The Writings of Benjamin Banneker: Their Effect Upon Concepts Regarding the Negro in America, 1750-1800

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The writings of Benjamin Banneker; their effect upon the concepts regarding the Negro in America 1750 - 1800

By

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts in Loyola University

February

1947
V I T A

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INTRODUCTION

The period from 1750 to 1800 may be considered the historical period when the underprivileged peoples of several nations demanded the inalienable rights of man which were denied them by their respective rulers. They became restless and eager to eradicate numerous inequalities. Although the change was gradual, England was the first nation to experience an economic and social change resulting from the Industrial Revolution. Establishment of many factories which caused a rapid movement of the masses from rural to city life legally broke up feudalism and created a desire among the laboring classes for social privileges formerly reserved for nobility. By taking advantage of Great Britain's straits during the American Revolution, Ireland obtained greater freedom of trade and legislative independence. That spirit of restlessness spread from England to Europe and America.

An unfair distribution of the tax burden upon the newly formed middle class merchants and the peasants

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2 Ibid., 78.
was climaxed by the French Revolution of 1789. In 1791 the first Constitution of the French people legally abolished all feudalism and class privileges. It included among other important clauses the famous "Declaration of the Rights of Man and of the Citizen" - a document which was to be used in the preamble to all French constitutions for many years thereafter. These French people voiced the general discontent of the age and the intense urge of the underprivileged to gain their unforfeitable rights.

Both the American Revolution and the French Revolution had as two of their objectives the abolition of unfair governmental practices and the creation of freedom of opportunity for the masses. However, neither nation explicitly included the Negro slave in its group of oppressed peoples. The general concept regarding the Negro was expressed by David Hume, the British philosopher, historian and essayist thus: "The negroes are naturally inferior to whites, and unsusceptible of attainments in arts and science."5 "Liberty, Fraternity, Equality,"6 proclaimed by the French were

5B.C. Steiner, The Life and Correspondence of James Mc Henry, Burrows Brothers Company, Cleveland, 1907, 98.
6Higgins, 126.
denied to the slaves of Santo Domingo in 1789. Slogans of the American Revolution such as "No taxation without representation," and "Give me