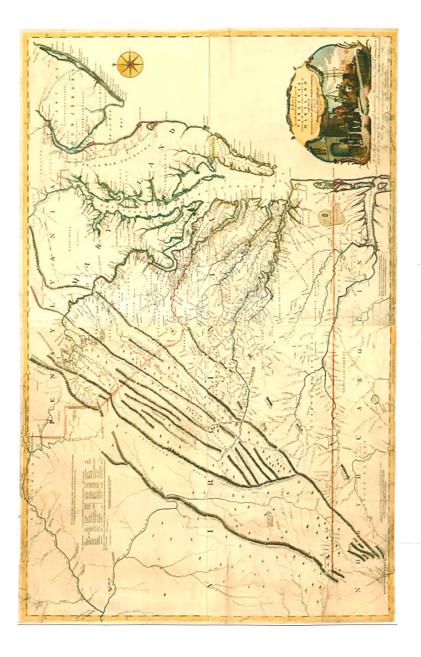
comprehensive and precise data, especially regarding meteorology and boundaries. It is also a superior book for its ability to proceed from compilation to speculation, from the recording of facts to the exposition of timeless ideas.¹ Initially undertaken as "a prosaic and matter-of-fact commentary of the resources and institutions of the American state, it developed into a wise and thoughtful book."² Generally regarded not only as the most influential American natural history of its time, but as one of the greatest expressions of the American Enlightenment, Jefferson's treatise is the most significant and compelling testament of the primacy of geography in the consciousness of Virginians and Americans in the colonial and immediate post-colonial era.

Jefferson not only wrote geography; like Washington, he "did" it. Early exposure to geographic activities undoubtedly contributed to this. Similar to Beverley's father (and Patrick Henry's, another famous and influential Virginian), Thomas's father was an accomplished surveyor.

Peter Jefferson, like most Virginia planters, had to locate his properties precisely, after being issued a land warrant by the colonial Governor and Council, and therefore had to learn surveying methods... His reputation as a student of mathematics and its application to surveying led him to be named Surveyor of Goochland County. In 1745 he became deputy surveyor of Albemarle County under Joshua Fry, former Professor of Mathematics in the College of William and Mary. Having already surveyed the boundary between Virginia's Northern Neck, Jefferson and Fry were appointed in 1749 to survey the boundary between Virginia and North Carolina. Upon their return, they compiled a map of Virginia ...[generally regarded] as one the best of its time...³

¹ William Peden, ed., <u>Notes on the State of Virginia (New York: Norton and Company, 1954)</u>, xxii. ² Ibid., xxi.

³ William A. Koelsch, "Thomas Jefferson, American Geographers, and the Uses of Geography," <u>Geographical Review</u> 98 (2), 263.



The map was considered one of the best of the period. Thomas followed his father, Peter, into the surveying profession

Figure 14 - Joshua Fry-Peter Jefferson's 1751 Map of Virginia

According to the latest scholarship on Thomas Jefferson as geographer by William Koelsch, the son "admired his father's work, followed in his footsteps as the official Surveyor of Albemarle County in 1773, and maintained a lifelong interest in maps and mapping."¹ He became an avid collector of maps, and even drew his own for his Notes. His cartography skills, as well as his appreciation of how powerful an impression maps could make, were apparent in 1818, when the Rockfish Gap Commission, tasked with finalizing the location for the new University of Virginia, was swayed into choosing Charlottesville over Lexington and Staunton on the strength of a map drawn by Jefferson. The Commission's decision was to be based not only on "which of the three places could offer the most opulent inducements in the way of buildings and endowments; and which was nearest to the center of the State, [but also] which of the three lay nearest to the centre of the State's population."² As Philip Alexander Bruce makes clear, the school's location became contentious not simply out of concern for the "welfare of literature and education.... Every man present [at the Commission proceedings] was convinced that the choice of a site for the University would give a powerful bias to the choice of a site for the new Capital, should the General Assembly determine to abandon Richmond as it has formerly deserted Williamsburg."³ Jefferson must have believed this as well. More significantly, the genesis and planning for the establishment of a University of Virginia was his due. He had labored at it for too long to leave the decision regarding its location to the momentary whims of the Commission. In anticipation of this, Jefferson had with

¹ Ibid., 263.

 ² Philip Alexander Bruce, <u>History of the University of Virginia, 1819-1919</u>: The Lengthened Shadow of One Man, Volume I (Charlottesville: University of Virginia Electronic Text Center, 2000), 114.
 ³ Ibid., 114.

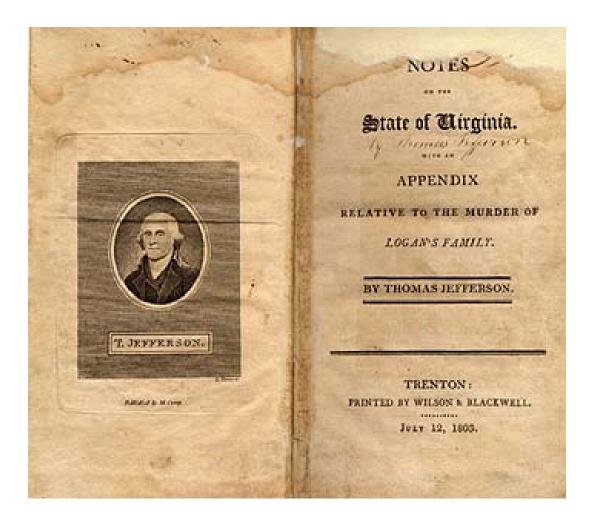


Figure 15 - Cover of Thomas Jefferson's <u>Notes on the State of Virginia</u>, the only book he wrote.

characteristic comprehensiveness and minuteness... written to each court clerk in Virginia, and from him obtained a statement of the distance of his county-seat from some well known town in the State, while additional facts relating to transportation, highways, and population had been gathered up from the same or similar obscure but reliable sources. With this mass carefully sifted and skillfully arranged to guide him, he had patiently and industriously constructed a large map, which indicated alike the geographical centre of the State and the centre of population.¹

At the critical moment, so Bruce, when the Commission was in such confusion they appeared entirely incapable of arriving at a decision, Jefferson "modestly drew forth that innocent-looking blunderbuss, his map, and quietly spread it out for the inspection of the body.... The evidence, so unostentatiously presented in this graphic form, proved so unanswerable that it brought about the [desired] decision a few days afterwards."² The University would be built in Charlottesville; by visually showing his choice was the most centrally situated in terms of population and location, and thus the most suitable, Jefferson's "blunderbuss" had tipped the balance. Geography's worthiness as a course of study was reaffirmed in 1824, when Jefferson's academic plan approved by the University of Virginia's Board of Visitors featured both ancient and modern geography, residing within the Schools (or Departments) of Ancient Languages and Modern Languages, respectively. "By that action, Jefferson as Rector and the Board of Visitors placed university-level geography firmly within the humanities, as a form of what Varenius would have called 'special geography'."³

¹ Ibid., 115.

² Ibid., 116.

³ Koelsch, 274.

Jefferson's successful efforts at establishing a university in Charlottesville in 1819 represent the culmination of his interest in not only higher education and geography, but general public education (and geography education) at all levels. In Virginia, he faced an up-hill and ultimately loosing battle. The large volume of scholarship on education in the colonial period agrees that educational opportunities for Virginians were few indeed. One reason for the dearth of schools and school choices can be explained, with some irony, by Virginia's geography.

The location of Virginia's very first settlement was no accident. Jamestown's site was chosen to be both defensible and relatively hidden from Spanish eyes. Between Philip II and Powhatan, England's second attempt at a permanent foothold in the New World was a dangerous venture. The colony's survival, to say nothing of its profitability, was in fact very much in question for the first decade of its existence until it was famously "saved" by John Rolfe's introduction of marketable West Indian tobacco. "That bewitching vegetable," as William Byrd later called it, "proved so successful that it radically changed the Virginia landscape and determined social developments in the colony."¹ Virginia's geographic environment both shaped and was shaped by tobacco. Its climate, soil, and river systems were conducive to its cultivation, which in turn influenced its settlement patterns. Ensuing plantations were largely isolated, self-sufficient feudal-style manors along the James, York, Rappahannock, and Potomac Rivers, making towns largely superfluous.

Although the Virginia Company originally envisioned farms and

¹ Adams, 143.

cottage industries neatly clustered around a few ports, tobacco scattered settlers throughout the rivers and creeks in a rapid westward expansion to the fall line, constantly in search of new land for planting... The dispersal of isolated plantations discouraged the growth in Virginia of towns and cities, and so of merchant centers, schools, churches, and other cooperative social institutions.¹

The effects of this dispersal were accompanied – and intensified – by the colony's rapidly increasing population, which grew from an estimated 3000 whites in 1630 to some 58,000 by 1700, and nearly 200,000 by mid-century.² Just as significantly, however, was the growth and changing status of Virginia's black population. While the first blacks came over as slaves as early as 1619, for most of the seventeenth century, the percentage of blacks relative to whites was relatively low and their socio-economic status more similar to that of white indentured servants than slaves. As the pioneering work of historians like Ira Berlin makes clear, it was not until the spread of the plantation system that Virginia moved from being a "society with slaves" to a "slave society." In 1680, black slaves comprised only seven percent of the total population. By 1750, however, that had grown to 46%.³ The resulting social and economic system in Virginia (and the South), which featured - from top to bottom - an aristocratic planter class, a relatively under-developed middle class, poor whites, free blacks, and slaves, was less conducive to the development of wide-spread, publicly funded schools than a society composed of a more developed middle class and free labor.

¹ Ibid., 143.

² Ibid., 181.

³ Ira Berlin, <u>Many Thousands Gone: The First Two Centuries of Slavery in North America</u> (Cambridge: Belknap Press, 1998), Table One.

Education in Colonial Virginia

As a result, Virginia's tobacco economy created a society that was "highly individualistic, competitive, materialistic, exploitative, and conservative."¹ "Unlike New England, where towns, social institutions, and communal activities flourished, the more isolated Virginians failed to develop as many churches (or until late in the seventeenth century [with the establishment of William and Mary]) and schools."² It is perhaps no accident that formal public education at all levels was introduced and firmly established in New England long before this was the case in the Mid-Atlantic.

While Virginia's geography, which encouraged its settlement and societal patterns, may have retarded the desire for and creation of some level of public schooling, his does not mean Virginians categorically opposed it. Governor William Berkeley's oft-quoted, notorious (and historically dubious) statement notwithstanding³, Cornelius Heatwole contends that, "during the first half of the seventeenth century, Virginia settlers set up the same institutions, social, political, ecclesiastical, and educational, to which they were accustomed in their mother country," and that they strove by the end of the 1600s and early 1700s to provide "educational advantages for their children as good as they had enjoyed in England before coming to America."⁴ That is not saying much, because

¹ Adams, 217.

² Ibid., 221.

³ "But, I thank God, there are no free schools nor printing, and I hope we shall not have these hundred years; for learning has brought disobedience, and heresy, and sects into the world, and printing has divulged them, and libels against the best government. God keep us from both." Quoted from William Waller Hening, ed, <u>The Statues at Large: Being a Collection of All the Laws of Virginia from the First Session of the Legislature in the Year 1619, Volume 2, 1809-23</u>, (Charlottesville: University of Virginia Press, 1969), 517.

⁴ Cornelius J Heatwole, <u>A History of Education in Virginia</u>, (New York: MacMillan Company, 1916), 39.

educational opportunities as currently understood were not particularly extensive even in England, and pertained almost exclusively to the upper classes. For all practical purposes, "in colonial and pre-Civil War Virginia, education was the responsibility of the family rather than the government."¹ Wealthy families such as the Carters, Randolphs, Fairfaxes, and Lees educated their children through private tutors, or at the few privatelyrun secondary, or "academies," schools like that of the Reverend James Maury attended by Thomas Jefferson. Heatwole counts as many as twenty-five such academies in Virginia before 1800, some of which became the nuclei of later colleges, such as Hampden-Sydney, Washington and Lee, Roanoke, and even the University of Virginia.² Funding for these academies came from endowments and tuition fees; beyond granting charters or enacting legislation allowing them to raise capital funds through lotteries and increased endowment funds, the state's financial and legislative involvement in these schools was minimal. After the successful completion of their studies at these academies or with their tutors, the sons of the wealthy were then packed off to matriculate at Oxford or Cambridge, where they pursued the classic, liberal arts curriculum little changed since the late Middle Ages.

In many cases concerning the pre-revolutionary colonial elite, education was less important for stressing intellectual achievements, for "turning out 'intellectual ornaments' or 'mere scholars' [as George Washington called them] than with pursuing social

¹Charlie Grymes, "Education in Virginia," <u>www.virginiaplaces.org/population/schools.html</u>, 1.

² Heatwole, 124.

connections and constructing appropriate patterns of polite social behavior.¹ As Heatwole notes, however, "the remoteness of England, together with the extraordinary dangers of a voyage across the Atlantic, made the rich Virginia planters hesitate to depend upon this source for the education of the rising generation; so, after the restoration of Charles I, we find a sentiment among the Virginia planters and heads of the government growing in favor of the establishment of a college in Virginia,"² resulting in the founding of The College of William and Mary College in 1693, America's second-oldest university behind Harvard in 1636.

Given the Jamestown colony's thirteen year head start over that of Plymouth, the later founding of William and Mary over Harvard has been seized upon by both contemporary sixteenth century (like Roger Green and Hartwell, Blair, and Chilton) and modern critics as one more proof of Virginia's retarded educational system. What needs to be remembered, however, is that the plans for the establishment of a university in Virginia at Henrico (twelve miles below Richmond on the James River), a branch of which included an Indian school, were begun by the Virginia Company as early as 1618, only eleven years after the founding of Jamestown and eighteen years before Harvard. Monies were being raises and workmen sent for from England to build the school when in 1622 an Indian uprising (the "First Powhatan War") killed over 300 (or one-third of the) colonists and annihilated Henrico. When the Virginia Company's charter was revoked two years later and Virginia became a royal colony, further plans for the

¹ Phillip Hamilton, "Education in the St. George Tucker household," <u>Virginia Magazine of History and</u> <u>Biography</u> 12 (April 1994), 4.

² Heatwole, 70.

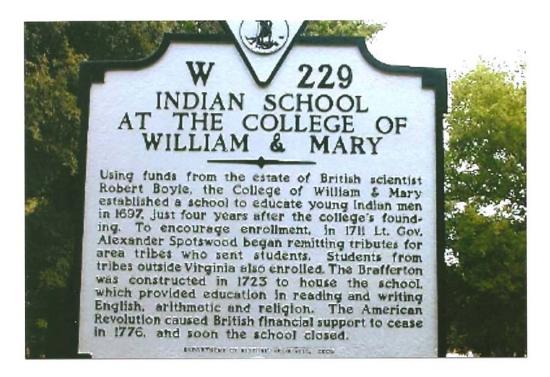


Figure 16 – As early as 1618, the Virginia Company began planning the establishment of a university at Henrico, which included an Indian school to "civilize" the native population. The Indians conveyed their appreciation by burning the school to the ground during the 1622 Powhatan War. The founding of the school had to wait until the end of the century and the move of Virginia's capital from Jamestown to Williamsburg. university were abandoned. Not until the colony was on surer footing and expanding westward were plans resurrected that created the school in the new capital of Williamsburg. If Virginia was relatively later at founding an institution of higher learning than Massachusetts, then the blame for that (conveniently) rests more with ungrateful natives resistant to Christianity, schools, and other civilizing institutions than the American planter class's elitist bias.

Virginia did after all offer less wealthy families some educational opportunities. For instance, various "grammar," "endowed," or "free" schools were funded by wealthy philanthropists such as Benjamin Symms or Thomas Eaton, the latter whose will in 1643 endowed a school bearing his name in Elizabeth City County. Students were charged a minimal fee and received a college preparatory education which included instruction in Latin. Between 1634 and 1775, there were nine known endowed schools of the Symms and Eaton type in Northumberland, Isle of Wight, Norfolk, Gloucester, Lancaster, and Middlesex Counties.¹

Lancasterian or Monitorial schools represented another type of free or low-cost schooling. One teacher was able to instruct hundreds of students with the help of student teachers (or monitors). Selected from amongst the best students, these monitors received extra instruction from the head teacher, then taught those lessons to their peers in small groups. Fees were based on each student's ability to pay, with the poorest attending for free. Like the endowed schools, these monitorial schools appealed to Virginians because

¹ Foney G. Mullins, "A History of the Literary Fund as a Funding Source for Free Public Education in the Commonwealth of Virginia," (Ph.D. dissertation, Virginia Polytechnic University, 2001), 11.

they operated at little or no taxpayer expense. The same can be said for Sunday schools, another form of schooling for the poor who could not spare their children during the week. "Generally, these schools operated from six to ten o'clock in the morning and again from two to six in the afternoon. Many children learned to read in these institutions but they could hardly have provided more than the bare fundamentals of education."¹

However, "perhaps the greatest proportion of the children who during the [colonial era] received an education obtained it in what became known as the Old Field [or Community] Schools."² These communally funded and constructed (often in abandoned old fields) schools charged voluntary tuition to hire a teacher to provide basic, elementary level schooling - reading, writing, and the "casting of accounts," another name for arithmetic. Neither the church nor the state had any connection or jurisdiction over these schools, save the granting of certificates to teachers. Some of these Old Field Schools were later called Academies. What would today be considered private boarding schools, these Academies offered the traditional "college-prep" curriculum of old – Latin, Greek, rhetoric, and mathematics – but, different from the Old Field Schools, more instruction in the emerging sciences such as physics, chemistry, and geography. There were some twenty-five of these Academies before the Revolution, such as the Reverend James Maury's School for Boys in Charlottesville - attended by future presidents Thomas Jefferson, James Madison, and James Monroe - the Norfolk Academy (1788), and Fredericksburg Academy (1783). Some of these would become the nuclei for later

¹ Mullins, 12.

² Heatwole, 49.

colleges and universities – Prince Edward Academy became Hampden-Sydney College, for instance, and Liberty Hall Academy morphed into Washington and Lee University – but their numbers would grow substantially after the Revolution. Like the Old Field Schools, "the state had no other connection with these Academies than the matter of chartering them or passing acts enabling them to conduct lotteries for the purpose of raising funds to erect buildings or to add to their endowment."¹

That, it seems, reflected the prevailing sentiment regarding the government's involvement in schooling. Colonial leaders were not opposed to education per se; they were just not willing to fund it. That was one of the reasons for the failure of Thomas Jefferson's scheme for establishing free public schools in Virginia. As Governor of Virginia in 1779, he proposed his famous "Bill for the More General Diffusion of Knowledge," which advocated a system of local elementary schools and academies, and reforms to the College of William and Mary. The establishment and funding of these schools, however, was left to the discretion of individual counties (or local districts) run by the landed gentry, none of whom apparently "saw the logic of taxing themselves to establish an institution which they themselves would not patronize."² This reality, coupled with Virginia's already-mentioned geographic settlement and societal patterns combined to put any more comprehensive system of education on hold until after the Civil War.

¹ Ibid., 127.

² Ibid., 101.

If public schools failed to gain a foothold during Virginia's colonial period, then there were nonetheless means of obtaining various levels of formal education. From private tutors to old field schools, the wealthy certainly did and the poor unevenly could avail themselves of schooling. For those who did, what where they taught? Given the respect accorded geographic literacy, how prominent was geography in the school curriculum, and how was it taught?

School Geography

Heatwole is the first to admit to a paucity of direct evidence concerning the curriculum in the various Virginia schools. Records were either never kept or destroyed by fires. As such, the best indirect sources of information come from private letters and diaries and, interestingly, newspaper advertisements placed by schools, by parents seeking tutors for their children, and by private tutors seeking students. In some rare instances, the records of local jurisdictions do indicate particulars about schools, particularly those endowed through wills.

For instance, the private writings of St George Tucker, a prominent Virginia planter, is typical in revealing what Martin Brueckner calls the "personal and generational interest in geographic instruction."¹ Tucker's letters provide some insight into his studies. Beginning with private tutors, he moved on to an academy, and was finally sent to William and Mary, where he took Latin and Greek, French, and natural and

¹ Martin Brueckner, <u>The Geographic Revolution in Early America: Maps, Literacy, and National Identity</u> (Chapel Hill: University of North Carolina Press, 2006), 12.

moral philosophy, which covered history, rhetoric, logic, ethics, mathematics, and geography.¹ A perusal of other colonial-era personal papers yields similar academic experiences.² Like Jefferson, Benjamin Franklin, and John Adams - who deemed geography "absolutely necessary to every person of public character... really, there ought not to be a state, a city, a promontory, a river, a harbor, an inlet or a mountain in all America, but what should be intimately known to every youth who has any pretensions to liberal education"³ – Tucker's schooling reflected his belief in the importance of geographic literacy.

Colonial-era Virginia newspapers frequently featured editorials concerning curriculum reform, advertisements by schools listing their course offerings, and advertisements by students seeking teachers, and visa versa. In 1774, for instance, the <u>Virginia Gazette</u> printed a letter to the editor, Mr Rind, by Charles Jeffery Smith addressed "to the public," in which he calls for the establishment of an academy in New Kent, whose curriculum should include among other subjects "navigation, surveying, geography, the use of the globe, and all those parts of learning which are useful in common life."⁴ In 1768, the "Rev. B Booth's ACADEMY" announced that "young GENTLEMEN are educated on the following terms: "

For Board, and learning English, Latin, Greek, Writing, Arithmetick, Merchants Accounts, *Geography* [italics mine], Navigation, Astronomy, *Surveying* [italics mine], Mathematicks in General, Drawing and Perspective [for 21 Pounds Sterling per annum].

¹ Hamilton, 2.

² Brueckner, 12.

³ Ibid., 147.

⁴ <u>Virginia Gazette</u>, 1 March, 1770, 2.

"Musick, Dancing, and Fencing" were extra, as were fees for "Fire and Washing, according to age."¹ In 1766, John Walker and his wife,

lately arrived in Williamsburg from London, and who for ten years has been engag'd in the Education of Youth, undertakes to instruct young Gentlemen in Reading, Writing, Arithmetick, and such material Branches of Classical Learning as ancient and modern Geography and History; but as the noblest End of Education and Human Attainments, he will exert his principal Endeavors to improve his Morals, in Proportion to their Progress in Learning, that no Parent may repent his Choice in trusting him with the Education of his Children.

As pertains to the young Ladies, Mrs Walker, the ad concludes, would be happy to teach them "all Kinds of Needle Work: [more specifically] Capuchins, Shades, Hats, and Bonnets."² As Linda Rowe makes clear, while "women were expected to play a role in the earliest stages of education for both girls and boys... the evidence shows that young Virginia women received a more limited education than their brothers, even in gentry households."³ If girls read primers and spelling books, Bibles and prayer books, and learned to use musical instruments, then boys, along with simple beginner texts, soon graduated to more advanced books on Greek grammar and dictionaries, and learned to use surveyor instruments.⁴ Even mere girls, however, were advised by their fathers to read geography "to enlarge their understanding" and render them "more agreeable

¹<u>Virginia Gazette</u>, 27 November, 1766, 2.

² <u>Virginia Gazette</u>, 17 November 1752, 2.

³ Linda Rowe, "Women and Education in Eighteen-Century Virginia," <u>Colonial Virginia Research Division</u> <u>Research Site</u>

^{(&}lt;u>http://research.history.org/Historical_Research/Research_ThemeFamily/WomenEd.</u>, 1. ⁴ Ibid., 4.



High HEAVE. E D U C A T I O N. THE great want of publick ichools for the ducation of youth, and the im-portanzadvantages ariling to the commu-rity form a reger cultivation of the hu-man mind in its early litate together with the expectations of a recompende for dif-charging, with credit, fo laborious and ufedia an undertaking, have induced the reverend mr. Andrew, and mr. Swinton, to form a refolution, of opening a fehool at the glebe in Suffex, at Chriftman next. As a knowledge of Latin and Greek hus always been judged mecellary for fome proofflions in civil and active life, gentle-men who chools to fend their children will have them inflructed in thofe languages after the molt approved methods; and as teaching boys only thefe who are to be brought up to trade and buildefs, or the mechanical arts, is rather fpending their into to little purpofe, they will be enabled to acquire a grammatical knowledge of their own tongue, and taught to read, with propriety, the belf Englifs authors, Writing, Accompts, Geography, the molt ufedu branches of the Arithmeticks, and French. The firideft care will be taken of their morals, and decent behaviour; and they will be guided in the paths of re-ligion, according to the doctrine of the church of England. The price of board in the neighbourhood is at prefent 12. a year, finding themfelvesbedding. Tuition profiles and the expiration of the year, the one half to be paid at ad-miffion, the other at the expiration of the year, the one half to be paid at adthe year. Sept. 1, 1777. 4

To be SOLD for ready money, on Thurfday the ad of October, at the plantation that lately belonged to major Burges Ball, in

Latestly belonged to major Burges Ball, in Lancatter county, ONE hundred head of cattle, 80 head of fheep, a number of hogs, a fine fix oared barge, feveral thoufand feet of both plank and feanting, a quantity of finereddih coloured flag ftone, ten horfes, corn, wheat, and fodder, the fale to con-tinued till the whole is difforded off. HENEY ARMISTEAD.

KIGHAOAD, Angult 28, 1777. Richao Angult 28, 1777. Richae, on Tuellay lett, a likely young negro man flave named TAPKEY, about 20 years old, 5 feet 9 or 10 iaches high, had on when he made his elcape an oinabrug or Virginia inen fhirt, a pair of canvas troutlers, tar ed, and a round hat. He is an entire fit anger to the country shore. Boattende

N to GRACIOUS ENDS direfts N GRACIOUS ENDS direfts FOR fale, the following treats of land in the upper cal of Cafuell county, North Carolina, viz. The field bying on both files of County Line ercek, contain-ing by ellimation 1850 acres of elegand land or upwards. On one of the planations is a large dwelling-houle built with aftone chinney, a kitchen 20 by 16 with aftone chinney are seen and a good repair, anapple ortoo miles of Coyle Creek, and within 300 or 100 miles of Coyle Creek, and withing on too miles of Coyle Creek, and withing and leafant, and the fpriogs (which are very plenyl) equal to any on the continent.--On another of the plan-tations (which lies on the main road to pterriburg and Halifar) is adwelling-houle to by 16, and a tub mill newly by 16 with a brick chinney, and a kitchen ; a warehoufe 24 by 16, a flore-houle so by 16, and a tub mill newly builton a very good flream.--The facond the function trave acres, and is exceedingly level, very rich, well tim-bertrad, bying within 20 reyr rich, well tim-bertrad and watered, ---- Have alfo feveral ther finaller trads, tying in the famo medionel lands may be thewn the wholey or in his ablence to David Hart, contigut ous hereore, who no sensowered to flag. D'Inve appointed mr. David Cover of

DURING my ablence from this flate, I powhatan county to fettle and receive all monies due to me, and to give proper dif-charges for the fame. It is hoped that all perfons indebted, either by bond or open account, will pay off as foon as polfible, to enable mr. Owen to difcharge the debts due from due from

HUGHES WOODSON. I

ALEXANDRIA, Angult 30, 1777. FOR fale, a fchooner now hjing at this-place, four years old, completely fitted for fea, with new fails, rigging, éve. Burthen about 150 barrels. Any perfon inclining to purchafe may know

the STORM! 140 DOLLARS Reward. ESERTED from col. William Grap-fors regiment, the following faits strain of the second strain of the second constraints of the second straints of the second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second second straints of the second straints of the second second straints of the second straints of the second second straints of the second second straints of the second second second second straints of the second s

CHARDTIE COURT, Sept. 2, 1777-DANEL TUCKER, and John Thomas, foldiers in the 4th Prignia regiment, are defired to meet me at the above courthouce, on the 15th inflast, without fail. 1ft Joseph Holt.

A HOUSE in the town of Marcheffer, and a cellar underneath; allo a kitchen, flable, and garden adjoining. For terms apply to A. STEUART. 51

Twenty DOLLARS reward. RUN away from the fubleriber in Fair-fax county, near Alexandria, about the 10th of Angulf, a young negro man named JOE, about 21 years of age, about 5 feet 8 incheshigh, wellmade, has around face, which is full of fmall human a

Figure 17 - A September 1777 article in the Virginia Gazette announces the opening of a new school in Sussex next Christmas, whose curriculum will include geography.

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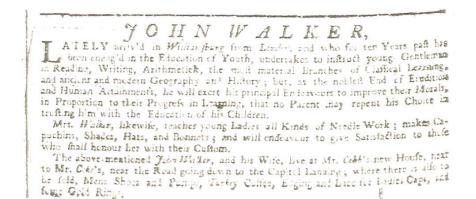


Figure 18 – The colonial-era <u>Virginia Gazette</u> contained numerous advertisements for schools, both in England (top) and Virginia (bottom). They typical curriculum included instruction in geography. The two advertisements are from 1 March, 1770 and 27 November, 1766.

companions" to their future husbands.¹ This sentiment was entirely in keeping with the influential educational theories of Rousseau, who could not have agreed more.

The records of one free (or endowed) school in Norfolk shows that in 1786 the Common Council, having appropriated money for its rebuilding after a fire, and appointing William and Mary graduate Rev. Walker Maury to head it, approved a curriculum that covered reading, writing, arithmetic, book keeping, English grammar, Latin, Greek, French, and "geography with the use of globes."² From this record, as well as the private and public (newspaper) writings of Virginians, it can reasonably be inferred that the course of study outlined in this Norfolk school is typical of the kind of subjects taught in colonial America. From the basic, elementary school level through higher education at William and Mary, Virginia's only institution of higher learning until Hampden-Sidney College in 1775, geography appears ubiquitous. The more practical applications of geography such as surveying were most likely not taught at William and Mary because "the vogue in English universities of teaching geometry and trigonometry as exercises in pure logic without any thought of their uses in practical measurement. Only one mathematics professor at William and Mary," Sarah Hughes laments, "who held the post from 1717 to 1721, left any record of teaching surveying."³ This would change after the Revolution, when reforms required knowledge of surveying for a B.A.

¹ Ibid., 7. Brueckner concurs with this assessment. As evidence he highlights a 1788 article in <u>Pennsylvania</u> <u>Gazette</u>, reporting the "Quarterly Examinations of the YOUNG LADIES belonging to Mr. POOR's Academy... in reading, writing, arithmetick, grammar, geography, etc.(163)."

² Lyon Gardiner Tyler, "Education in Colonial Virginia. Part III: Free Schools," <u>William and Mary College</u> <u>Quarterly Historical Magazine</u> 6 (October 1897), 81.

³ Hughes, 88.

degree.¹ In the case of Hampden-Sydney, however, which was founded by Scots-Irish Presbyterians to prepare men for the ministry and thus modeled its curriculum after that of Princeton, Heatwole maintains "the course of study as prescribed for the college in its early years included a full course in the ancient languages, mathematics, trigonometry, and surveying..."² Jennings Wagoner's study of the history of Hampden-Sydney confirms this. "The curriculum put in place, clearly bearing the stamp of the Scottish Enlightenment, followed the Princeton model but with an even greater emphasis on English, history, and geography.³ Future clergy required a practical knowledge of surveying and mapmaking to delineate their parish jurisdictions; as a result, Princeton's curriculum at that time included geography, as did Harvard's.

Before and in the immediate post-Revolutionary period, then, general geography held a prominent position in the college curriculum, not only in Virginia, but in other American universities. Compelling evidence suggests geography had its place alongside "reading, writing, and arithmetic" at all levels and modes of formal education in Virginia. This is fully consistent not only with the general appreciation for geographic literacy in the British-American "Weltanschauung," but with emerging pedagogical trends of the time. The most significant of these was put forth by John Locke, whose "Two Treatise of Government," written in 1670, was so influential in shaping Jefferson's "Declaration of Independence." In his 1690 "Essay Concerning Human Understanding," Locke outlined a new theory of the mind. He believed a child's mind was a *tabula rasa*, free of any

¹ Ibid., 181.

² Heatwole, 145.

³ Jennings L. Wagoner, "On This Hill: A Narrative History of Hampden-Sydney College, 1774-1994," <u>Virginia Magazine of History and Biography</u> 107 (Spring 1999), 224.

innate ideas. Three years later, he penned "Some Thoughts concerning Education,"

explaining how to educate that mind. This included his theory of the modern curriculum.

He strongly advocated geography instruction, and from an early age.

At the same time that he is learning French and Latin, a Child ... may also be enter'd in Arithmetick, Geography, Chronology, History and Geometry too. For if these be taught him in French or Latin, when he begins once to understand either of these Tongues, he will get a knowledge in these Sciences, and the Language to boot. Geography I think should be begun with: for the learning of the figure of the globe, the situation and boundaries of the four parts of the world, and that of particular kingdoms and countries, being only an exercise of the eyes and memory, a child with pleasure will learn and retain them. And this is so certain, that I now live in the house with a child whom his mother has so well instructed this way in geography, that he knew the limits of the four parts of the world, could readily point, being ask'd, to any country upon the globe, or any county in the map of England; knew all the great rivers, promontories, straits and bays in the world, and could find the longitude and latitude of any place, before he was six years old. These things, that he will thus learn by sight, and have by rote in his memory, are not all, I confess, that he is to learn upon the globes. But yet it is a good step and preparation to it, and will make the remainder much easier, when his judgment is grown ripe enough for it: besides that, it gets so much time now; and by the pleasure of knowing things, leads him on insensibly to the gaining of languages.¹

Locke's educational treatise, combined with that of Rousseau (<u>Emile</u>, which also emphasized the central role of geography in education) some eighty year later, became one of the foundational eighteenth century works on educational theory. A run-away best seller, it launched the "environmentalist" movement in education, one that believed that children's minds were shaped through their experiences. Systems of teaching children through their senses soon gained a following in Europe with such practitioners as Johann

¹ John Locke, "Some Thoughts Concerning Education," Section 178.

Pestalozzi, and became the basis for the twentieth century Montessori schools in the United States.

Unhappily for most colonial-era America students, however, Locke's enlightened "hands-on" approach to education, in which geography figures prominently, did not appear to "trickle down" to the rank and file teachers in the colonies. **How** subjects were taught is perhaps even more difficult to discern than what was taught, but is worth an educated effort, for one of the widely given reasons for America's subsequent (and present) geographic illiteracy lies in the way geography is introduced and taught in One in-direct way of determining pedagogical methods is through the schools. examination of the texts used to teach the course. Indeed, Charles Redway Dryer does this with great success in this study of nineteenth century geography education; his findings will be discussed in the next chapter. The difficulty of applying his method to the preceding century lies in the fact that, until the Revolution spurred the publication of new, American-centered texts such as Jedidiah Morse's American Geography (1789), we have no record of what books were used in geography education during the colonial period. One of the few clues involves the many illustrations of maps and globes in formal portraits, as well as the popularity of such geography books as the one by Varenius and Smith, which testifies to their presence and thus use in homes and schools. According to Martin Brueckner, pedagogy manuals of the time advised "lessons in all subjects ideally be taught orally through rote memorization. As teachers completed textbook lessons by having students stand up before the class, geography lessons became

recitals of Gordon's tables and maps."¹ Patrick Gordon's <u>Geography Anatomized</u>, first published in 1693,

offered not only a lesson in memorization but a typical geography lesson, one that shaped many British colonists' basic assumptions about geographical space and its representations... [It] established a Eurocentric world order that was predicated upon the nation. Built into its representation of American was a fundamental ambivalence towards giving it continental status.²

This concept of "continental status" became crucial in understanding the role of geography and geography education in Virginia in the years leading up to the Revolution. As mentioned, this period also witnessed a shifting colonial perspective regarding the natural environment, from one of fear to admiration. As geographic literacy was judged increasingly less necessary for survival and profit, colonial leaders by the mid-1700s began to value geographic literacy for its ability to foster patriotism and political and cultural independence. Colonial rhetoricians, which included prominent Virginians like Thomas Jefferson, George Washington, Patrick Henry (of Hanover County), and James Madison (of Orange County) who set out to define the colonies in "American" terms, did so by literally redrawing the map to show a separate American continental landmass, whose massive size dwarfed that of mother England. As Thomas Payne argued in Common Sense, "there is something very absurd, in supposing a continent to be perpetually governed by an island." "Realigning the British colonists' national affect (their 'love of country') by shifting their emotional investment from the map of England to that of North America," colonial agitators effectively "turned to geographical literacy

¹ Brueckner, 85.

² Ibid., 86.

as the basis of an Anglo-American variant of patriotism...This strategy of comparative mapping became one of the more effective tools for asserting American claims of sovereign authority."¹ By the second half of the eighteenth century, geography education in Virginia was thus not just a school subject administered by rote memorization, but an emotionally charged tool in the hands of colonists seeking to further their political goals. The power of map imagery would not be lost on Jefferson, who decades later used it to win his case to locate his university in Charlottesville.

The Geographical Growth of Colonial Virginia

The founding of Jamestown through the American Revolution spans roughly 180 years and six to nine generations. In this short time, Virginia's population grew from 104 in 1606 to around 50,000 in 1690, then to some 747,000 by the time of the first census one hundred years later in 1790. Demographically, it went from nearly 100% native American and statistically insignificant white to 60% white, 40% black, and statistically insignificant Indian. Geographically, the original eight counties² and its white population were all located in the extreme south-eastern corner of the colony, along the major waterways. After another Indian attack (the so-called "Second Powhatan War") in 1644 killed over five hundred colonists (more than the first attack 22 years earlier, but a much smaller percentage of the population), Governor William Berkeley ordered the

¹ Brueckner, 91 and 97.

² Charles City, Elizabeth City, Isle of Wight, Henrico, James City, Northampton, York, Warwick were all established by 1634. After that came Norfolk (1637), Nansemond (1637), Northumberland (1648), Surry (1649), Gloucester (1651), Lancaster (1652), Accomac (1652), Westmoreland (1653), New Kent (1654), Richmond (1674), Middlesex (1675), Stafford (1675), Princess Anne (1691), King and Queen (1691), and Essex (1692).

construction of a string of four forts along the frontier. The Indians were cleared from the areas south of the York River and territory reserved for them north of there, though not for long.

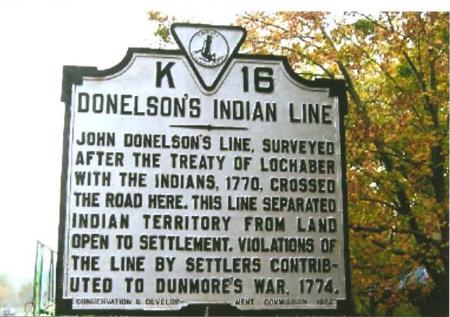
Over the next century and a half, as tobacco cultivation demanded more and more land and the population grew, Virginians spread north and particularly westward of the Coastal Plain past the fall line into the Piedmont, over the Blue Ridge, down the Shenandoah Valley and beyond. Throughout the colonial period, the land was explored, mapped, surveyed, settled, and exploited. The first explorations of the frontier began in 1650, when Edward Bland and Abraham Wood undertook a nine-day journey south-west into present-day North Carolina. The first known European to explore west of the Blue Ridge was John Lederer. Between 1669 and 1670, he made three trips into the interior and kept a journal of his impressions in Latin, the English translation of which was published in 1672. From it we know he had identified the major landforms and physiography of Virginia.¹ Two more voyages of exploration were sponsored by Wood, who had accompanied Bland on this 1650 expedition. Wood was in the fur trade, and as such interested in obtaining intelligence about the Indian tribes with which he dealt, as well as the areas in which they hunted.² Towards that end, in 1671 he dispatched Thomas Batts and Robert Fallam into the interior. They were followed three years later by James Needham and Gabriel Arthur. Between these two trips, by 1674 these English explorers had for the first time penetrated into present-day West Virginia and Kentucky to the

¹ Grymes, <u>www.virginiaplaces.org/settleand/lederer.html</u>, 1.

² Ibid., <u>http://www.virginiaplaces.org/settleland/bettsfallam.html</u>, 1.



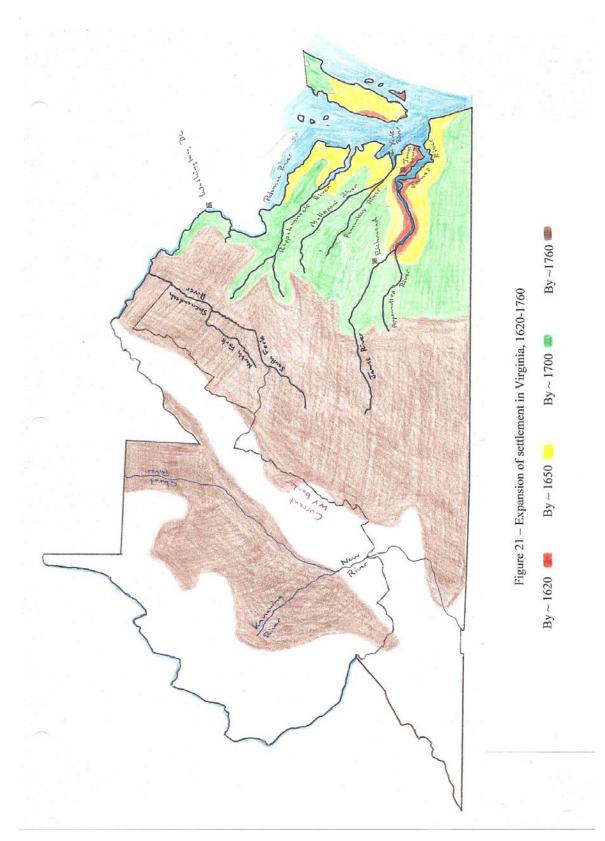
Figure 19 & 20 – Roadway markers throughout Virginia document the Old Dominion's colonial-era exploratory and surveying activities.



northwest, and as far south-west as Georgia and Alabama. In the tradition of John Smith, they were primarily concerned with trade and natural resource exploitation. Since this required the cooperation (or at least non-interference) of the native population, their accounts focused primarily on the discovered bounties and the behavior of the natives. Only Lederer's accounts briefly "waxes unusual aesthetic, paying exceptional attention to the pleasures of viewing the terrain."¹ In all cases, these explorers were "doing geography," something shared and valued by most colonial-era Virginians.

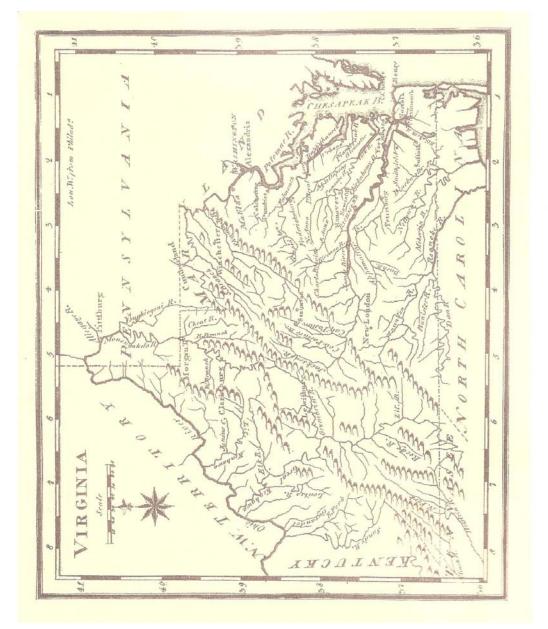
The large number of geographic accounts of the period bears this out. From (even before) John Smith's maps and tales of Jamestown through Robert Beverley's <u>History</u>, George Washington's surveys and maps, to Thomas Jefferson's <u>Notes</u>, some of Virginia's most prominent colonists have left behind their impressions of the land and its people. Spanning nearly two centuries, these show an evolution in geographic thought that mirrors the evolution in geographic settlement and activities of Virginia as a whole. Where once the land was viewed and chronicled merely for its economic and military worth, and was otherwise a wild and dangerous place, by Jefferson's generation it was increasingly appreciated for its own sake and less feared, inspiring the first landscape paintings. The earliest colonists had of course made considerable in-roads (literally and figuratively) by then. The continent, even what was then still Virginia's considerable part of it, was far from tamed, but the colony had not only survived but ultimately thrived to become England's largest and wealthiest in North America, though not along the lines envisioned by its sponsors.

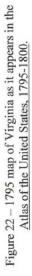
¹ Adams, 246.



The colony's isolated settlement pattern encouraged self-reliance and retarded the growth of anticipated towns, both of which discouraged the establishment of such civilizing institutions as churches and schools. Contemporary observers were quick to point this out, and chastised the colony accordingly. Formal educational opportunities did exist, but were largely the responsibility of individual families or communities willing to found their own schools. As such, the number of functionally literate Virginians is impossible to know. What evidence of schooling has survived, however, indicates that some sort and level of geography was part of the curriculum for most students. While the exact course of study offered in the various Virginia schools remains difficult to discern, at its most fundamental, colonial-era education at all levels was essentially designed to maintain the social status quo. It was only in the last decades before the American Revolution that "school subjects" such as geography began to influence the shaping of something approaching an American identity that ultimately challenged at least the political status quo and lead to revolution.

Towards the end of Virginia's colonial period, those leaders who had enough of an appreciation for geography to include it among their formal studies discovered another practical application for it beyond surveying or farming. They used maps, the language of geography, to stir up sentiment in favor of more – and ultimately complete – independence from Britain. This manipulation of geography for political purposes would not be an isolated one. As will be seen, America's founders, which included many Virginians, similarly relied upon geography to forge a unifying American identity and justify nineteenth century territorial expansion. In that regard, Thomas Jefferson, while already discussed at some length, is something of a transitional figure whose geographic credentials spans both the pre- and immediate post-Revolutionary era. What some consider his most significant contribution to American geography, his stewardship of the Lewis and Clark Expedition, features prominently in the next chapter on the discussion of geography in Virginia.





From Independence to Civil War

Chapter Three

During the second term of his presidency in 1807, Thomas Jefferson wrote his friend Joel Barlow, "people generally have more feeling for canals and roads than education. However, I hope we can advance them with equal pace."¹ As only the third president of the freshly minted United States, however, Jefferson's main preoccupation lay with securing the country's immediate and future survival. The Battle of Yorktown, Virginia, in 1781, which led to Britain's surrender and subsequent independence for America, lay only twenty years distant from Jefferson's inauguration as the country's third president. Much of the North American continent was still claimed by Britain - as well as Spain, France, and Russia – and occupied by hundreds of Indian nations. The Napoleonic Wars were just around the corner and threatening to envelop the United States, who had virtually no army, and no navy, and few funds to devote to their build-up. Equally troubling, the new nation had only a nascent conception of "being American." Jefferson, who himself had declared only a few years previously that, "Virginia, Sir, is my country," now had to jettison his own parochial allegiance to his home state and help nurture a national consciousness to ensure the country's future. Virginia and Virginians

¹ <u>Thomas Jefferson on Politics and Government,</u> <u>http://etext.virginia.edu/jefferson/quotations/jeff1370.htm</u>, 4.

had let the way from colonization to independence; as the nineteenth century dawned, the Commonwealth and its statesmen continued to lead the new nation, from fragile independence to stabile maturity.

Jefferson attempted this on several fronts. Be it by diplomatic, economic, and even social means, however, Jefferson's geographical literacy is apparent throughout. The philosophical and legislative groundwork laid by him and his fellow Founders and early Presidents - the first four out of five of whom were Virginians - became the basis for the political, economic, and social evolution of the United States through the Civil War and beyond. Virginians George Washington, Thomas Jefferson, James Madison, and James Monroe were all of generations who "did" geography, thought geographically, and believed in the necessity of an educated, literate population in order for a democracy to thrive. In this they were aided by other American patriots such as Noah Webster and Jedidiah Morse, who championed and wrote patently "American" (versus "British") English language and geography books. Indeed, the late eighteenth century and early nineteenth century witnessed the beginning of uniquely American literature such as Washington Irving's The Legend of Sleepy Hollow as well as geography school texts like Morse's <u>American Geography</u>, first published in 1789. Thomas Jefferson and Patrick Henry had turned to geography to promote unity and revolutionary sentiments against the British before the American Revolution. In the post-revolutionary period, geography would be relied upon to solidify democratic ideals, cultivate an "American" identity, foster nationalism, and justify territorial expansion. This agenda was reflected in Virginia's and the fledgling nation's classrooms, which prominently displayed

90

"American" globes and maps, and whose students read and recited "American" geography texts in accordance with American society's desire to separate itself from England and forge a new existence. As during the colonial period, geographic writing in the next sixty years, such as Matthew Fontaine Maury's <u>Physical Geography of</u> Virginia, reveals a great deal about America's Weltanschauung, about Virginia's and the new republic's perception of its land. Thomas Jefferson understood it better than most; more than canals and roads were required to "connect" Americans to this land.

The Louisiana Purchase, Lewis and Clark Expedition and the Northwest Ordinances

Diplomatically, Jefferson believed the wisest course for the United States to be one of "honest friendship with all, entangling alliances with none," as he famously said. Unhappily, his presidency coincided with the Napoleonic Wars, which threatened to pull even avowed neutrals like the United States into its orbit. While impressment and trade sanctions by the French and British created economic hardship and political resentment at home, Jefferson did not consider involvement in Europe's struggle to be in the United States' best geo-political interest, and managed to stay out of it during his tenure. His successor (and fellow Virginian) James Madison would not be so fortunate; in 1812, Americans had to fight their "second war of independence" against the British before their liberation from the mother country was complete three years later. Jefferson's ability to avoid outright war with the Europeans arguably ranks as one of his diplomatic successes. Yet his single greatest foreign relations coup - and one of his greatest achievements generally – was the purchase of the Louisiana Territory from France in 1803, land Napoleon needed to sell to help finance his forays in Europe. In that sense, at least, the Napoleonic Wars benefited the United States, for "in one fell swoop [and \$15 million dollars] Jefferson doubled the country's size by adding some 830,000 square miles. The millions of acres of fertile farmland, untold natural resources, and control of the vital Mississippi River and its tributaries were one of the extraordinary bargains in the history of the United States."¹

This diplomatic and geographic achievement was immediately succeeded by another, the Lewis and Clark expedition. Jefferson's involvement in this old-fashioned voyage of discovery of the land was even more direct than his involvement in its purchase. As William Koelsch asserts, "Jefferson is probably best known as a geographer for sponsoring the Lewis and Clark expedition."² Martin Brueckner builds on that sentiment, and argues that Jefferson's role went well beyond that of mere "sponsor" and extended to what amounted to editor.

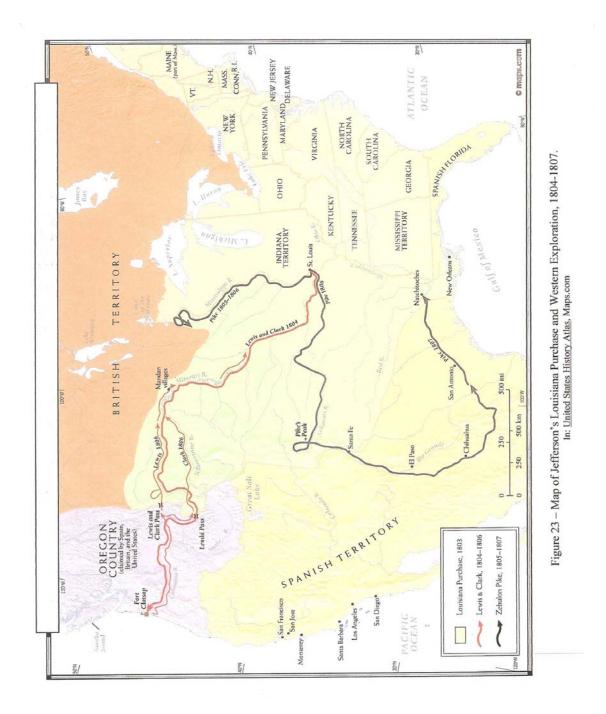
Jefferson arranged for Lewis and Clark to go through a crash course in modern scientific theories and related literary practices. They were thus not only trained in land surveying, astronomical observation, and navigation but were introduced to the nomenclature of botany, geology, and medicine, the narrative structure of natural history, and the art of mapmaking. Thus, before Lewis and Clark put either pen or pencil to paper, Jefferson had imposed a certain authorial control over all aspects of the expedition's literary productions.³

Before their departure, Jefferson gave Meriwether Lewis (his private secretary and Virginia neighbor in Albemarle County) and William Clark a letter containing his

¹ James West Davidson et al, <u>Nation of Nations: A Narrative History of the American Republic, Vol I, 3rd ed</u> (Boston: McGraw Hill, 1998), 277.

² Koelsch, 268.

³ Brueckner, 212.



personal instructions, which amounted to a list of questions mimicking the questionnaire Jefferson had himself answered for his <u>Notes on the State of Virginia</u>. This list "dictated, in the vein of the school geographer's catechism, the categories and the priorities of geographical information."¹ As mentioned, Jefferson's <u>Notes</u>, first published in 1787, was one of the most popular and important books written by an American to that time. Far more than a simple natural history or geography book, it was simultaneously a discourse on historical, societal, and political systems. It was technically the only book he ever wrote, but given the depth of his editorial control over Lewis' and Clark's writings, Jefferson's name arguably should appear as co-author of the Expedition's published journals.²

President Jefferson did not expend so much effort on the purchase and exploration of the Louisiana Territory simply for his own edification. To complete Brueckner's argument, "national interest favored the publication of the Lewis and Clark journals."

The map and their letters were made public in order to ensure and legitimate the nation-state's investment in the recently acquired [land]. Geographic writings – that is, the method of mapping the earth through coordinate points, the pattern of superinscribing new names over existing ones, and the subsequent geographic narrativization of cultures as spatial forms - provided the visual means for the public to imagine the investment's returns: land and more land.³

While Jefferson thus "used the bully pulpit to convey his vision of a transcontinental

¹ Ibid., 213.

² The Lewis and Clark Expedition was not the only one Jefferson sent to explore the newly purchased Louisiana Territory. In 1805, he dispatched Zebulon Pike into the upper Mississippi Valley, and again in 1806, up the Arkansas River Valley to present-day Colorado, where the peak Pike attempted but failed to climb bears his name. Pike's accounts are largely responsible for creating the myth of the "Great American Desert" which delayed the settlement of the American Mid-West until the last decades of the 1800s. ³ Brueckner, 232.

'republican empire,'" he could only do so successfully because his audience had already been conditioned by him and his American Revolutionaries before and during the Revolution to look towards geography and geographic literacy to help recognize and reconcile a changing world.

The incorporation of the Louisiana Territory was not the only example of this, or of Jefferson's and the Founder's geographical activities involving westward expansion.

As a member of the Congress of the United States under the Articles of Confederation during the 1780s, Jefferson was involved in the problems of establishing a system of survey before sale and settlement in the new public domain west of the Appalachians, created by the cessions of British and colonial claims after the Revolutionary War. He first chaired the committee that drafted the Ordinance of 1784, which, though it never took full effect, provided for the survey and division of those lands into territories and then states.¹

After the Revolution, the federal government created under the Articles of Confederation was financially broke. The state of Virginia took the lead in insisting that all the other states transfer their lands west of the Appalachians to the federal government, who would survey and then sell it to pay off its debts. The surveying of the resulting Northwest Territory was left to Thomas Hutchins, George Washington's appointment as "Geographer of the United States" in 1780. The "immaculate grid" resulting from this unique, rectilinear survey (the Ordinances of 1784 and 1787) without regard for physical features combined with a low price² to produce a system of landownership and settlement patterns European visitors such as Alexis de Tocqueville found remarkable because it

¹ Koelsch, 264.

 $^{^2}$ \$1.00 per acre, with a 640 acre minimum, by 1832 gradually increased to \$1.25 but with a much small, 40 acre minimum.

was "quite distinct from the hierarchical, landlord-dominated, agricultural societies they were accustomed to."¹ The geographic act of measuring the wilderness was the first step in buying and **owning** land. As Andro Linklater makes clear, "this was a revolutionary concept."² The concept of the individual ownership of the **use** of land was certainly well established in Europe and even amongst the native American Indians, who had occupied, hunted, and worked, that is, **used**, it for centuries before the Europeans "bought" (or took) it from them. However, the concept of owning the land **itself**, as one owned a cow - or, in Virginia, a slave – was what Linklater calls one of the

two most potent ideas that have shaped America. The first of these was a unique system of measurement that harks back to the dawn of history and, through the grid that the survey laid across America, was to leave its mark on almost every acre of real estate, every farm and every city block west of the Appalachians. The second, and perhaps more importent idea, was that any individual could own outright the land that Hutchins and his followers were to measure. Around that revolutionary perception grew a society whose economic system and democratic outlook were unlike any that had come before.³

Philosophically, Jefferson believed these grid-shaped, "republican farms" owned and

worked by yeoman farmers, were the key to sustaining democracy in the newly formed

United States.⁴ As an added bonus, the introduction of this grid, from which his own

home state was spared, "offered the United State the chance to have the first decimalized

¹ Andro Linklater, <u>Measuring America: How the United State was Shaped by the Greatest Land Sale in</u> <u>History</u> (New York: Penguin Books, 2002), 171.

 $^{^{2}}$ Ibid., 4.

³ Ibid., 6.

⁴ As further evidence of Jefferson's commitment to education, the NW Ordinance Survey set aside land for the establishment of schools. Each of the resulting 36-square mile townships were divided into 1-square mile lots, four of which in each township were reserved for public schools. (Linklater, 73).

system of measurement in the world."¹ Jefferson based this system on an idea first proposed by the French astronomer and cartographer Jean Picard in 1671, who looked towards the earth, i.e. geography, for a system of scientific measurements. The globe could be divided into 360 degrees, and each degree sub-divided into sixty minutes, called nautical miles. Jefferson calculated the length of each mile to be 6086.4 feet, and dubbed it a "geographical mile," which became the basis for the American mile, the unit of measurement he proposed, the federal government approved, and Thomas Hutchins used in his subsequent survey. As Jefferson wrote Francis Hopkinson, "in the scheme for disposing of the soil a happy opportunity occurs for introducing into general use the geographical mile..."2

The ordinance that Congress passed in 1784 for the survey leading to the disposition of the country's western lands was a geographical solution to their country's financial crisis. Jefferson's purchase and exploration of the Louisiana Territory represented one way, a diplomatic way, of securing the young nation's survival; the sale of western land represented another way, an economic one. Yet it was not the only geographically inspired actions taken by Virginian to help their state and the new nation.

Transportation Geography

The United States' earliest presidents, four of them Virginians, recognized the importance of creating an efficient transportation network which linked the country's

¹ Ibid., 71. ² Ibid., 71.

geographically diverse and remote areas to one another. Not only would this spur the country's economic development, but build centripetal forces promoting nationalism. Such geographically-minded leaders as George Washington or Albert Gallatin - Jefferson's and Madison's Swiss-born Treasury Secretary and "also a man of broad geographical, cartographic, and ethnographic interests"¹ - had either engaged in transportation projects personally, or strongly recommended federal financing for them. Washington had in 1752 helped survey Braddock Road², and in 1795 founded the Potowmac Canal Company to construct canals around the un-navigable portions of the Potomac River. In his 1807 <u>Report on Roads and Canals</u>, Gallatin acknowledged the expense and possible extra-constitutionality of federally mandated and funded internal improvements, but argued

the inconveniences, complaints, and perhaps dangers, which may result from a vast extent of territory, can not otherwise be radically removed, or prevented, than by opening speedy and easy communications through all its parts. Good roads and canals, will shorten distances, facilitate commercial and personal intercourse, and *unite by a still more intimate community of interests, the most remote quarters of the United States. No other single operation, within the power of government, can more effectually tend to strengthen and perpetuate that union, which secures external independence, domestic peace, and internal liberty* [italics mine].³

Several years previously, Gallatin had succeeded in inserting into the Ohio

statehood bill a provision for the construction of a national road from the eastern

¹ Koelsch, 270.

² Braddock Road was surveyed and constructed on an old Indian trail, Nemacolin's Path. Once completed by General Braddock's men, it ran some 110 miles from Alexandria through Cumberland, MD to Pittsburgh, PA.

³ Albert Gallatin's <u>Report on Roads and Canals</u>, 1807, www.union.edu/PUBLIC/ECODEPT/kleind/eco024/documents/internal call

seaboard across the new state. The 1803 Louisiana Purchase added impetus for such transportation improvements. Three years later, Jefferson signed into law the nation's first multi-state, federally funded highway. By 1818, the road – alternatively called the National Road or Pike, or Cumberland Road or Pike, and today largely Route 40 - ran from Baltimore through the extreme northern section of (what was then still) Virginia to the Ohio River on a patchwork of new and existing roads, opening up the Ohio River Valley and the Midwest for settlement and commerce.¹

From his letter to Joel Barlow and friendship with Gallatin, it is clear that Jefferson recognized the necessity of expanding the nation's transportation network within its rapidly growing territory. Virginia's earliest settlers had taken advantage of the well-watered Northern Neck rivers – the James, York, Rappahannock, and Potomac – and their tributaries for their transportation needs. As settlement extended north- and especially westward over the fall line, however, the needs for roads became increasingly apparent, and in 1632, the Virginia House of Burgesses passed what is considered the first highway legislation in American history when it decreed that "highways shall be layd in such convenient places as are requisite accordinge as the Governor and Counsell or the commissioners for the monthlie corts shall appoint, or accordinge as the parishioners of every parish shall agree."² The colony's basic road laws were subsequently broadened to, among other changes, empower country surveyors to select the location for roads, for owners of mill dams to provide a ten foot passage on dams and

¹ By the 1830s, it stretched some 800 miles to central Illinois, where construction finally ceased due to lack of funds.

² <u>http://www.loudounhistory.org/history/virginia-transportation.htm</u>, 3.

spillways, and for iron furnaces to lay out "good roads made from such works to the nearest place upon some navigable river or creek."¹ Throughout the colonial period to the Civil War, Virginia's road legislation also required all landowners to either work on the roads a certain number of days each year, or pay someone to do so in their stead. As Charlie Grymes notes, "minimal skill was required to fill in ruts – but the House of Burgesses funded contractors to build bridges on roads that were traveled by more than local farmers. The basic theory was that local roads were a local responsibility, and regional roads were the colony's responsibility."² Indeed, this system was very much like the one envisioned and described in Jefferson's <u>Notes</u>.

Some of the earliest roads partially financed by the Virginia government include the Virginia section of Braddock Road (from Alexandria to Winchester, into present-day West Virginia to Cumberland, MD) and Little River Turnpike, present-day Routes 236 and 50, running west from Alexandria through Jermantown to Aldie and Upperville. Construction of this toll road began in 1795, making it one of the oldest turnpikes in America. As Virginia's population continued expanding in number and breadth, other turnpikes soon followed, such as the Northwestern Turnpike in 1827 - Little River Turnpike's western extension from Winchester to the Ohio River and largely Route 50 today – and the Valley Turnpike (present-day Route 11), built by the Valley Turnpike Company between 1834 and 1840 on part of the old Great Wagon Road, connecting the

¹ Ibid., 3.

² <u>http://www.virginiaplaces.org/transportation/secondworst.html</u>, 1.

93 miles between Winchester and Staunton in the Shenandoah Valley.¹ The old Manchester Pike (near Richmond) and the Lynchburg-Salem Turnpike were among the first "paved" (with gravel, and then "macadamized") roads by 1808.² By 1816, when Virginia's population had climbed to over 970,000,³ the General Assembly established the country's first state Board of Public Works (BPW), responsible for chartering, funding, and supervising internal improvements.⁴

The BPW did not just concern itself with roads, however. Its formation coincided with the beginning of other modes of transportation, namely canals, steamboats, and railroads, all of which evolved, came of age, and competed against one another for commercial and public traffic during the first half of the nineteenth century. The challenge for Virginia (and the country's) leaders lay in deciding amongst them. At the federal level President James Madison, though personally sympathetic towards it, in 1817 vetoed a bill authorizing federal funds for transportation projects because he considered it unconstitutional. This left funding to the individual states. Virginia already had a (limited) history of funding roads; it now had to consider more controversial modes of transportation such as canals and railroads. As mentioned, George Washington attempted to build canals along the Potomac River between Cumberland and Georgetown to facilitate transport and commerce between the country's interior and its coastal ports and

¹ The Great Wagon Road ran the length of the Valley, from Pennsylvania southward to Georgia. The Valley Turnpike remained in private hands and collected tolls until 1918, when it was finally turned over to the state.

² <u>http://www.loudounhistory.org/history/virginia-transportation.htm</u>., 7.

³ This number represented around 14% of the total population of the United States, making Virginia the most populous state in the union until 1820, when it was surpassed by New York.

⁴ <u>http://www.loudonhistory.org/history/virgina-transportation.htm.</u>, 5.

beyond.¹ As Charlie Grymes points out, however, his canal, like all canals, "was an investment in just one portion of Virginia." Navigation improvements to the Potomac River watershed would not benefit residents in other parts of the state, such as those along the James River watershed. "The politics of pre-Civil War Virginia required simultaneous development of canals up the James and Potomac river, to satisfy the large number of voters who lived into separate watersheds... In a typical political compromise, the General Assembly financed both canals."² Grymes considers this the "second-worst decision" in the history of the State of Virginia.³ Not only did this decision ignore the interests of those Virginians living west of the Alleghenies, which fostered intense resentment and virtually guaranteed succession from the rest of the state when it became feasible during the Civil War; this decision set a precedent for the continual funding of canals, few of which were successfully completed, at the expense of an emerging, but ultimately superior means of transport, the railroads. Neglecting the transportation needs of the future West Virginia was of course not just a political decision; its rugged topography made any infrastructure improvements technically difficult, costly and unappealing. In that sense, the region's geography was its own worst enemy. The state's decision to back canals over railroads, however, is more difficult to reconcile. Despite the insistence and efforts of the Frenchman Claudius Crozet, one of the BPW's earliest chief

¹ Although Washington's business venture proved unprofitable, its holding were in 1824 ceded to the Chesapeake and Ohio Company, which four years later began construction of the 184 mile long C&O Canal, one of the many canal projects undertaken in the first half of the nineteenth century. George Washington's Powtomac Company had constructed its canals on the Virginia side of the Potomac River, but the C&O Company built its canal on the northern side of the river in Maryland.

² <u>http://www.virginaplaces.org/transportation/secondworst.html.</u>, 1-2.

³ According to Grymes, the worst decision – "so far, at least" - was Virginia's decision to secede from the Union to join the Confederacy.

engineers, the man who had a tremendous influence on Virginia's transportation network, and who "recognized that railroads would be cost-effective even before locomotive technology was perfected, and that rail-based transportation could carry freight at a far lower cost per mile than canals,"¹ the BPW and General Assembly favored canals over railroad throughout the decades before the Civil War.

That is not to say Virginia was devoid of railroads. Interestingly enough, it had built one of the first railroads in the country in 1828 to haul coal from the Triassic Basin in Chesterfield to Richmond.² Surveyed by Crozet, it proved an instant financial success. For political reasons, however, this did not translate into support for railroads on a significant scale. In all fairness to Virginia, many other states embraced canals as well. By 1840, there were more than 3300 miles of canals nation-wide, nearly half of them financed by state governments, and some of which, most notably the Erie Canal, proved spectacularly successful. By 1840, however, there was also a nearly equal number of miles of railroad trackage; then years later, trackage had grown to over 8800 miles, while canal construction had stalled.

In neglecting the transportation needs of the north-west portion of their state – the future West Virginia – and supporting too many separate and competing projects, few of either the turnpikes, canals, or railroads in Virginia could turn a profit or complete their routes, and were unable to successfully tap westward into the National Road and the Ohio River economy. This cost the state its economic and demographic leadership among the

¹ <u>http://www.virginiaplaces.org/transporation/secondworst.html</u>, 4.

² Ibid., 3.

states.¹ (It was also a contributing factor to western Virginia's cession during the Civil War.) Instead, its economic and social development followed that of the southern states. It remained less industrialized, more rural and more socially conservative than even its immediate northern neighbors Maryland and Pennsylvania, with several significant implications. Politically, it virtually ensured that, when the time came, Virginia would side with the Confederacy over the Union during the Civil War. It also meant the Old Dominion's educational system would mimic that of the South, eschewing public education and progressive pedagogy until this was forced it upon during Reconstruction.

The American Prime Meridian and East Coast Survey

In the last year of his presidency, Jefferson collaborated with his friend and Treasury Secretary Albert Gallatin on two additional geographic schemes designed to symbolize the republic's new independence from England. The first was the established of the prime meridian through the nation's capital, the second, the United States Coast Survey.

When Jefferson began sending out expeditions to explore and map North America, he became aware of the need for a single prime meridian to consolidate the information the explorers would collect. The matter of an American prime meridian preoccupied Jefferson for a period of time. It was required not only for establishing longitude on land, but also to serve the American maritime trade. A national prime meridian, not depended upon another country, would be a major step in making the new republic completely self-reliant.²

¹ By 1850, its population had grown to around 1,421,000, but its share of the country's population had dropped from 18% (the largest in the country) in 1790 to 6%, the 4th largest. Approximately 1/3 of Virginia's population was slaves.

² Silvio A. Bedini, <u>Jefferson and Science</u> (New York: MacMillan, 1990), 68.

In 1793, then Secretary of State Jefferson personally surveyed and marked with a wooden post the southwest vertex of the L'Enfant Triangle¹ in what was to become the new capital of the United States. When he became president, he assigned Issac Briggs, a friend and Survey General of the Mississippi Territory, to use that wooden post as the basis for establishing the first meridian line of the United States. In 1804, Jefferson's original marker was replaced with a granite obelisk which became know as the Jefferson Stone. It was supplemented by two additional markers, the Capital Stone and Meridian Stone, the latter of which was erected north of the White House on what was subsequently known as Meridian Hill. Although Briggs finished his task and submitted the necessary paperwork, according to Silvio Bedini, "no further action was taken by Jefferson to establish a national prime meridian, presumably due to precedence of other priorities in government,"² and the Jefferson Stone was reduced to being primarily useful to local surveyors laying out parcels in the area, and as a convenient hitching post for mules pulling barges up the (long since defunct) Washington City Canal.

In an 1812 letter to surveyor and friend Andrew Ellicott³, Jefferson lamented that "a great deal is yet wanting to ascertain the true geography of our country; more indeed as to its longitudes and latitudes. Towards this we have done too little for ourselves and

¹ The L'Enfant Triangle is a prominent feature of L'Enfant's Plan of Washington, DC, formed by Pennsylvania Avenue and the intersection of a line projected due south from the White House and a line projected due west from the Capitol Building.

² Bedini, 69.

³ Andrew Ellicott surveyed many of the territories west of the Appalachians. In 1791 and 1792, George Washington also appointed him to survey the boundaries of the new capital. Eleven years later, Thomas Jefferson hired Ellicott to tutor Meriwether Lewis in survey methods before Lewis' epic 1803/04 expedition with Clark.

depended too long on the ancient and inaccurate observations of other nations."¹ When the earth's prime meridian was finally standardized in 1884, Jefferson would have been gravely disappointed to learn it ran not through Washington, DC, but London, England.

When Marcus Baker wrote in 1898 that "Jefferson would not have us reckon our longitude from a foreign meridian, or depend upon a foreign country for an ephemeris or for coast charts,"² he was referring not just to Jefferson's desire for a Washington-based prime meridian, but to the other scheme he hatched with Gallatin. This was the US Coast Survey, a project intended to survey and map the complicated and long eastern seaboard - which included Virginia - to facilitate commerce and national defense. For the job Gallatin selected a fellow Swiss, Ferdinand Hassler, who had recently completed the geodetic survey of Switzerland but left there when the Helvetic Confederation collapsed, and obtained a post as professor of mathematics at West Point (which Jefferson had thoughtfully established in 1802). He was thus highly qualified for the task, but "unfortunately for Jefferson's plans and Hassler's career, a trade embargo and then the War of 1812 delayed the acquisition of the essential [surveying] instruments [demanded by Hassler], and almost ten years passed before the Coast Survey began, by which time Jefferson had been succeeded as president by James Madison."³ Madison, however, agreed to his predecessor's scheme, and in 1816, Hassler began his survey. While the Coast Survey was shut down after only one season due to lack of funds, Andrew Jackson restored it fifteen years later, and Hassler, who had in the interim supported himself

¹ Ibid., 65.

² Marcus Baker, "A Century of Geography in the United States," <u>Science</u> 7 (173), 546.

³ Linklater, 192.

writing surveying textbooks, was recalled to finish the task. He continued to work on it until his death in 1843.¹ According to Linklater, Hassler's "meticulous insistence on accuracy drove Congress to distraction," and slowed the Survey to a crawl. "As a result, it took another fifty-five years [after his death] to survey the entire coastline from Maine to New Orleans," but to Jefferson's posthumous satisfaction, every bit of it was measured in meters, and with an error rate (checked in the 1970s) of less than 1 in 100,000.²

European influences on Virginia geography

Albert Gallatin and Claudius Crozet were not the only Europeans who shaped Virginia and America's geographical "Weltanschauung" during the first half of the nineteenth century. From transportation to school geography, such notable European geographers and educators as Immanuel Kant, Johann Pestalozzi, Alexander and Wilhelm von Humboldt, and Karl Ritter, Americans incorporated the geographic contributions and innovations of these men to form their own conception of geography and its uses and place in the new nation.

The European and American voyages of discovery had contributed to the understanding of the world by adding ever more data to the geographical data base. But the collection of more and more exact information about the earth and its inhabitants was only one element of the "new geography," of the "new science" generally that had emerged with the Scientific Revolution. What made it "new" was the move away from

 ¹ Benedict von Tscharner, <u>Albert Gallatin: Geneva's American Statesman (Geneva: private printing</u>, 2008), 81.
 ² Linklater, 194.

"exact descriptions of specific things" towards the development of "more useful ways of generalizing, explaining and communicating."¹ The emphasis was instead on formulating and testing general theories to fit these "specific things." Related to this was the emergence of the modern scientist, in this case, the professionally trained, university-educated geographer who could guide this discipline. "Most of the present fields of science [including geography] had their roots in the eighteenth century, during which time the acceptable methods of study were being formulated and reliable procedures for verifying hypotheses were being established."²

Bernhard Varenius' <u>Geographiea Generalis</u> was one example of this trend. One hundred years after Varenius, Immanuel Kant built upon the "new geography" by providing a philosophical foundation for the belief that the field of geography had a significant contribution to make. His logical division of knowledge, grouped either in accordance with their nature (the logical classification) or in accordance with their position in time and space (the physical classification), laid the foundation for the systemic sciences, such as the study of animals in zoology or rocks in geography, and provided the scientific basis for history - a **chronological** science - and geography, a **chorological** science that studies phenomena which lie side by side in space. "Kant gave geography a central position amongst the sciences, and geographers have often reiterated his views in justification of the existence of the subject and its special position among the

¹ Martin, 136.

² Martin, 136.

sciences."¹ Over time it of course became apparent that it was impossible to make such sharp distinctions between time and space, especially in the study of human geography, but Kant's formidable reputation among scholars added much needed clout to this emerging discipline.

If Kant gave the discipline its philosophical foundation, then it was two other Germans who developed geography into an independent branch of knowledge. The first of these was Alexander von Humboldt, born 1769, widely considered the "last of the great polymaths... [After his death in 1859], no other individual scholar could hope any longer to master the world's knowledge about the earth."² Trained as a mining engineer, Alexander worked as a government mines inspector in his native Prussia until an inheritance allowed him to team up with botanist Aime Bonpland to explore and study the flora, fauna, and topography of South America for five years. In 1804, von Humboldt was invited to visit the United States by Vincent Gray, the American Consul in Havana. Intimately familiar with and impressed by Jefferson's recently published <u>Notes</u>,³ and aware of the president's need for information about the president's recent Louisiana Purchase, von Humboldt accepted the invitation; he docked in Philadelphia the end of May, 1804, just weeks after the start of the Lewis and Clark Expedition.

After ten days in Philadelphia, during which time he made the acquaintance of the members of the American Philosophical Society (of which Jefferson was president), von Humboldt arrived in Washington, DC on 1 June. In the new nation's new capital, he was

¹ Holt-Jensen, 15.

² Martin, 131.

³ Ingo Schwarz, "Alexander von Humboldt's Visit to Washington and Philadelphia, his Friendship with Jefferson, and his Fascination with the United States," <u>Northeastern Naturalist</u> (8), 1, 52.

introduced to and developed life-long friendships with, among others, James Madison, Albert Gallatin, and most significantly, Thomas Jefferson. "A year after the Louisiana Purchase, von Humboldt was able to supply the US government with the latest geographical and statistical information on Mexico, such as the correct location of the western border of the new territory."¹ However, he and Jefferson also discussed other matters of geographical interest. Jefferson's <u>Notes</u>, technical details regarding astronomical observations, the feasibility of an inter-oceanic canal linking Atlantic and Pacific, gold mining, and the best location for laying a transatlantic cable were topics among others that would continue to be revisited in subsequent correspondences between the two men and between von Humboldt and Gallatin, and, much later in the 1850s, between von Humboldt and Matthew Fontaine Maury, whom he befriended when both were in Europe.

Von Humboldt remained in Washington for two weeks, after which he returned to Philadelphia, making a stop along the way in Lancaster, Pennsylvania to meet botanist Gotthilf Henry Ernest Muhlenberg and surveyor Andrew Ellicott, Jefferson's friend and cartographic tutor of Meriwether Lewis. He spent his last days in Philadelphia writing warm letters of thanks to his hosts, expressing his admiration for the United States, then sailed for Bordeaux at the end of June, 1804, never to return. Back in Europe, von Humboldt went on to write some thirty volumes based on his field studies in South America, as well as explore Russia, where the system of weather stations he helped established led to such "discoveries" as permafrost, the principle of continentality, and

¹ Ibid., 48.

the creation of the first isotherm map. He died in 1859 at age 89, one of the world's most decorated and honored scientists. Today, there are six geographical features (a bay, river, lake, sink, marsh, trail, and mountain range), four cities (in Kansas, Nebraska, Tennessee, and South Dakota), three counties (in California, Iowa, and Nevada), one university, and countless schools, parks and streets in the United States alone named in von Humboldt's honor, a remarkable legacy for someone who spent a grand total of five weeks in the country.¹ His more enduring legacy, however, was Kosmas, published between 1845 and 1862, his attempt at cramming all the contemporary knowledge of the world into five volumes. It became an instant best-seller, and the most prestigious scientific work produced to that time. Although the different volumes emphasized the different interests in von Humboldt's life, the second, fourth and fifth volumes in particular concerned what would be considered modern geography – the history of man's geographic discoveries, physical geography and human geography, respectively. Though primarily interested in physical geography, he strongly emphasized comparative studies, the unity and coherence of nature, and man's relationship to it. Like Kant, von Humboldt underscored the need to distinguish between the various emerging scientific disciplines (zoology, geology, etc), and his immense prestige gave a scientific stamp to the up-and-coming, stand-alone field of geography.

From 1827 to 1828, Alexander gave a series of immensely popular public lectures in Berlin on the subjects in his <u>Kosmos</u>. He was not, however, the only von Humboldt

¹ Index to National Geographic's <u>Close-Up USA</u> map series, 1978, and <u>www.enwikipedia.org/wiki/Alexander von Humboldt</u>.

interested in geography education. With the support of the Prussian King Friedrich Wilhelm II, Alexander's brother Wilhelm von Humboldt established a different kind of center for higher learning when he founded the "free" University of Berlin in 1809. "For the first time anywhere, the attachment of either faculty or students to any particular religious creed or school of thought was explicitly repudiated,"² marking the beginning of universities as free communities of scholars. In America, this secularization of education was evident at the University of Virginia, founded by Jefferson in 1817, and New York University (opened in 1832), whose guiding spirit was none other than Albert Gallatin.³

The other German credited with providing geography its own identity, and one who has particularly influential in America during this period, was Carl Ritter. Both a student and colleague of Alexander von Humboldt, Ritter established himself as a geographer with the publication on <u>Erdkunde</u>, a two volume study of Africa and Asia, in 1817-1818. In 1820, Wilhelm von Humboldt established the geography department at Berlin, and named Ritter as its first chair. Unlike Alexander von Humboldt and the general trend of geography, Ritter became increasingly more interested in human rather than physical geography, and gained a reputation for his emphasis on "Ganzheit," the "wholeness" of things. While he conducted his studies with great precision and logical classification, Ritter was also deeply religious, and his beliefs were strongly reflected in his work. However great the strides towards modern scientific thought and behavior, geography, like the other emerging sciences of the nineteenth century, was still a product

² Martin and James, 133.

³ Noted educator (and politician) Albert Gallatin Brown, born 1813, the father of the public school system in Mississippi and the University of Mississippi (as well as former governor and senator of the state in the 1840s & 50s), was named in his honor.

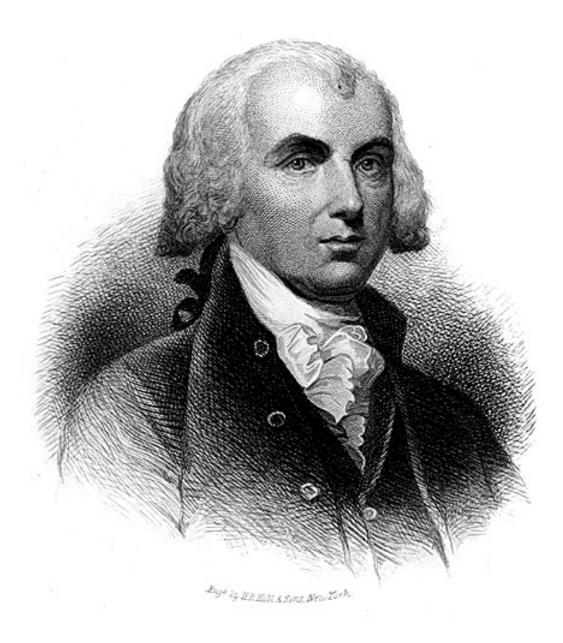


Figure 24 - James Madison, born 1751 in King George County. "Father of the Constitution" and the 4th president of the United States.

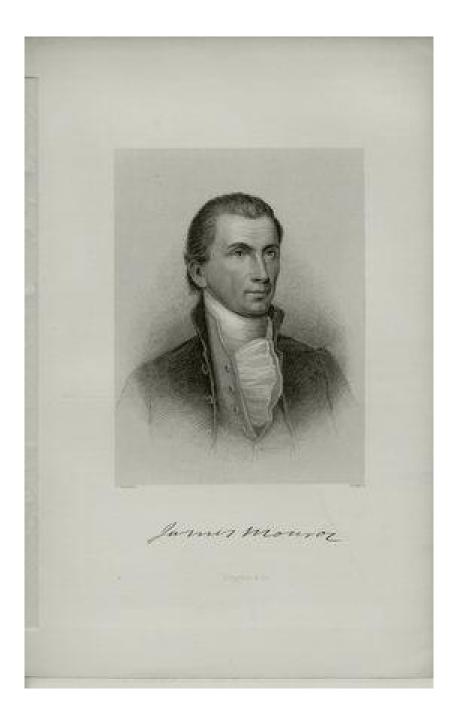


Figure 25 - James Monroe, born 1758 in Albemarle County. Two-time governor of Virginia and America's 5th president. of its time, inheriting the Mechanical philosophy that had so dominated science in the previous (seventeenth) century. This philosophy, which came to regard the world as a grand clock created by God, gave rise to a world regarded as "teleologically designed and providentially controlled." The earth was interpreted "as a functioning revelation of divine purpose" and geography "its physical and organic forms, were seen as pointing beyond itself to nature's God."¹ Ritter was a teleologist, who

studied the workings of nature in order to understand the purpose behind the order. His view of science sprang from his belief in God as the planner of the Universe. He regarded the earth as an educational model for man, where nature had a God-given *purpose* which was to show the way for man's development.²

For Ritter, the "zusammenhang" in nature, the harmony of interconnected parts which was geography, was evidence of the Creator's plan to lead mankind towards perfection.

Beyond his influence as a scholar of geography, Ritter was perhaps more significant as a teacher. Heavily influenced by the educational philosophies of Rousseau and Johann Pestalozzi - whose student he was - he warned against teaching "a lifeless summary of facts about countries and cities."³ A brilliant lecturer, Ritter encouraged his colleagues to adopt Pestalozzi's more stimulating, "look-and-see" method of learning to replace the boring, rote memorization of facts.

Ritter's influence on geography in the United States was significant, in two aspects. Firstly, Ritter's pedagogical views were carried across the pond by such disciples

¹ Livingstone, 31.

² Holt-Jensen, 18.

³ Martin, 128.

as the Frenchman Elisee Reclus and the Swiss Arnold Guyot. The latter delivered a series of lectures at Harvard in 1848 outlining the "new geography," in which he attacked the traditional descriptive geography wherein encyclopedic collections of facts were given to students to be memorized.

Bare memory, unintelligent and therefore not retentive, instead of being the useful servant, is the sole master and despot of the mind. Purely mechanical memorization makes knowledge a burden, and of instruction noting remains but the empty and passing show... Cultivate the pupil's power of thought by the exercise of his own intelligence. Thorough comprehension should precede committing to memory.¹

The "new geography," he felt, should not only describe but also compare and interpret.

"It should rise," he lectured, "to the how and wherefore of the phenomena that it

describes."2

When the Massachusetts Board of Education asked Guyot to deliver a series of lectures on the 'new geography' and the methods of teaching it, his influence on American schools spread quickly; for decades his textbooks set the standards for elementary and secondary classes in geo-graphy.³

Unfortunately, few of the American texts of this period would rise to Guyot's standard; his books, especially <u>The Earth and Its Inhabitants: Common School Geography</u> (1866) would prove to be among the few excellent American geography texts of its era.

If Guyot's teaching philosophy was considered advanced, his academic philosophy remained solidly entrenched in Ritter's increasingly discredited, "unscientific," old-school teleological theory of geography. "The conclusion is

¹ Dryer, 122.

² Martin, 148.

³ Martin, 148.

irresistible," he wrote as late as 1873, "that the entire globe is a grand organism, every feature of which is the outgrowth of a definite plan of the all-wise Creator."¹ Guyot returned to the United States six years later to teach at Princeton from 1854 to 1880, but remained unmoved to the end by the next big influence on geography and geographic education in his adopted land in the latter half of the nineteenth century, Darwin's concepts of evolution.

It was not just Ritter's *pedagogical* views which were transported across from Europe to the United States in the first half of the nineteenth century, however. The second reason Ritter proved so influential to geography here is because his *teleological* views were adopted and propagated by important American geographers like Daniel Coit Gilman or Virginian Matthew Fontaine Maury, the latter one of the most important geographers of his time.²

Matthew Fontaine Maury

Born in Fredericksburg, Virginia in 1806, Matthew was the grandson of the Reverend James Maury, whose Maury School for Boys in Charlottesville educated three Virginia presidents. A geographically-minded scholar himself, James considered knowledge of geography "one of the essential features in the education of a 'well-rounded young gentleman.'"³ In 1753, he proved his enthusiasm for western exploration

¹ Livingstone, 58.

² H. R. Mill, writing in 1901, correctly noted that "teleological modes of reasoning were tacitly accepted or avowed by almost every writer on the theory of geography" in the United States. (Livingstone, 31.) ³ www.vcdh.virginia.edu/lewisandclark/students/projects/adventurers/maurybio.htlm

when he collaborated on a planned (though ultimately unexecuted) expedition up the Missouri River. His enthusiasm for such geographic endeavors undoubtedly influenced not only his students, but his grandson, who joined the US Navy in 1825 and made three extended voyages, including one around the world, during which he made extensive studies and notes on meteorology, navigation, and currents.

When injury forced his retirement in 1834, Matthew Fontaine Maury returned to Fredericksburg and began publishing a series of works on sea navigation and oceanography based on his meticulous notes. In 1836, he wrote <u>A New Theoretical and Practical Treatise on Navigation</u>, which the Navy immediately adopted as its text on the subject. The 1847 publication of his <u>Wind and Current Chart of the North Atlantic</u> dramatically shorted sailing times on many routes, and established a standardized system of recording oceanographic data that was adopted worldwide. <u>The Physical Geography of the Sea</u>, released in 1855, is widely regarded as the first textbook of modern oceanography. In 1859, the University of Virginia attempted to lure the now worldfamous Maury to head its proposed new School of Physical Geography and Agricultural Science.¹ By then, however, Maury had been appointed superintendent of the Depot of Charts and Instruments of the Navy Department, a position he held until his resignation from the US Navy in 1861 to serve as commander in the Confederate Navy.

Wars' end in 1865 found Maury in London, where he had been sent by the Confederacy to acquire ships and supplies. Throughout the summer of 1866, he remained in London to work on a series of school geographies commissioned by New

¹ Koelsch, 275.

York publisher Richardson and Company, and which first appeared in American schools in 1868.¹ That year, Maury finally returned to Virginia to accept a teaching position as Physics (Geography) chair at the Virginia Military Institute (VMI) in Lexington, having turned down similar offers from other schools, including the College of William and Mary, in order to be closer to his former boss Robert E Lee, by then president of Washington and Lee College in the same Shenandoah Valley city.²

Maury's tenure at VMI proved relatively brief – he was there less than three years before he died in February 1873 - but during that time, he not only taught at the school but lectured extensively throughout the country, though primarily in the South. He resumed his campaign, begun before the war, for a universal system of telegraphic meteorological observations. Along with Jefferson and Gallatin, Maury also encouraged the expansion of higher education at the national and Virginia state level when he lobbied for the creation of the US Naval Academy in 1848, and after the Civil War, for Virginia to take advantage of the Land Grant legislation to establish a State agricultural college as an adjunct to VMI. This led in 1872 to the Virginia Agricultural and Mechanical College at Blacksburg, better known today as Virginia Tech. No doubt at Maury's insistence, the curriculum at the school from the beginning included such geography courses as geology, mineralogy, and surveying.³

In this endeavor Maury was aided by General Francis H Smith, a fellow Virginian who had persuaded Maury to return to his home state and VMI. Smith was himself a

¹ www.ibiblio.org/pub/academic/history/marshall/military/civil war usa/pictures/mfm, 6.

² www.answer.com/topic/matthew-fontaine-maury, 3

³ "A History of the Mathematics Department at Virginia Tech," <u>http://spec.lib.vt.edu/arc/math/math/htm</u>

professor of geography at West Point and Hampden-Sidney College before becoming both Maury's predecessor as Physics and Mathematics chair as well as VMI's first Superintendent. He held the latter position for an astonishing and tumultuous 50 years (1839-89), during which time Smith

structured VMI on the Sylvanus Thayer educational model and sought to promote this system throughout every school in Virginia and the South, both in military and non-military institutions. He also created a network of like-minded academics... who launched a movement to encourage a more practical education in the South, focusing on mathematics, engineering, and the sciences [which by extension meant and included geography].¹

As a Virginian, a geographer, and a Confederate officer during the war, Maury ranked among these like-minded academics, and was a natural choice to succeed Smith not only as teacher at VMI, but for an additional task. Since his earliest Superintendent days, Smith had wanted to create a better map of Virginia. After the Civil War, he expanded this project to include the development of "a complete geographical and geological map" of Virginia as part of a larger work on "the entire physical geography of the state."² Maury, Smith felt, was just the man for the job, and when the former agreed, Smith spent the summer before Maury's return to Virginia gathering together the desired cartographic materials. These included "fifteen local maps of the Valley of Virginia provide by Robert E Lee, drafts of maps by Thomas H Williamson, professor of engineering and drawing at VMI, and geological information from Colonel M McDonald, head of VMI's department of mineralogy and geology." In addition to these sources, Jedediah Hotchkiss, Stonewall

¹ Bradford Alexander Wineman, "Francis H Smith: architect of antebellum southern military schools and educational reform," <u>http://txspace.tamu.edu/handle/1969.1/4344</u>, abstract.

² Peter C Thomas, "Matthew Fontaine Maury and the Problem of Virginia's Identity, 1865-1873," <u>Virginia</u> <u>Magazine of History and Biography</u> 90 (2), 213.

Jackson's cartographer, offered his maps of Augusta and various other Shenandoah Valley counties.¹

Maury was thus tasked not only with the creation of a new map of Virginia, but a written work on the state's physical geography in which to print it. Time constraints prevented the map's inclusion in the resulting book's first edition in 1868, but in 1869, James H Waddell, under Maury's direction, completed a "Map of Virginia and West Virginia," which was included in the second edition of Maury's <u>Physical Geography of Virginia</u>. More on this interesting work, whose full title, significantly, is <u>Her Geographical Position; Its Commercial Advantages and National Importance</u>, later; for now it is important to note that world-renowned geographically very small part of the world.

For all his geographic and scientific achievements, however, Maury, like Ritter, remained an ardent teleologist throughout his life. Although he died some fourteen years after Darwin's publication of <u>Origins of Species</u> in 1859, and would have been privy to the heated discussions on both sides of the Atlantic concerning Darwin's biological theory of evolution, Maury sided with many of his American scientific colleagues on the issue, thereby perpetuating the creationist versus evolution debate that has raged in the United States to this day.

The title of Maury's Virginia geography, combined with his teleological views, suggests how far geography in Virginia had come in some 250 years. Granted, since the

³ Thomas, 213.

Europeans set foot on its soil, Virginia has been there for the taking. Yet, this terra incognito also inspired real apprehension. By the 1800s, however, the geography of Virginia was no longer feared, as during early colonial times, or simply admired, as it was done during the Romantic era of the early 1800s. With the onslaught of the Industrial Revolution in the United States, the geography of Virginia was to be used to position itself, as Maury does, as the logical Eastern transportation conduit to European trade and commerce. His book was less a traditional geography text than propaganda to advance an agenda, and one by several "eminent Virginians [who] were active in bringing to the attention of the outside world all the potential resources of the Old Dominion calling for development."¹ In that sense, he was in keeping with the Founder's and early nineteenth century American leader's conception and use of geography as an area of knowledge and way of thinking which justified the nation's resource exploitation, territorial expansion and domination. In another sense, his tenacious teleological beliefs were shared by another American geographers and scientists long after they were abandoned by their European counter-parts, a fact reflected in geography texts and thus geography education for the remainder of the 1800s. As believes Virginia, so does America.

Geography Education

Maury was similarly in keeping with Virginia's and the country's political elite such as John Adams, Benjamin Franklin, Noah Webster, and Jedediah Morse - in his fundamental interest in education, particularly geography education, to forge an

¹ Jean Gottmann, <u>Virginia at Mid-Century</u> (New York: Henry Holt, 1955), 123.

American identity and impart the idea of a political, economic, and geographic "manifest destiny," as it was beginning to be called. Franklin, for instance, who famously stated that "nothing can more effectively contribute to the cultivation of a country than a proper education of its youth," in 1749 published a pamphlet on the aims of education entitled "Proposals Relating to the Education of Youth in Pensilvania." (He coyly called it a "Paper of *Hints* towards forming a Plan for that Purpose.") As founder of the American Philosophical Society to promote useful knowledge in the sciences and humanities, Franklin placed geography, including cultural geography, near the top of his list of fields to master.¹

Noah Webster was born in 1758, a generation after Franklin, but shared with him and the Founders the desire to break not just politically but culturally with England and foster an independent American identity. In his 1788 essay "On the Education of Youth in America," Webster echoed Franklin's sentiments regarding the role of education – and geography education – in the new nation.

Every child in America should be acquainted with his own country. He should read books that furnish him with ideas that will be useful to him in life and practice. As soon as he opens his lips, he should rehearse the history of his own country...A selection of essays, respecting the settlement and geography of America... should be the principal school book in the United States. These are interesting objects to every man; they call home the minds of youth and fix them upon the interests of their own country, and they assist in forming attachments to it, as well as enlarging the understanding.²

¹ Benjamin Franklin, "Proposal Relating to the Education of Youth in Pensilvania," 1749, www.archives.upenn.edu/primdocs/1749proposals.html

² Noah Webster, "On the Education of Youth in America," 1788, http://press-pubs.uchicago.edu/founders/documents/v1ch18s26.html

Like Jefferson, Noah pushed for governmental funding for public schooling. "In our American republics," he wrote in his essay, "where government is in the hands of the people, knowledge should be universally diffused by means of public schools. Of such consequence is it to society... that I conceive no Legislature can be justified in neglecting proper establishments for this purpose."¹ Webster is of course best know for promoting nationalism through his famous "Blue-Backed Speller,"² which first appeared in 1783 and sold over 100 million copies over the next century, and his series of Dictionaries of the English language, published between 1806 and 1828, which were revised and expanded after his death in 1847 as the Merriam-Webster Dictionary. These works were designed to standardize and promote *American* spelling, grammar and language usage over that of *British* English and other languages and help unite the country under a common tongue.

As Martin Brueckner points out, however, spellers and dictionaries were not the only, or even the best, means of achieving this. Jedediah Morse was three years younger than fellow New Englander and friend Noah Webster, and like him, taught school after attending Yale. Morse was equally disturbed by the dearth of American-born school texts, especially geography texts oriented to the forming nation. "It is to be lamented," he wrote in the introduction to his ensuing geography text,

that this part of education (geography) has hitherto been so much neglectted in America. Our young men, universally, have been much better acquainted with the geography of Europe and Asia than with that of their

¹ Ibid.

² Its proper title was <u>A Grammatical Institute of the English Language</u>, but is popularly known by its blue backed cover.



Figure 26 - Jedediah Morse family by Samuel Morse, 1810.

Jedediah Morse (1761-1826) was a prominent clergyman and educator. His observation that "so imperfect are all the accounts of America hitherto published ... that from them very little knowledge of this country can be gained" prompted him to author the first "American" geography texts, which remained popular for many decades. His texts and maps fostered nationalism and territorial expansion. "The Mississippi River was never destined as the western boundary of the American Empire," he noted in 1805.

His son Samuel was the inventor of the electro-magnetic telegraph.

own State and country. The want of suitable books on this subject has been the cause, we hope the sole cause, of this shameful defect in our education. Till within a few years we have seldom pretended to write, and hardly to think for ourselves. We have humbly received from Great Britain our laws, our manners, our books, and our mode of thinking; and our youth have been educated rather as the subjects of the British King than as citizens of a free republic. But the scene is now changing. The Revolution has been favorable to science, particularly to that of the geography of our own country.¹

At age 23 (in 1784, a year after the appearance of Webster's "Speller,") Morse produced <u>Geography Made Easy</u>. An instant success, it was followed five years later by the much more substantial <u>American Geography</u>, generally regarded as the first American geography text. <u>American Geography</u> and several other books in his series went through some twenty editions and enjoyed such wide use they earned Morse the unofficial (if debatable) title of "father of American geography."

What makes his geographies particularly noteworthy is their purpose. As Morse wrote in their introduction, he hoped "that our youth of both sexes, at the same time that they are learning to read, might imbibe an acquaintance with their own country, and an attachment to its interests."² "Like the Federalist language reformer Noah Webster," Brueckner argues, "Morse sought to achieve a degree of national identity by aligning the overall practices of alphabetic training with geographical knowledge. Given the programmatic rethinking of elementary literary instruction, the map became a product of alphabetic learning."³ Morse followed Webster's lead in "Americanizing" and standardizing place-names, and included American-drawn maps in his texts, such as the

¹ Jedediah Morse, <u>Geography Made Easy</u> (New Haven, CT, 1784), i.

² Ibid., iv.

³ Brueckner, 119.

one by Amos Doolittle, who created one of the earliest national maps of the United States following the Treaty of Paris that ended the American Revolution. All this was important, because "in the first decades of the United States' existence, the image of the national map was one of the few visual artifacts demonstrating what many perceived to be either an abstract or even untenable fiction, namely that there could be a national union between the disjointed regions and politically disparate people."¹

With the War of 1812 concluded in America's favor, this fiction of a United States became more of a fact, however, and by the 1820s, "geography was no longer used exclusively for the purpose of national consolidation but was employed to sanction and legitimate the expansion of the national domain." To complete Brueckner's thesis,

To a literate population that had been educated in a geographical vein, the incompleteness of the North American geography on maps and in textbook entries was construed as an eyesore and a source of national embarrassment... The geographically literate eye desired to see the map extending neatly across the entire continent, achieving not only a political imperative but an aesthetic one.²

Thus America's Founders and post-revolutionary leaders, many of whom were themselves highly geographically literate, promoted and counted upon the geographic literacy of the American people in order to successfully conclude that unique political and social experiment called the United States. Once done, they then turned to geography to justify and fulfill their next vision of the United States, its manifest destiny – a term first coined in 1845 - to hold and control the land from coast to coast. If this was

¹ Ibid., 121.

² Brueckner., 238.

the American geographic "Weltanschauung" of the first half of the nineteenth century, was it reflected in its schools, and if so, then how?

School Geography

By teaching literacy through geography, Morse and the many other geography textbook writers who soon followed him not only helped the earliest generations of young Americans to read, but through geography to infuse in them a Weltanschauung based on a sense of unique American nationalism historians today refer to as American exceptionalism. God and geography favored America, and gave its (white, Christian, preferably Protestant) people both a special standing and a special responsibility to spread American liberty and democratic ideas over the continent, even beyond. Initially Americans believed this could be done peacefully. "Settlement would spread westward, and when the time was right, neighboring provinces, like ripe fruit, would fall naturally into American hands. Texas, New Mexico, Oregon and California ... dominated the American expansionist imagination. With time [however], Americans became less willing to wait patiently for the fruit to fall,"¹ and the United States had to resort to more coercive means to gain most of these areas. By 1848, the new nation had grown by another 1.5 million square acres, and possessed all the territory of the present-day United States, save Hawaii, Alaska, and a few smaller areas acquired later through territorial adjustments.

¹ James West Davidson et al., <u>Nation of Nations: A Narrative History of the American Republic</u>, 3rd ed. (Boston: McGraw Hill, 1998), 451.

"Empire as a way of life," as William Appleman Williams calls it, was a pervasive theme in the nation's popular press and political speeches, and, not surprisingly, in the schools.

As ordinary citizens became involved in the fantasy and process of colonization and western expansion, their desire for geographical knowledge elicited calls for the general dissemination of geographic education. This call was quickly met by the various sectors of the country's emerging culture industry, and several organizations of the new social reform movement took up the cause of promoting the study of geography. In a campaign that eventually resulted in the democratize-tion and professionalization of public education, a medley of teachers, religious leaders, and middle-class patrons ... lobbied successfully for the inclusion of geography and map-making into the nation's primary and secondary school curriculum.¹

The American publishing industry quickly capitalized on the subsequent demand for geography texts, and the first half of the 1800s produced an impressive number of school geographies to compete against Morse's offerings. These texts deserve closer scrutiny, for as both Charles Redway Dryer and Marcus Baker make clear, the "materials for a history of geographical education in the United States are scant and not easily accessible."² It is from Morse's and other texts that "we may learn something of the state of the art of geographic teaching."³ As Dryer noted in his 1924 study on a "Century of Geographic Education in the United States,"

there is no better index of what is being done in any school subject than that furnished by the textbooks used. Authors of successful books must take into account the general character of the demands made by the schools, and these are determined by the stage of development of the subject, and by the qualifications of the teachers and school authorities.

¹ Brueckner, 245.

² Dryer, 119.

³ Baker, 544.

In order to find a publisher and secure adequate sales, the textbook must not fall behind the standards of the time. Again, textbooks are usually written by the more enterprising and able teachers of the subject, each of which is impelled by the conviction that he can produce a better book than his rivals have done. Consequently, each new book is likely to be better, at least in some respects, than its predecessors. Thus a constant improvement, in one direction or another, is secured. The books are all tested and sifted in the schools, and the fittest, that is best adapted to the general and local conditions, survive. The value of the textbook as an index of education is enhanced by the fact, that it, more than anything else, determines the character of the instruction given. Outside the colleges and universities, not one teacher in a hundred does much more than the textbook indicates.¹

Morse's texts were of course not the only ones available to teachers and students of geography during this period. "If the American people in the early part of the nineteenth century lacked interest or intelligence in the subject of geography, it was not for want of available information. It was a period when books were written, published, and presumably sold and read, of which the number, scope and monumental character are a wonder and a puzzle to the present-day student."² Dryer does not mention Morse, but points to several other texts published between 1789 and 1812.

In 1815, for instance, William Guthrie penned a voluminous (1,200 page, 730,000 word) two-volume <u>New Geographical, Historical and Commercial Grammar and Present</u> <u>State of the Several Kingdoms of the World</u>. As the title suggests, it encompassed far than what we today expect of a geography text. "The plan of the author seems to have been to tell everything known about every part of the world, making wholesale use of information from ... every source, so that a geography of that period took the place of

¹ Dryer, 119.

² Ibid., 117.

several classes of the literature of today."¹ Elijah Parish's <u>A New System of Modern</u> <u>Geography</u>, published in 1812, was much more manageable, and "of a type more familiar to us... While the present-day reader is impressed by the attention given to religion and curiosities," Dryer judged its contents to fall well within the scope of geography as conceived by his Association of American Geographers.²

If Morse's texts were not the only "American-grown" school geographies available during the first several decades of the early republic, then they are nonetheless worth a closer examination because they were extensively and widely used. Marcus Baker emphasizes the high esteem in which the work of Morse was held, citing as proof not only its many editions, but Peter Parley's³ boyhood school memories of Morse's <u>Universal Geography</u>, which Parley referred to as the "mammoth monument of American learning and genius of that age and generation."⁴ So what did Morse's texts cover? As Baker rightly notes, "the points emphasized by him are the points which were of commanding interest in his day."⁵ As such, the texts devoted a fair amount of space to such topics as the country's fertile soils and healthy climate, but in keeping with America's emerging transportation revolution, they dwelt especially on transportation in general, with a particular focus on navigable rivers and lakes such as the Ohio and Mississippi Rivers and the Great Lakes. "By means of these various streams and collections of water the whole country is checkered into islands and peninsulas," he

¹ Dryer, 118.

² Ibid., 118.

³ Peter Parley was the pseudonym for Samuel Griswold Goodrich, a very popular nineteenth-century author of children's books, which embraced geography, history, biography, science, and miscellaneous topics.

⁴ Marcus Baker, "A Century of Geography in the United States," <u>Science</u> 7 (173), 544.

⁵ Ibid., 544.

wrote. "The United States, and indeed all parts of North America, seem to have been formed by nature for the most intimate Union. For two hundred thousand guineas North America [- notice he does not confine himself to the US-] might be converted into a cluster of large and fertile islands, communicating with each other with ease and little expense and in many instances without the uncertainty or danger of the sea."¹ So important did Morse consider the Ohio River that he ventured to speculate that the nation's new capital would be located along its banks. Morse's water-based transportation network never materialized on the scale he prognosticated, but did reflect Virginia's and the country's turn-of-the-century love affair with canals which lasted, like the popularity of Morse's books, through the 1840s.

Morse's text also accurately predicted – and urged - the United State's territorial expansion. "We cannot but anticipate the period as not far distant," he wrote in 1791, "when the American Empire will comprehend millions of souls west of the Mississippi. Judging upon probable grounds, the Mississippi was never designed as the western boundary of the American Empire. The God of Nature never intended that some of the best parts of his earth should be inhabited by the subjects of a monarch 4,000 miles from them." As Baker points out, when President Monroe spoke about "America for Americans," "he did not create or express new or strange doctrines, but simply gave expression to an abiding conviction of the American people"² as reflected in the popular literature, including geography texts.

¹ Baker, 544.

² Ibid., 545.

Today, one hundred years after Baker's assessment of Morse's text - an assessment itself a product of its time - contemporary geographers such as Kieran O'Mahoney consider Morse's geographies "terrible, steadfastly national, narrow in matters pertaining to religion, and ultra-conservative in moral tone. [They were] merely literary accounts of geographical phenomena that were devoid of any intellectual stimulus."¹ Douglas Lawson concurs. "During practically the entire nineteenth century... geography remained a study of relatively unrelated physical facts in topography, geology, and political divisions, with little classroom emphasis on any functional or social implications of the subject."² Morse's competitors, such as Daniel Adams' Geography (1830), William Woodbridge and Emma Willard's popular Rudiments of Geography (1822), or S.S. Cornell's Primary Geography (and other books in the series, first available in 1854), were all more or less alike in content and tone, and that is a "large compendium of unrelated, encyclopedic information," focusing the country's god-given greatness, which justified its manifest destiny to not only to survive but thrive as an American "Empire," as Morse called it. Jesse Olney's Practical System of Modern Geography (1831) view of the native American Indians was typical. While "in general, of a large size, of a robust frame, and a well proportioned figure, free from defects of organization and distinguished for bravery and native eloquence," they were also "ignorant, barbarous, and warlike," justifying the continued westward expansion of

¹ O'Mahoney, 33.

² Douglas E. Lawson, "Geography Then and Now," <u>The Elementary School Journal</u> 41 (8), 598.

the new nation at the Indian's expense.¹ As such, the only discernible difference between these geography texts lay in their pedagogy method.

Brueckner contends that "geographers, like most educators of the time, engaged in a highly specialized pedagogic debate" about how to "construct a durable geographic memory. The debate pitted the residual teaching philosophy of John Locke against the recently devised methodology by the Swiss pedagogue Johann Pestalozzi."² Educators still generally accepted Locke's belief that a child's mind was a *tabula rasa* which did not contain any innate ideas. This blank slate, when young, formed "associations of ideas" which became the foundation of the self. The question revolved around the most effective way of inscribing and molding that blank slate. "For Morse, the geography lessons of the 1810s and 1820s were still those of the 1780s and 1790s; geography was a matter of literary discipline in which national feeling became bound to the reader through the oral memorization of textbook knowledge... In the name of nationalism, geographic instruction was continually tied to one of the nation's self-constituting mechanism, the spoken and written word."³ Towards this end, "the dominant, if not the sole purpose of author and publisher was to present the material in the best form for memorization by the pupil."⁴ Indeed, they devised innumerable creative and "helpful" ways to retain and recite geographic knowledge. Most geography texts during this time continued to ape Morse's tried-and-true, old memoriter, question-and-answer pedagogical method because it was the easiest way for under-trained teachers to dispense their lessons. "The

¹ Jesse Olney, <u>A Practical system of Modern Geography</u> (Hartford: DF Robinson, 1831), 119.

² Brueckner, 246.

³ Brueckner, 246.

⁴ Dryer, 120.

catechetical method of teaching prevailed prior to 1800 and did not entirely pass out of use during the ensuing century."¹ There were, however, a few notable exceptions.

Some textbook writers and educators, most notably Willard and Woodbridge, advocated the pedagogy of the Swiss Johann Pestalozzi (1746-1827), who put Rousseau's theories to practice. Like Arnold Guyot, they argued that the road to better geography teaching and learning lay not in the creation of a better system of rote memorization and recall, but in the adherence to a system that emphasized the visual over the verbal, the active over the passive, the deep over the superficial learning. "Students [should be] trained to see the world, not to memorize it," is how the <u>Academician</u>, one of America's earliest teaching journals, published by geographer Albert Picket, described Pestalozzi's doctrine of "Anschauung" in 1819.² Pestalozzi is today widely and highly regarded as one of the founders of modern pedagogy, but if his progressive, hands-on approach to geography education ever gained a large following in the United States, the available textbooks do not reflect this. The vast majority of the texts, and by extension, the pedagogy of the entire nineteenth century continued to rely upon and teach the God-centered, memory-based geography of old.

Virginia School Geography

There is no reason to believe Virginia differed from the rest of the growing nation in this regard. In fact, as the Old Dominion began to loose its predominance among the

¹ Lawson, 598.

² "On Teaching Geography," <u>Academician</u> I (1819), 245.

other states, its social and legislative structure became more conservative, which would not have been particularly conducive to the introduction of progressive pedagogy. Case in point, Virginians did not even have a public school system until it was forced upon them after the Civil War. Granted, several attempts were made in the Virginia legislature between 1818 and 1846 to enact Jefferson's "Bill for the More General Diffusion of Knowledge," but they made little progress in this direction. The sole exception was the establishment in 1810 of the Literary Fund, "which provided the first, albeit modest, state support of education in the Commonwealth."¹ This Fund was designed to provide free schooling to Virginia's indigent white children out of monies collected from "escheats, confiscations, fines, penalties and forfeitures, and all rights accruing to the state as derelict."² It did thus not cover all children (better-off whites and all blacks were excluded), but it was at least a start. But the poor did not initially avail themselves of these schools. As Heatwole quotes from various Country Commissioner's reports in 1855, "many false prejudices exist against the system owning to false pride and children grow up in ignorance rather than be educated from public funds." "The main defects," another Commissioner wrote, "are the lack of qualified teachers."³ The low attendance at these schools resulted in a surplus for the Literary Fund, which soon became a slush fund to further special interests. After 1818, for instance, part of the Fund's money went to institutions of higher education, such as Jefferson's newly-minted UVA, VMI, and Emory & Henry and Hampden-Sydney Colleges. This proved unpopular in the western

¹ Mullins, 8.

² Heatwole, 104.

³ Heatwole, 116.

counties of the state, which had no such institutions, and feared loosing funding for their primary schools. In 1829, additional money was siphoned from the Fund when a portion of it was used to fund a public library, and in 1838, to establish asylums for the deaf and blind.

"A Special Act Of February 25, 1846," was the last of several attempts before the

Civil War to enact meaningful legislation in Virginia for the establishment of a free

public school system. This act

was an effort to establish directly by statute a complete free district school system in certain counties which had already indicated by voluntary citizen's petitions a favorable attitude towards local taxation for education. Tuition free education for all white children between the ages of 5 and 21 years of age was provided by this act. The assent of two-thirds of the electors of the country was required before this plan could be put into operation. The sentiment among most county voters was one of outrage against the tyranny of the state in imposing a direct tax on its citizens. In a few specific instances, the plan was adopted by a majority of the electors. Albemarle, Norfolk, and Washington counties were given this special privilege.

As Foney Mullins concludes,

as a result of the Act of 1846, friends of education again were reminded of the difficulties that prevailed in establishing a common school system for the Commonwealth. Securing compulsory taxation for schools to help augment the Literary Fund seemed impossible in the years leading up to the Civil War. Education remained a political and economic debate among citizens, legislators, and reformers prior to 1861. That year marked the end of the Literary Fund as a means to educate children in the Commonwealth of Virginia. After the War, its uses would be very different.¹

Despite ante-bellum Virginia's inability to establish free schooling for all, some

65,000 poor white children (out of a total population of 1,421 million, 894,800 of them

white) did attend school in 1851, half of them in "actual daily attendance fifty-four days a

¹ Mullins, 31.

year, at a cost of four cents a day."¹ According to the 1850 census,² there were 109,775 students "attending school" in Virginia out of a population of 345,265 white school-age (age 5-19) children, which, if accurate, meant that approximately one-third (32%) of Virginia's children were receiving some sort of schooling by mid-century. Of those, 67,438 (62%) attended public schools, 9,068 (.8%) attended "academy and other" schools, and 1,343 attended "colleges."³ In comparison to states with similar populations, 32% was a very low number indeed. For instance, Tennessee, Pennsylvania, Ohio, and Massachusetts had school attendance percentages of 47%, 61%, 67%, and 73%, respectively.

Of those children who did attend elementary school in Virginia in the first half of the nineteenth century, Heatwole provides an example of their academic experience from the writings of an Old Field school student (and future professor) in Accomac County in 1847. Having first described the school building, Edward S. Joynes chronicled:

Of gradation, there was no thought. Each boy and girl recited, either alone or in class, as his or her condition required. School was from nine to twelve, and in the winter from one to four; in summer from two to five. There was no regular school term. There was always school when there was a teacher; and as in those days a teacher usually meant anybody who could find nothing else to do, it usually continued, with somewhat irregular intervals, all the year round. Attendance was, of course, conditioned more or less by the necessities of farm work at home; but that made no difference. Each fellow, on returning, entered just where he could.

[As regards] the curriculum and method of teaching, our tasks were set in the book, and we 'said them' from the book, and, usually, word for word.

¹ Heatwole, 109. By 1859, this figure had rise to 54,232.

² There are no educational statistics available for the 1860 census.

³ That leaves some 31,926 unaccounted for.

Often the questions were at the bottom of the page, which saved trouble to both scholars and teacher. We wrote our copies over and over; we 'ciphered' till we 'got the answer' - no questions were asked. If, after due trial, we could not get the answer, we were thrashed, and, after brief explanation, we tried again.

We studied but few subjects – literally the three R's, but these we studied thoroughly... We used Olney's <u>Geography</u>; we got the text book by heart. Of the philosophy of geography and of physical geography, as now taught, we knew nothing. But what we did learn we learned so thoroughly, and reviewed so often, that when I was ten years old there was hardly an important town, seaport, or waterway in the world that I did not know, by name and location at least. This, I now see was a very slender and superficial kind of knowledge; but, such as it was, it was positive and it was accurate.¹

Geography thus continued to be part of the curriculum of the elementary education of Virginia's schools throughout the first half of the 1800s, though the method for teaching it – and all other subjects, for that matter – remained largely unchanged from centuries past. If more progressive pedagogy was practiced anywhere in the Old Dominion, then it would have been at the numerous, more prestigious private Academies which developed out of the Old Field Schools and multiplied rapidly during this time. There were approximately twenty-five of them before the Revolution, some of which become the nuclei for later colleges and universities, but by 1860, Heatwole counts some 250 academies, with at least one in every county. These academies, Heatwole contends, "were the type of schools that spread through Virginia and served as the means of education for the majority of the children of the state."² Over half of these were either women's or co-educational institutions, and offered a "college prep" curriculum of the

¹ Heatwole, 109.

² Ibid., 127.

classics (Latin, Greek, rhetoric), mathematics, and, significantly, the sciences (physics, chemistry, and botany).

The teaching of the sciences came with the movement that demanded a more practical type of training, and were patronized and maintained by the growing influence of the middle class, and the wide-spread movement of the industrial, economic, and new political life of the state. This type of education [as opposed to free public education] persisted so long in Virginia because of the transition in political ideas, represented by Jefferson's political philosophy of local self-government, and the fear of centralized power in matters of state control.¹

If public schools made little headway in the Old Dominion, then higher education appeared to enjoy better fortune. "From 1818 to 1848 the people of the state became more interested in higher education and secondary education than in a system of primary schools."² William & Mary and Hampden-Sydney, the only two colleges or universities that existed in Virginia before independence, were thereafter joined by Washington & Lee (1798), University of Virginia (1818), Richmond and Randolph Macon (1830), Emory & Henry (1838), Virginia Military Institute (1839), and Roanoke (1842).

UVA was of course the creation of Thomas Jefferson. "Beginning early in 1800, when he was Vice-President of the United States," William Koelsch wrote, "Jefferson, skeptical of the prospects for a reformed William & Mary, began corresponding with Joseph Priestly, Pierre Samuel Du Pont de Nemours, John Adams, and others on what a true university should look like. He developed a list of subjects, including both geography and history, that, he wrote Priestly, would be 'useful & practicable for us.'"³

¹ Heatwole, 136.

² Ibid., 103.

³ Koelsch, 274.

The inclusion of geography as a field of study was for Jefferson never at issue; his only dilemma lay in how that subject was to be grouped. After wrestling with this for several years, he finally decided, and the Board of Visitors in 1824 approved, Jefferson's academic plan, which placed both "ancient" geography and history in the School (Department) of Ancient Languages, and "modern" geography and history in the School of Modern Languages. "By that action [he] placed university-level geography firmly within the humanities, as a form of what Varenius would have called 'special geography."¹¹ Geography continued to be taught at UVA under Jefferson's humanities heading until shortly before the Civil War, when, as stated earlier, a proposed School of Physical Geography and Agricultural Science attempted to lure Matthew Fontaine Maury to head it. Neither the School nor Maury materialized at Charlottesville, but UVA's actions "is of interest as showing the future direction American academic geography would take. Geography was not given independent departmental status at the University of Virginia until after World War II, and then for only a comparatively brief period."²

The place of geography in Virginia's (and the nation's) other colleges and universities during this period is harder to nail down. The course of study at Hampden-Sydney included, among other subjects, the ancient languages, mathematics, trigonometry, physics, moral philosophy, and surveying,³ and Richmond College's curricula additionally covered history, economics, education and "science."⁴ Emory & Henry and Roanoke appeared to demand similar course work. As Heatwole emphasizes,

¹ Koelsch, 274.

² Ibid., 275.

³ Heatwole, 145.

⁴ Ibid., 157.

"upon the schools and colleges established in Virginia and the South after the 1840s one can detect the University of Virginia stamp. In form of administration and standards of scholarship, method of instruction and other fundamental policies, the University of Virginia has been a model."¹ If this is indeed true, then it can be inferred that Jefferson's strong believe in academic geography manifest itself in Virginia's (and at least the South's, if not the entire nation's) other higher education institutions. This was certainly the case at VMI, where the school's first Superintendent, geographer Francis Smith, from the very beginning not only embedded geography in the curriculum, but did so based on a progressive educational model of the kind followed at West Point. The same could be said of the United States Naval Academy in Annapolis, championed by Maury and founded during this period in 1848, which, like its Army counterpart established by Jefferson in 1804, has since its inception emphasized a curriculum that included such geographical subjects as mathematics, navigation, and natural philosophy.² Today, all majors at West Point require either Physical or Human Geography coursework.³

When George Washington became the new nation's first president, he inaugurated the so-called Virginia dynasty of leaders who dominated the United States' formative years. From 1789 to 1824, for the first 35 years of its history, four Virginians took the lead in shaping the American conscience from independence, through nationalism, to fledgling expansionism. Throughout the first half of the nineteenth

¹ Ibid., 194.

² www.usna.edu/VirtualTour/150Years/

³www.dean.usma.edu/Curriculum/CurriculumBriefing

century, these geographically-minded presidents and their advisors and colleagues relied on geography to propagate their geographically-based Weltanschauung. Such geographical activities as land acquisition (the Louisiana Purchase and Mexican War), land distribution (Northwest Ordinance sales and Jackson's Indian Removal policies), land mapping (NW Ordinance and Coastal Surveys), and transportation projects (the Erie Canal, National Pike, and, just around the corner, the Trans-Continental Railroad) were all attempts to foster cultural unity and purpose. In many instances, Virginia and Virginians took the lead, so what happened in the Old Dominion was soon mirrored in the rest of the country.

While home-grown, this American Weltanschauung nevertheless contains a palpably European influence. Kant, the von Humboldts, Pestalozzi, Ritter and others helped shaped geography in Virginia and America, especially as it pertained to academic geography. Jefferson, Gallatin, Webster, Morse, and Maury were all influenced by these German and Swiss geographers and educators, and, ironically enough, used the knowledge gained from them to break free from European intellectual and cultural dominance and create an independent, American identity and path. They regarded formal education as the crucial means for achieving this end. As such, school geography at all levels, but particularly in the elementary grades, both reflected and propagandized that agenda, and these five men wasted no time established schools and publishing geography books, especially school texts. As Brueckner makes clear, "early national geography textbooks are at the heart of the geographical literatures so prominent in the new Republic; these widely published books created and informed the geographical consciousness that pervaded American social, political, and personal identities."¹ The map of the United States was changing with unprecedented speed. Boundaries and people were on the move, transforming the look of the land in Virginia and the country as a whole. Informed by their own geographically-based Weltanschauung, the new country's political and social leaders perceived that the best way to explain and justify geographic change was through geographic literacy. Jefferson was correct; transportation and education systems were the centripetal forces that forged a nation.

¹ Brueckner, 145.

From Civil War to 1900

Chapter Four

Antebellum America featured a far more complex society than it had been during its colonial and immediate post-Revolutionary period. It was becoming increasingly ethnically, occupationally, and geographically diverse, it was growing in size and wealth, and, thanks to a successfully weathered War of 1812 (often called America's Second War of Independence), it was a nation and country whose future was now not only secure, but politically and economically promising. Slowly, Americans themselves began developing a sense of self, different from their European ancestors and former overlords. One component of this emerging American identity included the very geographical notion of territorial expansion. Americans had always been very mobile, but their geographical restlessness, desire for material betterment, and a providential belief in the superiority of their institutions and belief systems gave rise to "Manifest Destiny," which diffused the American way of life from sea to shining sea by the 1840s. This rapid resettlement of people was potentially politically destabilizing in and of itself; one of the institutions making the trip which magnified this instability was slavery. Newly gained territory had to be mapped, settled, and eventually politically incorporated; the question of whether or not these territories would be admitted as "free" or "slave" states, as well as the philosophical issue of slavery itself, would by mid-century reach such fervor that even

such seasoned Virginia leaders as John Tyler could keep it from eruption. His Virginia Peace Convention failed to stave off war, the disastrous results of which demoted the Old Dominion from a leader to a follower for the next century.

In 1955, Jean Gottmann's geography of <u>Virginia at Mid-Century</u> paid tribute to the state's storied early history. "The first two centuries were indeed an epoch of greatness for Virginia. It was the largest British colony in America and produced in the eighteenth century an extraordinary array of great men who contributed significantly to shape the American nation and culture. Such an inheritance has made Virginians rightly proud of being natives of a land the sons of which achieved such glory."¹ The most obvious of these "sons" included the members of the so-called Virginia dynasty of presidents, but other Virginians, as well as three additional presidents of the 1840s, made their mark on geography and geography education in Virginia and the United States during the middle and latter half of the 1800s. As the April, 1929 issue of <u>National</u> <u>Geographic</u> aptly noted, "in the matter of extending the domain of the United States, Virginians played as vital a part as in its formation and the charting of its curse through the years."²

Despite the presence of so many great minds, and its "opening under seemingly favorable auspices" early in the next century, however, the latter half of the 1800s "was one of tragedy for the Old Dominion, as for the whole South; the War Between the States

¹ Gottmann, 54.

² William Joseph Showalter, "Virginia – A Commonwealth That Has Come Back," <u>National Geographic</u>, LV (4), April, 1929, 463.

came at a time when the rural economy of Virginia was beginning to enjoy a new prosperity."¹ The most significant event in the state's history, the American Civil War not only abruptly unseated Virginia as one of the country's most dominant states, but brought about several specific, momentous changes to its geography and educational system, ones which continue to resonate to this day.

Territorially and demographically, Virginia shrank by over 1/3 and 1/4, respectively, due to the secession of West Virginia and war casualties. Physically and economically, it was devastated by the unrelenting fighting waged on its soil for four years. Politically and socially, it emerged on the loosing side of the war, and was subject to federal oversight and such reconstructionist requirements as manumission and universal public education before it was readmitted into the Union in 1870. Cartographically-speaking, the war, as wars often do, spawned technical innovations in mapmaking and produced a generation of cartographers like John Wesley Powell who had ample opportunity to ply their trade in Virginia during the war and in the rapidly expanding West afterwards.

One positive outcome of the Civil War in Virginia involved education. One of the conditions for re-entering the Union was the establishment of universal public education. The introduction of free public schools and several land-grant institutions such as Virginia Tech provided a long-needed boost for education, including formal geography education, and the subject remained popular for as long as the nation's land acquisition,

¹ Ibid., 99.

exploration, and population dispersal westward continued. Virginians and non-Virginians alike remained interested in their country's ever-changing landscape, and the popularity of academic geography in Virginia thus continued unabated and unaffected by the state's late nineteenth century downturn. This did not however mean the subject remained static or free of its own pedagogical and especially philosophical challenges. Rote memorization provided the "where," but not the more involved and ultimately more useful "why," "what," and "so what" asked of the New Geography emerging from Europe. For most students, however, geography never got beyond the "where." Not only would the next step in geographical literacy have required more knowledgeable teachers and advanced pedagogy than could be expected of most schools and teacher colleges, but it would have (and did) embroil educators into the fierce debates concerning Darwinism. Another perusal of geography texts of this period reflects both the pedagogic and philosophical bend of the country's geography scholars – who wrote the books - and its educators – who taught the books.

Geography in Virginia during the nineteenth century was constantly evolving and changing, but in the first sixty years of the century, this evolution and change was arguably positive. For instance, Virginia re-gained territory with the retrocession of the Virginia portion of the District of Columbia in 1846, and began diversifying its agricultural and economic activities. Its transportation system was greatly expanded, and there were increasing (if still limited) educational opportunities. Unhappily, the geographic location of Virginia, its place on the map which during colonial times and early nationhood had been so advantageous for successful settlement and resource exploitation, during the Civil War and the remainder of the century proved a liability; during the last forty years of the 1800s, the look of the land in Virginia devolved for the worse. While some changes brought by the war – abolition of slavery, a public school system, and more and better maps of the land – made Virginia "a better place" in certain respects,¹ the impact of the conflict was so severe it took until the turn of the century for it to recover physically and economically, (although it never regained its antebellum prominence.) For a variety of reasons – not just the war - industrialization, urbanization, and the nation's territorial expansion, exploration, and other geographic activities left Virginia largely behind. By the second half of the nineteenth century, Virginia was no longer a geographic (or presidential) leader but a follower, and not a very good one at that, as reflected in the geographic writings published during this period.

From the beginning, the geographies of Virginia by Smith, Beverely, and Jefferson did more than simply *describe* the land and its people; they *show-cased* the land's rich economic potential and provided a look into how geography was perceived. This tradition continued with Matthew Fontaine Maury's <u>Physical Survey of Virginia</u>, the most important geography of this period. While Jefferson's <u>Notes</u> advertised his state's advantages and natural curiosities, however, it was done subtly. In contrast, Maury's book was a blatant attempt at promoting Virginia's strategic military and especially economic location to attract business and rebuilt its economy. The state and the country needed help, and once again, Virginia's leaders turned to geography to advance their vision of the political, economic, and cultural path they wished their land to follow. This

¹ Not all Virginians may agree with this, then or now.

time geography would not be invoked to foster revolution, promote nationalism, or justify imperialism, but to help restore Virginia to its former glory. As such, if Maury mentioned the Old Dominion's beauty, natural curiosities or mild climate at all, it was to attract tourist dollars, not because he felt compelled to praise God's gift to man (and he was a teleologist.)

The war's economic devastation thus combined with the nation's greater rush to industrialize that produced a highly utilitarian regard and use for geography in Virginia during the latter half of the nineteenth century. At the same time, however, another and sometimes opposing view of the land emerged. In direct response and opposition to industrialization, urbanization, and the growth of "science," artists and writers on both sides of the Atlantic provided another way of perceiving the world and launched romanticism and transcendentalism.

Unlike colonial times, when "the Virginia landscape was not the subject of the day,"¹ painters and other artists of the nineteenth century were abandoning the classical Renaissance style in favor of Romanticism, in which "man yearned to acknowledge the presence of those natural forces that he could not control, to look outside the classical cannon of order to discover different beauties in nature ..."² Landscape painting became increasingly popular, and Virginia's Natural Bridge, Great Falls, Harper's Ferry, Peaks of Otter, and its numerous caves became subjects of the dominant genre of painting in the nineteenth century, the Sublime and the Picturesque, as well as uniquely American off-

¹ Kelly, 3. ² Ibid., 9.

shoots of these.¹ By mid-century, the Romantic impulse was firmly entrenched in the popular literature of the Transcendentalists, America's first hippies, who would after the Civil War give voice to America's nascent environmental movement. George Perkins Marsh and John Wesley Powell, two of the country's and period's most influential geographers and cartographers, were also among its earliest environmentalists who wrote influential works which both reflected and shaped one direction of America's evolving geographic consciousness or Weltanschauung; geographers like Maury represented the other direction.

If resource environmentalist or exploiter, both visions of geography during the second half of the 1800s had to contend with the other occurrence that profoundly affected geography and geography education in Virginia and the country besides the Civil War, and that was Darwinism. <u>On the Origins of Species</u> was published well before the war, but the intellectual debates over it in the United States did not gain full steam until afterwards. Geographers and especially geologists were forced to reject, accept, or reconcile Darwin's compelling theory on biological evolution with their own. This had a profound affect not just on the increasingly scientific field of geography but on geography education. For once, American scientists and geography, like many of the other sciences, plunged into a struggle between creationists and evolutionists which continues to this day.

¹ Ibid., 9.

The Virginia Dynasty of Presidents Continues

The fact that so many of the country's founding fathers and early presidents were geographically-minded Virginians is one measure of both the political and cultural significance of the Old Dominion in the shaping of the nation from before independence through the mid-nineteenth century. Washington, Jefferson, Madison, and Monroe are of course the best known Virginia presidents, but three additional antebellum American presidents, William Henry Harrison, John Tyler, and Zachary Taylor – the ninth, tenth, and twelfth president, respectively - had roots in Virginia. Of these, only Taylor could be considered a genuine "Virginia" president. Harrison after all left the Old Dominion for the West at age eighteen, never to return, and Taylor, born outside Charlottesville, moved away as an infant and was raised in Kentucky, making his Virginia connection even more tenuous. Yet this very tenuousness is itself revealing of the direction geography in Virginia was taking. The Old Dominion still spawned presidents, but these presidents, like Virginians and Americans generally, were deserting the increasingly tired, firstgeneration states for the dynamic, newly-hatched lands of the West, thus changing the geography of Virginia and the country.

At first glance, William Henry Harrison and John Tyler appear continuations of the Virginia Dynasty. Both were products of the old Virginia planter and political elite of Charles City County, and were educated at Hampden-Sydney and William & Mary College, respectively. But while Tyler remained in Virginia throughout his life, Harrison's military career took him out of the state to the Indiana Territory and eventual citizenship in Ohio, where he lived for ten years until he won the 1840 presidential

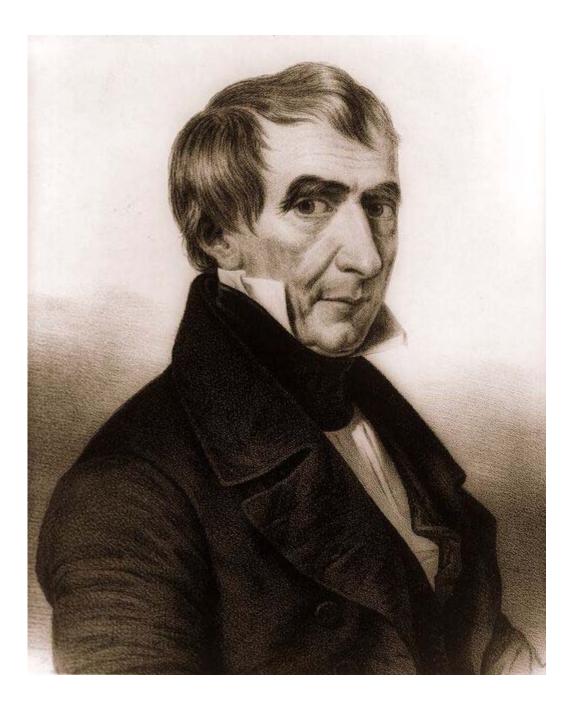


Figure 27 – William Henry Harrison, born 1773 at Berkeley Plantation in Charles City County. Victor of the Battle of Tippecanoe, and 9th American president.
 He was the first president to die in office, only one month after his inauguration.

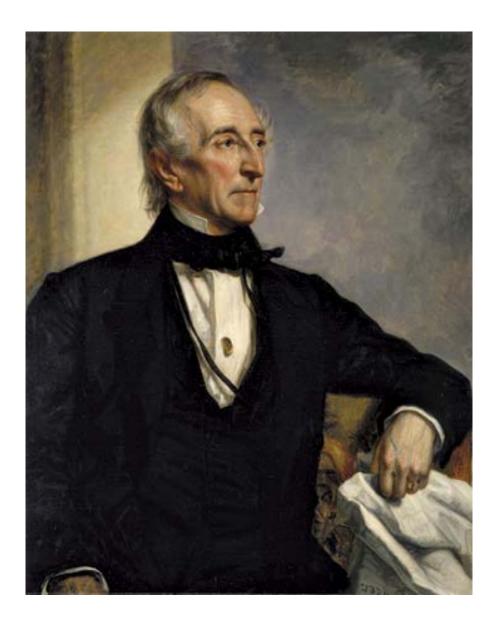


Figure 28 - John Tyler with map.

He was born 1790 in Charles City County. United States senator, governor of Virginia, and 10th American president.



Figure 29 - Zachary Taylor, born 1784 in Orange County. General in the Mexican War, and 12th president of the United States.

elections with John Tyler as his running mate. When Harrison died after only 32 days in office, Tyler took his place.

Territorial Retrocession of Washington, DC

Tyler witnessed several significant geographical changes to the map of Virginia and the nation during his political career. His tenure as United States Senator for Virginia coincided with a chairmanship of the Committee on the District of Columbia, which had jurisdiction over Washington, DC and the on-going issue of land retrocession. The sectional dispute over the location of the new nation's capital – with northerners arguing for Philadelphia, and southerners for a more "neutral" and southerly place – had been settled in 1791. In a classic example of political horse-trading, over dinner Thomas Jefferson and James Madison pledged to obtain enough southern votes to pass Alexander Hamilton's Debt Assumption Bill in exchange for the northern states' support of a location for the new federal capital district on the boundary of Virginia and Maryland.¹ In 1801, the two states donated land towards this purpose, but almost immediately, some Virginians began doubting the wisdom of their donation, and started agitating for the return of the 32 square miles south of the Potomac River surveyed by Andrew Ellicott, which included the City of Alexandria and rural Alexandria (now Arlington) County. Debate on this question continued through Tyler's chairmanship and presidency, when it was put up for referendum. Finally, after much debate and voting, the referendum for retrocession was passed in 1846, and signed into law by Tyler's successor (and Zachary

¹ Davidson, 247.

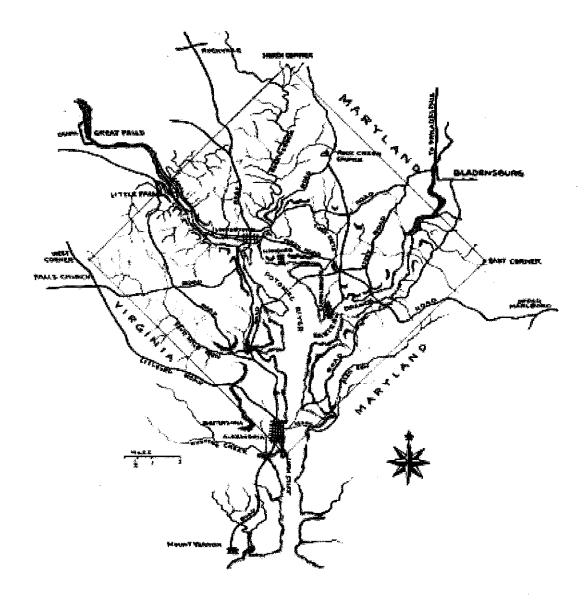


Figure 30 - Artemas C Harmon map of Washington, DC, based on surveys by Andrew Ellicott.

George Washington specifically included land on the Virginia side of the Potomac River in his design for the new capital city. Virginia's 32 square mile "donation" was returned in 1846. Taylor's predecessor), James Polk.

The immediate result of this boundary change on the area was generally positive for Virginia.

Retrocession brought about a period of affluence built on new railroads, banks, industry, and a vigorous slave trade that lasted until the Civil War. State legislative support allowed Alexandria to improve basic city services. A gas light company began in 1851, followed by a new water system the next year. In response, the population of Alexandria grew by almost 50% during the 1850s, from 8,700 to 12,650 in 1860.¹

Retrocession was undoubtedly good for Virginia, but not necessarily the Federal government, and the issue re-surfaced with the outbreak of the Civil War, "particularly the wisdom of having returned Alexandria to Virginia. On May 24, 1861, the Union Army had to (re)occupy Alexandria, making it the first Confederate town to fall to Union forces and the longest-occupied territory of the Civil War."² In his first State of the Union address, President Abraham Lincoln suggested restoring Washington, DC to its original boundaries. Nothing came of this during the war, but the idea was reintroduced during Reconstruction, and continued to be revisited periodically thereafter. For instance, in a 1915 <u>National Geographic</u> article, President William Howard Taft described retrocession as an "injury" and "egregious blunder" and suggested the return to DC of some 7,300 acres of Virginia shoreline. Like Lincoln's idea, Taft's was not adopted, but it serves to illustrate the historical geographical connection of Virginia to the nation's capital and the nation.

¹ Mark David Richards, "The Debate over the Retrocession of the District of Columbia, 1801-2004," <u>Washington History</u>, Spring/Summer 2004, 73.

² Ibid., 75.

Texas and Florida Annexation

Virginia's borders were not the only one which changed during John Tyler's tenure. Like Jefferson, the most famous and significant achievement of his presidency was a geographic one, in Tyler's case, the addition of Texas and Florida to the United States. The annexation of Texas, which included the present state as well as portions of New Mexico, Oklahoma, Wyoming, and Colorado, and the reclassification of Florida from territory to official state, once again re-drew the map and enlarged the United States exponentially. The territory of Florida had been acquired by a previous Virginia president, James Monroe, in 1821. By Tyler's presidency, Florida had achieved all the requirements for statehood, and was admitted as the 27th state in 1845. Statehood for Texas was more complicated. Embroiled in the growing sectional crisis over slavery, the incorporation of new land into the United States during this period was increasingly difficult, but Tyler in his waning days in office was able to orchestrate a political situation which allowed his successor James Polk to bring Texas into the union.

This was in many ways a remarkable achievement for a man whose presidency was rarely taken seriously in his time. His detractors never fully accepted him as president because he gained the office by the accidental circumstance of Harrison's death, thus nicknaming him "His Accidency." Upon assuming the presidency, Tyler also immediately began alienating himself from his Whig Party, winning him the designation of "man without a party." Tellingly, when he retired to his James River plantation, "Walnut Grove," in 1845, he renamed it "Sherwood Forest" to signify that he had been "outlawed" by the Whigs.¹ On the eve of the Civil War, Tyler re-entered public life to sponsor and chair the Virginia Peace Convention, held in Washington, DC in February 1861 in an attempt to stave off the impending war. When this proved unsuccessful and Virginia joined the Confederacy, Tyler sided with his state and was elected to the House of Representatives of the Confederate Congress, but died before he could assume this office.

The last Virginia-born president of the nineteenth century, Zachary Taylor, had to similarly wrestle with the geo-political issue of how to best incorporate territory into the expanding nation. Like William Henry Harrison, Zachary Taylor was born in Virginia (in 1784) and was a military officer before entering politics, a career path that led him away from the now settled, charted, civilized and increasingly and relatively over-populated Eastern seaboard. Taylor and Harrison's life thus reflected a new but growing geographic and demographic reality in the state, the departure of native Virginians from their home across the Appalachians into the newly organized states in the South (Tennessee, Louisiana, Mississippi, or Alabama) and Northwest (Ohio, Indiana, Illinois, etc). Virginia continued to gain population between 1840 and 1860, but at a much slower rate than previously, and after the devastation of the Civil War, its population dropped by 1/3 (from 1,596 million to 1,225 million in 1870); it required until the mid-1880s, or over 25 years, to reach antebellum numbers.

¹ "John Tyler," <u>http://en.wikipedia.org/wiki/John_Tyler</u>

Taylor shared more than a common birthplace and career path with Harrison; they were the first two presidents to die in office. Taylor at least made it fifteen months longer before succumbing to gastroenteritis, but that did not give him much time to deal with the complicated geographical and political question of what to do with the country's latest territorial acquisition, the land gained from the Mexican War in 1848. During the 1840s, the United States grew by more than one million acres – the greatest wave of expansion since the Louisiana Purchase forty years previously – and Virginians like Tyler and Taylor had to decide how to handle this changing geographic reality. What to do about Texas, Oregon, New Mexico, California and other places on the constantly revising map were geographically-based issues affecting the entire country. The resulting Compromise of 1850, which Tyler set in motion before his death, was little more than a temporary bandage which came off eleven years later. By 1861, Virginia was so firmly a "southern" state that even its proximity to the nation's capital and vulnerability to Northern attack did not deter it from joining the Confederacy. It even became the home state for the break-away Confederacy's own new capital, Richmond, a mere 100 miles from Washington. The old Dominion's geographic location in fact accounts for the disproportionate amount of fighting that occurred on its soil during the war. Since it mattered, it was mapped, and so intensively that Civil War cartography is an integral part of the story of geography in Virginia.

Civil War Cartography

Robert E Lee

One 1 June 1862, General Robert E. Lee assumed command of the Army of the Confederacy. Born 1807 at Stratford, the family plantation in Westmoreland County, Lee - like Washington, Jefferson, Madison, Harrison, Tyler and so many other important early American leaders – was descended from the old Virginia planters and political elite, thus sharing their upbringing and Weltanschauung, including their geographical literacy. This literacy was undoubtedly enhanced by his formal education, which began at home, then at Eastern View in Fauquier County, a family school maintained by and for the wealthy and extended Carter family to whom Robert was related on his mother's side. When the Lees moved to Alexandria, Robert entered the Alexandria Academy, where for approximately three years he studied under William B Leary, an Irishman for whom he acquired a life-long respect. When Robert decided to attend West Point, Leary provided him with the following recommendation which described his course of study, a typical one for someone of Lee's class and generation.

Robert Lee was formerly a pupil of mine. While under my care I can vouch for his correct and gentlemanly deportment. In the various branches, to which his attention has been applied, I flatter myself that his information will be found adequate to the most sanguine expectations of his friends. With me he has read all the minor classics in addition to Homer& Longius, Tacitus & Cicero. He is well versed in arithmetic, Algebra & Euclid. In regard to what he has read with me I am certain That when examined he will neither disappoint me or his friends.¹

¹ Douglas Southall Freeman, <u>Robert E. Lee, Vol 1</u> (New York: Charles Scribner's Sons, 1947), 87.

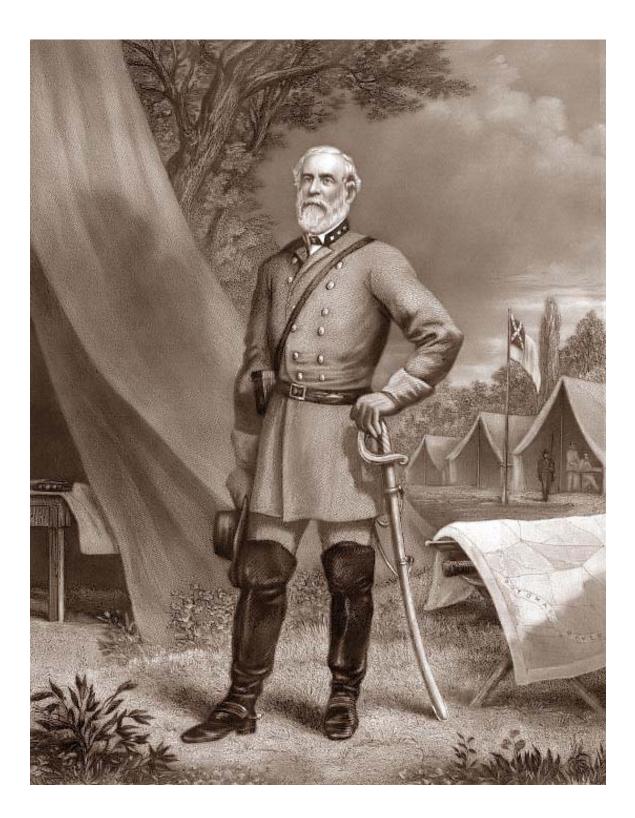


Figure 31 - "General Robert E Lee in Camp" with a map showing the Potomac River

Lee was especially adept at mathematics, and studied engineering at West Point. Upon graduating second in his class in 1829, he was commissioned a second lieutenant and dispatched to work on military engineering and surveying projects throughout the country, including the surveying of the Ohio-Michigan border in 1835. While stationed in Fort Monroe, Virginia, Lee met Mary Custis, the great-granddaughter of Mary Washington. They were married and later made their home at Arlington House, her father's plantation across the Potomac River from Washington, DC, which thirty years later the Federal troops would occupy during the Civil War and turn into Arlington National Cemetery.

Robert E Lee went on to a distinguished 32 year career in the US Army, opposed slavery and southern secession, but when forced to choose sides at the eve of the Civil War he, like Matthew Fontaine Maury, could not go against his native "land," Virginia, and resigned his commission. When offered command of the Confederate Army in 1862, he accepted, albeit with a heavy heart.

One of the first actions of this geographically literate Virginian was to improve the Confederate mapping situation. When the war began, there were few detailed maps of the areas in which fighting was likely to occur, such as the strategically crucial Shenandoah Valley. But as the northern-most state in the Confederacy, host of its capital (Richmond), threat to the capital of the Union (Washington, DC), and breadbasket to the South, Virginia (and the Valley) was of such strategic importance it became the most fought-over of all the seceding states. Yet neither South nor North possessed the "uniform, large-scale topographical maps, such as those produced today by the US Geological Survey. They did not exist and would not become a reality for another generation."¹ As Albert H Campbell, whom Lee assigned to head his new Topographical Department within days of taking command of the Confederate Army, noted

It is true that there were no maps of any account in existence at the time when General Lee assumed the command, that were of any use to the Army of Northern Virginia, June 1st, 1862. Incomplete tracing or fragments of the old "nine-sheet" map² of Virginia were probably all that our commanders had for guidance.... One of the first things that engaged General Lee's attention on taking command of the army was the organization of some plan for procuring accurate maps for his own use and that of his commanders.³

Campbell, a Virginian with an engineering degree from Brown University, was soon

joined by Jeremy Francis Gilmer - like Lee a West Point engineer/surveyor and career US

Army officer until he resigned in support of the southern cause and joined the

Confederate Army - and Jedediah Hotchkiss - a Virginia schoolmaster and self-taught

cartographer – to furnish the Confederacy the maps they desperately needed.

The Union Army was not in much better cartographic shape; their maps were just as inadequate as those possessed by their opponents. However, the Federalists had one great advantage; they could tap into existing federal mapping units such as the US Army's Corps of Topographical Engineers and Corps of Engineers (first established by George Washington during the Revolution, and Lee's and Gilmer's former unit) and the Treasury Department's Coast Survey (created by Thomas Jefferson and Albert Gallatin)

¹ Library of Congress, "History of Mapping the Civil War" (Pre-War Mapping), http://memory.loc/gov/ammem/collections/civil war maps/cwmpm.html, 1.

² The reference is to the nine-sheet map of Virginia by Herman Boye (scale 5 miles to 1 inch), revised by Ludwick von Buchholtz and published in Richmond in 1859. Even this 1859 map was a revision of an earlier one first sold in 1827.

³ Albert H Campbell, "The Lost War Maps of the Confederates," <u>Century Magazine</u> 35 (January 1888), 480.

and build upon their organizational structure, which included equipment and trained personnel.¹ As soon as Union troops were able to occupy key positions in northern Virginia, General Winfield Scott - Virginia native, William & Mary graduate and commander of the Union Army in 1861 – ordered two field parties composed of US Coast Survey personnel to survey a 38 square mile section of the state. "Transportation and protection were provided by army detachments, and the actual map itself was compiled in the Topographical Engineers Office at the Division Headquarters of General Irvin McDowell at Arlington. This cooperative undertaking involved both the Coast Survey and Army personnel was to be the pattern followed throughout the war."² The resulting map, which was first issued in January 1862 and revised several times thereafter during the war, was the first detailed map of Northern Virginia, and remains an important cartographic tool for the study of the region at mid-century to this day.

The Confederacy did not of course enjoy the Union's relative mapmaking advantages. At the beginning of the war, they suffered from a lack of "established government mapping agencies capable of preparing large-scale maps, and the inadequacy of reprinting facilities for producing them. The situation was further complicated by the almost total absence of surveying and drafting equipment, and the lack of trained military engineers and mapmakers to use the equipment that was available."³ Lee attempted to remedy this situation by recruiting the few men with cartographic training, i.e. geographers, available to him, such as Campbell and Gilmer, and organizing them into a

¹ "History of Mapping the Civil War," (Union Mapping), 1.

² Ibid., 2.

³ "History of Mapping the Civil War," (Confederate Mapping), 1.

Topographical Department, which was then tasked with surveying and mapping those Virginia counties most likely to see battle. As a result, Campbell and Gilmer produced detailed maps of eastern and central Virginia, including the area around the capital, Richmond.¹

Jedediah Hotchkiss

Robert E Lee was not the only Confederate general with a keen appreciation for good maps in wartime. When fellow Virginian and West Pointer General Thomas "Stonewall" Jackson was given command of the Confederate forces protecting the Shenandoah Valley, he ordered Jedediah Hotchkiss to "make me a map of the Valley, from Harper's Ferry to Lexington, showing all points of offence and defense in those places."² Hotchkiss was a good choice for the task. He was familiar with the Valley from his days as school tutor for the Daniel Forrer family in Staunton. Like the Carters, the Forrers were a large and wealthy enough family to have their own school, which evolved into the Mossy Creek Academy, a widely known school for boys in the area. In 1858, Hotchkiss founded the Loch Willow School in nearby Churchville, and taught there until the war, when he closed it to volunteer his self-taught cartographic services to the Confederacy. Having drawn maps for General Robert S Garnett before the battle of Rich Mountain in July 1861, the following year he joined Jackson's staff as captain and chief topographical engineer of the Valley District. In fulfillment of Jackson's order,

¹ These were the Gilmer-Campbell maps, or the "Lost War Maps of the Confederates," so-called because their whereabouts were unknown until many years after the war.

² Jedediah Hotchkiss, <u>Make Me a Map of the Valley: The Civil War Journal of Stonewall Jackson's</u> <u>Topographer</u>, (Dallas: Southern Methodist University Press, 1973), 10.



Jedediah Hotchkiss

Figure 32 – Jedediah Hotchkiss (1828-1899), a Virginia educator, geographer, and Stonewall Jackson's cartographer.

Hotchkiss personally carried out reconnaissance and drew the first detailed maps of the Shenandoah Valley, "sketching most of the maps while on horseback, using different colored pencils to note the chief characteristics and peculiarities of the terrain as well as troop positions, roads, and residences."¹ "The resulting comprehensive map, drawn ... at the scale of 1:80,000 and measuring 254 by 111 cm, was of significant value to Jackson and his staff in planning the Valley Campaign in May and June 1862,"² considered one of the most brilliant operation of military history and a testament to the geographically-minded Jackson's excellent knowledge and shrewd use of the terrain.

Hotchkiss' map, like most maps of this period, was drawn on tracing linen and filed in the Confederate Topographical Department in Richmond. Maps were initially reproduced by tracing the file copy by hand, but when demand outstripped the Department's ability to reproduce the maps in this traditional way, Albert Campbell "conceived the plan of doing this by photography," as he wrote in his memoirs.³ By 1864, the South was thus able to supply its commanders with photo reproductions of maps which, while still in relatively short supply, were equal in quality to the more plentiful Northern ones.⁴

There were in fact many maps of Virginia and all the places in which the Civil War took place. Military commanders were not the only ones clambering for maps to help them plan and understand battles. Throughout the war,

commercial publishers in the North and to a lesser extent in the South

¹ "Jedediah Hotchkiss," <u>http://stonewall.hut/leaders/hotchkiss.htm</u>, 1.

² "History of Mapping the Civil War," (Field Mapping), 3.

³ Campbell, 480.

⁴ "History of Mapping the Civil War," (Confederate Mapping), 3.



Figure 33 - Jeremy Francis Gilmer's Map of Richmond and Petersburg.

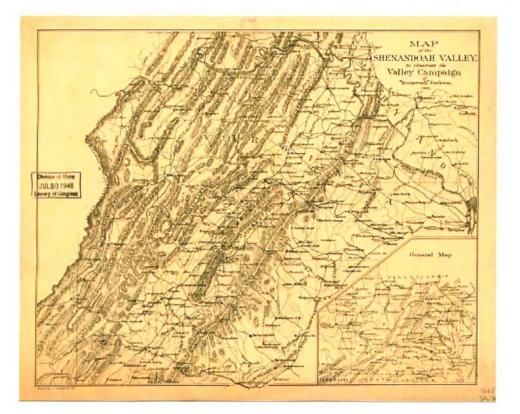




Figure 34 – Jedediah Hotchkiss's map of the Shenandoah Valley Campaign.

Figure 35 – A portion of a Hotchkiss map of Manassas.

produced countless maps for an eagerly awaiting public in need of upto-date information. Few families were without someone in the armed forces serving in a little-known place in the American South. Maps, therefore, were not only important sources of information, but also satisfied the patriotic impulses of the populace. Publishers in New York, Philadelphia, Washington, and Boston quickly became aware of this profitable market and began to issue maps in quantities undreamed of before the war.¹

Maps did not confine themselves to atlases and books; for the first time, they began being printed with regularity in daily newspapers and journals. "The public was enthralled by pictorial representations of the war, and pictures did much to shape their image and opinion of events and people in the news."²

Be they battlefield maps, propaganda maps, or panoramic maps, for military or commercial purposes, the Civil War created an urgent need and desire for the kind of geographical information only maps can supply. Like all wars, it produced technical innovations in surveying, intelligence-gathering, and reproduction techniques. It also stimulated a tremendous interest, if only a temporary one, in geography, the importance of geographical literacy, and the role of geography in everyday life. As Ambrose Bierce, the late nineteenth century author, satirist and Civil War Union topographer quipped, "war is God's way of teaching Americans geography."

The death of Taylor in 1850 marked the last of an impressive number – seven of twelve - Virginians to hold presidential office during the first sixty-one years of the United States' short history. Significantly, Virginia would not provide another president

¹ "History of Mapping the Civil War," (Commercial Mapping), 1.

² Ibid., 6.

until 1912, when the state itself had recovered from the ravages of the Civil War. In terms of its geographical impact, the conflict took a disproportionately high toll on the Old Dominion. Virginia's economy, political power, social structure, and landscape all took a beating; the state literally *looked* very different during the latter half of the 1800s.

The Creation of West Virginia

Most significantly, Virginia was a much smaller state after 1863 when 50 counties in the north-west portion of the state seceded and established West Virginia. With the stroke of his pen, President Abraham Lincoln relieved Virginia of some 24,000 square miles and roughly 450,000 people – or 1/3 of its territory, and ¼ of its population. The creation of the 35th state came as no surprise to anyone knowledgeable about Virginia's geography and politics; talk of secession had been around for years.

Virginia had since its inception been dominated by the Eastern tidewater planters, and tension between the western and eastern regions was evident by the early 1800s. The Virginia State Constitution, adopted in 1776, provided the latter a number of political advantages. For instance, voting rights were only granted to white males owning at least 25 acres of improved or 50 acres of unimproved land. Slaves were taxed less than other private property, but counted in determining representation in the legislature. Since many western Virginians owned neither land nor slaves, Eastern Virginians dominated them politically, with a corresponding distribution of funds. As the third chapter revealed, Richmond neglected not only the transportation needs of its north-western counties, but – in siphoning off money from the Literary Fund - its educational needs.

Two conventions in 1816 and 1825 attended by delegates from the Shenandoah Valley counties and regions westward designed to address these grievances failed, although the General Assembly did establish the Board of Public Works to legislate internal improvements, some of them hopefully in the western part of the state. Unappeased, these same western counties continued to voice their discontent, and in 1828 managed to convince Richmond to hold a constitutional convention. Despite the intense efforts by such notable Virginians as James Madison, James Monroe, and John Tyler, eastern conservatives managed to defeat virtually every major reform sought by the western delegates, including the extension of the voter franchise to all white men regardless of property requirement, and representation based on the white population, and the election (as opposed to appointment) of the governor and judges. "Statewide, the new constitution was approved by a margin of 26,055 to 15,566, although voters in presentday West Virginia rejected it 8,365 to 1,383. Calls for secession began immediately..."¹

Over the next twenty years, the General Assembly made an effort to ease growing sectional tension by establishing nineteen new western counties, which gave the western region more representatives in the legislature, and building the Northwestern and Valley Turnpikes, which improved transportation. In 1850, the co-called Reform Convention did redress many of the west's grievances regarding the voter franchise and the election of governor and judges. In return, however, slaves were taxed at a lower rate than they had been previously, placing a higher financial burden on the western region.

¹ "West Virginia Statehood," West Virginia Division of Culture and History, <u>www.wvculture.org/hiStory/statehoo.html</u>, 1.

The 1850 Virginia Constitution (like the national Compromise of 1850 set in motion by John Tyler) was an attempt at smoothing over sectional differences within the state. One of the reasons the western part of Virginia and the western part of the expanding United States developed differently from its eastern neighbors was dictated by its geography. Lying further inland, on the mountainous Allegheny plateau, the area that became West Virginia was settled later by different people who engaged in different economic activities than those living east of the Fall Line. The topography and climate to the west simply did not lend itself to plantation agriculture and a slave economy. As a result, future West Virginia never developed the way of life and mindset, or "slaveocracy," cultivated by the rest of the state. Through the first half of the nineteenth century and the Civil War, the southern part of Virginia continued to move culturally and economically southward, while the northwestern part of the state moved north and westward.

Despite the momentary "decade of good feeling" brought by the 1850 Reform Convention, the underlying differences between the two regions did not disappear, and when the Virginia legislature voted in favor of the 17 April 1861 Ordinance of Secession, western delegates – the overwhelming majority of whom opposed secession from the Union – seized the moment. "With few slaves and stronger economic ties to the North, these westerns had felt themselves ignored and discriminated against by slaveholding planters in the east."¹ In June 1861, they called a convention in Wheeling, nullified Virginia's Secession Ordinance, and formed the "Restored" or "Reorganized"

¹ Heinemann, 224.

Government of Virginia with Francis H Pierpont as governor. After west Virginians overwhelming voted their approval on 24 October, and the US Congress concurred, Lincoln signed the West Virginia state bill on 31 December. The people of the fifty western Virginia counties voted in favor of statehood in March 1863, and on 20 June 1863, West Virginia officially became the 35th state.

Transportation Geography

The loss of a significant portion of its territory and population was just one of the geographical changes suffered by Virginia during the Civil War. The intensive mapping of the state is one indicator of the importance both sides placed in controlling it, which resulted in extreme physical and economic devastation. This was evident in the state's transportation system.

Like all states in the first half of the nineteenth century, Virginia invested heavily in improving its transportation infrastructure. With the outbreak of the Civil War, the resulting roads, canals, and railways took on increasing importance to both sides. The availability and control of transportation arteries often determines the outcome of battles, so Confederate and Union armies fought over, guarded, built and re-built them throughout the war. Yet the relatively poor condition of Virginia's transportation infrastructure hindered the military operations of both sides as they moved up and down the Shenandoah Valley and throughout the state during the war.

The Civil War was the first "modern" war in the sense that its conduct relied heavily upon railroads for maneuver and supplies. Yet in the same manner that Virginia

and the South entered the war at a distinct disadvantage regarding its map-making capabilities, its rail transport situation vis-à-vis the North was grim. Not only did the Confederacy possess only 1/3 of the miles of trackage and freight cars as its counterpart – and in Virginia, what little rail trackage existed was almost exclusively confined to the eastern side of the Blue Ridge – but more importantly, the Confederacy lack the ability to *maintain* its railroad system over time. For instance, the Tredegar Iron Works in Richmond was the largest producers of locomotives in the South before the war, but that is a relative fact. In 1860, it and the few other Southern producers built only 19 locomotives to the North's 45, and once the war began, Tredegar stopped producing locomotives altogether and concentrated on armament. For the remainder of the war, the Confederacy built no more locomotives, and very few rail cars or new rail lines because it lacked the industrial and skilled manpower capacity.¹ The North was well aware of this, and targeted their foe's rail system for destruction. Richmond was not just attacked because it was the Confederacy's capital; it was served by no fewer than six different railroads, making it one of the most important railway junctions and transportation hubs in the South.

Virginia's roads were not much better than its rail roads, but were equally contested. Commanders on both sides grumbled about their poor condition, and how it

¹ Christopher R Gabel, "Rails to Oblivion: The Decline of Confederate Railroads in the Civil War," <u>CGSC</u> <u>Press</u>, 2002, 1.

"embarrassed their operations," as General Lee put it.¹ The South's inability to sustain its rails and roads over time was telling, and not just regarding the outcome of the war.

Poor to begin with, the roads, bridges and railroads were damaged and destroyed as the armies fought over them repeatedly... For most of the turnpike companies, the war was the final blow from which they could not recover...After the war, the state's Board of Public Works turned mainly to matters other than roads, and in the counties there developed a widely varying patchwork of road development practices. Twenty-five years after the war, Virginia's roads were far worse than when the war began.²

As Charlie Grymes makes clear, Virginia's decision in the 1840s and 50s to invest excessively in its transportation infrastructure had far-reaching consequences.³ After the war, the General Assembly had nothing to show for it except ruined roads, rails, and canals, and an enormous debt which took 50 years to erase. Paying off this debt not only made Virginia leery of borrowing money for future transportation improvements for the next two centuries, but channeled funds away from other "internal" improvements such as public education. Virginia's transportation and education system increasingly lagged behind during the remainder of the nineteenth and the early twentieth century, which only accelerated its overall economic and political decline relative to the other states.

¹ "A History of Roads in Virginia," <u>www.loudounhistory.org/history/virginia-tranportation.htm</u>, 8.

² <u>www.loudounhistory.org/history/virginia-transportation.htm</u>, 9.

³ Charlie Grymes, "Second-Worst Decision of the State of Virginia?" www.virginiaplaces.org/transportation/secondworst.html

Post-War Geographers and Geographies in Virginia

Maury's Physical Survey of Virginia

The Old Dominion thus took a geographical beating during the Civil War, loosing territory, population, and a fledgling transportation network. The landscape looked very different after 1865, and not for the better. One indicator of Virginia's altered circumstances can be found in the kind of geographies written about the state in the immediate post-war period; Matthew Fontaine Maury's <u>Physical Survey of Virginia</u>, published in 1868, is an excellent example.

In many respects, Maury's book follows in the tradition of the Virginia geographies by Smith, Beverley, and Jefferson. Their works were not merely descriptive, but were designed to promote the land's resources to encourage settlement and economic development. They were, however, geographies in the commonly understood sense in that they also discussed physical features, climate, transportation systems, native inhabitants, and the like. Perhaps Maury felt that, by 1868, these elements of Virginia's geography were so well known and covered that he need not rehash them in great detail. Rather than *reiterating* the physical resources of the state for its own sake, he concentrated upon *developing* them in order to help Virginia rebuilt after five years of devastating warfare. As he notes in his introduction in 1868,

Considering the circumstances under which recent events have placed the people of Virginia, I have thought it best to address myself in this work, to developing the physical resources of the State, to make known its geography, and to point out the great commercial advantages which naturally arise from its situation with regard to the sea and interior; to show the national importance of that situation and the benefits

to arise from turning it into account; also, to collect from the people and embody in like manner all the information already possessed by them, as to the climate, soil, and productions of the State, its mineral resources, water-power and manufacturing facilities, to the end that industry may be stimulated, enterprise encouraged, the material prosperity of the people advanced, and the general welfare of the country promoted.¹

Maury's "report," as he called it, argued that Norfolk on the East Coast and San Francisco on the West were the two most geographically gifted and important commercial and military harbors in the United States. But while Congress had "encouraged with marked liberality the construction of a system of internal improvements designed to connect the port of California with the interior for the distance of more than a thousand miles of $rail^2$... it has done nothing for bringing that interior into connection with the port of Virginia." Given the country's predominant European (as opposed to Asian) cultural and especially economic orientation, and the "commercial tendency of the agricultural produce of the Mississippi Valley to seek outlets not to the West, but to the East," Congress should devote equal resources to a "great national highway from these inland States of the Mississippi Valley to the Chesapeake Bay, their nearest and best haven of the sea."³ Toward this end, Maury suggested an interlocking network of canals connecting the Ohio, Tennessee, and James Rivers with existing and new rail lines, collectively funneling through Virginia into Norfolk. To do otherwise,

to connect the port of California by a great national work with the Mississippi Valley, and then to leave the harbors of the Chesapeake out, would be like forging the two ends of a chain and leaving out the con-

¹ Matthew Fontaine Maury, Physical Survey of Virginia: Her Geographical Position; Its Commercial Advantages and National Importance (New York: D.Van Nostrand, 1869), 2. ² The reference is to the newly completed Trans-Continental Railroad.

 $^{^{3}}$ Maury, 4.



Figure 36 – Virginia geographer Matthew Fontaine Maury was also a noted educator, teacher, and textbook author. This school in Clarendon (Arlington County) is named in his honor. It was among the thousands of schools constructed throughout the state as a result of numerous educational reforms enacted after the turn of the century.

necting link in the middle. Thus unconnected, no cable can subserve half its purpose, nor can it, in times of storm and tempest, hold, for want of scope, the ship to her moorings.¹

As he argues, what's good for Virginia is good for the nation.

Maury's "report" generated intense interest and was "in great demand in Virginia, where it seems to have hit the public fancy," as he proudly wrote his son-in-law. Interest in it extended beyond the state, however. The kind and scale of transportation improvements urged by Maury would have been supported by anyone in the transportation sector; as a result, "the railway and canal men have been watching the press and literally devouring the reports as fast as they were printed. They think it will wake up a lively interest especially in the South and West."² This may have been the case temporarily, but Maury's proposals never gained traction in Washington, and Virginia would have to wait until the latter half of the twentieth century, not the nineteenth, to regain the role in the international economy it had enjoyed during the colonial and ante-bellum period.

Maury's efforts at doing so, at helping his state rebuild itself after the war by writing his geographical work on Virginia, shows the continuing role of geography and geography education in Virginia and the country. In the tradition of the founding fathers and early American patriots like Webster and Morse, Maury's <u>Physical Survey of Virginia</u> attempted to use geography to propagate a geographically-based Weltanschauung and help the nation prosper. It was written to educate Congress and

¹ Ibid., 6.

² Matthew Fontaine Maury Papers, Virginia Military Institute Archives Manuscript #00103, 14 & 19 January 1869.

American citizens about Virginia's favorable geographical location and attributes, and how to capitalize on them.

Matthew Fontaine Maury was in the last decade of his life above all else a geography educator. While his letters reveal attempts by other institutions such as the University of Alabama to lure him away from Lexington, he remained at VMI after its Board of Regents agreed to give him free reign in designing the school's admissions requirements, curriculum, and hiring practices. He urged the creation of a State agricultural college, resulting in the establishment of Virginia Tech in 1872. While declining to serve as its first president, Maury did help craft its curriculum, which naturally included various geography courses. He also continued to lecture on various geographic topics throughout the country, particularly the South. By 1871, the school geography texts he had written while in London were in use in more than five thousand schools.¹

Jackson, Lee and Hotchkiss

In that sense, Maury followed the path of several other prominent geographicallyliterate Virginians of the period. Stonewall Jackson, Robert E Lee, and Jedediah Hotchkiss are not generally regarded as geographers or educators but as military men, yet all three were educators – essentially geographer educators - either before or after the

¹ William Maury Morris II, <u>Incidents in the Life of Matthew Fontaine Maury: American Scientist, Founder of Oceanography</u>, 1994, www.ibiblio.org/pub/academic/history/marshall/military/civil war usa/pictures/mfm, 7.

war. They appreciated the value of geography, and the necessity of passing geographic knowledge on to the next generation.

From 1851 to the outbreak of the Civil War, Jackson was Professor of Natural Philosophy (Physics) and Instructor of Artillery at VMI. His teachings were of such high quality they are still used at the school today. Unfortunately, he was an unpopular instructor. "He memorized his lectures and then recited them to the class; any students who came to ask for help were only given the same explanation as before. And if students came to ask again, Jackson viewed this as insubordination and likewise punished them."¹ As VMI's superintendent Smith noted, Jackson "was not a success. He was no teacher, and he lacked the tact required in getting along with his classes. His genius was in the Science and Art of War."²

Robert E Lee returned to Richmond at the end of the war, but several months later moved to Lexington to serve as president of Washington (now Washington and Lee) College. (Maury would join him in Lexington three years later when he began teaching at VMI). Far from the figurehead many expected him to be, Lee proved a far-sighted administrator. He made substantial changes to the school's curriculum, reflecting both his own background and belief in classical education as well as his appreciation for practical training in law, medicine, journalism, business, and science. During his tenure, he petitioned the General Assembly for funds to endow chairs in chemical, mechanical, and civil engineering, astronomy, and agriculture, as well as modern languages, history, and

¹ "Stonewall Jackson at VMI," Virginia Military Institute Archives, <u>www.vmi.edu/archives</u>

² Francis H Smith, <u>History of the Virginia Military Institute</u>, <u>www.vmi.edu/archives</u>

literature. The business and journalism courses he instituted were the first offered in any college in the United States.¹ Lee devoted the last five years of his life to education, underscoring his belief that "the education of a man is never completed until he dies."

After the war, Jedediah Hotchkiss re-opened his Loch Willow School in Churchville. He also launched a successful lecturing career, speaking on "Reminiscences of Stonewall Jackson's Campaign in the Valley of Virginia." He collaborated in writing the 12-volume "Confederate Military History," and was the sole author of the 1,292 page volume on Virginia. Most of the Confederate maps in the atlas are the Official Records that were drawn by him.² Hotchkiss offered these maps to Maury when he was compiling cartographic information for his <u>Physical Survey</u>. Similarly to Maury, he championed Virginia's economic and industrial (re)development. "After teaching school, he opened an office as a civil and mining consultant engineer, and, being so familiar with the geography of the state, was able to steer lucrative foreign and Northern investments to the most appropriate place."³

Public Schooling comes to Virginia

Until his death in 1899 in Staunton, Hotchkiss also championed another cause, the new notion of public education in Virginia. Calls for some manner of free public schooling had of course existed since 1779, when Thomas Jefferson first introduced his failed "Bill for the More General Diffusion of Knowledge." The ineffectual Literary

¹ "Robert E Lee: The Educator," Washington and Lee University website, <u>http://lee200.wlu.edu/Educator.html</u>

² "Jedidiah Hotchkiss," <u>http://stonewall.hut.ru/leaders/hotchkiss.htm</u>

³ <u>http://en.wikipedia.org/wiki/Jedediah Hotchkiss</u>, 2

Fund, established in 1810 to educate the poorest of the poor (whites), was as close as the Commonwealth came to providing state support of public education until the Civil War. As Jack Maddex notes,

the antebellum South had not been receptive to universal free public education, even after the cause had captured almost all the free states. The South had excelled, rather, in higher education of its elite in classical colleges and universities. **On the bayonets of Yankee soldiers came an educational revolution,** part and parcel of the new order of nineteenth century liberal capitalism. Its principle innovations were the common school and a "practical" or technical curriculum.¹

Virginia's opposition to public schooling persisted after the war. "Between 1865 and 1867, conservative Virginians showed few signs of departing from the traditional educational policy, dismissing it as a Yankee error."² Unhappily for them, however, they were on the loosing side of the recently concluded "Great Unpleasantness;" in order to rejoin the Union, they had to submit to the 1869 Underwood Constitution, which mandated a free, universal public school system by 1876. "Thus, after an agitation of nearly a century," Cornelius Heatwole observed, "the educational scheme of Thomas Jefferson, in modified form, was made into law."

Of course, *signing* a disagreeable piece of legislation and actually *enacting* it is not the same thing. Many Virginians, including academics and various educational organizations, argued vigorously against the mandate, and fought to undermine it. The Educational Association of Virginia, for instance, endorsed public schooling only after

¹ Jack P Maddex, Jr, <u>The Virginia Conservatives, 1867-1879</u> (Chapel Hill: University of North Carolina Press, 1970), 204.

² Maddex, 205.

being bribed by state and Peabody Fund¹ money, which helped publish its <u>Educational</u> <u>Journal of Virginia</u>. At its 1870 convention, no less an educator than Matthew Fontaine Maury spoke bitterly of "this system of common schools which has been thrust upon us," while Professor Bennett L Puryear of Richmond College wrote a series of articles for the <u>Religious Herald</u> in 1875 discussing his opposition to mass education on principle.²

Free schooling was a new question introduced and to be administered by novices in this work. To organize the freedom and equality of citizenship of a large class, lately the slaves of the white people, was not easy, because in conflict with the traditions, prejudices, social customs, and legal rights of a few years preceding. To impose voluntary, heavy burdens on the scant property which survived the demoralization of the war, so as to educate gratuitously their own children and the children of the late African slaves was a task of patriotism, of humanity, of civic duty which no people ever encountered.³

As Virginians saw it, providing tax-payer funded education was bad enough;

providing it to former black slaves was adding insult to injury. The task of persuading

them that universal public schooling was not only the law but ultimately to everyone's

benefit fell upon the Reverend William Henry Ruffner, Virginia's first state

Superintendent of Public Education. Born in Lexington in 1824 to a respected Virginia

family, his father was an educator and former president of Washington (and Lee)

College. Ruffner himself attended that school, and "imbibed a lasting passion for science

and technology."⁴ Among other endeavors, he engaged in scientific farming and

¹ The Peabody Education Fund was established in 1866 to help fund education in the South. Dr Barnas Sears of Staunton, former president of Brown University, was the fund's first agent in Virginia. Virginia schools ultimately received the lion's share of the \$2 million endowment.

² Ibid., 211 & 213.

³ Heatwole, quoting JLM Curry, 213.

⁴ Maddex, 206.

geological exploration in Rockbridge County in the 1850s.¹ In that sense, Ruffner had in common the education, interests, and pursuits – and the Weltanschauung - of so many other Virginians of his class and period. Classically educated, geographically literate, socially minded but something of a maverick for opposing slavery (on economic grounds) before the war, Ruffner proved an excellent choice for the job. "Until he was forced out of office [after twelve years] by politics in 1882, Ruffner demonstrated indomitable courage and unusual genius in administration… He more than anyone else deserves to be remembered as the 'father of Virginia's school system.' He was Virginia's Horace Mann."²

During Ruffner's tenure, he was able to create a public sentiment in favor of public schools, and find the necessary monies to fund them. This was a remarkable achievement in a state accustomed to looking upon formal education as a function not of the government but the home and an individual responsibility. Any school system also had to compete with the state's desire to pay off its enormous public debt incurred during its pre-war infrastructure improvement spree and the war itself. Yet Ruffner found a way, and by 1872, reports by his divisional superintendents revealed growing, if far from universal, sentiment in favor of public schools.³ In 1871, 30% of all school-age (5-21 years) children were enrolled in Virginia's public school system; by 1900, this figure had increased to 54%. Ten years after that, the percentage of school age children attending public schools in Virginia stood at 65%.

¹ Ibid., 207.

² Allen W Moger, <u>Virginia: Bourbonism to Byrd, 1870-1925</u> (Charlottesville: University Press of Virginia, 1968), 240.

³ Heatwole, 230.

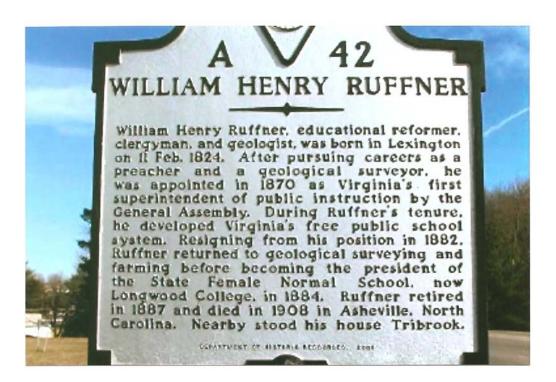


Figure 37 – A roadway marker in Lexington pays tribute to William Henry Ruffner, geographer and Virginia's "father of education."

More students required more - and ideally, better trained - teachers, and the postwar decades witnessed the (slow) establishment of so-called normal schools, or at least "summer" normal institutes, to keep pace with the increasing demand for pedagogical training. In 1884, Farmville Female College was founded expressly to train female teachers for the public schools; soon after, William & Mary College became the training school for male teachers.¹ (After his superintendent position, Ruffner served as president of the Normal (Teaching) School in Farmville from 1884 to 1887, at which time he returned to his geography roots and became a surveyor and geologist in his native Rockbridge County until his death in 1908.²) The establishment of these teacher colleges allowed a systemized method of teacher certification. Standardization was increased further in the mid-1880s when the State School Board provided the schools with a uniform series of text books, with a preference for Virginia authors.³

Thanks to the provisions of the Underwood Constitution and abilities of William Henry Ruffner, the Old Dominion finally had a functional system of public education by the closing decades of the nineteenth century. As a result, the number and class of students grew and changed tremendously during this period, but what were they being taught? Was the post-war curriculum different from that of the pre-war period, and how did geography fit in?

¹ Ibid., 248.

² Library of Virginia, http://ead.lib.virginia.edu/vivaead/published/lva/vi00164.document

³ Heatwole, 252.

Post-war Geography Texts

While the *breadth* of schooling increased tremendously and measurably in Virginia after 1870, its *depth* is much more difficult to gauge. On the whole, it appears the curriculum and pedagogy in the primary schools changed little from the beginning of the century to its end. Elementary school children – then as now – learned the basic "3 R's," as well as introductory-level geography. As Douglas E Lawson states, "it is clear that after 1800 the old three R's were scarcely more popular than was geography. More than almost any other subject, it has spread over the entire range of the grades and has persisted year after year and decade after decade."¹ Unlike the late eighteenth and early nineteenth century, however, the texts used to foster this literacy were no longer distinctively geographical. Where previously Morse's geographies had doubled as reading tutorials, they were increasingly replaced by books specific to that purpose. By mid-century, the most widely used series of books to teach reading were the famous McGuffey Readers, authored by William Holmes McGuffey, Professor of Philosophy at the University of Virginia (from 1845 to his death in 1873), and coincidentally mentor to William Ruffner during his studies there. McGuffey's Readers

molded American literary taste and morality, particularly in the South and Middle West, from 1836 until the early twentieth century. The total sales reached 122 million copies by 1920. Only the Bible and *Webster's Spelling Book* have enjoyed equal acceptance in the United States. The books followed the conventional pattern of readers, teaching the principles of religion, morality, and patriotism through literary samples and pictures. They included considerable lore about nature, games and sports, manners, and attitudes toward God, relatives, teachers, companions,

¹ Douglas E Lawson, "Geography Then and Now," <u>The Elementary School Journal</u>, 41 (8), 599.

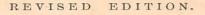
unfortunates, and animals.¹

To the detriment of geographical literacy in the United States, they included little geography or geographical references. If American school children were going to learn geography, then they would no longer do so intertwined with their moral and literacy training, but separately from the dozen or so geography texts in use by the latter half of the 1800s. This did not auger well for the subject's future popularity.

Although there were about half a dozen American texts in use by 1870 from which Virginia's school system could choose, they were more or less alike, unscientific, and unpalatable. Offerings such as those by S. S. Cornell, William Swinton, and Frederick Maglott consisted of a series of seemingly unconnected chapters on the globe, maps, "the grand divisions" of the world, natural features, the different human races, etc, arranged and re-arranged to present the material in the best form to be memorized. Cornell's <u>Primary Geography</u>, for instance, has as its aim "to arrange the elements, and their exponents the maps, as to free this interesting science from dryness and confusion... Through this system," the author claims, "the memory of the pupil becomes so *thoroughly and permanently* possessed of the contents of a map, as to enable him, after a time, without consulting it, to describe each of its physical and political divisions with intelligence and accuracy" (preface). She includes such innovations as a "memory's aid" requiring only the briefest answers.

Swinton's <u>Primary Geography</u> helpfully reintroduces "a custom of the older geographies which has fallen into disuse, but which is believed to be a necessary aid to

¹ <u>US History Encylopedia</u>, "McGuffey Readers," <u>www.answers.com/topic/mcguffey-readers</u>



CORNELL'S

PRIMARY GEOGRAPHY,

FORMING PART FIRST

SYSTEMATIC SERIES OF SCHOOL GEOGRAPHIES.

OF A

BY S. S. CORNELL.

"First the blade, then the ear, after that the full corn in the ear "



NEW YORK: ~ D. APPLETON & COMPANY, 549 & 551 BROADWAY.

Figure 38 - The 1875 (9th) edition of <u>Cornell's Primary Geography</u>.

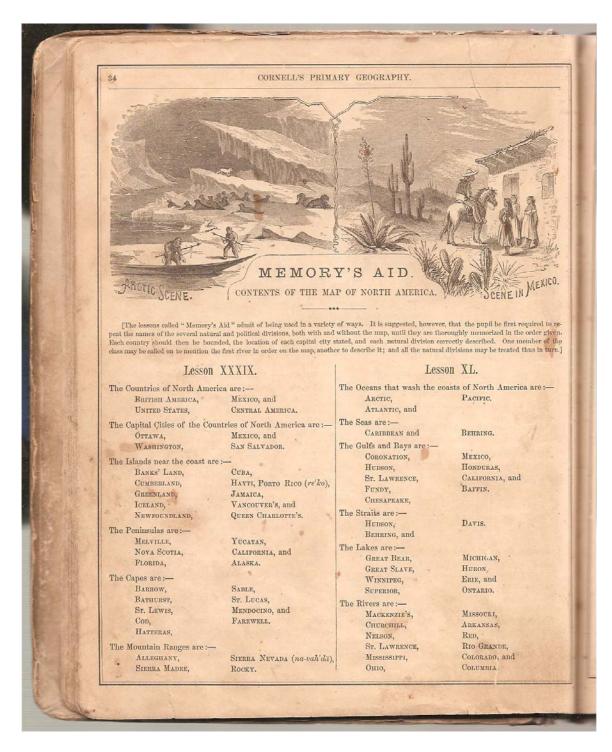


Figure 39 - The "Memory's Aid" for pupils in Cornell's Primary Geography.

the younger children" by providing the first and last letters to an answer. If the pupil "thoroughly masters" his text, Swinton assures both student and teacher, he "will have about all the geography he needs" (preface). It is in other respects very similar to Cornell.

These and other texts fall into what Dryer refers to as the "formal-statement-of-

fact" type of texts. Most of the texts used in Virginia schools and throughout the country

are of this type. There were, however, two additional kinds of texts. James Cruikshank's

<u>A Primary Geography</u> as well as Alexis Everett Frye's <u>Home Geography</u> are examples of

"sentimental story" books. Cruikshank first chapter begin thusly:

Lesson 1. This Beautiful World

1. We cannot make any picture that is half as beautiful as this world is, when the green grass springs up and the flowers bloom in the gardens and fields, and the birds sing in the groves.

2. The bright sun by day makes us glad, and at night the stars shine like diamonds in the sky....

3. This world is very large. You cannot see much of it at once – only a little way along the road, or across the fields; and other people that you have never seen live on it, some of them far away.¹

Similarly, Frye introduces geography by informing students that "we live on a ball. It is very large. We call it the earth. The red man is an Indian. He has a gun and a pony. He shoots also with a bow."² The other type of text commonly used in the United States during this time, which often overlapped with the "sentimental" kind, involved the "good-God-in-Nature" theme. Frederick Maglott, for instance, submits his <u>Manual of Geography</u> to his "pupils and co-workers, with the hope that it will perform the mission

¹ LL Cruishank, <u>A Primary Geography</u> (New York: William Wood and Company, 1867), 1.

² Alex Everett Fry, <u>Home Geography and Type Studies</u> (Boston: Ginn and Company, 1911), 1.

Helps: — How are some caves formed? Tell what you can about Mammoth cave.

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Give another name for cave. In what part of our country are the caverns of Luray? For what are they noted? Tell how the Natural bridge was formed.

58. Grand Canyon

We have read that in the West a deep gorge is a *canyon*. There are many deep canyons in our country. They were worn by rivers.

There are many high plains between the Rocky mountains and the Sierra Nevada. These plains are rough and many ranges rise in them. Such high plains are called *plateaus*.

Rivers wear deep canyons in the plateaus. Some have been worn by the Colorado river. Here we find the *Grand canyon*, the most noted in the world.

In places this canyon is about a mile deep. Its sides are rocks of many colors. There are gray, brown, red, yellow and purple. You

should see them at sunrise or sunset. First one color and then another catches the light. Parts of the walls of this canyon are made of marble. Branches of the river have also cut deep canyons. In some of these are found ruins of strange homes. They are in caves in the cliffs.



All but this part of a cave roof fell

The Indians who made these homes were not here when the white men came. We call them *Cliff-dwellers*. We do not know

Figure 40 - Alexis Everett Frey's 1911 Home Geography illustrates Virginia's Natural Bridge.

of its design, and stimulate and encourage you to still greater effort in the pursuit of knowledge, and that, in a measure, at least, it may lead us to a better appreciation of the Great Author, Designer, and Giver of all" (preface). In a section of the "Benefits Arising From The Earth's Inclination," he instructs

Here, as in all of God's works, we can see the infinite wisdom of the creator... Nearly the whole earth is thus made a fit abode for man. As we contemplate the sun in his majestic course through the skies, and behold how he alternately makes glad the inhabitants of the northern and southern zones by his invigorating powers, our hearts are made to swell with gratitude towards the author of all things, who giveth us every good and perfect gift.¹

In the chapter on physical geography, evolutionary theory is easily reconciled.

After many changes, extending through millions of years, that sublime revolution which established the present arrangement of ocean and continents, and the present races of animals and vegetable life, as described in the opening books of the Bible, was effected. The theory [of evolution] does not deny the creation of the world as described by Moses, but on the contrary, is perfectly consistent with the narrative as recoded in the first chapters of Genesis. The plan of creation a glorious subject for contemplation; everything has shaped itself as it occurred in the mind of the creator from the beginning, and has acted in perfect obedience to the laws of the Almighty, as laid down at the foundation of the world.²

"The 'good-God-in Nature," Dryer noted, "has been a popular and profitable theme for

writers of geography textbooks. Neither earthquakes, volcanoes, tornadoes, plague,

pestilence nor famine ever daunt them."³

Fortunately for the discipline, there were a few excellent American geography

texts from the mid-century, although their competence was less attributable to some sort

¹ Frederick Maglott, <u>A Manual of Geography (Ada, Ohio: L.J. Kemp, 1902)</u>, 25.

² Maglott, 30.

³ Dryer, 122.

of evolutionary improvement than the competence of their authors, Arnold Guyot and Matthew Fontaine Maury. Guyot, Professor of Physical Geography and Geology at Princeton University from 1854 to 1884, authored good texts because "this was geography as seen by a trained scientist instead of by a narrow-minded teacher or an editorial hack."¹ They were also good because his Pestalozzi-based teaching philosophy railed against the dull, rote memorization so prevalent in nineteenth century education.

Maury's <u>Elementary Geography</u> series and <u>Manual of Geography</u> (which were still in print in the 1920s) rank among the other very few good American geography texts of the mid-to-late nineteenth century. Like Guyot's texts, they were the first American geography texts written by experts in geography,² and a testament to the clear and scientific approach of their scholarship.

As Maury wrote in the preface of his Manual of Geography,

the time seems fully to have arrived when geography demands an honorable place among her sister sciences... "The study of physical phenomena,' to borrow the words of Humboldt, 'finds its noblest and richest reward in a knowledge of the chain of connections by which all natural forces are linked together and made mutually dependent on each other; and it is the perception of these relations that exalts our views and ennoble our enjoyments.' While, therefore, the author has sought to reproduce in the pupil's mind the same vivid pictures of the various parts and places and objects of the globe which, as an eye-witness he himself retains, he has constantly aimed at pointing out geographical laws, and at giving the learner glimpses into the terrestrial machinery...³

"Among the marked excellences of the early edition," Mytton Maury lauded his

father's text,

¹ Ibid., 123.

² American Association of Geographers, <u>History of Geography in the United States</u>, 42.

³ Matthew Fontaine Maury, <u>Manual of Geography</u> (New York: University Publishing Company, 1886).

was its presentation of geography in the character of a science, rather than as an assemblage of disconnected facts. Land and air and ocean were treated as parts of a grand mechanism; rivers were discussed not simply as 'divisions of water,' but as having definite 'offices' to perform; mountains were not merely masses of a certain altitude, but regulators of the rainfall. It was also carefully pointed out how the geographical position and climate of a country determine its industries. Trade was shown to be in a special manner under the influence of geographical law.¹

If, as Cornelius Heatwole suggests, Virginians preferred to use books by Virginia authors in its schools, they were fortunate to count Maury among their ilk. Information regarding the Commonwealth's geography text choices during this period is difficult to ascertain, largely because the choice of textbooks lay in the hands of local school boards and not the state. Given that Maury's geographies were indeed used in more than five thousand schools by 1871, however, it seems highly plausible they were *Virginia* schools.

School Geography

As before the Civil War, then, elementary level education in the Old Dominion after 1865 continued to include geography. Commenting on his own school days in the 1880s, Charles Dryer wrote that "outside the three r's, geography was, I think, introduced earlier, given more time, and was less disliked than any other study. In my boyhood geography gave us our only glimpses into the field of science."² With the establishment of free (and by the 1920s, compulsory) public high schools in Virginia, geography predominantly physical geography – was offered "on average in 75% of high schools,

¹ Matthew Fontaine Maury, Manual of Geography (New York: University Publishing Company, 1886), preface. ² Ibid., 123.

including the black high schools. For instance, Gloucester Agricultural and Industrial (High) School, established by the pioneering black Virginia educator William G Price in 1890 to provide quality practical training for blacks "in a poor county in a poor state where blacks faced bleak educational opportunities," included general geography.¹ By 1896 more than ¹/₄ of the students in American public high schools – including Gloucester² - were enrolled in physical geography."³ While decisions regarding the curriculum (and the selection of texts) in Virginia's public schools fell on local jurisdictions, it can be inferred that the choices made by these local school boards followed those of schools nationally. If that is the case, then the turn of the twentieth century was the something of an apex for the popularity of physical geography in Virginia and the nation's high schools. "Never again would the proportion of students in physical geography be so large."⁴ After 1900, other geography courses, most notably commercial (or economic) geography, increasingly replaced physical geography in popularity as business and other vocational-technical programs proliferated during the rapid industrialization of the era.

Geography courses also continued to be part of the curriculum in many institutions of higher learning in Virginia (and the country) during the latter half of the nineteenth century. Indeed, these years witnessed not only the birth of the public school system, but of three new land-grant universities, Virginia Polytechnical Institute (in

¹ George F Bagby, "William G Price and the Gloucester agricultural and industrial school," <u>Virginia</u> <u>Magazine of History and Biography</u>, 108 (1), 50.

² Ibid., 54.

³ Jerome D Fellmann, "Rise and Fall of High-School Economic Geography," <u>Geographical Review</u> 76 (4), 426.

⁴ Ibid., 426.

Blacksburg in 1872) Virginia Normal and Collegiate Institute (in Petersburg in 1882), and Hampton Normal and Agricultural Institute (in Hampton in 1868). Virginia Tech, Virginia State, and Hampton University (as they are known today) joined the growing number of Virginia colleges and universities offering geography and geography-related classes. From the beginning of Virginia Tech's history, geography was a required course for incoming students, and upper-classmen had to take surveying, mineralogy and geology (Natural History).¹ In 1883, Virginia State offered physical geography in its Normal (teacher) college; three years later, it added "descriptive" geography to its Academic college courses.² Hampton's Normal School - whose graduates included William Price and the even more famous fellow Virginia educator, Booker T Washington - similarly required geography in its teacher education program.³ This was in keeping with the curricula at the more established Virginia colleges like the University of Virginia, who continued to require some sort of geography, geology, or plant and animal morphology as part of their program.⁴ Under Robert E Lee's guidance, Washington and Lee College became "one of the first institutions of higher learning in the United States to offer formal programs in the study of the Earth" through its stand-alone department of geology, established just after the Civil War.⁵

¹ University Archives of Virginia Tech, <u>http://spec.lib.vt.edu/archives/catalog/1872/1872_pg15.html</u>

² Preston E James, "Geographical Ideas in America, 1890-1914," <u>The Origins of Academic Geography in</u> <u>the United States</u>, Brian W Blouet, ed. (NY: Archon Books, 1981), 341.

 $^{^3}$ Bagby, 42.

⁴ Bruce, 153.

⁵ Washington & Lee University, Department of Geology website, <u>http://geology.wlu.edu/Geology_at_WL.html</u>

This trend in higher education is discernible nation-wide. Harvard University, for instance, offered geography courses throughout its long history, but began requiring physical geography as an admissions requirement and started teaching it in 1870. Among its graduates were future geography heavy-weights William Morris Davis and Henry Gannett. Kansas State University - the nation's first land-grant college - required geography coursework, even in the separate curriculum for women. The school offered general geography, ancient geography, and physical geography, all taught by Jennie Platt, the wife of the professor of music. Slippery Rock Normal College (now University) in Pennsylvania, founded in 1889, was typical of most teacher colleges for offering and requiring geography coursework in its curriculum. Ironically, some geographers have blamed this requirement on the discipline's subsequent diminished respect within academia because many academics viewed geography as little more than a "teachertraining activity," not a full-fledged academic entity.¹ By the end of the nineteenth century, there were still only five explicitly geography professorships at American universities - Davis at Harvard, Tarr at Cornell, William Libbey (Guyot's successor) at Princeton, George Davidson at Berkeley, and Richard E Dodge at Columbia - but the movement to introduce a "professionally acceptable kind of geography into colleges and universities gathered strength."² The establishment of America's first Geography Department was just around the corner.

¹ Merle C. Prunty, "Geography in the South," <u>Annals of the Association of American Geographers</u>, 69 (1), 56. ² Martin, 319.

The relative rise in popularity of academic geography at all levels during this period was undoubtedly a reflection of the geographic activities of the nation generally. "In the years immediately following the Civil War several events occurred which gave a fresh impetus to geography." As Marcus Baker notes, the purchase of Alaska (1867), John Wesley Powell's Grand Canyon expedition (1869), the completion of the Transcontinental Railroad (also in 1869), and a series of three national surveys in the West by Ferdinand V Hayden, George M Wheeler, and Powell in the 1870s were major events in US *history* which simultaneously advanced America's knowledge and interest in *geography*. To help make sense of it all, geography-minded Americans founded a number of professional and academic societies, most notably the US Geological Survey (USGS) in 1879 - with Powell as its first president - and the National Geographic Society (NGS) in 1888.¹ Gardiner Greene Hubbard, NGS's first president, was a lawyer, not a geographer, but considered that an asset to the position and the Society.

By my election you notify the public that the membership of our Society will not be confined to professional geographers, but will include that large number who, like myself, desire to promote special researches by others, and to diffuse the knowledge so gained, among men, so that we may all know more of the world upon which we live.²

Societies like NGS were not attempting to preach to the choir; instead, they hoped to promote geographical inquiry, and promote geographic literacy. In this endeavor they were aided by the emergence of two forms of scientific representation, the national atlas,

¹ The first geographical society established in the United States was the American Geographical Society in 1851. The National Academy of Science was founded in 1863. One of its fifty charter members was geographer Arnold Guyot. ² Matt Rosenberg, "The History of Modern Geography in the United States," <u>Guide to Geography</u>,

² Matt Rosenberg, "The History of Modern Geography in the United States," <u>Guide to Geography</u>, <u>http://geography.about.com/od/historyofgeography/a/geographyusa.htm</u>, 1.

first realized in the <u>Statistical Atlas of the United States Based on the results of the Ninth</u> <u>Census</u>, published by the Bureau of the Census in 1874, and the topographic mapping program established at USGS in 1882, which produced the nation's "mother map," as geographer Henry Gannett, the program's first director, christened it.¹

The 1870 and 1880 atlases incorporated topic discussions and thematic maps representing the nation's physical and human geographies. From 1890 to 1920, only topics in human geography were included. Each atlas issued from 1870 to 1910 also included maps of the intensity of settlement from the earliest (1790) census. It is this series of maps that the historian Frederick Jackson Turner used to declare the 'settlement frontier to be closed' following the 1890 census.²

School Reform

The introduction of public schooling in Virginia, which greatly expanded the educational opportunities for many more students, combined with the growing knowledge of the nation's geography, and organizations dedicated to promoting this knowledge, to boost geography education in the Commonwealth after the Civil War. During the last decade of the century, an educational reform movement – a smaller by-product of the larger Progressive Movement – was sweeping the United States. In 1892, the National Education Association (NEA) appointed a "Committee of Ten" to consider the general lack of uniformity in school programs and requirements for admission to higher education. The Committee recommended that the college preparatory program of America's public and private secondary schools cover nine subject areas, including

¹ Library of Congress, "Presenting the Nation's Cultural Geography: 1790-1920," <u>http://lcweb2.loc.gov/ammem/gmdhtml/census2.html</u>, 1.

² AAG, <u>History of Geography in the United States</u>, 47.

geography, and decided to organize nine individual conferences corresponding to these areas. The Conference of Geography was chaired by Thomas C Chamberlain of the University of Chicago, as well as eight other prominent geologists, meteorologists, geographers and geography educators such as William Morris Davis of Harvard, Francis W Parker of the Cook County Normal School, and Mark W Harrington from the US Weather Bureau.¹

Meeting at the Cook County Normal School in Chicago during the last days of

December, 1892, the Conference was tasked with addressing physical geography,

geology, and meteorology in the nation's primary and secondary school curriculum.

Their discussions "developed the fact that there was such a diversity of opinion among its

members that unanimous agreement could not be had, [resulting in] a Minority

Report which was subsequently sent to the Committee by Conference member Edwin

Houston [of Central High School in Philadelphia]."² The Majority Report concluded that

geography should provide a broad treatment of Earth, its inhabitants and institutions in the early primary grades, that its focus turn more to physical geography in the later primary grades, and that a course in 'physiography' (physical geography with an emphasis on process) should provide the capstone secondary school experience in geography. 'In examinations for admission to college, the Conference suggests that physiography be given preference over other branches of geography, and that political geography be required in connection with history.' Meteorology and geology courses are recommended only for school capable of providing proper instruction. The conference also emphasizes the use of maps in classrooms and produces a separate book to assist teachers in that regard.³

¹ Israel C Russell, "Reports of a Conference on Geography," Journal of the American Geographical Society <u>of New York</u>, 27 (1), 30.

² Russell, 31.

³ AAG, "History of Geography in the United States," 58.

The Geography Conference's conclusions, which support the rising interest in physical geography (specifically physiography) as a scientific research discipline, proved controversial within the discipline. While physical geography was indeed the most popular geography course in American high schools by the 1890s, other offerings, including commercial (economic) and human (cultural) geography were rapidly finding their way into Virginia and the nation's classrooms. Proponents of these other branches of geography were not pleased that the Conference relegated them to the history and (newly emerging) social studies curricula.

The Committee of Ten was apparently surprised by the Geography Conference's report, which recommended more extensive changes in the secondary school curricula than any other of the other eight Conferences. "It is somewhat startling to find," wrote the Committee, "that the report of the Conference of Geography ... exhibits more dissatisfaction with prevailing methods ... and makes the most revolutionary suggestions," but the recommendations of the conference "were so manifestly sane," as a contemporary wrote, that they were adopted.¹ "This affected the teaching of geography almost as profoundly as the Pleistocene ice age affected the distribution and evolution of plants, animals, and men," Charles Dryer waxed poetically in 1924.² The NEA encouraged schools throughout the United States to elevate geographic education, especially physical geography and physiography (geomorphology), from the rote memorization of random facts to its study as a genuine science.

¹ R.H. Whitbeck, "The Present Trend of Geography in the United States," <u>Geographical Journal</u>, 35 (4), 422. ² Dryer, 125.

The Influence of Darwin

One of the reasons behind physical geography's dominance in the geography curriculum during the latter half of the nineteenth century of course rests with Charles Darwin. His theory of biological evolution, first published in 1859, and popularized by Thomas Huxley, challenged the strongly-held teleological convictions of many leading American geographers. Darwinian evolution was a biological theory, but as Geoffrey Martin points out, the concept of evolutionary change was so stimulating that it was applied by analogy to many other fields besides biology, such as geography. In the case of the study of landforms, it appeared as the cycle of erosion. Applied to soils, it was reflected in the concept of mature soils developing from immature or young soils and parent materials. Used in the study of humans and their location on the map, it became environmental determinism.¹ As a result, the Ritterian approach to geography was by the latter half of the nineteenth century gradually being replaced, as Arild Holt-Jensen notes,

by a materialistic scientific philosophy which emphasized natural laws and causality, mechanical rather than teleological explanation. Many scholars came to believe that Ritter's work was valueless and unscientific because it could not be accommodated in Darwin's concepts of struggle and survival, and to his belief that evolutionary change resulted from random variations. The new scientific method which came to dominate research was, in a way, the opposite of Ritter's inductive approach which sought to witness to God's plan and existance (*final causes*, the aim or purpose of things observed.)²

As Dereck R Stoddart emphasizes,

¹ Martin, 140.

² Holt-Jensen, 20.

It is important to recall that Darwin's theory was not simply one of 'evolution'... but concerned a mechanism whereby random variations in plants and animals could be selectively preserved, and by inheritance lead to changes at the species level. In geography, however, Darwinism was interpreted primarily as evolution, in the sense of a 'continuous process of change in a temporal perspective long enough to produce a series of transformations.' It was in this sense that many natural and social scientists welcomed evolution from 1860 onward. Darwin, however, was primarily concerned with the mechanisms for change... This element of struggle was applied in a deterministic way, at about the same period of time. The crux of Darwin's theory, the randomness of the initial variations, passed almost unnoticed. In both physical and human geography, supposedly Darwinian ideas were applied in an eighteenth rather than a nineteenth century fashion, and geographers were still applying essentially Newtonian views of causation well into the twentieth century.¹

This is perhaps one reason teleological views of geography in education and in its texts continued to survive for as long as they have, especially in the United States, for if evolutionary change was a result of **random** variations, the teleological concept of a divine plan had to be abandoned.

Darwin's ideas thus not only strongly influence geographical theory, but debate over them ultimately contributed to the development of geography as a legitimate, standalone science. The sphere of scientific enquiry he created, free from a priori theological ideas, liberated natural science from the arguments of natural theology.² One very notable American geographer must have felt vindicated and empowered by this turn of events. William Morris Davis, the "father of physiography" who taught physical geography and geology at Harvard from 1878 to 1912, had helped established the "new geography" to

¹ Dereck R Stoddard, "Darwin's Impact of Geography," <u>Annals of the Association of American</u> <u>Geographers</u>, 56 (4), 683.

² Stoddart, 697.

the United States, and encouraged its development as a profession. Schooled by Nathaniel S Shaler – who himself had been a student of Agassiz (the anti-evolutionary Harvard zoologist) – Davis was perhaps the most influential American geography scholar and teacher of his day. His belief in geographical (or environmental) determinism shaped much of the study of the increasingly popular sub-field of human geography, while his concept of the cycle of erosion – which he called the geographical cycle – became one of the basis of modern geomorphology. Many of the new textbooks to emerge as a result of the NEA's recommendation incorporated Davis's ideas.

Davis must also have been delighted to read the Committee of Ten's recommendation to redesign not just the *content* but the *teaching* of geography. Davis was a great teacher whose own students numbered among the outstanding physical and human geographers of the early twentieth century, and he, like Ritter and Guyot before him, strove to rescue geography teaching from too much memorization and attention to facts over general concepts.

No geographer...need feel himself unfortunate because of the great diversity of facts that his composite subject requires him to study; for in the progress of his work he may discover relations and principles which bind his facts together in a thoroughly reasonable manner, and he may then concern himself, especially in his teaching, largely with those relations and principles, and introduce items of fact chiefly to illustrate the principles. Unhappily, geographers are often so impressed with the innumerable facts of their subject that much of their attention is given to individual occurrences in specified localities rather than to principles which the occurrences exemplify; and that is regrettable.¹

¹ William Morris Davis, <u>Physical Geography</u> (Boston: Ginn and Company, 1899), 2.

The Geography Conference's conclusions, which supported the rising interest in physical geography (specifically physiography) as a scientific research discipline, proved controversial within the discipline for several reasons. While physical geography was indeed the most popular geography course in American high schools by the 1890s, other offerings, including commercial (economic) and human (cultural) geography were rapidly finding their way into Virginia and the nation's classrooms. Proponents of these other branches of geography were not pleased that the Conference relegated them to the history and (newly emerging) social studies curricula.

The Conference's emphasis upon physical geography proved controversial for another reason. The first textbook to emerge which incorporated their and the NEA recommendations was by Ralph Tarr, a student of Davis and professor at Cornell from 1892-1912. While a great improvement upon the "Natural Teleology" stage of American geography texts, it and other similar books which quickly followed were ill-received by many primary and secondary school teachers, who considered them to be too restrictive, too geological, and placing too little emphasis on the human element in geography.¹ More to the point, however, many of these teachers were also quite unprepared to teach this new "science." Despite the inclusion of geography in the curriculum of most teacher colleges, "few indeed were the teachers who could identify a land-form out-of-doors or who could make Davis's theoretical models come alive."² Most teachers did not like the Geography Committee's recommendations because they were unfamiliar with both the

¹ Whitbeck, 422.

² Martin, 315.

subject matter and the prescribed modern pedagogy for teaching it. Predictably, they fell back to the familiar memorization method, and within a few years, the exciting new science of physical geography was increasingly replaced by (arguably) less scientific – but perhaps easier to teach - branches of the discipline such as commercial and human geography. By the beginning of the twentieth century, textbooks reflecting a synthesis of physical and commercial geography became popular. Not long thereafter, even these various sub-fields were lumped together and devolved into and taught as what is today called "social studies." Virginia schools would not be immune to academic geography's changing circumstances.

The State of Post-War Virginia

The Civil War had brought permanent political, economic, social, and geographic change to the Old Dominion. Financially and physically devastated by five years of fighting on its soil, socially upturned by manumission of its slave, and stripped of a third of its territory, it lost its political dominance among the nation's states. After 1865, Virginia was no longer a leader but a follower. Its dynasty of presidents petered out after Zachary Taylor, and even his tenuous Virginia connection was indicative of times to come. The state bred no more Washingtons, Jefferson, or Madisons, whose geographically-based Weltanschauung shaped not only the Commonwealth but the nation; the influence of the next generation of notable Virginians, including John Tyler, Zachary Taylor, Robert E Lee, Thomas Jackson, Jedediah Hotchkiss, Matthew Fontaine Maury, and William Ruffner was more local. While these men made significant contributions to geography and geography education in *Virginia*, they were less important on the *national* stage than their predecessors. Maury's <u>Physical Survey</u> may have insisted that what was good for Virginia was good for the nation, but the nation did not buy it. The resources required to elevate Norfolk (and Virginia) to the status envisioned by Maury never materialized; Virginia's geographically-based economic "take-off" would have to wait another 100 years.

This is reflected in the state's educational institutions. While the Underwood Constitution forced upon Virginia a system of long-resisted public schools, and great strides were subsequently made in educating its children, southern states like Virginia were only expending one-half to one-third as much on education as their eastern or western counterparts. For example, Wisconsin's school-age population in 1875 was similar to that of Virginia (461,000 versus 482,000) but the former spent over \$2 million on education, while the latter spent just over \$1 million, even though Wisconsin's schools had nearly double the daily attendance rates (200,000 versus 103,000) as those in Virginia. Not surprisingly, illiteracy rates were much higher in southern states than in eastern or middle states (around 25% versus less than 4%).¹ Echoing Matthew Fontaine Maury's sentiments, Charles Ruffner recognized that what benefited Virginia – in this case an educated populace – benefited the nation as a whole, but the Old Dominion had neither the resources nor the inclination to fund a first-rate public school system; this, too, would have to wait another 100 years. In the meantime, it retained its private academies,

¹ "Education in the Southern States," <u>The Christian Recorder</u>, 22 February 1877. They based their figures on the latest report of the US Commissioner for Education.

colleges, and universities, whose curriculum and pedagogy generally followed that of other schools in the country during this period.

Happily for academic geography in both private and public institutions, the subject as alive and well and still considered relevant and interesting to Americans. Their country continued to acquire vast amounts of new territory throughout the nineteenth century, territory which had to be explored, mapped, and politically organized before it could be settled and exploited to meet the material demands of rapid industrialization. Exploration, mapping, migration and settlement, and resource management are all inherently *geographical* activities, and as long as these geographical activities remained in the political, economic, and cultural forefront and captured the American imagination, they remained in the educational forefront. The public's fascination with maps during the Civil war is one example of this; the rise of economic geography in response to America's increasing role in the world economy is another. In that sense, Americans continued to be geographically-minded throughout the 1800s.

Not everyone approved of the way Americans increasingly used geography for power and profit, however. In direct response to the country's urbanization, industrialization, and scientific, systematic exploitation of natural resources, some of the country's most influential geographers revolted and launched the fledgling environmental and resource conservation movement. Geographer John Wesley Powell, whose 1869 exploration of the Grand Canyon captivated the nation and launched a series of national geographical surveys in 1870s, in 1878 wrote a <u>Report on the Lands of the Arid Region</u> <u>of the United States</u>. Powell's famous report focused on the government's controversial land distribution policies in the West. While the orderly grid system imposed on the West by the Land Ordinance Act may have worked moderately well for taming the lands east of the 98th meridian, those to the west lay in a much drier climate and needed to be organized differently, around watersheds. Powell's recommendations flew in the face of conventional wisdom and profiteering and were initially rejected, but, similarly to the forestry movement, his "prophetic writing, lecturing and work [in the area of water use] eventually bore fruit."¹ Powell also went on to serve as the first director for the newly-established US Geological Survey, where he was the principal force in expanding geological studies and topographic mapping throughout the country and in stimulating investigations of soil, ground water, rivers, flood control, and irrigation.²

With this arid regions report, Powell was building on the earlier work by George Perkins Marsh. Marsh's <u>Man and Nature; or, Physical Geography as Modified by</u> <u>Human Action</u>, first published in 1864, was the "first modern synthesis of the role of humans in altering the Earth's physical environment."³ As Marsh stated, very simply, "man is everywhere a disturbing agent. Wherever he plants his foot, the harmonies of nature are tuned to discord."⁴ "The conventional ideas held by the geographers of the day, Arnold Guyot and Carl Ritter, was that the physical aspect of the earth was entirely the result of natural phenomena, mountains, rivers, and oceans. No one had ever turned to the study of the earth as the home of humankind. Marsh was the first to describe the

 ¹ Joseph M Petulla, <u>American Environmental History</u> (Columbus, OH: Merrill Publishing, 1988), 237.
 ² Henry Nash Smith, "Clarence King, John Wesley Powell, and the Establishment of the United States Geological Survey," <u>Mississippi Valley Historical Review</u>, 34 (10), 42.
 ³ AAG, 41.

⁴ George Perkins Marsh, <u>Man and Nature; or, Physical Geography as Modified by Human Action</u> (Cambridge: Harvard University Press, 1965 [1864]), 36.

interdependence of environmental and social relationships."¹ He was of course not the first to make observations regarding man's destructive influence on its lands. For instance, in 1818, James Madison, writing on "Intelligent Husbandry," commented that "new settlers had neither the knowledge nor the inclination to conserve the soil they tilled... With so many consumers of the fertility of the earth, and so little attention to the means of repairing the ravages, no one can be surprised at the impoverished face of the country."² By mid-century, however, more Americans were paying attention to Marsh's geographic-based message. Man and Nature was widely read in the United States and Europe, and ultimately very influential in shaping the thoughts and actions of Gifford Pinchot, John Muir, and Lewis Mumford, men who rank among the late nineteenth century's most important conservationists and preservationists. While they won admittedly few environmental triumphs during this period, these men did successfully use their geographic Weltanschauung to establish the nation's first national park -Yellowstone- in 1872, the National Forestry Service to protect and manage public forests, and the Sierra and other environmentalist clubs.

This different use of geography, one which emphasized conservation and preservation over exploitation, would gain traction after the turn of the century with Theodore Roosevelt's ascendancy to the presidency in 1901. Until then, however, Matthew Fontaine Maury's notion of geography - as a science to be used for the material

¹ "George Perkins Marsh: Renaissance Vermonter," Clark University website, <u>www.clarku.edu/departments/marsh/about/index.htm</u>

² Robert McHenry and Charles Van Doren, eds, <u>A Documentary History of Conservation in America</u> (New York: Praeger, 1972), 172.

improvement of Virginia (and the nation) - was the predominant one, and the one

subsequently taught in schools. As he wrote in his Physical Survey of Virginia,

Those regions of Virginia which nature had made tributary to the Atlantic are the regions over which the Christian nations of the world hold chief sway. They have the most wants for they are the most enlightened; they are, therefore, the most commercial and mighty. With them 'COMMERCE is king;' and nothing man can remove is permitted to stand in its way.¹

¹ Maury, 6.

The Twentieth Century

Chapter Five

The United States greeted the arrival of the new century with a mixture of confidence and apprehension. There was ample reason for national pride. Its population was swelling, enjoying longer life spans, increasing literacy rates, and bigger incomes. The country had also recently added overseas territories to its already formidable holdings. By 1900, America ranked as "one of the Great Powers of the world,"¹ Matthew Fontaine Maury's geography texts proudly proclaimed. A combination of factors – abundant land, rich natural resources, large domestic markets free of artificial trade barriers, and, of course, a seemingly unending supply of cheap labor from immigration and the country's own high birthrate – enabled the US to become the world's foremost industrial nation.² After the First World War, it would become the world's foremost military and political nation, as well. As Neil Smith argues, the twentieth century could justifiably go down in history as the "American century."

For some, however, American society was growing and changing at an unsettling pace. Rapid industrialization, immigration, and the resulting social upheaval and change

¹ Maury, 21.

² Rondo Cameron, <u>A Concise Economic History of the World</u> (Oxford: Oxford University Press, 2003), 225-227.

to the landscape caused considerable apprehension. For many others, the 1893 Depression remained a vivid memory. The shift in attitude towards the government and its role during those economic hard times spawned a program of social reforms collectively known as Progressivism. Among other items, the Progressive agenda demanded increased regulation of private industry practices, more suitable living environments in the form of better housing and more open space, and the improvement and historically resisted such "modern" ideas, became swept up in the movement of the moment, and embraced its agenda. Its own economic recovery was already apparent by the 1900, but over the course of the twentieth century, it allowed the nation's rising tide to lift its boat from the bottom of the sea back up to the crest of the wave. By midcentury, the Old Dominion's rejuvenation was well underway; by 2000, the Commonwealth had "(re-) arrived."

On 15 June, 1936, Virginia became the first state in the nation to inaugurate an entire park system on the same day. From land donated by private citizens, the Great Depression-inspired Federal Civilian Conservation Corps (CCC) constructed the infrastructure for six parks "for the benefit of all Virginians that preserves and protects significant natural and cultural resources and provides outstanding opportunities for outdoor recreation."¹ After the introduction of various environmental and historical

¹ Virginia Senate Joint Resolution No. 109, "Commemorating 2006 as the Official 70th Anniversary of Virginia State Parks," CCC Day Resolution, <u>www.ccclegacy.org/ccc_day_resolutions.htm</u>.

interpretive programs by mid-century, the mission of Virginia's state parks was expanded to offers educational opportunities in geography as well.¹ Since its inception, Virginia's state park system has been additionally complimented by a *federal* system of parks, the first of which was Shenandoah National Park, created in 1935.² If the *state's* first parks were established more than 60 years after the *country's* first national park, (Yellowstone, in 1872), then it is nevertheless a testament to the Old Dominion's evolving geographic Weltanschauung during the twentieth century. Only a generation or so ago, the very notion of taking economically profitable land in the country – the concept of *city* parks was a bit more understandable - out of circulation for the sake of ecological preservation and recreational use by the greater public would have been considered an absurd waste of public money. Even by the 1930s, not all Virginians appreciated the wisdom and forethought in establishing parks; the well-documented lingering bitterness of the hill folk displaced and forcibly re-located to establish Shenandoah Park, for instance, survives to this day. However, the fact that this park, and an entire system of parks, came into being in a state as traditionally politically and socially conservative as Virginia not only shows a new and different appreciation for its natural surroundings, but is one of many indicators proving Jean Gottmann's assertion that, in the twentieth century, "the Old Dominion was growing young."³ A 1929 National Geographic article commented

¹ Since its fledgling beginnings in the 1930s, the Commonwealth's system has expanded to 39 parks (representing over 70,000 acres), as well as another 30 natural areas and historic sites.

² Today, Virginia has over 32 federal parks, including such diverse sites as Assateague Island, the Claude Moore Colonial Farm, the George Washington Parkway, Manassas National Battlefield, Wolf Trap Park for the Performing Arts, and Yorktown National Cemetery.

³ Gottmann, 563.

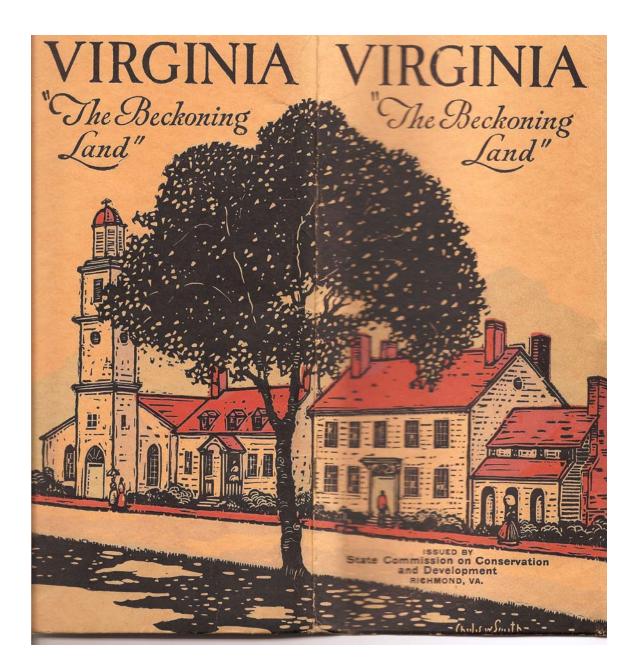


Figure 41 - Cover of a 1920s Virginia travel brochure, advertised in the April 1929 <u>National</u> <u>Geographic</u>. "You may have visited the beauty spots of every country and every clime and may have beheld every scene that is the boast of the international traveler, and still find thrills a-plenty in the magnificent Shenandoah Valley, in the pastorial Piedmont, and in the finely wooded and superbly rounded Blue Ridge and Alleghany Mountains... If it be the scenery that has lured the traveler to Virginia, his only embarrassment will be that of the richness of choice," the brochure promised potential visitors.

similarly that the establishment of Shenandoah National Park and the construction of Skyline Drive "signalized a new era" for Virginia. "Today the Old Dominion, having solved the last of the innumerable problems that grew out of the aftermath of the Civil War, again has time to think in terms of service to the Nation...by providing a playground and recreation area per excellence for the 40 million people who live within a radius of 350 miles of it."¹

Jean Gottmann

Like John Smith in the seventeenth century, Robert Beverly and Thomas Jefferson in the eighteenth, and Matthew Fontaine Maury in the nineteenth, Jean Gottmann in the twentieth century penned the most significant geography of Virginia. In the foreword to <u>Virginia at Mid-Century</u>, Gottmann explains that, to his knowledge, his was the first attempt of apply the method of the French school of regional monographs developed during the first half of the 1900s to any of the American states. This may have been true of any other state *but* Virginia, for Gottmann's work in reality represented not a new direction in geographic inquiry but a continuation of the systematic, periodic study of the Commonwealth since Smith. Virginia is the only state in the Union able to provide four hundred years of contemporary, geographic introspection. This alone invites a study of the history of geography in Virginia. However, as Gottmann makes clear, a careful regional examination of the Old Dominion "ought to be of some interest to many people

¹ William Joseph Showalter, "Virginia – A Commonwealth That Has Come Back," <u>National Geographic</u> <u>Magazine</u>, LV (4), April 1929, 419.

beyond the frontiers of the commonwealth. Because so many different sections of the United States are brought to participate in the Virginia framework," he emphasizes in the introduction,

many of the problems or situations we shall be faced with in the commonwealth may take on national importance... So vital a part of the United States is this region, and so great today are the role and responsibilities of the American people in the world arena, that some [of the discussion] may be of import to sections remote from Virginia itself. Just as most of what occurs within Virginia cannot be explained in terms of local factors only, the consequences do not stop either at the eastern capes of the western gaps.¹

As goes Virginia, so goes the nation ... and the world.

Like the rest of the United States, Virginia experienced unprecedented geographic change during the 1900s, particularly the latter half of the 1900s. By nearly every measure, the state grew. It grew in population, in urbanization, in income, in economic output, in expenditures, in road miles paved and in houses built. Most impressively, it progressed in matters of education. In 1900, Virginia's illiteracy rate stood at 24.3% (around 10 % for white, 45% for blacks), among the highest in the nation and well above the national average of 11.3%. Sixty years later, this figured dropped to 3.4%, just 1 percentage point below the national average.² School attendance, which had risen from around 18% in 1870 to nearly 40% in 1900,³ more than doubled again after 1968 when Virginia began enforcing mandatory school attendance. Per pupil expenditure, number of high schools, percentage of college graduates, teacher training requirements, and related

¹ Gottmann, 7.

² US Census Bureau report, 1963.

³ Heatwole, 259.

educational indicators increased dramatically, illustrating a remarkable reversal of Virginians' three hundred year long tradition of resistance towards public education.

Geography education, which had been part of the school curriculum in Virginia's (and the nation's) private and educational institutions at all levels from the beginning, at the start of the new century maintained and even appeared to strengthened its position in schools. After the First World War and for nearly the rest of the 1900s, however, academic geography's fortunes ebbed and flowed. Geography lost its automatic seat at the school table; instead, for reasons to be examined later, its practitioners found themselves devoting considerable energy towards defining itself and justifying its existence as a stand-alone subject worthy of inclusion in the curriculum beyond the primary level. Not until the last decade of the twentieth century did their concerted efforts begin to bear fruit. By then, geography in Virginia – the look of the land, as well as Virginians' perception of it - had undergone tremendous change, a fact the Commonwealth's educational system acknowledged when it included geography as a core subject in its Standards of Learning program in 1995.

From the establishment of a park system to a growing commitment towards improving education at all levels (for all races) as well as Jean Gottmann's inclusion of eastern Virginia in his concept of megalopolis are just a few indications of the state's economic, social, political, and geographic recovery. It took roughly one hundred years after the Civil War, but by mid-century - in large measure due to its geographic location, but also because Virginians themselves willed it – the Commonwealth was coming full circle. "As the Old Dominion has grown definitely younger, more modern," in Gottmann's words, it has become an increasingly important player in the United States, an increasingly important participant in the world economy, and an American leader in its appreciation for and use of geography.

Virginia, Nineteen Hundred to Mid-Century

As the twentieth century opened, Virginia had achieved physical and economic reconstruction, the restoration of conservatism in government, and a *modus vivendi* acceptable to the various sections of the population following the bitter social revolution of the tragic post-war years. It may be said that, though some problems continued to weigh heavily upon the commonwealth's functioning and its destiny, Virginia was well on the way to prosperity by 1900.... Owing to the creation and development of a public school system and to greater attention given to matters of education, Virginia was better preparing her people for the sweeping changes and the coming prosperity of the twentieth century.¹

At the eve of the Civil War, Virginia's population totaled roughly 1.6 million. By 1900, this figure had grown a respectable 16% or so (257,866), to around 1.8 million, the 17th most populous state in the union. Thanks to increased industrialization, the Old Dominion's economic ranking relative to the other states had also improved since the War. With industrialization came urbanization, and while both were modest by national standards, Virginia's cities did experience rapid growth by the turn of the century. Richmond, the state capitol and largest city, reached 85,000 in 1900, Norfolk, 46,600, Petersburg, 21,800, Roanoke, 21,500, Newport News, 19,600. All were located in the southern (and except for rapidly growing newcomer Roanoke) and eastern half of the

¹ Gottmann, 130.

state. The largest city in northern Virginia, Alexandria, could boast only 14,500 residents. (Washington, DC's population numbered 278,700.)

Fifty years later, Virginia's population had nearly doubled to 3.3 million, although its ranking vis-à-vis the other states fell slightly. Economically, the United States had become the world's foremost industrial nation by end of the nineteenth century, but its population remained predominantly rural until the First World War.¹ By comparison, Virginia did not reach this milestone until around 1950.² At mid-century, the Commonwealth's population density of 83 persons per square mile was above the national average of 51, making it the 15th most densely populated state in the nation. Virginians were of course not evenly distributed throughout their land. In colonial times, the population was firmly planted along the coast and waterways south and east of the Fall Line. Thereafter, while the population densities continued to remain the highest there, the western and northern regions of the state began to be filled in. By 1900, of the counties with the largest populations (30,000 and over), five of eight were located in the state's mid-section, stretching north to south. Over the next fifty years, economic development in the form of industrialization and federal government spending shifted Virginians increasingly towards the coal-producing counties in the south-west (Wise and Tazewell), the port and ship-building centers in the Tidewater (Norfolk-Portsmouth and Hampton Roads-Newport News), and the governmental, especially defense-oriented activities in northern Virginia (Alexandria, Arlington, and Fairfax). Fairfax County's

¹ Rondo Cameron and Larry Neal, <u>A Concise Economic History of the World (New York: Oxford Press, 2003)</u>, 226.

² Gottmann, 39.

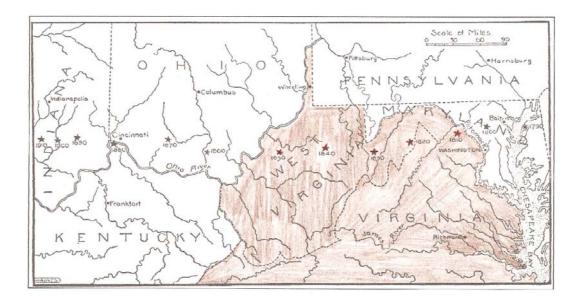


Figure 42 – Movement of the Center of Population Gravity in the United States, 1790-1910

From 1810 to 1850, the center of population gravity for the United States was located in Virginia. In 1810, it was in Waterford (Loudoun County), then moved steadily westward into present-day West Virginia (Hardy, Grant, Upshur, and Wirt Counties) until crossing into Ohio in 1860. Today, the center of population gravity is located in Phelps County, Missouri, reflecting the general west and southwest population drift in the country.



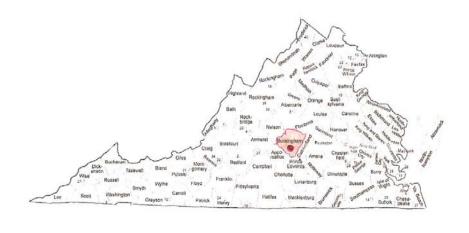


Figure 43 & 44– Virginia's geographical center is located approximately 5 miles southwest of Buckingham, near the intersection of US Routes 60 and 24, in Mount Rush (Buckingham County). Until 1950, the state's center of population gravity was located in nearby Farmville, 20 miles to the southeast.

population alone exploded from 18,000 in 1900 to nearly 100,000 in 1950. (It would reach nearly 1 million by 2000.) Besides these four large urban systems around Washington, DC, the Tidewater area, Richmond and Roanoke, however, "Virginia's population remained scattered through rural districts with a number of small urban centers rather evenly distributed over the territory."¹ While economic opportunities certainly influenced this distribution pattern – for instance, heavily populated counties of along the southern-central border with North Carolina like Pittsylvania and Halifax attest to the importance of tobacco, while the Norfolk-Portsmouth area grew exponentially large due to its ship-building and export harbor activities – Gottmann stresses that "the distribution of settlement reflects many features of the local habitat: its past and present, the economic, social, and natural setting."²

In "Geography of Virginia: A Supplement to <u>Maury's Manual of Geography</u>," Virginia school children like Charles F Cook of Shenandoah County – "aged 9 years, 11 months, 29 days on January 6th 1904," as he wrote in the text's inside cover - learned that

more than half the people of the State are supported by agriculture. Of all the agricultural products of Virginia, tobacco is most characteristic, although in value it ranks third [behind corn and hay.] Three counties – Pittsylvania, Halifax, and Mecklenburg – produce about one-third of the tobacco grown in the state. Virginia has come to be a great manufacturing State. While the capital invested in manufacturing is only about one-third of that invested in agriculture, the true net value of all the manufactured products exceeds the value of all the agricultural products, including live stock, by more than twelve million dollars. This represents a wonderful growth in the last ten years. Tobacco manufacture, flour and corn meal production, lumber products, and steel are the most important industries.

¹ Gottmann, 41.

² Gottmann, 45.

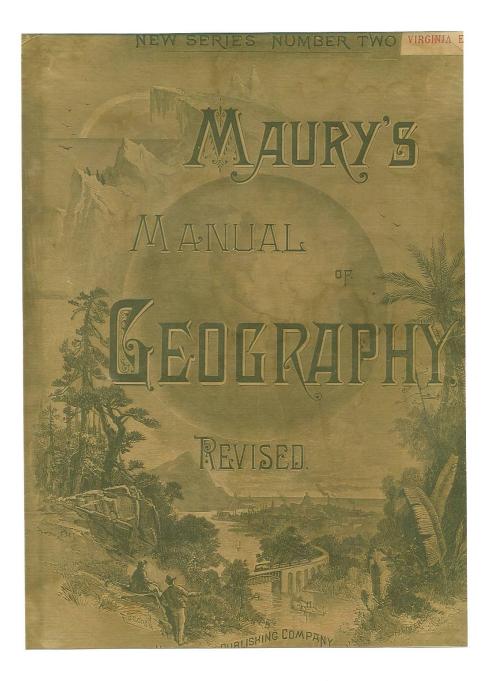


Figure 45 – Cover of Matthew Fontaine Maury's 1886 <u>Maury's Manual of Geography</u>.

This Virginia Edition contains 10 extra pages featuring the "Special Geography of Virginia."

Report of Mail Sallie Bailey for the month ending Geb. 17, 1588. Altendance 85 Recitations 100 Deportment,100 Arithanetic 96 Geography 97 Mord Analysis 95 Grammar 75 Reading _ 90 Dictionary 98 Pennanship, 90 ON Mr. Hill Seacher

Figure 46 - A report card for Sallie Bailey, owner of Maury's 1886 <u>Manual of Geography</u> and a geography pupil of teacher D.H. Hill in Virginia. The report card was preserved in the text.

The manufacture of steel ships at Newport News, Richmond, and in the Navy Yard at Portsmouth is the leading iron industry. Virginia is rich in coal and iron, and there are also mines of gold, lead, copper, zinc, barites, manganese and salt.¹

These economic activities, already widely distributed throughout the state at the turn of the century, would expand further over the next fifty years. Four heavily populated, tobacco-growing counties along the southern-central border with North Carolina would in response to the demands of the First World War be joined by the coastal Norfolk-Portsmouth area, and the rayon-producing cities of Roanoke, Waynesboro, and Front Royal in the Shenandoah Valley. By the 1930s, for instance, Virginia produced roughly one-third of the United State's rayon, and launched more naval tonnage than all the other navy yards in the country combined.² In contrast, Northern Virginia's dramatic growth, fueled primarily by government spending, would have to wait until the second half of the century. By 1950, however, the Commonwealth's economic recovery was already well underway, ranking the 15th most prosperous state.³ (By 2007, Virginia moved up to 10th.)⁴

Such significant demographic and economic changes over such a relatively short period forced much-needed if much-resisted changes in the Old Dominion. "These facts signified a break in the old tradition among Virginians, well maintained until recently, of

¹ Matthew Fontaine Maury, <u>Maury's Manual of Geography</u> (New York: University Publishing Company, 1904), Virginia Supplement, 5. The Supplement was prepared by W.J. McGee, President of the National Geographic Society.

² Emily J Salmon and Edward D.C Campbell, ed, <u>The Hornbook of Virginia History</u>, 4th ed (Richmond: Library of Virginia, 1994), 72.

³ US Department of Commerce, <u>Statistical Abstract of the United States</u>, 1950.

⁴ US Department of Commerce, Bureau of Economic Analysis, "Regional Economic Accounts, 2007," <u>www.bea.gov/regional/gsp/action.cfm</u>

pride in their rural, and politically conservative, background; they are psychologically and socially just off the farm... The old Virginia way of life," Gottmann concluded in 1952, "is gradually undergoing considerable change."¹ Virginia was after all not immune from the Progressive movement which swept the country at the turn of the century. "A broad-based reform movement directed at the industrial-urban revolution that had devastated the landscape, changed the nature of work and human relationships, and made the United States a world power,"² progressivism targeted corrupt politicians, corporate monopolies, child labor laws, and other social issues, including transportation and education. In Virginia, roads and schools went hand-in-hand, and were the primary focus of the reformers.³ Both were under-developed and in need of assistance.

Transportation Geography

In 1890, journalist and publicist Edwin Lawrence Godkin asserted in <u>The Nation</u> that America's country roads were in no better shape than they had been in John Smith's Virginia.⁴ The comparison was apt. "Mud, mud, mud, and double mud is all the go now," Staunton's <u>Daily News</u> agreed in describing the Commonwealth's roads 1903. The Richmond <u>News Leader</u> proclaimed Virginia's roads "the worst roads known to civilization,"⁵ prompting the newly-formed American Automobile Association to warn tourists heading to the 1907 Jamestown Tercentennial Exposition by car to avoid the

¹ Gottmann, 466.

² Ronald L Heinemann, John G Kolp et al, <u>Old Dominion, New Commonwealth: A History of Virginia,</u> <u>1607-2007</u> (Charlottesville: University of Virginia Press, 2007), 276.

³ Heinemann, 282.

⁴ Moger, 258.

⁵ Richmond <u>News Leader</u>, 20 April, 1903.

direct route from Washington to Richmond through Fredericksburg. "That road is practically impassable, and no one should attempt it, unless he has plenty of time on his hands, and takes pleasure in surmounting unusual road obstacles."¹ As with many aspects of the Old Dominion, little had changed regarding either the construction or maintenance of roads since the creation of the Board of Public Works in 1816. Indeed, until 1906, the building and maintenance of roads in Virginia remained primarily in the hands of local authorities, usually the county supervisors, and road taxes were paid in money or by labor on the roads. That year, however, the concerted efforts of such organizations as the Virginia Good Roads Association and individuals like Governor Andrew Jackson Montague (1902-06) combined with "public demand and the existence of a sizable surplus in the state treasury"² to create Virginia's first State Highway Commission (headed by Captain P. St. Julien Wilson) and appropriate \$250,000 for road building.

By the end of the Second World War, some 4500 miles of roads and hundreds of bridges had been added to the Commonwealth's transportation network, and road building had become big business.³ Some twenty years previously (1918), the General Assembly established the state's first highway system, a network of 4000 miles linking principal cities. To finance the system, a popular referendum rejected a bond issue favor of the "pay-as-you-go" taxation strongly supported by Harry F Byrd,⁴ whose name would

¹ R.H. Johnson, "Motoring Routes to the Jamestown Expedition," <u>The Independent</u>, June, 1907.

² Moger, 260.

³ Moger, 263.

⁴ State senator from 1915-25, Governor from 1926-30, and US Senator from 1933-65



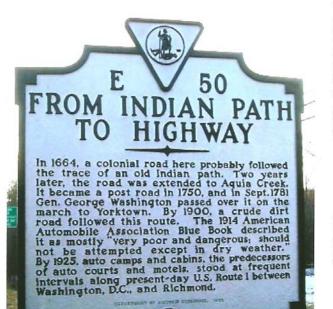


Figure 47 – Most early 20th century Virginia roads were single lane, unpaved, and traversed with difficulty in wet weather. In 1918, the General Assembly approved the establishment of the first state highway system, a network of 4002 miles of roads. By 1006, it had grown to nearly 70,000 miles. (Photo courtesy of Virginia Department of Transportation.)

Figure 48 – Many old Virginia roads like Route 1 along the coast and Route 11 through the Shenandoah Valley were old Indian paths.





Figure 49 – The 87 year evolution of a Virginia roadway in Dumfries. (Photo courtesy of the Virginia Department of Transportation)

forever after be associated with this funding method.

Byrd's pay-as-you-go system – which applied to as much of Virginia's finances as possible, including education - has long been criticized by some as too parsimonious. By the 1930s, however, the Secondary Road Act had transferred from the counties to the State Highway Commission some 36,000 miles of roads, which expanded to 47,000 miles by 1945.¹ Such growth would not have occurred without Byrd's support.

Byrd's deliberations on road building revealed the competing forces that were typical of the Virginia mindset: a conservative preference for traditional practices, especially when it came to spending money, versus a zest for progress, growth, and the utilization of resources in the most efficient and productive manner possible. Roads were necessary for development [including the development of schools], but one had to be careful not to overextend in financing them. This personal dichotomy reflected the current mood of cautious optimism in Virginia.²

However the Commonwealth chose to fund its transportation improvements, it

needed to be done.

The establishment of a good road network in the era of motorcar transportation was by its consequences even more important for Virginia than the railroad development on the morrow of the Civil War. Not only did it speed industrialization and the scattering of manufacturing plants throughout the country, providing more wealth and employment to here-tofore purely rural areas with surplus man-power, but it also made possible a fuller utilization of the geographical and historical endowment of the Commonwealth. Virginia's geographical position between the rest of the Southeast on the one hand and the great urban and industrial complex of the Atlantic Northeast on the other made necessary, besides the rail connection, major highways, adequately built and maintained, linking [Southeast and Northeast]...³

¹ "VDOT History Highlights," <u>www.virginiadot.org/about/vdot_history.asp</u>

² Heineman, 299.

³ Gottmann, 137.

Better roads did not just aid Virginia's economic development, but its social development. "It must be added that the penetration of the entire territory by motorcars caused many changed that went deeper than economic uplift."¹ Not only did the outside world come to remote and previously isolated corners of the Old Dominion, but better roads allowed more children to be transported more quickly to schools, and make possible the consolidation of weaker schools. As Joseph D Eggleton, William Ruffner's able successor as Virginia's first elected superintendent of public instruction from 1906-1912 succinctly noted, "the school question and the road question are inseparable for the present."²

Education in Virginia

The Progressive agenda included not just better roads, but better schools, and by the dawn of the twentieth century, the Old Dominion seemed at last able and willing to devote itself to improving its woefully inadequate education system. There was much to be done. As noted, in 1900, Virginia's illiteracy rate stood at 24.3%, among the highest in the nation and well above the national average of 11.3%. Annual state expenditure per pupil in daily attendance (roughly \$5.50), while relatively high compared to other southern states, was less than one-third of that spent by other states like New Jersey with a similar number of students (\$19.50), let alone Massachusetts (\$29.00).³ "Little more than half the school-age population was enrolled, most schoolhouses had only one room,

¹ Gottmann, 137.

² Richmond <u>News Leader</u>, 30 March, 1905.

³ Statistical Abstract of the United States, 1900, No 133, "School Population Enrollment," 424.

the state had only one four-year public high school, terms were abbreviated, and the teacher salaries were abysmally low."¹ William Ruffner had made laudable progress in advancing literacy in the Commonwealth in the 1870s and 80s, but the economic depression of the late 1890s meant times were difficult, and school taxes were considered a burden. "It is a hardship," the <u>Rockbridge County News</u> opined in 1890, "for the honest, industrious, and thrifty people of the land to contribute of their hard earnings all the educational fund for a thriftless and shiftless class, whose little learning in many instances only helps to make them drones and an incubus on society."²

Fortunately for Virginia, after the turn of the century renewed economic prosperity, two "pro-education" (to use the modern term) governors, and the civic activism of progressive reformers combined to reverse this mindset and propel education into "take-off mode," as Peter Wallenstein characterized it.³ In 1901, the Conference for Southern Education began a targeted lobbying campaign for education reform. That same year, progressives like Lila Mead Valentine and Mary Cooke Branch Munford founded the Richmond Education Association (which in 1904 became the larger Cooperative Education Association of Virginia.) Similar to the Virginia Good Roads Association, these civic groups lobbied for reforms and improvements, in this instance in education. Demands included a nine-month school term, more high schools and libraries in even rural areas, consolidated schools and transportation to them, agricultural and industrial

¹ Heineman, 279.

² <u>Rockbridge County News</u>, 27 February, 1890.

³ Wallenstein, 257.

education, and greater emphasis on teacher training.¹ Speakers traveled thoughout the state in support of this agenda, and in 1901, "for the first time in Virginia history a candidate for governor [Andrew Jackson Montague] insisted on better schools as the chief plank in his platform."²

Duly elected, Montague would provide education the same benefit of his active participation and full prestige of the office as he had to road improvements, earning him the distinction as "Virginia's first educational governor." During his tenure, the state elected its first superintendent of public instruction, Joseph Eggleston, considered the ablest leader to hold the office since William Henry Ruffner. Working tactfully and closely with Montague's successor, Claude A Swanson, Eggleston and Swanson in 1906 successfully convinced the General Assembly to pass the Mann High School Act. Pushing far beyond the universal system of primary schools, this was the first serious attempt by the state to support high schools. In appropriating state funds to match local contributions, the Mann Act effectively doubled state spending for public schooling. As a result, Virginia's high schools grew from one (in Richmond) in 1900 to an astonishing 345 by 1909, and 575 by 1918.³ (Only eight of these were for blacks.)⁴ Eggleston's effective leadership produced similar improvements concerning the length of school terms (from 6.4 to 7.1 months), expenditure per pupil (from \$9.50 to \$21.50), school consolidations, teachers' salaries (increased between 54-75%), and teacher training.

¹ Wallenstein, 258.

² Moger, 243.

³ Moger, 251.

⁴ Phyllis McClure, "Rosenwald Schools in the Northern Neck," <u>Virginia Magazine of History and Biography</u>, 113 (2), 131.

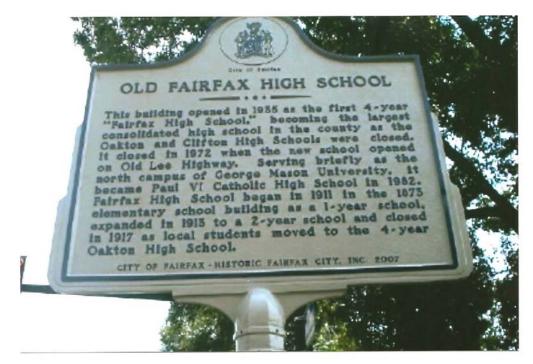


Figure 50 – In 2007, the Fairfax County public school system has grown to nearly 200 schools, including 21 high schools.

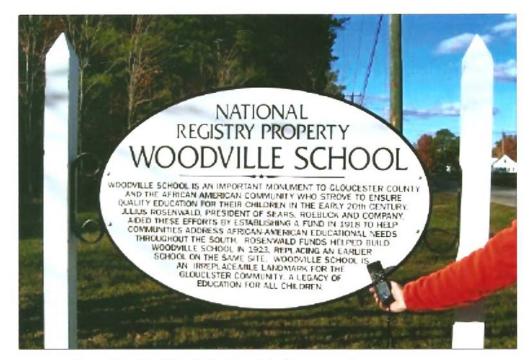


Figure 51 – The Woodville School in Gloucester County was one of 368 Rosenwald schools constructed for blacks in Virginia between 1914 and 1932.

Since the majority of teachers were women, but the state supported only one normal school for women (Farmville), three additional normal schools were opened at Harrisonburg (1909), Fredericksburg (1911), and Radford (1912).¹ By the First World War, each quadrant of the state had one such school.² The teachers' colleges for men were housed at UVA, Virginia Tech, VMI, and William & Mary.

What were these teachers learning, and what were they teaching their students? As during the previous century, discerning the exact course of study followed by Virginia primary, secondary, and post-secondary students is not as simple as it should be. Even in the age of professionalization, standardization, and record-keeping, programs of study and text books used are difficult to find, particularly since both were determined at the local, and not state level. In general, however, the picture that emerges is one in which geography continued to be universally taught alongside reading, writing, arithmetic, and history as a core course in the primary schools through the sixth year, or pupil age of around thirteen, after which geography education effectively ended for most, including those who went on to high school. While roughly 25% of all high school students were enrolled in some sort of geography course (overwhelmingly physical geography, but also commercial/economic and human geography) in 1900, this percentage would fall to just around 5% by 1928.³ In 1920, while some 60% of normal (teacher) colleges offered geography courses, in many cases they were electives.⁴ As such, many teachers

¹ In time, the first two schools became James Madison University and the University of Mary Washington, respectively.

² Wallenstein, 259.

³ Fellmann, 453.

⁴ Dryer, 142.

graduated from these schools without any formal geography training, although many of them would teach the subject. At the university level, only 30% offered any geography, and of those who did, 38% did not go beyond physiography.¹

While these figures are not derived from Virginia schools but are based on national surveys, there is no reason to believe the educational curriculum in the Old Dominion differed from that of the rest of the nation. After all, during the first half of the twentieth century, the Commonwealth's schools were still playing catch-up and following, not leading, the pedagogic reform movement. For example, Gloucester Agricultural and Industrial School, a black comprehensive school in rural Gloucester County, Virginia informally and popularly called Capahosic School, required six years of geography in the elementary and high school grades, and one year of physiography (physical geography) in its college preparatory and teacher-training program.² Similarly, Northern neck residents who attended Rosenwald schools³ during this period "remember a curriculum consisting of academic and vocational subjects... including reading, writing, penmanship, **geography**, history, and French..."⁴

School Reform

As such, geography continued to be universally taught to Virginia's youngest pupils. However, this could not be said of the growing number of high school students.

¹ Dryer, 143.

² Bagby, 11.

³ Between 1914 and 1932, Julius Rosenwald, president of Sears and Roebuck from 1908 to 1924, helped fund the establishing of 368 primary and secondary schools for blacks in Virginia. (McClure, 117). ⁴ McClure, 139.

Despite the pedagogical reform efforts of William Morris Davis at Harvard, Richard E Dodge at Columbia Teachers College, or Zonia Barber at the University of Chicago, what passed for high school geography continued for the most part to be poorly taught by poorly trained teachers. (Of course, history and civics fared no better in this regard.) Partly in reaction to this, as well as the education establishment's incessant need for reinventing itself and justifying its existence, the NEA in 1916 initiated another review of the secondary school curriculum. At their last major curriculum reform meeting in 1892, the Geography Committee of Ten had successfully lobbied for geography's – especially physical geography's - inclusion as one of the nine core subject areas for the college preparatory program. As a result, geography's place in American education at all levels was not only assured, but blossomed by the turn of the century. This would not be the case 24 years later. In 1916, the newly formed and influential Council for the Social Studies proposed a "social studies" curriculum, designed to create linkages between isolated subjects such as history, economics, political science, law, and geography in order to "promote civic competence."¹ "Geography's place in the ensuing social studies might have been strengthened at that time, but geographers held that geography was not a social science and refused to participate in the NEA's social studies curriculum development process."² This stance "effectively insured that the geography of professional geographers would be absent from the programs of most college-bound high

 ¹ "About National Council for the Social Studies," NCSS website, <u>www.socialstudies.org/about</u>
 ² Hill, 3.

school students."¹ William Koelsch was correct; social studies became largely dominated by historians, not geographers, a pattern which exists and has hurt academic geography to the present day.²

Isaiah Bowman

By the mid-1920s, "there were hundreds of school systems with reorganized courses in which geography was integrated with history and civics to form the broader course known as social studies.³ Not all geographers necessarily despaired of this development, however. Isaiah Bowman was arguably the most prominent American geographer of the mid-twentieth century. A geography professor at Yale from 1905 to 1915, then director of the American Geographical Society for the next twenty years (1915-35), and finally president of Johns Hopkins University from 1935 until shortly before his death in 1950, Bowman also served in the Inquiry – the "think-tank for post-war reconstruction,"⁴- as Woodrow Wilson's chief territorial advisor at the Versailles Peace Conference. While "not in favor of calling geography a social science," as he once told German geographer Albrecht Penck,⁵ he nevertheless believed that geography had "contributions to make to social studies."⁶ Unlike most geographers, Bowman bowed to the reality that "to have social and political influence, geography must deal with ideas

¹ William A Koelsch, "Academic Geography, American Style," in <u>Geography: Discipline, Profession and</u> <u>Subject since 1870</u>, Gary S Dunbar, ed (Kluwer Academic Publishers, 2001), 255.

 $^{^2}$ Hill, 4.

³ Douglas Lawson, "Geography Then and Now," <u>The Elementary School Journal</u> 41 (8), 599.

⁴ Smith, 25.

⁵ Smith, 222.

⁶ Geoffrey J Martin, <u>The Life and Thought of Isaiah Bowman</u> New York: Archon Books, 1980), 197.

that seem to be of critical importance to government and society.¹¹ His <u>Geography in</u> <u>Relation to the Social Sciences</u> (published in 1934, but largely written in 1931) enlarged on the themes presented before the Social Science Research Council in 1929. "Pitched to a popular audience, it aimed to convince the reading public that geography was more than maps, much more sophisticated than the school geography of popular memories, and indispensable to modern social scientific education."² The book was widely read, but unsurprisingly, received only a lukewarm reception among most of his peers because Bowman rejected the possibility of science in the social realm.³ While, as geographer Eva Taylor felt, the book may have been "a sane and balanced exposition that should go far to correct the view that geography can be neglected with impunity,"⁴ it ultimately did little to convince a highly dubious and resisting geography polity to establish a more friendly relationship with the social sciences. If geography at the secondary and postsecondary level suffered – and it did - then geographers themselves appear at least partially responsible for this predicament.

Thanks to the private efforts of such progressive reformers as Rosenwald and Valentine, and the determination of elected officials like Eggleston, Montague, and Swanson – who collectively achieved a 900% increase in education revenues schools during the first two decades of the twentieth century - Virginia's schools improved

¹ Paul P Abrahams, "Academic Geography in America: An Overview," <u>Reviews in American History</u> 3 (1), 49.

² Smith, 222.

³ Smith, 222.

⁴ Martin, 198.

tremendously. Despite this unprecedented funding increase, however, the Commonwealth was still spending only half the national average for education. The emerging Byrd Organization, which gained power during the twenties and would completely dominate Virginia politics for the next forty years, applied their low-tax, low-services approach to education. As a result, the considerably educational gains of the 1910s and 20s would not continue, and effectively stalled until the last four decades of the century, when an economically and socially reinvigorated Virginia demanded an educational system to match.

Academic and School Geography, 1900 to 1940

In 1903, the University of Chicago established America's first stand-alone geography department, headed by Rollin D Salisbury. He also became one of the charter members of the newly-formed Association of American Geographers (AAG) in 1904. As a member of both academia and a professional association, Salisbury typified the turn of the century's growing professionalization and specialization of American society generally, and geography specifically. As William Koelsch notes, this period

saw the emergence of permanent institutions created to sustain interests that had earlier been undifferentiated, erratic, or personal: symphony orchestras, comprehensive arts museums, [professional organizations and journals, research universities, academic disciplines. These new ventures owed much to rising levels of personal and national wealth, increasing cultural and civic consciousness in burgeoning American cities, the march of academic specialization and, not least, the career strategies and seized opportunities of individuals in an era of faith in science, progress, and broadened access to education and culture.¹

The founding of the National Geographic Society (and other geographic societies)², the promotion of a large number of geography museums and exhibitions,³ the establishment of numerous scholarly journals,⁴ the issuing of the first geography-themed US postage stamps, as well as the United States' participation in various international geography conferences and schemes⁵ all attest to the country's sustained systematic interest in things geographical at the turn of the new century. Its internal (continental) territorial expansion may have ceased, but its super-national ambitions were just beginning. In short order, Hawaii, Samoa, Cuba, Puerto Rico, and the Philippines came under American control during the last two years of the nineteenth century, ushering in a new justification for geographic literacy.

As Neil Smith persuasively argues, however, this did not happen during the next century, or at least not until the end of it, for this "American Century" was largely based on inherent geographic contradictions. On the one hand, the Empire Americans constructed for themselves was inherently spatially global, and thus fundamentally geographical. Geography mattered. On the other hand, the *nature* of this empire colluded

¹ William Koelsch, "Academic Geography, American Style: An Institutional Perspective," <u>Geography:</u> <u>Discipline, Profession and Subject since 1870</u>, Gary S Dunbar, ed (Dordrecht: Kluwer Academic Publishers, 2001), 9.

² These include the Geographic Society of Chicago in 1898, and the AAG in 1904.

³ The Philadelphia Commercial Museum opened in 1897. Both the Smithsonian Museum and the US Centennial Exhibition featured geographical exhibits.

⁴ Examples include the <u>Journal of School Geography</u>, the <u>Journal of Geography</u>, and <u>National Geographic</u> <u>Magazine</u>.

⁵ The 8th International Geographical Congress convened in the US for the first time in 1904. That same year, the US joined with other countries to produce the International Map of the World. Earlier, in 1884, the US hosted the International Conference for the Purpose of Fixing a Prime Meridian.

with politics and technology to effectively hide its important geographical underpinnings. Geography, Americans were told, no longer mattered; geography was dead.

This was not case previously. "For European settlers in North America from the seventeenth into the nineteenth century, the seeming emptiness of the continent was the 'crucial founding fiction.' To them, 'America did not connote society, or history,' argues Myra Jehlen, so much as geography."¹ From George Washington and Thomas Jefferson through Zachary Taylor and Matthew Fontaine Maury, Virginians and Americans conceived change "more in terms of geographical expansion than social transformation. For [them], history *was* geography." This is one reason science historians such as Nathan Reingold maintains that geography, broadly defined, dominated the sciences in America

Geography... surely was the appropriate science of spatial expansion in the new nation. Geography, American, and the nation-state were triplets born of the eighteenth century Enlightenment, coming of age in the nineteenth century. From Jefferson's own intensely geographical expansionism to the militarism of 1898, the discipline of geography should have been and partly was the American science par excellence. High historicized and largely inseparable from geology throughout most of the nineteenth century, *it was socially in tune with its times* [italics mine].³

Yet this inherently geographical – as opposed to historical- way of thinking, this uniquely American geographically-based Weltanschauung, could survive only for as long as there was real geographical expansion, real visible geographical alterations to the map. In 1898, however, the United States reached its territorial limits, and while "the grammar

¹ Neil Smith, <u>American Empire: Roosevelt's Geographer and the Prelude to Globalization</u> (Berkeley: University of California Press, 2003), 9.

² Nathan Reingold, Science in Nineteenth-Century America (London: Macmillan, 1966), 61.

³ Smith, 10.

of global power was indisputably [still] geographical, the relevance of geography to social, economic, and political change was changing fundamentally." The United States had "outstripped its geography by the end of the nineteenth century," Smith argues; "geography could no longer contain history."¹ Unlike early Virginia's (and America's) conception of it, change and progress no longer manifest itself geographically but economically. Territorial and economic expansion have of course always been closely linked, with the latter often achieved through the accumulation of the former, but in the twentieth century, economic expansion would bear a much more complicated and subtle relationship to geographical change.² The emerging American "Empire" would be founded not on the direct political control of places but on the indirect manipulation of world economic markets. Geography was profoundly important to the methodical construction of this Empire, but it was akin to a "virtual" Empire; only occasionally did it require policing on the ground. In those instances when Americans did literally have to dispatch to distant shores to protect their geo-political and economic interests militarily, popular interest in geography rose accordingly, only to fall once the boys came home. Wars notwithstanding, economic rather than political or physical control of countries and continents, coupled with emerging communication and travel technologies which appeared to shrink distances and homogenize landscapes, conspired to diminish and trivialize geography in the eyes of successive American generations. Geography obviously mattered during the *acquisition* of an Empire, but once acquired, once

¹ Smith 14.

² Smith, 14.

possessed of this new global power, Americans no longer had to care about in any detail.

"Precisely because geography was everywhere – the American Century was global – it

was simultaneously nothing."¹

The American Century, therefore, was premised on a quite opposite connection between geography and political economy vis-à-vis that which drove the European empires and fueled European geographical [and pre-twentieth century American] geographical traditions. European attention to local and global geographies was integral to strategies of territorial expansion in a way that no longer applied to the United States... This pivotal shift in the relationship between geography and economic expansion facilitated a combination of global power with popular geographical ignorance in the United States that represented something quite new and became an abiding ideological trademark of the American Century, at least into the 1980s.²

Geography's contradictory conundrum would be painfully evident in academia

throughout most of the century. It intensified the identity crisis in which the field

increasingly wallowed, and widened the rift - launched by the NEA's 1892 Geography

Committee recommendations - between those who welcomed a closer, cross-disciplinary

relationship with other fields and "softer" sciences, and those who opposed the

"hijacking" of geography and the loss of status vis-à-vis other academic disciplines.

At the beginning of the 1900s, the latter group still had the upper hand. The first meeting of the AAG in 1904 was dominated by papers dealing with physiography,³ and one quarter of all Virginia (and American) high school students were enrolled in physical (as opposed to other) geography courses. Physical geography's dominance in academia was in no small measure due to its most influential proponent, William Morris Davis.

¹ Smith, 18.

² Smith, 18.

³ Lawrence Martin, "Alfred Perry Brigham: Popularizer of Geography and Geology in the United States," <u>Annals of the Association of American Geographers</u> 20 (2), 83.

Davis, the widely proclaimed "father of modern American geography," earned this distinction not only for his scientific contribution to the field, but for his pedagogic efforts at the secondary and college level. Undoubtedly influenced by Darwin's organic evolution theory, in 1889 Davis wrote "The Rivers and Valleys of Pennsylvania," in which he first presented his "cycle of erosion." What he called the "geographical cycle" but is more properly the "geomorphic cycle," conveyed the erosion cycle in easily understood terms, and became the basis for modern geomorphology. His theory of landform creation and erosion were a laudable scientific departure from the teleologically-based, "Great Biblical Flood" explanations which continued to appear in many geography texts during the remainder of the nineteenth century (and beyond, in the United States), and helped geography gain credibility as a "real science," and not just a "memory study for little children," as University of Wisconsin geographer R.H. Whitbeck described it in 1910.¹ As Jurgen Herbst asserted in 1961, "American academic geography reached its pinnacle of respect and achievement under the leadership of William Morris Davis."²

Unfortunately, and perhaps predictably, the new scientific respectability Davis brought to his discipline was short-lived, for several reasons. First of all, while easily understood, his erosion cycle ultimately proved over-simplified, quantitatively incorrect, and scientifically unsustainable, leading to an inevitable loss of prestige for his theory specifically and physical geography generally. Secondly, physical geography proved

¹ R.H. Whitbeck, "The Present Trend of Geography in the United States," <u>Geographical Journal</u> 35 (4), 420.

² Jurgen Herbst, "Social Darwinism and the History of American Geography," <u>Proceedings of the American Philosophical Society</u>, 105 (6), 540.

unpopular among teachers. Reports by the Secondary School Geography Committee and the NEA at the AAG meeting in Baltimore in 1908 indicated "the widespread feeling of unrest among teachers of geography regarding the teaching of physical geography." While the teachers complained that physical geography was "too geological, too closely restricted to the description and classification of landforms, with too little emphasis upon the life side,"¹ geography professors like Whitbeck at Wisconsin believed the real problem lay in "the immaturity of the pupils and the lack of special preparation among teachers."

We must not forget that most of the high school geography is taught in the first year to girls who are still playing with dolls and to boys who still wear knee-trousers; second, that the teachers in all but the larger high schools are not specially trained to teach the subject. In several tours of high school inspection, both in the east and west, I find that classes in physical geography are very commonly distributed among the various teachers of the faculty whose schedules will best permit of their taking such classes. In two cases at least I have found the teacher of stenography teaching physical geography. It is my impresssion that not 10 per cent of the teachers of physical geography in the smaller high schools have had special preparation for the teaching of this subject.²

The AAG and NEA's solution to physical geography's declining popularity among teachers and students was to "humanize" geography by emphasizing regions and culture "so carefully worked out in the text books that even under-trained teachers can handle it."³ This relative "de-scientification" was as much symptomatic of, as it was responsible for, the next trend in academic geography during the early twentieth century.

¹ Whitbeck, 420.

² Whitbeck, 423.

³ Whitbeck, 424.

By 1910, physical geography no longer played a dominant role in the high school curriculum, and was in fact being replaced by general science courses.¹ It its stead, both the NEA and AAG recommended the more "humanized," vocational economic (or commercial) geography. This reflected the reality and needs of the emerging American Empire. "As the United States began to look outward to distribute its growing surplus of goods and to invest its surplus capital, this brought about an interest in vocational education, high schools of commerce, and with them, the study of commercial geography."² In the same manner that Virginia (and America's) founders had turned to geography to foster revolution, nationalism, and territorial expansion during the eighteenth and nineteenth century, in the twentieth the nation's educators looked towards geography to help foster the nascent American Empire. While far from universal, and never as popular as physical geography at its peak, economic geography at its height in 1928 was offered in 21% of public high schools in 1928.³ By then, the percentage of high school students electing physical geography had fallen to less than 5%. Five years later, all geography courses were disappearing from the high schools, and "geography lost its position as an admission subject in most liberal-arts colleges during this period, no doubt because of its new vocational reputation. Even the College Board stopped

¹ A David Hill and Lisa A LaPrarie, "Geography in American Education," in <u>Geography in America</u>, Gary L Gaile and Cort J Willmott, eds. (Toronto: Merrill Publishing Company, 1989), 3.

² Kohn, 257.

³ Fellmann, 433. Economic geography in higher education fared significantly worse. Of 571 colleges surveyed, only 55 (or less than 1%) taught it. (Fellmann, "Myth and Reality in the Origin of American Economic Geography," <u>Annals of the Association of American Geographers</u>, 76 (3), 320.

examinations in geography in 1934,"¹ a situation not rectified until the (re)introduction of Advanced Placement (AP) Human Geography in 2001.

The other more "humanized" sub-field of geography which gained popularity during the early decades of the 1900s was environmental (or geographical) determinism. A cultural geographic theory brought to the United States by Ellen Churchill Semple, professor of geography at Clark University, and further propagated by Ellsworth Huntington (a student of Davis' and geography professor at Yale), environmental determinism rode on the coat-tails of the evolutionary biology introduced by Darwin and applied in geographical terms by Davis. This is one reason it became a natural and popular successor to physical geography; Davis' embrace of it was another. Yet there existed a third reason for its popularity.

Environmental determinists (or social Darwinists) like Semple, Huntington, and Davis were prominent in the institutionalization and theorization of early modern geography in the United States because their geographically (i.e. scientifically)-based theory justified past as well as current acts of genocide and territorial expansionism. While actually more Lamarckian than Darwinian (inheritance of acquired characteristics versus random mutation and natural selection), the application of a biological theory to explain human society provided a source of social legitimation. In another instance of European influence upon American geography, Semple imported the German Friedrich Ratzel's geopolitical idea of *Lebensraum* "under the aegis of 'science'… Interpreting Ratzel through the scientific racism current at the turn of the century," her American

¹ Hill, 3.

<u>History and Its Geographic Conditions</u> (1903) was a "tale of the sturdy energy of the Anglo-Saxon race reinvigorated under the frontier conditions of North America, and its updating, or scientific specification, of the nineteenth century ideology of manifest destiny."¹ Ellsworth Huntington's <u>Civilization and Climate</u> (1915) postulated a similar hypothesis. "Where a certain type of (mid-latitude) climate prevails, human energy is at its height and great civilizations arise – 'therefore, such a climate seems to be a necessary condition of great progress."²

Unhappily for his future reputation and the reputation of geography, William

Morris Davis also subscribed to this ultimately scientifically unsustainable line of

reasoning. In the introduction of the 1899 edition of his Physical Geography text book, he

wrote that,

very clearly, as a rule, the local features of the regions in which men live exercise a strong control over their manner of living... Their habits and customs are closely related to the surroundings in which they have been acquired... In one region he may be a savage, living in the rudest manner, ignorant of all but the simplest arts, each individual working in about the same way as any other in the search for food and shelter. Here the relation of man's habits to his surroundings is easily understood. In another region he may be one of a civilized nation, where great progress has been made in the arts and sciences, and where each individual gains his livelihood not by working independently, but by doing something that will serve the needs of many other persons besides himself. Here the relation between man's way of living and his surroundings may be more complicated, but it may always be discovered by careful study.³

¹Richard Peet, <u>Modern Geographical Thought</u> (New York: Blackwell Publishers, 1998), 13.

² Peet, 13.

³ William Morris Davis, <u>Physical Geography</u> (Boston: Ginn and Company, 1899), 6.

While never as strongly environmentally deterministic as Semple or Huntington, Davis nonetheless contributed to a line of geographical thought which served the interests, and "scientifically" legitimized the actions, of Neil Smith's emerging "American Empire." As Derek Stoddard argued in the previous chapter, Darwin's biological theory, establishing the human's place in nature, made possible the development of geography as a science.¹ For Richard Peet, the resulting "organismic analogy" and the "conception of a natural humanity" allowed geography "entry into modern science not only because they enabled logical synthesis of the natural and the human, but more importantly because this synthesis could be employed in the service of power, specifically to legitimate as natural the expansion of Europe [and the United States] into world dominance. Behind the collection of geographical facts into organized systems of thoughts lay a sense of social and political purpose."² Stated more forcefully by R Hudson, "the rise of modern geography can be interpreted as serving the interests of imperialism in its various aspects including territorial acquisition, economic exploitation, militarism, and the practice of class and race domination."³

Sadly for the discipline, when imperialism (the new manifest destiny) became politically incorrect after the First World, so did its "scientific" basis, environmental determinism. Like his erosion cycle, Davis' geographical deterministic views could not withstand closer scrutiny. During the inter-war period,

environmental determinism came under repeated attacks as its claims were

¹ Stoddard, 684.

² Peet, 13.

³ R Hudson, <u>The New Geography and the New Imperialism, 1870-1919</u> (Cambridge: Cambridge Press, 1977), 12.

found to be severely faulted at best, and often dangerously wrong. Geographers reacted to this by first developing the softer notion of "environmental possibilism," and later by abandoning the search for theory and causal explanation for many decades. The criticism that determinism served to justify racism, imperialism, and war has left a scar on geography.¹

While Geography's departure from its more scientific physical roots and subsequent embrace of social Darwinism was actually relatively brief and confined to only a small number of proponents, it nevertheless inflicted lasting damage. Both Carl Sauer and Richard Hartshorne considered it "the chief cause for the lingering sickness of American geography during the early decades of the twentieth century." ² It precipitated what Nevin Fenneman in his 1918 Presidential Address to the AAG described as the discipline's "peculiarity to be always discussing and debating its own content – as though a society were to be organized for the sole purpose of finding out what the organization was for... It is probably unnecessary to point out this is purely an American attitude." The basis for this concern, he felt, was not greed, but fear. "Geography wages no aggressive wars and seems to covet no new territory," but was quite the opposite afraid that if it accepted the work and used the language of other sciences, "geography itself will be dismembered and its remains divided among its competitors."³

Fenneman's words proved prophetic. In the years following the First World War, academic geography at all levels was nearly cannibalized, in fact self-cannibalized, on two fronts. As early as 1904, relative purists like William Morris Davis warned the

¹ Andrew Sluyter, "Neo-Environmental Determinism, Intellectual Damage Control, and Nature/Society Science," <u>Antipode 4</u> (35), 813.

² Herbst, 543.

³ Nevin M Fenneman, "The Circumference of Geography," <u>Annals of the Association of American</u> <u>Geographers 9</u> (1919), 3.

discipline needed to remain narrowly focused on the "properly geographical." For Davis, this meant the "relation between the elements of terrestrial environment and the items of organic response." As he wrote in Science, "in the field of geographical study, there is no room for geography and history, geography and geology, geography and astronomy. Geography will never gain the disciplinary quality that is so profitable in other subjects until it is as jealously guarded from the intrusion of irrelevant items as is physics or geometry or Latin."¹ The trick lay in advancing "scientific" geographical research without appearing to delve too deeply into any one area. Otherwise, the unifying "mother of the sciences" could splinter into specialized sub-fields and get subsumed by other disciplines. Unhappily for geography, Davis's advice went unheeded. As Indiana University geographer Stephen S Visher noted in 1932, thanks to the movement toward specialization that began in the late 1800s, "geography has suffered the loss of many scientific men who specialized and became known not as geographers but as geologists, anthropologists, commercial economists, physiographers, ecologists, climatologists, etc."² With the "pulling apart of geography from geology [i.e. physical geography], American geography gradually ceased to be a part of Earth Science," initiating what Carl Sauer in his 1940 Presidential address before the AAG would call the "Great Retreat."³

¹ William Morris Davis, "Geography in the United States I," Science 19 (473), 127.

² Stephen S Visher, "Recent Trends in Geography," <u>The Scientific Monthly</u> 35 (5), 439. ³ Carl O Sauer, "Forward to Historical Geography," 1940, www.colorado.edu/geography/giw/sauer-co/1941_fhg/1941_fhg_body.html

For all these grim developments, and despite its best efforts, geography nonetheless experienced relatively impressive growth during the First World War and inner-war period.¹ As Ambrose Bierce intimated, geography always profited from a good war, and geography's experience during the Great War was no exception. Wilson's Inquiry, headed by Bowman and staffed with numerous other geographers such as Nevin Fenneman, Mark Jefferson, and Ellen Churchill Semple, "engaged in a map-making program hitherto without precedent in this country... [with maps] made to visualize not only all manner of territorial boundaries but with distribution of peoples, populations and their local densities, religions, economic activities, distribution of material resources, trade routes, both historic and potential strategic points, etc. [plus] a series of base maps and block diagrams [i.e. landform maps]."² As president of the AGS, Bowman made available to the American war effort the Society's extensive map collections and used them to prepare reports for the President. Bowman also prepared a 1:3,000,000 relief map of Europe which became the most widely used base map at the Conference, while his report on "A Suggested Statement of Peace Terms," -accompanied by some twenty maps – was the basis for President Woodrow Wilson's framing of his Fourteen Points.³ One reason for Bowman's and geography's elevated role within the Inquiry undoubtedly rests with the geographically-minded Wilson himself.

¹ Koelsch, 256.

² AAG, 77.

³ Martin, 83.



Figure 52 - Woodrow Wilson and his family in Virginia on the first Mother's Day.

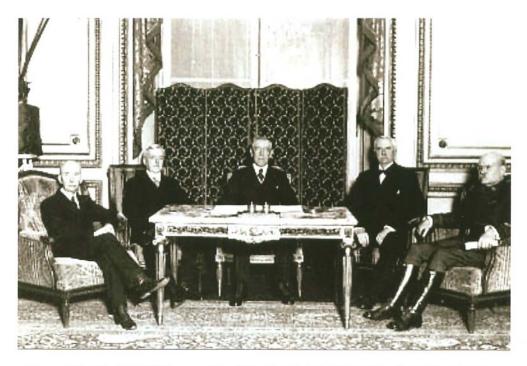


Figure 53 - President Wilson and the "Big Four" at the Versailles Peace Conference.

Woodrow Wilson

Thomas Woodrow Wilson was Virginia's eight (and the nation's twenty-eight) president. Born in the Shenandoah Valley city of Staunton to a Presbyterian minister in 1856, he grew up in Georgia and South Carolina, and graduated from Princeton in 1879. Yet "Tommy" retained strong ties to his home state throughout his lifetime. He spend his summer vacations in the state, visiting relations on his mother's (Woodrow) side of the family, attended law school at UVA, and almost became its president until Princeton offered him the same position at a higher salary in 1902.¹ His second wife, Edith Bolling Galt, born in the south-western town of Wytheville, descendent from colonial-era Virginia gentry, and was a music graduate of Martha Washington College in Abingdon. In 1915, the Wilsons honeymooned in Hot Springs, Virginia. While Wilson used the governorship of New Jersey, and not Virginia, as his springboard to the presidency in 1914, he recognized the significance of place and his Virginia heritage when he stated that "a man's rootage is more important than his leafage."²

Wilson's tenure at Princeton coincided with that of Arnold Guyot, the noted Swiss professor of geology and physical geographer. Wilson was a student in at least one of Guyot's classes, was president of the university when Guyot Hall was dedicated in 1909, and was president of the United States when he recognized Guyot as one of the founders of the US Weather Bureau in 1916.³

¹ "Wilson the Virginian," The Woodrow Wilson Presidential Library, <u>www.woodrowwilson.org</u>

² Ibid. Also at <u>http://thinkexist.com/quotes/with/keyword/rootage</u>

³ Emily Aronson, "Bicentennial of Princeton geologist celebrated," Princeton University website, <u>www.princeton.edu/main/news/archive/S18/90/06C08</u>

As both college professor (of Political Science) and then administrator at Princeton, Wilson recognized the importance of modernizing the programs of study in higher education, and jumped on the academic reform movement of his day. Like so many other reformers before him, however, he found his efforts at revising the curriculum, pedagogy, and even admissions systems at Princeton daunting; at one point, he lamented that "changing a college curriculum is like moving a graveyard – you never know how many friends the dead have until you try to move them."¹ Wilson nevertheless seemed to enjoy some success at reorganizing various university departments, including the ones overseeing geography. Geography and geology (or geosciences, as the school calls it) had been part of Princeton's curriculum since Arnold Guyot's arrival in 1854. In 1904, Wilson created a single Department of Geology, which enjoyed considerable growth over the succeeding five years of his tenure. New groups of undergraduate and graduate courses were adopted, and a graduate school was established as a separate organization.² When he departed Princeton to become governor of New Jersey in 1911, he left behind a strong geography program, which during the 1920s enjoyed a second round of growth, leading to the acquisition of more faculty and expanded course offerings. In 1927, for instance, the school received funds to endow the Knox Taylor Professorship of Geography, first awarded to former University of Chicago professor Paul MacClintock.³

www.quotationpages.com

² "History of Geosciences at Princeton University," Princeton University website, http://geoweb.princeton.edu/aboutgeo/historv.html ³ Ibid.

Wilson's geography credentials were most clearly evident during the First World War. Now President of the United States, he worked closely with Isaiah Bowman to craft a geographically-based peace plan which literally re-drew the map of Europe. "When Woodrow Wilson sailed to Europe in December 1918," Neil Smith wrote,

he optimistically expected that the Paris Peace Conference would be a geographical moping-up exercise. In contrast to what he saw as the petty , avaricious geographical squabbles of the European nations, he expected the conference to tidy up the world map in preparation for a new and high stage of international society – a beneficent brotherhood of capitalist nations competing economically but peacefully while advancing the global good. More than anything, it was these high expectations for the 1919 Paris Peace Conference that seemed to promise a future beyond the closed frontier and a cemented connection between an emerging American Empire and the escape from geography. But the conference failed this antigeographical ambition...¹

As Koelsch notes, "the actual postwar territorial settlements owed far more to secret commitments made by European politicians during the war itself and to demands for reparations than they did to geographical research."² They also underscored the inherently contradictory nature of geography which emerged during the American Century, one in which geography was considered spaceless but simultaneously spacially constituted. At Versailles, geographically-minded leaders like Wilson looked towards geography to solve their political problems, and poured over maps for what they hoped would be the last time. As it was, the United States Congress also consulted maps, and came to a different geographically-based foreign policy decision than the one proposed by the Virginian. Afraid that membership in a global organization like the League of

¹ Smith, 16.

² Koelsch, 256.

Nations would lead to unwanted global entanglement, they refused to ratify Wilson's plan, and the United States, perceived to be splendidly isolated by 3000 miles of ocean from perpetually unstable Europe, retreated into isolationism.

Richard E Byrd

If the United States government chose to limit its political and military interaction with Europe during the inner-war period, then this did not mean the American public lost all interest in things geographical. The increasing popularity of human geography in academia after the war was in part a response to the exploits of American and European explorers and adventurers of the early 1900s. Some, like the American Robert Peary and the Norwegian Roald Amundsen, concentrated their efforts on reaching and charting the Arctic, while other, notably Charles Lindbergh, were simply interested in conquering vast distances via the new technology of airplanes. One Virginian, however, successfully managed to fuse America's fascination with exploration **and** flying, making him the most famous geographer of his day.

Between 1925 and 1929, Richard E Byrd, the brother of Virginia Governor Harry Byrd, organized a series of aerial expeditions to the Arctic (South Pole) and Antarctic (North Pole). As a boy, Richard developed an interest in travel and distant places during a journey to visit a family friend in the Philippines. This prompted a subsequent career in the US Navy, where he learned to fly. An early proponent of air travel, after the First World War Byrd decided to combine his love of flying with travel and become an "entrepreneur of exploration, using emerging airplane technology to explore the littleknow polar regions."¹ In 1925, Byrd joined the MacMillan Arctic expedition. He and his co-pilot Floyd Bennett made aviation surveys of Greenland which improved the geographical understanding of the area, but poor weather prevented them from flying to the North Pole. He had better luck the following year, when he and Bennett, in their trusty Fokker airplane, reached their destination on 9 May, 1926. While the distinction of being the first to reach the North Pole has subsequently been disputed, at the time of his return to the United States, "Byrd received one of the wildest greetings ever accorded a celebrity. New York City gave him a ticker-tape parade and schools closed for a day in his honor. His flight received an avalanche of publicity."²

In 1928, Byrd embarked on his next geographical adventure, this time on the opposite end of the globe, the South Pole. While Roald Amundsen had reached Antarctica fifteen years previously, in his highly publicized race against Robert Falcon Scott he had virtually ignored scientific inquiry, leaving the area largely unexplored. Not only would flying to the South Pole and back rank among the greatest feats in the history of exploration and aviation, as the <u>New York Times</u> opined, but its uncharted lands would allow Byrd to make his mark as a geographer in one of the world's last scientifically and geographically unknown territories.³

In contrast to his 1927 attempt at beating Lindbergh across the Atlantic, Byrd's first Antarctic expedition proved much more successful. Not only did he (undisputedly, this time) circle over the South Pole on 29 November 1929 – prompting a radioed

¹ Eugene Rodgers, "Richard E Byrd's first Antarctic expedition," <u>Virginia Magazine of History and</u> <u>Biography</u>, 110 (2), 1.

² Rodgers, 2.

³ Ibid., 3.

congratulations from President Hoover upon his return to his base camp – but he and his scientific corps made unprecedented contributions to the geography of the region. One of the expedition's main objectives had been to improve Antarctica's maps. Towards this end, aerial photographer Ashley McKinley made the first mapping-quality aerial photographs of such geographical features as the Rockefeller Mountains and the Edsel Ford range¹, which, in conjunction with ground surveys, enabled Byrd's team to produce the best maps in polar history.² Led by University of Michigan geologist Dr. Laurence M Gould and US Navy oceanographer Ralph Shropshire, the expedition also collected data on weather – which led to the development of the wind chill factor - the aurora australis, and the earth's magnetic field. Through rock analysis, Gould was able to confirm the existence of a seemingly unconnected mountain range, the Transantarctic Mountains, while Shropshire, aided by the newly developed sonic depth finder, chartered the ocean floor.³ From a geo-political perspective, all these activities strengthened the United State's claim to the region.

Upon his return, Byrd was honored with another ticker-tape parade, and graced the cover of <u>Time Magazine</u>. His exploits "produced a popular delirium that was repeated many times in this zany decade, notably over Charles Lindbergh's transatlantic flight a year later."⁴

A benefit of the expedition that ought not to be discounted was its contribution to the geographical education and entertainment of the millions of people who followed it. For more than two years, the <u>New</u>

¹Both were named after two of the expedition's sponsors. The <u>New York Times</u> was also a sponsor.

 $^{^{2}}$ Rodgers, 6.

 $^{^{3}}$ Rodgers, 5.

⁴ Heinemann, 304.

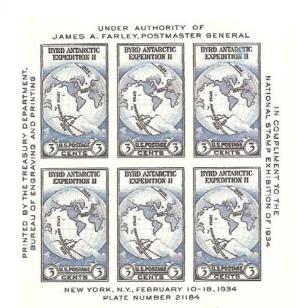


Figure 54 – Richard E Byrd commemorative Stamp.

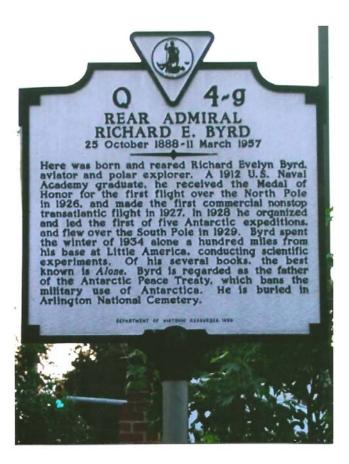


Figure 55- Richard E Byrd roadway marker in Winchester. <u>York Times</u> published and syndicated stories about the expedition and articles about Antarctic science and geography, earning a 1930 Pulitzer Prize...while a documentary, "With Byrd at the South Pole," won the 1930 Academy Award for photography. Several museums set up exhibits about Antarctica... and the <u>New York Times</u> sent an educational exhibit on a tour of the country. Byrd and more than half of the other members of the expedition lectured about it in towns and cities all over America. And he and seven of his men wrote books devoted to the first expedition, including several best sellers that went into additional printings.¹

Like fellow Virginian and US naval officer Matthew Fontaine Maury before him, Byrd was bestowed with many awards, decorations, and honors, and had several geographical features and schools (and two US Naval vessels) named after him. In 1927, the city of Richmond dedicated their first airport, the Richard Evelyn Byrd Flying Field (today Richmond International Airport) in his honor. Seven years later, the US Post Office commemorated Byrd's achievements with a postage stamp.

For all this, however, Byrd is today as little known as Maury, even in his home state. In this regard Byrd, the geographer and explorer, suffered the same fate as Geography, the field. "As society grew more sober and sophisticated after World War II," his biographer Eugene Rodgers concluded, "people tended to lump Byrd with the easily forgotten, silly celebrities of his frivolous era – the flagpole sitters, the goldfish swallowers, the marathon dancers."²

¹ Rodgers, 8.

² Rodgers, 8.

The State of Academic Geography after 1919

Indeed, in the second half of the American Century, geography increasingly seemed conquered, unimportant, and thus easily forgotten after grade school. After the First World War, however, "the impact of wartime service on American geography was substantial."¹ Physically-oriented geography, already in retreat before the war, was rapidly being replaced by more human-oriented courses such as economic, urban, and, with the popularity of Bowman's 1921 The New World, political geography. "Human geography emerged with its own independent identity in geography education, with textbooks emerging for elementary and secondary schools and for colleges."² In 1921, the US State Department established the Office of the Geographer "to maintain the geographic expertise in international boundary delineation and regional analysis" developed at Versailles.³ That same year, Bowman helped found the Council of Foreign Relations. "An organizational response to the many disappointments experienced by British and American advisors" at Versailles, the Council hoped to "expand the geographical horizon of America's public opinion leaders, business elites, and elected officials from one centered within the United States (a nationalist-isolationist perspective) to the global scale (an internationalist-interventionist perspective.)"⁴ Bowman wanted Americans to recognize that geography still mattered.

The period also witnessed the expansion of undergraduate and graduate classes (in schools such as Princeton) and the establishment of entire departments – including

¹ Koelsch, 256.

² AAG, "History of Geography," 78.

³ Ibid, 79.

⁴ Ibid, 83.

graduate departments – at such universities as Hawaii, Arizona, Michigan State, Ohio State, Nebraska, Southern California, and Washington. Clark University opened its graduate program in 1921 and immediately began accepting doctoral candidates; two years later, the University of California under Carl Sauer followed suit, ushering in the "Berkeley School," with its emphasis on "field observation (versus field survey), a strong historical and morphological orientation, backed up by substantial library research and often directed towards Latin American problems."¹ In Baltimore, Isaiah Bowman – unlike geographer Daniel Coit Gilman before him - made the most his position as president at Johns Hopkins University (1935-48) by actively cultivating geography at the school and planting the seeds for a geography department.² In 1936, he became the first geographer since Richard Byrd to grace the cover of <u>Time Magazine</u>.

As such, geography's impressive presence and influence at Versailles gave it a much-needed boost which was reflected in the growth of academic geography at the national level over the next twenty years. As befitting a state still behind the educational curve in the first half of the century, however, Virginia was slow to follow this trend. While Washington & Lee, UVA, Virginia Tech, Martha Washington, and other colleges appeared to continue to teach individual geography courses (although many, such as

¹ Koelsch, 260.

² "Department of Geography and Environmental Engineering," Johns Hopkins University website, <u>http://engineering.jhu.edu/~dogee/undergraduate-programs/</u> In 1948, these seeds blossomed into the Isaiah Bowman School of Geography. The current department was established in 1968 and lies within the Whiting School of Engineering.

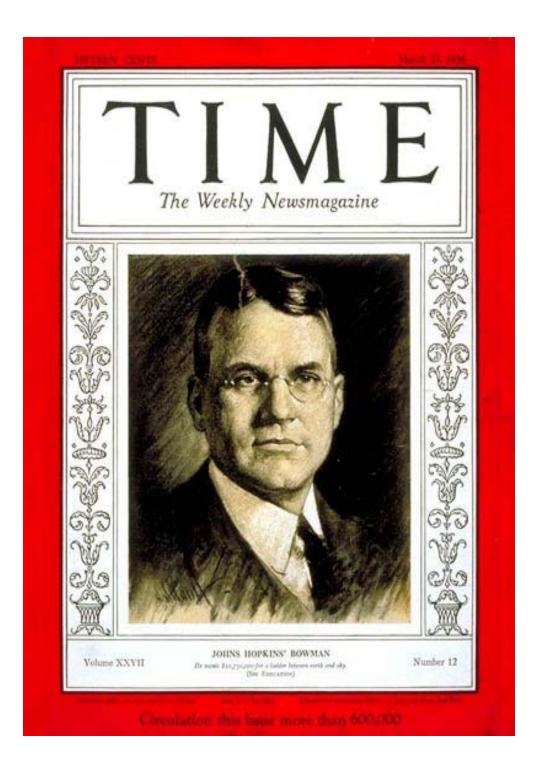


Figure 56 - Isaiah Bowman (1878-1950) was a geographer, educator, director of the American Geographical Society, president of Johns Hopkins University, and territorial advisor to Presidents Wilson and Roosevelt during both world wars.

economic geography, were taught by non-geographers) during this period, only one Virginia college - little Emory & Henry College, located in the extreme south-western portion of the state - had an active geography program and seemed to offer a major in the field. A departmental history of that school reveals that geography came to E&H with the arrival of (West) Virginian E. Ray Casto in 1920. Casto, who held a geography Ph.D. from Clark, taught geography, geology, and biology at E&H for twenty years. During that time, his course offerings ranged from "Climatology and the Climate of the World" through "Geography of Europe" and "Geography of Southwest Virginia" to "World Problems" and "Economic Geography."¹ His dozen or so different topics, especially the last two, were indicative of the increasingly humanized and wide-ranging direction academic geography was taking.

If geography entered this Virginia school with Casto, then it also exited with him. His death in 1940 signaled the end of both the geography and geology department, and no geography courses were taught at E&H until 1953, when by a happy "historical accident," Edgar Bingham was hired as the school's sole geographer, a position he held until his retirement in 1986. In 1979, he was able to (re)establish a stand-alone geography major to replace the interdisciplinary major in Geography and Social Science, and since the mid-1980s, E&H has been among the few colleges in the Commonwealth with a geography department.²

¹ Edward H Davis and John T Morgan, "The Development and Status of Geography at an Appalachian Private College," <u>Proceedings of the 12th Conference on Appalachian Geography</u>. Concord University: Athens, WV, 2006.
² Ibid.

⁻ Ibid.

In many ways, the history of geography at Emory and Henry College in Virginia mirrors the experience of academic geography in the nation. On the one hand, America's internationalism in the decades leading up to and including the First World War had spurred an increasing interest in and awareness of the importance of geography. This created a demand for geography education. On the other hand, dramatic improvements in transportation and communication, especially after the Second World War, with the resulting simplification of travel, availability of formerly exotic consumer goods and growing geographical knowledge generally, seemed to shrink and homogenize the world. Geography's banishment to the social studies curriculum in the primary and secondary schools during the 1920s and 30s trivialized and marginalized it further. In 1929, Douglas Johnson blamed geography's plight on six minor and five major factors. In his view,

American geography suffered from the lack of professional opportunities outside of teaching; from the simplicity of its terminology; from being known as a school subject only, from the popular, that is, non-professional character of geographic societies; from ignorance of the nature and aims of geography, and from the indifference of the press and public. The major deficiencies were that geography was a young subject and attracted inferior men to its ranks. Being a field of vast scope and poor definition It dealt too much with synthesis and description and too little with analysis. Its teachers devoted too much time to teaching and too little to research. In short, geography was not "scientific" enough.¹

Only the arrival of another (world) war would mask American's geographic ambivalence, and then only temporarily.

¹ Douglas Johnson, "The Geographic Prospect," <u>Annals of the Association of American Geographers</u> 19 (4), 169.

Demographic Growth in Virginia

In 1940, the population of Washington, DC stood at 663,000. The greater metropolitan area of Virginia (Arlington and Alexandria) and Maryland added another 264,000, 67% (173,400) of whom lived in Virginia.¹ This small region of the Old Dominion had already grown by nearly 80% in the preceding decade, but between 1940 and 1950, it expanded even further, in space and especially in numbers of residents. In addition to Arlington and Alexandria, the Virginia metro area after 1940 was enlarged to include the city of Falls Church and the county of Fairfax. While Washington's population grew by 21% in those ten years, the Commonwealth's metro region swelled by 130%. In contrast, the state's overall population grew a more modest 24%.² The reason behind this dramatic rise in northern Virginia's population lies in the fundamental geographical principle of location. Virginia's historic clout, economic importance, and location vis-à-vis the other states greatly influenced the final placement of the nation's new capital along the banks of the Potomac River some 150 years previously, yet the effects of its proximity to Washington proved a mixed blessing until recently.

On the one hand, as the closest succeeding state to the Northern capital during the Civil War, the Old Dominion could not be ignored by the Federalists; as discussed, Virginians and their (soon physically divided) state suffered accordingly, never fully to recover. On the other hand, subsequent foreign wars proved not only good for geography generally, but had a tremendous impact on Virginia's geographic development. "It was

¹ US Census Bureau, 1940.

 $^{^2}$ US Census Bureau, 1950. Between 1940 and 1950, Virginia's population grew from 2,678,000 to 3,319,000. Even with this increase, however, it dropped from 15^{th} to 19^{th} most populous state in the country.

not until the twentieth century, when the capital and the federal government's bureaucracy and activities expanded as a result of three wars and one depression, that Virginia felt the full impact of this neighbor,"¹ Jean Gottmann wrote in 1955. Since midcentury to 2008, the state's population has grown around $130\%^2$, significantly more than that of the United States as a whole. (Its population doubled.) This increased has been very uneven, however, and is confined to those areas in close geographical proximity to Washington (extreme Northern Virginia) and Washington's defense-related activities (Tidewater Virginia) – the southern end of Gottmann's megalopolis. Other parts of the state, including such former population clusters as tobacco-growing South-central Pittsylvania, Halifax, and Mecklenburg countries, coal-mining Wise and Tazewell counties, and older cities like Roanoke and Danville, who were not blessed with close proximity to DC or its federal monetary largess, have lost population over the last few decades. As a recent demographic study by the University of Virginia concluded, "Virginia is becoming an increasingly urban state. The combined population living in Northern Virginia, Richmond, and Tidewater is now at 5.3 million, or roughly seven out of 10 Virginians."³ Since 1950, the Virginia metropolitan area - which has expanded even further to include additional Northern counties such as Loudoun, Prince William, and Fauquier – has increased its population more than six-fold (508%) to roughly 3 million residents in 2006.

¹ Gottmann, 456.

² 3,318,000 to 7,669,000.

³ "Metro Area Gains, Rural Counties Lose Population," Weldon Cooper Center for Public Service, www.coopercenter.org/demographics/sitefiles/documents/pdfs/media/uva%20today.pdf

The unprecedented demographic growth and shift experienced by the

Commonwealth over the last five decades has had a profound effect on geography in Virginia. Nothing short of a natural catastrophe of biblical proportions is capable of changing the look of a land as thoroughly as human habitation and activity. The more people, the more infrastructure (roads, bridges, airports), employment (factories, office buildings), and service needs (shops, parks, and schools), all of which make demands upon the state's natural resources and fundamentally alter the landscape. Gottmann's geography inventoried and traced these alterations throughout Virginia's long history, then predicted that the state's (re)developmental progress, which began around 1900, would continue to accelerate after the book's publication in 1955. True to prediction, a triumphant Gottmann wrote in the 1969 Postscriptum of Virginia at Mid-Century,

By 1968, Virginia has left the mid-century far behind... The assumptions of the preceding chapters seem to have been verified: the Old Dominion has grown definitely younger, more modern. And in the process, it has come to play a greater part in America than it has been able to do for almost a century...The main changes were due to metropolitan growth, and improvements in education.¹

Post-War Education in Virginia

The Old Dominion's population not only grew, but changed. It changed in density², in racial makeup³, in employment,⁴ and, as mentioned, distribution. In short, post-war Virginia became increasingly metropolitan. Of course, not everyone applauded

¹ Gottmann, 563.

 $^{^{2}}$ 83 per square mile in 1950 to 179 in 2000.

³ 84% White and 16% Black in 1950, to 72% White, 19% Black, 6% Hispanic, and 5% Asian in 2005.

⁴ The tertiary sector employed 73% in 1950, and 79% in 2005.

this trend. As Virginian Woodrow Wilson aptly observed, "if you want to make enemies, try to change something." This held particularly true in matters of education. The state had made great strides in its public school system during the first half of the twentieth century, but not equal strides. The educational opportunities for blacks, who accounted for 22% of the population by mid-century, continued to be vastly inferior to that of whites. When the civil rights movement and forced, federally-mandated school desegregation came to Virginia after the Second World War, white Virginians revealed the vestiges of their conservative Southern heritage by resisting these changes as long as possible. One county, Prince Edward, closed its public schools altogether for five years rather than admit blacks. Since the mid-1960s, however, "the winds of change blowing through Virginia carried with them acceptance of the need to bring educational facilities and standards up to the level commensurate with the role and future of the state in the nation."¹ Right after the war (1947), Virginia ranked 41st among the 50 states in the average expense per pupil in public primary and secondary schools, with a correspondingly high illiteracy rate (40th), particularly among blacks. Today (2006), however, its expenditure per student and its literacy rate has climbed to slightly above average.² These and other rising educational indicators, such as high school graduation rates, the teacher-pupil ratio, and the number of higher educational institutions, show a state whose attitude toward universal public education has undergone a monumental change over the last one hundred years.

¹ Gottmann, 602.

² National Center for Educational Statistics,

http://nces.ed.gov/pubs2007/npefs13years/tables/table_B17b1.asp

The Commonwealth's commitment to education has been particular evident in higher education. Maury's <u>Manual of Geography</u> listed seventeen institutions of higher learning in Virginia in 1904 (five of them for blacks). By 1946, there were 43; today, there are 112 degree-granting public and private post-secondary institutions.¹ Not surprisingly, the largest growth in colleges and universities has occurred in the state's metropolitan areas, especially Northern Virginia, which has seen the establishment of such large schools as Northern Virginia Community College (one of the nation's largest community college systems), George Mason University (the largest in the state), and various for-profit, technology-oriented schools such as Strayer University.

Post-War Geography Education

If the latter half of the century has proved a boon for education in Virginia generally, then what of *geography* education specifically? Until its inclusion in the state's SOLs in 2001, the history of geography in the Old Dominion's (and the nation's) schools was not a happy one. The subject's near-total hijacking into social studies at the elementary and secondary level, and perceived dismemberment by other fields (such as environmental studies, ecology, urban planning, and most recently, GIS) at the post-secondary level, made for dire times. In 1969, for instance, only three of nineteen Virginia community colleges surveyed even offered any geography courses,² and such venerable institutions as UVA and William & Mary eliminated their programs altogether,

¹ National Center for Educational Statistics, 2006,

² "Geography in the Two-Year Colleges," Panel of Geography in the Two-Year Colleges, Association of American Geographers, Publication No 10, 1970.

although some courses continued to be offered within their education departments. The post-war period did witness the establishment of geography departments at Mary Washington, Radford, Virginia Tech, Old Dominion, James Madison, and George Mason, but this is as much attributable to the explosive post-war collegiate growth generally than to a greatly heightened interest in geography per se.

As with the First World War, the United States' involvement in the second one sparked a temporary interest in things geographical. Hundreds of professionally trained geographers were pressed into service in a variety of activities, with roughly one half employed by the federal government, and the other half in military training programs on college campuses. The War and State Departments, Board of Economic Warfare, and especially the Office of Strategic Services employed a large number of geographers, who provided the US war effort with regional geographic accounts, field intelligence, and general and thematic maps and relief models. For instance, during the last two years of the war, they contributed to the Joint Army-Navy Intelligence Studies (JANIS), "a remarkable series of reports providing topographical and geographical information on areas of likely operations extending from Bulgaria across Asia to Japan."¹

Isaiah Bowman, who had been "the" face of geography during World War One, and continued to champion the field throughout the isolationist inner-war period, played an active role during World War Two as well. Bowman was busy being president of Johns Hopkins – trying to establish a geography department there - but spent a great deal of time in Washington serving on numerous governmental advisory committees,

¹ "History of Geography in the United States," AAG report, 101.

including the Council of Foreign Relations (CFR), which he helped found. The Council played an integral part in helping President Franklin D Roosevelt create the United Nations, so Bowman's role as presidential advisor during and immediately after the latter war, while not as hands-on as during the former, was similar. He and FDR had been friends since their Harvard days, when both attended geographical functions.¹ The friendship continued at the Versailles Conference, which FDR attended as assistant secretary of the navy, and was refreshed during then New York Governor Roosevelt's occasional visits to the American Geographical Society's rooms during Bowman's tenure as AGS president. Roosevelt had since his youth been a keen geographer, and will forever be remembered for his "invitation to the American people to take out their atlases and follow along with his fireside radio chats as he charted the war's progress," something Neil Smith considers a "dramatic corrective to the 'lost geographies' of America's post-World War I ideological isolationism."² FDR delighted in the "President's Globe" he received from his Chief of Staff General George Marshall in 1942,³ and like Woodrow Wilson before him never tired of pouring over maps in his White House Map Room. His internationalist Weltanschauung and friendship with Bowman seemed to auger well for the future of geography.

Besides Bowman, other geographers contributed to the war effort by working as civilian instructors in numerous academic programs initiated by the War Department to train junior officers, most notably the Army Specialized Training Program (ASTP). Over

¹ Martin, 123.

² Smith, 438.

³ The globe was produced by noted geographers Arthur H Robinson, Richard Hartshorne, and Preston E James, who worked for the OSS during the war. AAG report, 107.



Figure 57 – President Franklin D. Roosevelt speaks to the world during one of his "fireside" chats in 1942, illustrating how the United States will "carry the war to the enemy."

200 colleges and universities participated in this program, training soldiers in foreign languages and technical, particularly engineering, skills. The basic program also included geography courses such as World Regions, Physical Geography, Economic Geography, and Political Geography.¹ Two Virginia schools, Virginia Military Institute and Virginia Tech, taught over 4000 ASTP students (including such diverse individuals as writer Gore Vidal and comedian Mel Brooks) between May 1943 and April 1946. VMI's most serious problem was obtaining and retaining a qualified faculty. As was so often the case in geography education, the geography instructor, Col R.L. Bates, was ordinarily a psychology professor.²

The field's continual shortage of professionally trained geographers notwithstanding, the ASTP did expose over 140,000 men to post-secondary geography, and despite the drop in college enrollment, three universities established geography departments during the war. Two of them, the University of Maryland and George Washington (founded by the first president after his scheme for a National University failed) were in telling proximity to Washington, the hub of the American war effort. Meanwhile, as during the Civil War, at "pivotal movements during the Second World War – after the German invasion of Poland, the bombing of Pearl Harbor, and the assault on Normandy – Americans bought in a matter of hours what in peacetime would have been a year's supply of maps and atlases."³ Reminiscing Virginia school children tell of

¹ AAG report, 101.

² "Cadet Life during World War II," James M Morgan Jr., Virginia Military Institute Archives, <u>www.vmi.edu</u>

³ Susan Schulten, <u>The Geographical Imagination in America, 1880-1950</u> (Chicago: University of Chicago Press, 2001), 1.

daily charting the war's progress on wall maps provided by their school master, and learning the flags of the all the war's participating countries.¹ Yanked from its self-imposed political, economic, military, and thus geographic, isolation, suddenly geography mattered again. Indeed,

US geographers were certainly optimistic that the post-war period would deliver the discipline onto its rightful academic pedestal. All the evidence was on their side; an American globalism would need geographical knowledge of unprecedented accuracy and extent, and geographers were poised to fill the need. As Bowman had put it in the wartime State Department, anything happening anywhere around the world potentially involved US interests.²

The State of Academic Geography at the End of the Century

By some measures, geography's standing appeared to improve in the post-war, Cold war period. For one instance, the National Science Foundation, an independent federal agency created in 1950 to fund basic research in the sciences, began supporting geographic research through its Office of Social Science.³ In 1956, the Foundation funded the publication of <u>Man's Role in Changing the Face of the Earth</u>, a landmark in geography's human-environment tradition born out of an international symposium held at Princeton University the previous year. For another instance, geographer and climatologist Paul Siple, who had accompanied Richard Byrd on his polar expeditions in the 1920s and is credited with the development of the wind chill factor, graced the 31 December 1956 cover of <u>Time Magazine</u> for his exploration of Antarctica in the mid

¹ Glen Hickerson, <u>In the Hollow</u> (Charlottesville: University of Virginia Press, 1983), 23.

² Smith, 439.

³ AAG report, 118.

1950s.¹ In higher education, dozens of new geography departments were established at the nation's colleges and universities, including six in Virginia, with a corresponding rise in the number of geography undergraduate and graduate degrees. Many of these new and newly renovated departments were staffed by relatively younger geographers who, as a result of their wartime experiences and observations, brought to their campuses "a more quantitative, interdisciplinary, problem-focused, and above all more specialized training [they believed] necessary in the contemporary world." As William Koelsch writes, this post-war generation "began to argue for the development of more 'systematic' (as opposed to regional) research in geography, particularly human geography..."² If prewar students studied commercial or economic geography, then their post-war cohort studied global, "air-age," or political and historical geography, and a bit later, urban, transportation, and ecological geography.

Unfortunately, neither the American Century's new post-war globalism nor the field's expanded and fresh offerings proved enough to fulfill geography's hope for a better seat at the academic table. While some institutions were opening geography departments, others, like UVA and William & Mary in Virginia, and most notably venerable Harvard, shuttered their departments soon after the war, the latter in 1948 after its President James Conant famously proclaimed that geography was not a university subject.³ In 1950, only 17% of American colleges and universities offered enough

¹ AAG report, 121. ² Koelsch, "Academic Geography," 263.

³ Smith 443

undergraduate courses in geography for a minor or major,¹ a percentage which remained relatively stable throughout the remainder of the century.

The fate of geography education in the secondary schools faired similarly. In 1960, for instance, only 14% of America's 7-12 graders were enrolled in geography courses, a lower percentage than had been standard for years, but which dropped even further, to 9%, by the mid-1970s. Equally depressing, the few geography pupils who did exist were being instructed by teachers, one-third of whom had never taken a single college-level geography course.² "Le plus ca change, le plus c'est la meme chose," geography education reformer Richard E Dodge reportedly lamented towards the end of his long career.³

The resulting and continuing geographical illiteracy of American high school and college students during the latter half of the twentieth century was well-documented in periodic surveys by the National Council for Geographic Education (NCGE), the American Association of Geographers (AAG), the National Geographical Society (NGS), the US Department of Education, and others. Beyond surveys, however, these same organizations also made various attempts at improving geographic education at the secondary and post-secondary level. The AAG, for instance, launched the High School Geography Project (HSGP) and the Commission on College Geography (CCG) in the mid-1960s. The CCG tackled curriculum content and the development of materials devoted to substantive and methodological topics through discussion at summer institutes

¹ David Firman, "Geography in Higher Education," <u>The Journal of Higher Education</u> 23 (3), 138.

² David Pierpont Gardner, "Geography in the School Curriculum," <u>Annals of the Association of American</u> <u>Geographers</u>, 76 (1), 2.

³ S.S. Visher, "Richard Elwood Dodge," <u>Annals of the Association of American Geographers</u>, 1952.

and the publication of general, resource, and technical papers.¹ The HSGP, in the meanwhile, brought together high school geography teachers and university professors "to prepare an improved course in high school geography....Unfortunately, like all social-science projects of the time, its acceptance and use was minimal."² Lack of teacher preparedness was one reason for the limited success of the HSGP; another was the clash between professional educators and academics from other disciplines. As Gary Gaile and Cort Willmott conclude, "geographers rather than professional educators were supported to produce a new high school geography, but without the strong support of 'school people,' curriculum reform was likely to fail." The late 1950s and 1960s (the "post-Sputnik era") was a time of intense educational reform, but as in the 1920s, geographers proved unable to work harmoniously and successfully with reformers to improve their subject's academic standing.³

Something of a turning point appeared to come in the 1980s, however. During that decade, the popular media in the United States began publishing the dismal results of the various polls, surveys, and other assessments conducted by the AAG and others to great effect. For example, a 1984 University of North Carolina survey revealed 74 % of university students could not name a single country in Africa south of the Sahara,⁴ while the 1988 "National Report Card" commissioned by the US Department of Education and the NGS concluded that American 18-24 year olds ranked dead last of all countries

¹ AAG report, 130.

² Gaile and Willmott, 6.

³ Gaile and Willmott, 6.

⁴ R.J. Kopec, "Geography: No Where in 1984," <u>ERIC Report #ED 256630</u>.

tested.¹ Coinciding as they did with similarly alarming assessments of the United States' educational system generally - <u>A Nation at Risk</u> (1983) spoke of "a rising tide of mediocrity that threatens our very future as a nation" - these and other geography surveys acted as something of a wake-up call, spurring geographers into action.

As a result, the historic lack of communication and cooperation (bordering on disdain) between scholarly academic organizations such as the AAG and more populist ones like the National Geographic Society began to improve. In 1984, NGS President Gilbert M Grosvenor, in an address at the AAG's annual meeting, told his audience,

As I look back over those decades – one group of geographers doing their best to establish a discipline upon sound academic credentials, another doing their best to broaden the popular base and reach that critical mass that makes possible research – I am struck by the idea that no one seemed to realize there was ample room for both approaches, that with proper communication one could support and complement the other... You have the professional skills – the engine; the Society has the delivery system. I am confident that American schools and the general public would embrace a modern, state-of-the-art resurrection of the geographer as a vital participant in the global problem-solving teams of the 21^{st} century.²

Grosvenor's conciliatory attempts bore fruit when, fueled by another round of distressing educational surveys in the late 1980s widely and sensationally covered by the country's popular press, the NGS, AAG, NCGE, and numerous education specialists teamed up to produce a set of voluntary geographic standards primary and secondary schools could use as guidelines for developing their own geography curriculum. Unlike earlier disciplinary attempts at reform and promotion, the resulting 1994 <u>Geography for</u>

¹ Grosvenor, 413.

² Gilbert M Grosvenor, "In Sight of the Tunnel: The Renaissance of Geography Education," <u>Annals of the</u> <u>Association of American Geographers</u>, 85 (3), 411.

<u>Life: National Geography Standards 1994</u> were well received and widely adopted. In 2001, they were included in Virginia's Standards of Learning.

Geography in Virginia, 1945 to present

By the end of the twentieth century, then, academic geography in Virginia and the nation was enjoying something of a renaissance. Unprecedented cooperation among formally divergent geographic organizations, which allowed geographers to take advantage of the nation's latest educational reform movement, contributed to this happy state of affairs. However, academic geographers cannot take all the credit for this re-awakened appreciation for their subject. They had planted the seeds, but these seeds only sprouted because Virginia's soil had finally recovered sufficiently to support them.

The Second World War effort brought an already modernizing Commonwealth fully into the American Century. It brought an unprecedented federal presence, such as the Pentagon, the world largest office building, and all the ancillary infrastructure necessary to support it, to Northern Virginia, transforming the landscape and the character of the region. "Despite the American tradition of decentralization, a concentration of much of the high command of the Armed Forces in the national capital or its immediate neighborhood was unavoidable," Jean Gottmann correctly noted. Alongside the Pentagon,

many more military establishments mushroomed to the south of the capital's metropolitan area. The location of Washington on the Potomac was not alien in the decision to make Norfolk the major American naval base on the Atlantic. Thus the proximity of the capital

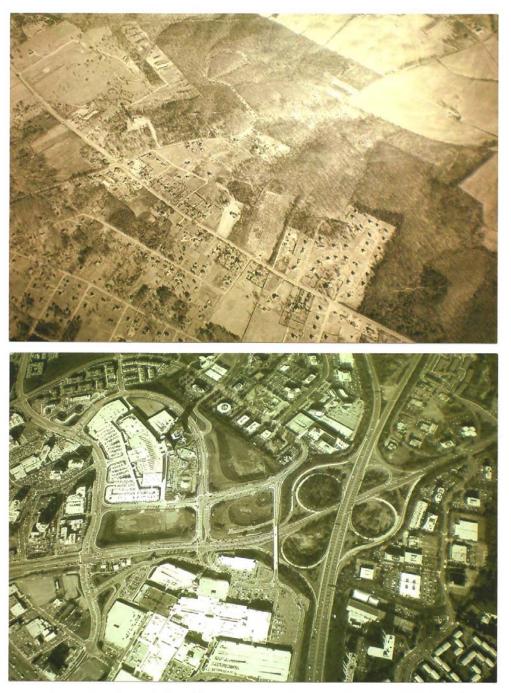


Figure 58 - The evolution of Tyson's Corner in Fairfax County, 1958 & 1998.

The cloverleaf in the second photo is part of I-495, the "Beltway" around Washington, DC, completed in 1963. (Photos courtesy of the Fairfax County GIS and Mapping Department.) was still indirectly responsible in part for the importance of naval installations and personnel in Virginia.¹

Like Northern Virginia, the Tidewater region around Norfolk also experienced tremendous population growth and geographical change during the war. As a result, the area currently hosts the majority of the state's largest cities, and became the southern terminus for Gottmann's megalopolis. Virginia's inclusion in megalopolis illustrates Gottmann's point that it has grown increasingly young, increasingly modern, and that it has reclaimed its position as one of America's – and by extension the world's – more important states. In the twenty-first century, modernity means globalism, a term rooted in geography. For the first time since the Civil War, Virginians are in the position to need and care about geography beyond the Commonwealth, and helps explain their recent re-awakened interest in seeing it in their schools beyond the primary level.

The Old Dominion's continually evolving perception concerning geography is also evident outside education. From the inauguration of its original six parks in 1936, the state's system has expanded to nearly seventy parks, natural areas, and historic sites today, encompassing some 70,000 acres. Unfortunately, however, this growth has been no match for the state's rapid development; over the last ten years alone, Virginia has lost nearly 600,000 acres to development, prompting a pledge by current Governor Tim Kaine to preserve an additional 400,000 acres from development. As Kaine noted in 2006,

Virginia's identity is its land. From the shores of Chincoteague to the hills and valleys of Cumberland Gap, Virginia's beauty is unmatched. But as quickly as our population is growing, our rate of development is

¹ Gottmann, 457.

growing even faster. If we continue as we have, Virginia will develop more land in the next 40 years than we have in the last 400 years. Without foresight, without a plan to focus and manage that growth in a balanced way, we will be failing ourselves and future generations.¹

Virginia's view of geography has never been static, but has changed as intellectual thought, cultural norms, territorial expansion, and technology changed. For Virginia's earliest white inhabitants, the land was terra incognito, to be feared, exploited, and tamed, but not otherwise celebrated or admired for its own sake. Such a geographical Weltanschauung did not appear until the romanticism of the early nineteenth century, and did not turn into concrete actions of conservation and preservation until the late 1800s. In socially and politically conservative Virginia, the conservation and preservation movement came even later, but come it did, and if the state's twenty-first century governor's stated appreciation of Virginia's land reflects that of his constituents, then geography in Virginia has indeed evolved and grown young.

¹ "Vision for Virginia's Outdoors," <u>2007 Virginia Outdoors Plan</u>, 2.

Some Conclusions

Chapter Six

It was been forty years since Jean Gottmann's 1969 Postscriptum to Virginia at Mid-Century, and over half a century since the original edition's research and publication. While the author himself died in 1994, his "significant regional monograph on one of the great states of the Union,"¹ underwritten by Paul Mellon's Old Dominion Foundation, has withstood the test of time. Gottmann's masterful interpretation of Virginia's geographic history - its fondness for the local past and its desire to make it live on into the present, while simultaneously part of Megalopolis and all the social and physical transformations that has entailed – has manifest itself in indisputable fashion. With the twenty-first century well underway, Virginia's population is more educated, suburbanized, and wealthy than most of the nation. In the Megalopolis regions, these indicators are even more pronounced. To whit, while the number of Bachelor's degrees or higher stands at 29.5% for the entire state (and 24.4% for the country), this percentage increases to 54.8% in Fairfax, and 60.2% in Arlington, Counties. The population of these Northern Virginia counties and cities, as well as Richmond, Virginia Beach, and the state's 11 other metropolitan areas, contain more than 85% of the state's total population

¹ Raymond E Crist, "Book review of <u>Virginia at Mid-Century,</u>" <u>Economic Geography</u> 32, (2), 187.



Figure 59 - "Virginia Leading the Way" is the motto of the Kaine Administration, adopted by the Governor because it embodies both Virginia's "tradition of excellence – and its constant striving to surpass previous achievements." <u>www.governor.virginia.gov</u>

of 7.6 million.¹ True to prediction, Fairfax Country's population alone topped 1 million residents by the turn of the century.

Gottmann did of course not get it 100% right. For instance, while he did note that "the future prospects of the 'golden weed' [tobacco] have been jeopardized by recent pronouncements against cigarette smoking,"² he did not and could not have predicted tobacco's precipitous decline over the last two decades and its negative effect on Southside and southwestern Virginia. As Charlie Grymes emphasizes, "Virginia's economy, as well as its agricultural production, was dominated by tobacco for over three centuries."³ At its peak in 1920, the crop that saved Jamestown was being grown on some 242,000 thousand Virginia acres. Between 1950 and 1970, farmers were producing an average 150,000 lbs of tobacco a year. Tobacco was until the mid-1990s the 5th largest cash generator for Virginia farmers, and fueled the state's economy. Within the last ten years (1998-2008), however, this averaged production has fallen to less than 65,000 lbs (46,000 lbs in 2008), and tobacco's ranking among agricultural products has declined to 9^{th.4} The General Assembly devoted half of the settlement money (\$1.23 billion to date) from a federal law suite against the nation's largest tobacco companies to fund the

¹ "Demographic Profile of Virginia," Weldon Cooper Center for Public Service, 2006, www.coopercenter.org

² Gottmann, 586.

³ Charlie Grymes, "Tobacco in Virginia," <u>www.virginiaplace.org/agriculture/tobacco.html</u>

⁴ US Department of Agriculture, "National Agricultural Statistics Service – Virginia Data, Crops," <u>www.nasss.usda.gov/QuickStats/PullData_US.jsp</u> and

US Department of Agriculture, "The Census of Agriculture – Ranking of Market Value of Ag Products Sold, Virginia,"

www.agcensus.usda.gov/Publications/2007/Online Highlights/Rankings of Market US.jsp



Figure 60 – Jean Gottmann's "Megalopolis."

In <u>Virginia at Mid-Century</u>, coastal Virginia is the southern terminus of Gottmann's Portsmouth-to-Norfolk megalopolis.

revitalization of the hard-hit tobacco-growing regions, but they are still in economic and demographic decline; twenty counties in Southside, Southwestern, and Western Virginia have seen their populations tumble over the past decade.

A recent (2009) two-part series in the <u>Washington Post</u> examining the impact of tobacco and changing attitudes towards it in the Old Dominion highlights the state's dilemma. In the aptly titled "The Tobacco War – Paydays vs the Price Paid," Virginians are being increasingly pressured – by their own (Northern Virginia) governor, Tim Kaine, no less - to abandon an industry and activity intrinsically tied to their long geographic and historical development. The considerable positive economic contribution made by Philip Morris and other tobacco companies to state coffers generally, and local counties in southern Virginia particularly, are of course the primary reason for Richmond's long opposition towards any political measures aimed at curtailing the tobacco industry. The Altria Group, Philip Morris' parent company, remains Virginia's biggest public company in terms of market sales, and alone generates more than 2% of the state's total tax revenue. As House Minority Leader Ward L Armstrong (from beleaguered southern Henry County) succinctly noted of Philip Morris, "they pay an awful lot in taxes."¹

Yet falling revenue and lost jobs are not the only reason for the Old Dominion's reluctance to divorce itself from its nearly four hundred year relationship with "that noxious weed," as King James I called it. The role of tobacco and agriculture in general is obviously in decline, but agriculture continues to play an essential part in the land use

¹ "The Tobacco War – Paydays vs the Price Paid," <u>Washington Post</u>, 8 February 2009, C1.



Figure 61 - Tobacco Corded and Ready for Curing

This photo from the April, 1929 <u>National Geographic</u> notes that, in 1927, Virginia had 178,000 acres planted in tobacco. Tobacco manufacture was the state's leading industrial operation.

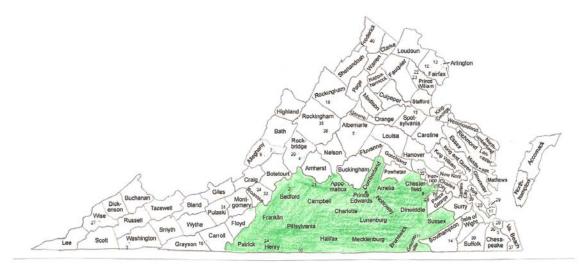


Figure 62 - Map of the main tobacco-growing counties in Virginia (in green).

and appearance of Virginia. It also enables Virginians to retain their all-important

heritage. As Grymes describes the age-old tobacco-purchasing process,

farmers would bring their crop to a warehouse, and bidders from different tobacco companies (such as Phillip Morris) would walk along piles of tobacco arranged in long rows. An auctioneer would chant the bids until finally announcing the price at which each pile was sold. The bidders walked at a steady pace, and it might take just 10-15 seconds at each pile until the auctioneer concluded his sing-song chant of the bids with "Sold American!" (if purchased by the American Tobacco Company, for example). A clerk trailing the bidders would write the price and the buying company on a ticket, which he would toss on each pile. After examining all the tickets on his piles, the tobacco farmer would discover if he had made a profit that year. The warehouse auction process has almost disappeared now. Farmers are contracting in the Spring with a specific tobacco company to sell the crop, eliminating the competitive bidding in the Fall. The small Virginia towns that had tobacco warehouses, such as South Hill [Mecklenburg County], have lost both the economic activity of the crowd that came to auctions and an activity that reflected the unique culture of the tobacco growing community.¹

Agricultural activities such as tobacco cultivation "provides a small minority of

Virginians with a way of life that becomes all the more pleasant and worth while as the average size of the farm increases and specialization turns either towards animal husbandry or towards highly mechanized crop production" such as the cattle, soybean, and hay replacing tobacco in southern Virginia. As Gottmann concludes, "the increasing proportion of large farms and of part-time and estate farms are old trends combining to make farming into a way of life rather than an essential sector of the state's economy."²

If the Old Dominion is increasingly – if grudgingly- abandoning its Thomas Jefferson-inspired, primary sector, "yeoman farmer" life style, then what is replacing it,

¹ Grymes, "Tobacco in Virginia."

² Gottmann, 589.

and how is it changing geography in Virginia? In such Megalopolis population clusters as Fairfax County – with a population density nearly twice that of the rest of the state¹ the answer lies in such quaternary sector pursuits as Aerospace and Defense, Information Technology (IT) and, to the joy of geographers, Geographic Information Systems (GIS). Boeing, Lockheed-Martin, Northrop Grumman, British Aerospace, and most other major and minor defense contractors have large regional and even national offices in the Washington metro region, as do such equally important IT companies as AOL, Hughes Network Systems, CSC (Computer Sciences Corporation), and SAIC (Science Application International Corporation). Northern Virginia is increasingly referred to as the Silicon Valley of the East Coast. It has also turned into something of a GIS capital.

In the same way that the Commonwealth's geographic location hosted the ideal conditions for growing and exporting tobacco for the first 375 or so years of its existence, its situation adjacent to one of the world's most important capital cities today fosters the ideal conditions for rapidly expanding GIS activities. The metro region is home to not just a large number of GIS providers, but users. Nearly every one of the many US federal governmental agencies located in this region has a need for GIS to store, visualize, and analyze data.² The Department of Defense, Central Intelligence Agency, National Geospatial Intelligence Agency, National Security Agency and other military and intelligence organizations immediately leap to mind, but other less obvious (and more benign) ones such as the Bureaus of Land Management, the Census, Indian Affairs, and

¹ US Census Bureau, "Virginia Quick Facts," <u>http://quickfacts.census.gov/qfd/states/51000.html</u>

² Nigel Waters, "Where's the Center of the GIS Universe?" <u>Geo World</u>, May 2007.



Figure 63 - Landsat satellite images of Loudoun County, 1979 & 2003.

They show the dramatic change to the landscape of this Northern Virginia county in only 25 years. The Potomac River, the boundary between Virginia and Maryland, is in the top right corner. (Photos courtesy of Dr Allan Falconer.) the US Geological Survey (headquartered in Reston) also employ GIS to fulfill their objectives, as do various non-governmental organizations (NGOs) and private companies. Restaurant and retail chains, home developers, urban planners, and local governments rely on GIS as well. To serve the Washington area's unusually large and growing list of GIS consumers, GIS producers such as ESRI, SAIC, Booz Allen Hamilton, and GeoEye (who recently began advertising its services on local radio stations) have established a regional presence, and are partnering with local schools such as George Mason University to improve and expand geography, particularly GIS, education. While self-serving, such recent corporate and governmental interest in geography has nevertheless contributed to the field's relative renaissance in Virginia.

In the Commonwealth's secondary schools, this renewed interest in things geographic is evident in such schools as Thomas Jefferson High School for Science and Technology in Alexandria. Established in 1985, TJHS is the result of a partnership of businesses and schools created to improve education in science, mathematics, and technology. Its curriculum includes one full year of Laboratory Geoscience (GIS), as well as Geography II (Cultural Geography).¹ For a second year in a row, it has been named the top high school in the country by <u>US News and World Report</u>. (Three additional Fairfax County high schools also made the top 100, and seven others received lesser recognition.) While such academic rankings are of course somewhat specious, Fairfax County and Northern Virginia's school system is generally considered one of the "best" in the nation. In 2006, Virginia's bested the national average in numerous

¹ Thomas Jefferson High School for Science and Technology website, <u>www.Tjhsst.edu</u>

educational indexes such as revenue spending per student, student/teacher ratio, and NAEP (National Assessment of Educational Progress) scores in math and reading, and number of degree-granting, post-secondary institutions.¹

As mentioned, the Old Dominion's attitude towards public education has undergone an astonishing change since the Civil War, and particularly since the Second World War. "Virginians are beginning to admit that the betterment of education is a necessary and worthy investment," Gottmann wryly observed in 1953.² Desegregation and increased funding during the latter half of the 1900s are just two indications of the Commonwealth's will to "grow young" and retake its position among America's leading states. A leading state requires a progressive educational system, one that provides both new, state-of-the-art technology and some "old-fashioned three R's." In typical Virginia style, its schools have chosen to combine the new with some old. The ultimate integrating science, geography helps tie the two together by satisfying those comforted by the re-introduction of a more "traditional" school subject emphasizing "where, why, and how," and those desiring a more modern, technology-heavy subject such as GIS, which goes beyond the "where, why, and how" to interpretation and application in the global world in which Virginia once again finds itself. As a result, geography departments throughout the Commonwealth's colleges and universities have recently re-tailored themselves accordingly. George Mason, for instance, no longer offers a straight-forward Ph.D. in Geography, but one in Regional Development Policy (through the School of

¹ "State Education Data Profiles," National Center for Education Statistics, <u>http://nces.ed.gov</u>

² Gottmann, 547.

Public Policy), in Environmental Science and Public Policy (through the Department of Environmental Science and Policy), and in Earth Systems and Geoinformation Sciences (through the Department of Geography and Geoinformation Science in the College of Science.) The University of Richmond, which jumped on the geography renaissance bandwagon in 2008 when it established a stand-alone geography department for the first time in its nearly 180 year history, is promoting its major as a means towards job security. "Geospatial Technology is one of 14 high growth, high demand, and economically vital sectors of the US economy," its departmental website quotes a recent US Department of Labor study.¹

One of the reasons for academic geography's renewed popularity is thus a clearly practical one. For arguable the first time in its history, formal geography training – at least in one specialized area of the field, GIS – is able to provide increasingly large numbers of jobs outside academia. Higher education in the United States is too expensive for most students to engage in a course of study with few viable job prospects. For as long as geography can link itself to a high-technology, in-demand profession, it will prosper in a place like Northern Virginia

Academic geography has thus once again found a home in Virginia's educational system. From the primary level through higher education, the state's leaders, citizenry and businesses have a renewed appreciation for geographic literacy, and have taken the lead among other states in promoting it. Freshman Senator (and former governor) Mark

¹ "Why Geography?" University of Richmond School of Arts and Sciences: Geography, <u>http://geography.richmond.edu/why/index/html</u>

Warner has pledged to re-introduce his predecessor's stalled "Teaching Geography is Fundamental" Act, "a bill to improve and expand geographic literacy among kindergarten through grade 12 students in the United States by improving professional development programs for kindergarten through grade 12 teachers offered through institutions of higher education."¹ Virginians have supported their school's decision to incorporate geography into its SOLs and eagerly enroll their children in Geography AP (Advanced Placement) courses and geography-savvy "magnet" high schools such as Thomas Jefferson. There are a growing number of corporate-university partnerships dedicated to improving the geographic literacy of college graduates entering Virginia's hightechnology, global workforce.

The Old Dominion's path towards "young age" – the retreat from its agricultural roots, the rise of Megalopolis, the growing political power of more liberal, urban Democrats over traditional, rural conservative Republicans, and the embrace of high-quality public education – has had a significant impact on the land. Virginia "looks" very different at the turn of the twenty-first century than it did at the turn of the nineteenth. For instance, there were no national or state parks in the Commonwealth in 1900. In 1992, however "Virginia voters showed their continued desire to invest in the state's natural and historic resources [already protected] through overwhelming passage of the \$95 million parks and natural areas bond referendum...which financed improvement

¹ GovTrack.us website, <u>www.govtrack.us/congress/bill.xpd</u>

projects as well as the acquisition of four new parks and ten natural areas."¹ In 2006, Governor Tim Kaine took a remarkably progressive position on the environment when he pledged to conserve 400,000 acres of open space by the end of the decade.² For all the land being set aside for recreation and preservation, that much more is of course being lost to residential and commercial development. If good or bad, this reality reflects the state's changing land use and landscape. As Theodore Roosevelt articulated during his 1907 visit to Jamestown, "in utilizing and conserving natural resources of the nation, the one characteristic more essential than any other is foresight."

Since the Second World War, the state has also invested heavily in transportation improvements. Major infrastructure projects have included roads like Interstates 395 (Shirley Highway), 95, 495, 81 and 66, airports like Dulles International, and bridges like the Wilson and Chesapeake Bay. Most of these have been confined to rapidly growing Northern Virginia, and made that growth possible. Current transportation issues enjoying contentious debate include a rail extension from the farthest reaches of the DC Metro subway system in Fairfax to Dulles Airport, as well as "HOT" (high-occupancy transit) lanes on the I-495 "Beltway." Again, if good or bad, these activities have altered the geography of Virginia.

The Commonwealth's changing demographics have also contributed to Virginia's "new look." Not only has the population increased by some 5.7 million since 1900, but it

¹ "History of Virginia State Parks," Virginia.gov website, <u>www.dcr.virginia.gov/state_parks/his_parx.shtml</u> The new parks include Kiptopeke, Belle Isle, Wilderness Road, James River, and Andy Guest Shenandoah River state parks. All except the latter are located in southern and eastern Virginia.

² Paul Gilbert, Executive Director of the Northern Virginia Regional Parks Authority, <u>http://regionalparks.blogspot.com</u>

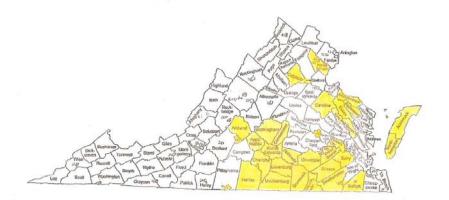
has become distinctly more racially diverse. While Blacks make up an increasingly small proportion than previously (43% in 1870, 36% in 1900, and 20% in 2006), Latino and Asian populations have increased substantially in recent years, particularly in certain areas. The two groups have grown from statistically insignificant in the 1960s to 7% and 5%, respectively in 2006. This is still low by national percentages, but a striking increase and contrast to the Virginia of old. In some urban areas like Arlington, Manassas Park and Culpeper, the high concentration of these groups has transformed the character of these places in a way unimaginable a generation ago, and contributed to Virginia's constantly evolving cultural landscape.

In 1929, <u>National Geographic</u> devoted nearly its entire April issue to "Virginia – A Commonwealth That Has Come Back." "The outstanding impression of many months of wandering amid the scenes and shrines of Virginia," William Joseph Showalter wrote eighty years ago, "is that the Old Dominion is a Commonwealth that has come back completely from one of the greatest catastrophes that ever befell a people."¹ Noting the Civil War's devastating effect on the state's population, physical boundaries, infrastructure, treasury, and agricultural and manufacturing capacity, the author likened immediate post-Civil War Virginia to immediate post-World War I Northern France, though "a Northern France without her victory, her Alsace-Lorraine [West Virginia] lost instead of won, with nowhere to look for reparation credits, no friendly ally to indulge

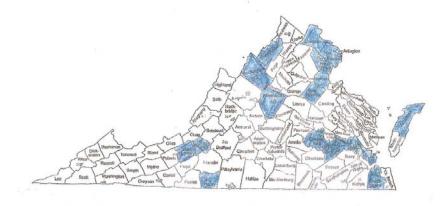
¹ Showalter, 404.



90% - 98% White (orange)



30% - 80% Black (yellow)



5% - 15% Hispanic or Asian (blue)

Figure 64 - Population Distribution of Ethnicities in Virginia

her debt."¹ Adding insult to injury, "a third of Virginia's population [freed slaves] had passed from employment into idleness, and a carpetbag government voted bonds compounding defaulted interest..." Ultimately, Virginians "not only had to repair the damage of war, but also had been put under the necessity of revamping and making over their entire social order." "Could any state, thus encumbered, thus fettered," Showalter queried, "regain its financial feet, restore its devastated areas, repair its credit, renew its prosperity?"

The world doubted and stood aloof... Decades rolled by and it forgot the measure of Virginia's despair and desolation after Appomattox... It was a long, hard, grueling grind, but finally, shortly after the turn of the [twentieth] century, the State, triumphing over every obstacle, saw the dawn of a new era. The devastation of the Civil War period at last had been repaired and Virginia was free again.²

The "unsentimental, nonpartisan" statistics of the Federal Census, Showalter claimed,

spoke for themselves; between 1870 and 1922, Virginia's wealth increased 14-fold, and

its treasury, once so impoverished that Virginia's entire income was sufficient merely to

meet the interest on the then-existing state debt, now enjoyed an annual surplus

amounting to more than its entire post-war income.³ More geographically visible,

the farms of the Shenandoah and the plantations of the Piedmont and Southside again yield the milk and honey of bounteous crops. New barns have been built, larger and better than before; old rail fences have been replaced; Virginia-bred horses win in Derby races and style shows; Virginia-grown cattle move for export in trainload lots; worn-out turnpikes have been replaced by modern highways and

¹ Interestingly enough, Gottmann used a similar comparison. "To anyone who returned at the end of World War II to a European country like France, devastated by military campaigns sweeping repeatedly across its territory and by several years of occupation and administration by enemy forces, the picture of Virginia on the morrow of the surrender would probably have seemed familiar." 119

² Showalter, 413.

³ Showalter, 415.

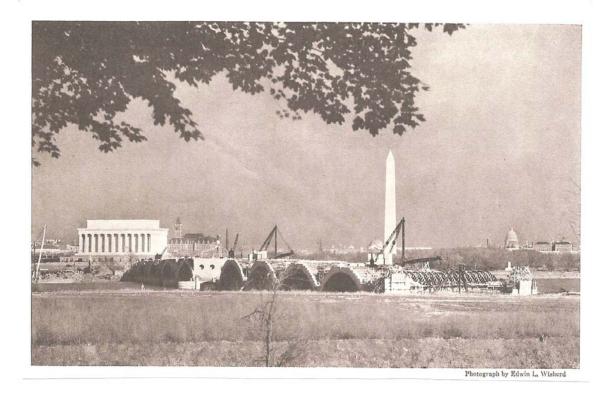
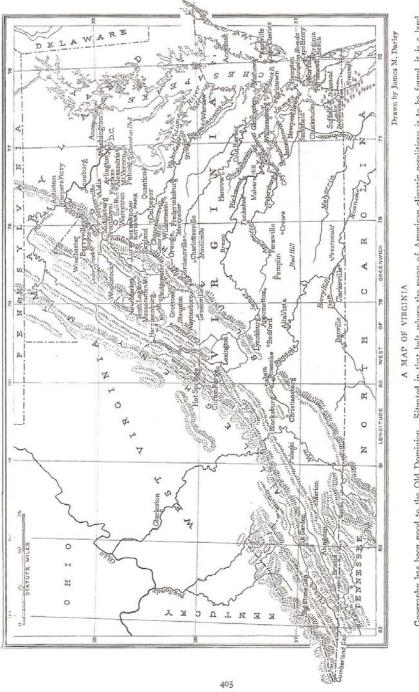
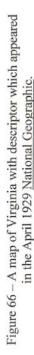


Figure 65 – An April 1929 <u>National Geographic</u> photo of the construction of Memorial Bridge over the Potomac River, linking Washington, DC and Arlington, VA. Arlington was part of the original territory ceded to Washington to form the nation's capital. It was returned to the Commonwealth in 1846.







dynamited bridges by modern steel and concrete structures... Also Virginia's mills, her factories, and her cities have become modern and as prosperous as those of any section of the country; a new stock of manhood has grown up...

As <u>National Geographic</u> triumphantly concluded, "Virginia transformed penury into prosperity and the ruins of war into the edifices of peace. The story of this achievement constitutes an epic of American courage and American resourcefulness."¹

Forty-five years later, <u>National Geographic</u> was similarly enthralled by the Old Dominion's diversity of character and rich historical tradition. In 1974, Mike Edwards described Virginia as "as quaint as a cobbler's shop in Williamsburg, as modern as nuclear ships at Newport News, as timeless as a Shenandoah barn."² Despite its unrelenting march towards modernity, "much of Virginia retains a fine antique flavor."³ "And she is the only state that can make me weep." At the Civil War battlefield of Manassas, "the tears brim. Not for a lost cause: tears for the agony of a war of brothers and of a nation sundered; for courage, fear, pain."⁴ "Virginians," Edwards observed, "build tomorrow while remembering yesterday."

<u>National Geographic</u> revisited the Old Dominion in May, 2007. By this time, the story no longer concerned the state's resurrection, or its backward-looking, forwardmoving character, but the four hundredth anniversary of the founding of Jamestown. In "America – Lost and Found," the <u>Magazine</u> took a critical look at how a small number of British colonists "took the first steps in creating the American landscape we know

¹ Showalter, 414.

² Mike W Edwards, "The Virginians," <u>National Geographic</u>, 146 (5), November, 1974, 590.

³ Edwards, 609.

⁴ Edwards, 590.

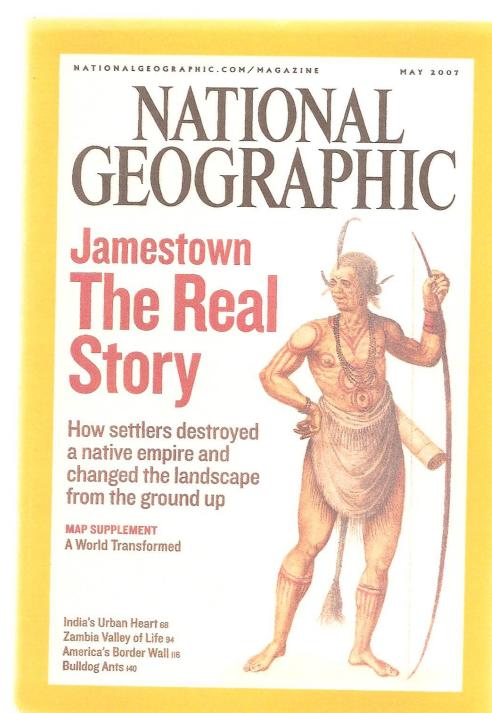


Figure 67 - <u>National Geographic</u> revisits and reinterprets the meaning behind the four hundredth anniversary of the founding of Jamestown.

today."¹ Unable to adapt to the foreign landscape they encountered in Jamestown, the colonists "transformed it into a place they could understand. In doing so, they unleashed what would become a multilevel ecological assault on North America."² Such seemingly benign introductions as tobacco, honeybees, and earthworms – and more obvious ones as cattle, hogs, and malaria – so fundamentally altered the region's (and eventually the continent's) eco-system it amounted to "ecological imperialism," and launched the famous world-wide "Columbian exchange" of goods. It also spelled the rapid demise of the native Indian population, for whom the European's activities "hadn't just made the landscape inhospitable, but deadly."³ As author Charles Mann tellingly summarizes, "four centuries ago, the English didn't discover a New World – they created one."⁴

The New World's geographic make-over began in Virginia in 1607. Four centuries later, the inhabitants of this state continue to re-create their domain. The landscape first charted by John Smith looks very different from the one regularly documented every century thereafter by Robert Beverley, Thomas Jefferson, Matthew Fontaine Maury, and Jean Gottmann. If Virginia is to benefit from this rich geographic tradition, then it now needs someone to come forward to produce and synthesize its current geographic trends. Since Gottmann's study, geography in Virginia – both the look of the land and the Weltanschauung of those who live there - has undergone a profound transformation.

¹ Charles C Mann, "America, Lost and Found," <u>National Geographic</u>, 211, (5), May, 2007, 37.

² Mann, 44.

³ Mann, 52.

⁴ Mann, 53.

In some ways, the Old Dominion's geography has allowed history to come full circle. Thanks to its location, Virginia once again ranks among the nation's economic, technology, and education leaders. This renaissance has spurred an appreciation for academic geography not seen since Virginia's ante-bellum heydays. At that time, the Commonwealth was led by geographically-minded individuals; post-bellum, it was increasingly led by geographically-ambivalent institutions. Over the last few decades, however, these institutions have begun to develop a spatially-oriented world view of their own, one in which geography "matters."

In his commencement address to the Virginia Military Institute in 2007, Governor Tim Kaine spoke of "Virginia then and now," a story with decidedly educational and geographic themes. Fifty years ago, he told VMI's fledgling graduates and future leaders,

Virginia was at the bottom of the nation in the percentage of our youngsters, school-age, who attended school. For those few who did graduate, they would have faced a state whose per capita income was about 20% less than the national average. We were 36^{th} in the nation, a back-of-the -pack state just 50 years ago... and exporting people, not importing them.

Today, Virginia's K-12 education system is recognized as one of the best in the nation, with high success on SAT's and AP scores and other measures of success...

Economically, the Commonwealth now has a per capita income 20% *higher* than the national average, and we're 9^{th} in the nation. No state has moved that much over the course of the last 50 years as Virginia has, or has made that big a jump forward...

One reason for this: Virginia, in the last generation, realized the power of investing in education...

How do we keep it going? We continue to embrace the power of wise educational investments... and break down barriers... between us and others around the world, between the Commonwealth and between our country and between that global community of nations...

You may not be like those explorers [in Jamestown] in a position where you're gonna find a new world or draw a new map. There isn't much geography left on this globe that hasn't been explored so that may not be your lot. But I am here to tell you that there are still new worlds for you... We need a society of adventurers. We need a society of people who are open to those new worlds.¹

"Virginia's identity is its land," the governor noted in 2006. As this land has

changed over four centuries, so has Virginia's identification with it. In turn feared,

revered, altered, expanded, and exploited, the history of geography in Virginia has

mirrored the history of geography in the nation. In that sense, the state's motto, Sic

Semper Tyrannis – Thus Always to Tyrants – might better be De Nobis Fabula Narratur

– Their Story Is Our Story.

¹ Governor Timothy Kaine, Commencement Address to Virginia Military Institute, Lexington, VA, 16 May, 2007, <u>www.governor.virginia.giv</u>



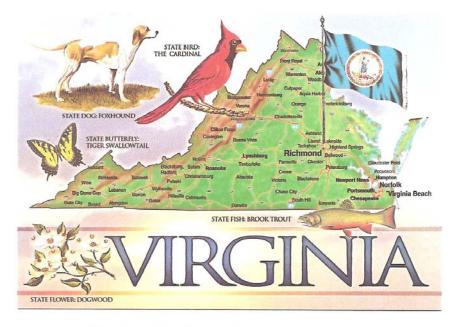
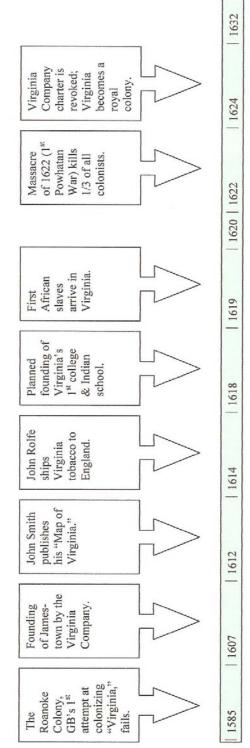


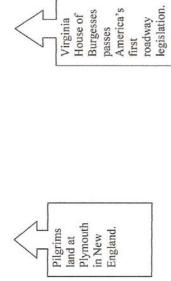
Figure 68 - Official bumper sticker and post card of Virginia.

Appendix

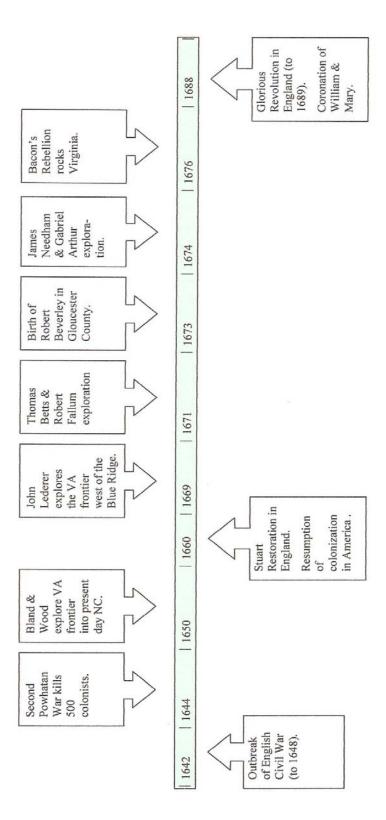
Virginia Population Statistics

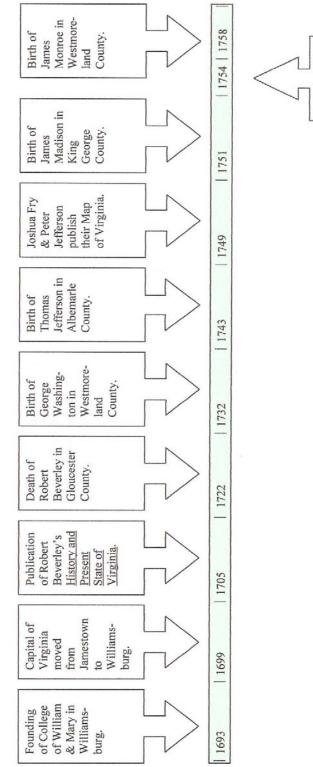
YEAR	POPULATION	% OF	RANK	VIRGINIA'S %
		BLACKS IN	AMONG	OF TOTAL
		POPULATION	COLONIES	POPULATION
			OR	
			STATES	
1620	2,200		1	
1640	10,400		1	
1650	18,700		1	
1660	27,000		1	
1670	35,300		1	
1680	43,600	7% (3000)	1	
1690	53,000		1	
1700	58,600	28% (16,400)	1	
1720	87,700		1	
1750	231,000	44% (101,500)	1	
1760	339,700		1	
1770	447,000	42% (187,600)	1	
1800	886,100	42% (367,000)	1	17
1820	1,075,000	43% (465,000)	2	11
1840	1,249,700	40% (502,000)	4	7
1860	1,596,300	34% (549,000)	5	5
1880	1,512,500	42% (632,000)	14	3
1900	1,854,100	36% (661,000)	17	2.4
1920	2,309,000	30% (690,000)	20	
1940	2,677,700	25% (661,000)	19	
1960	3,967,000	21% (816,000)	14	
1980	5,346,800	19 % (1,009,000)	14	
2000	7,078,500	20% (1,390,000)	12	
2006	7,642,800	20% (1,528,500)	12	2.6

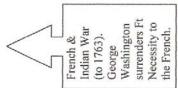


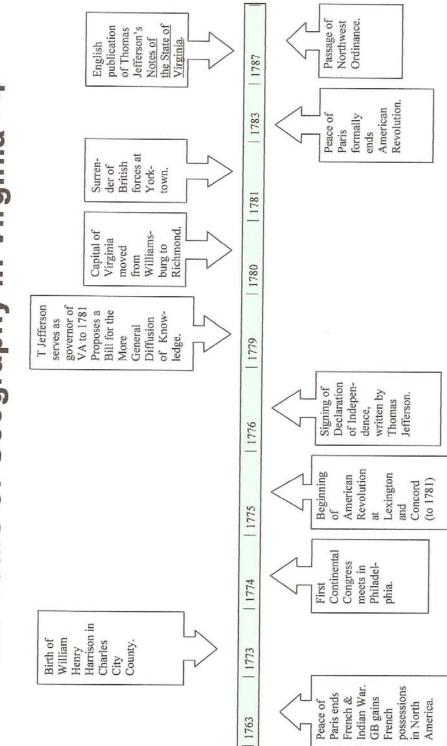


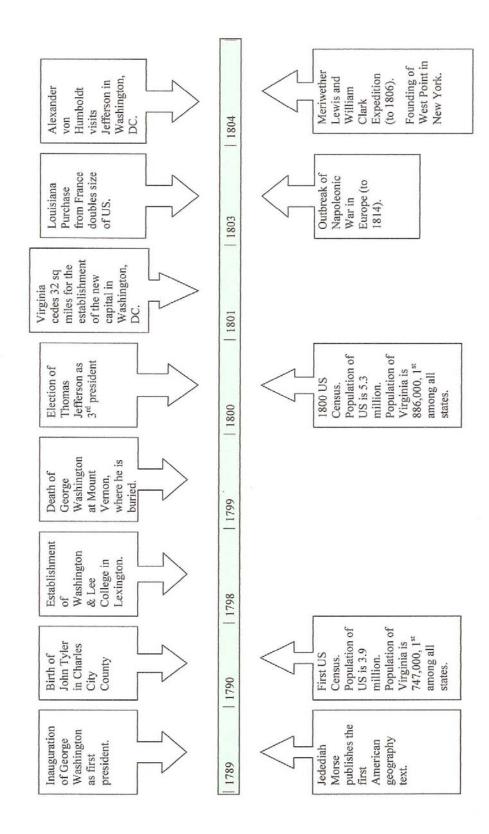
400 Years of Geography in Virginia - 2

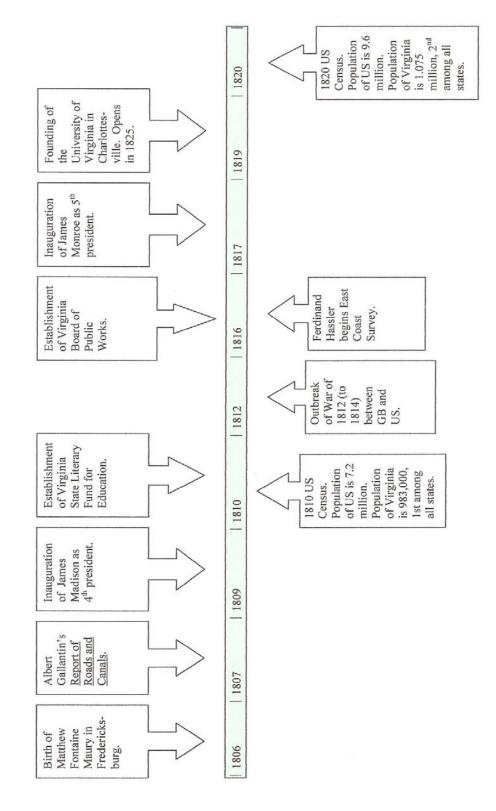






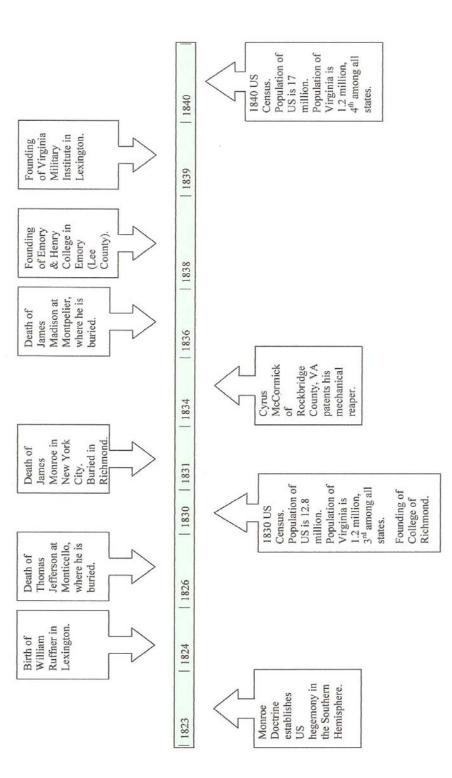


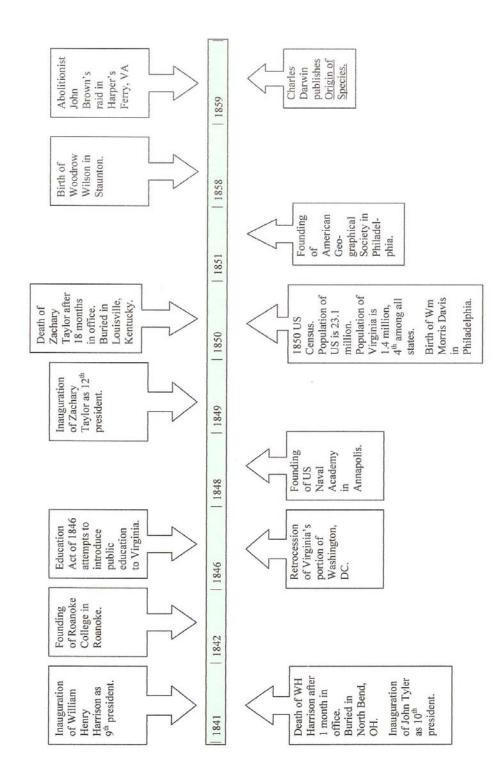


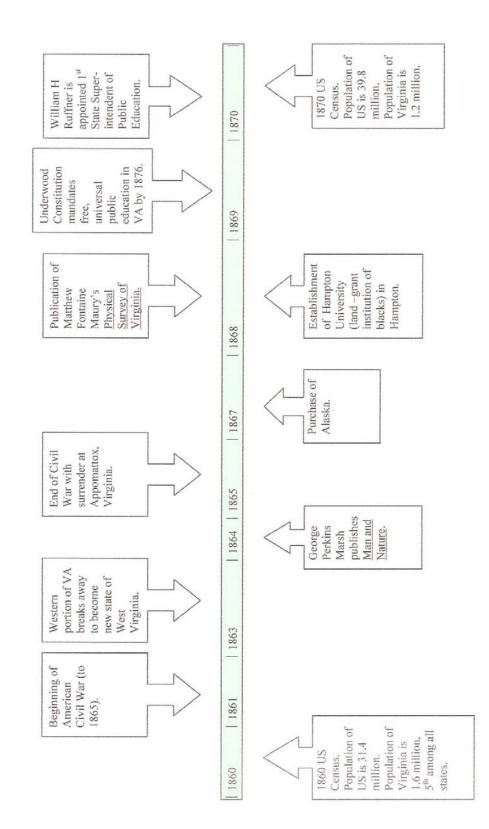


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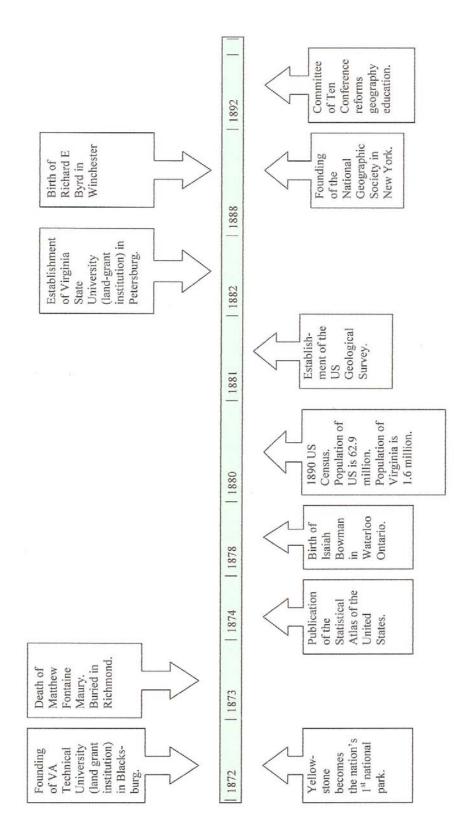
400 Years of Geography in Virginia - 7

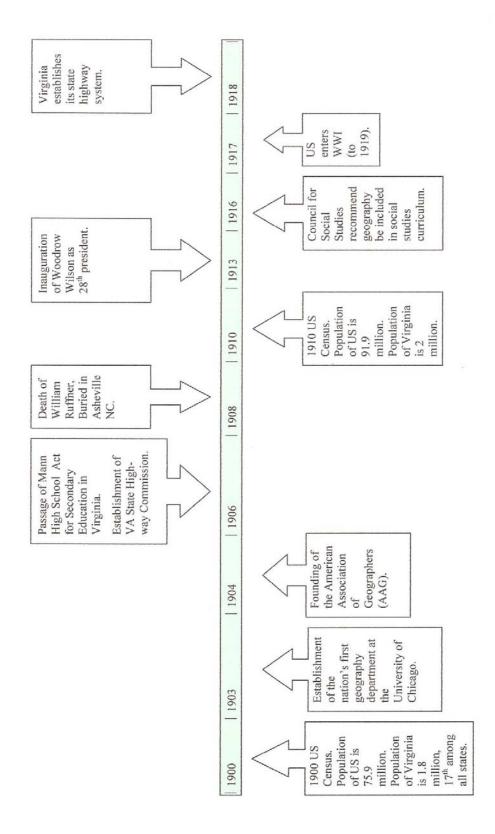


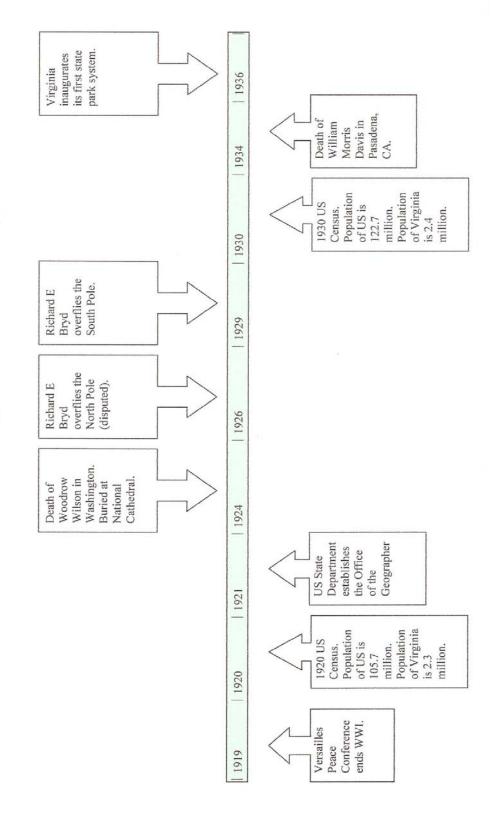


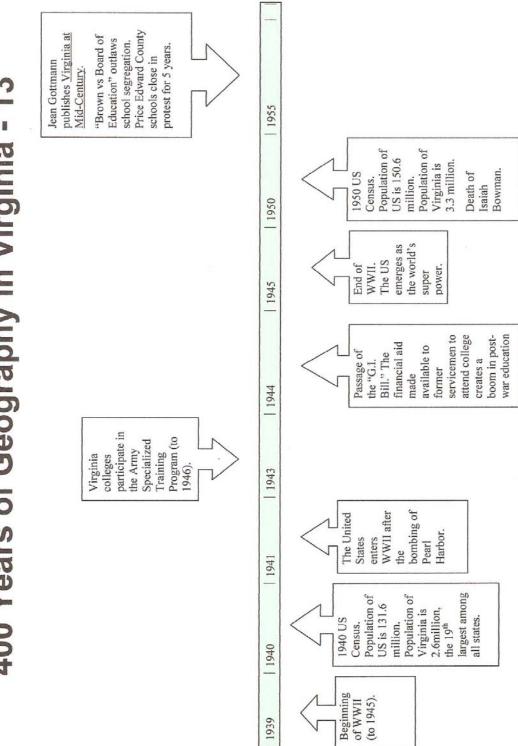


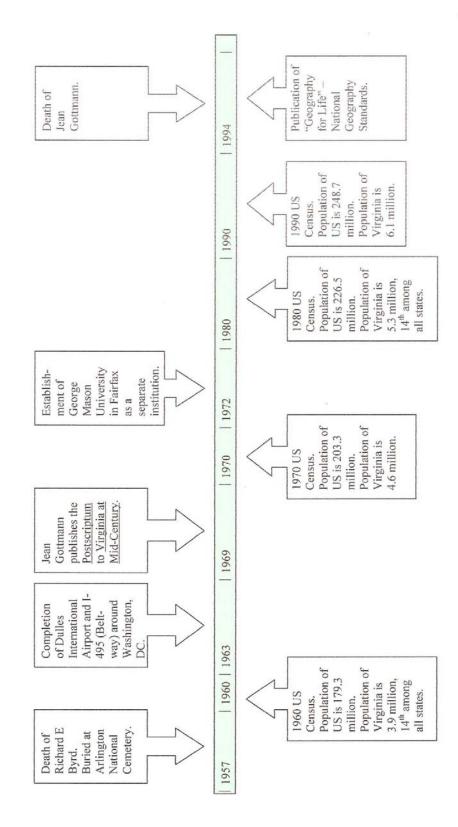
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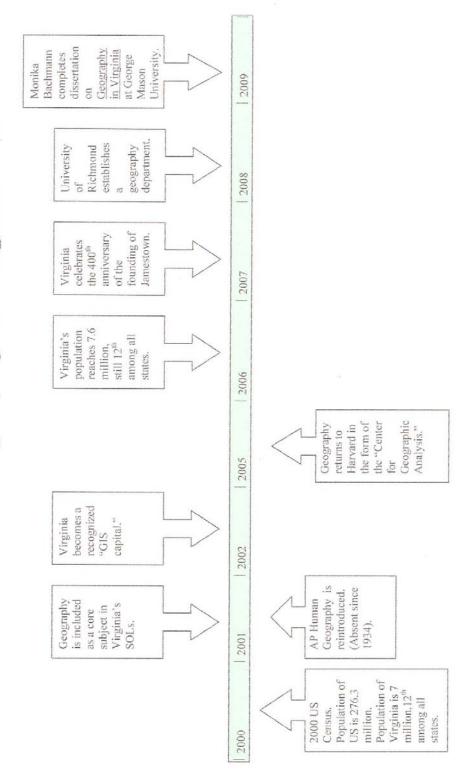












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Curriculum Vitae

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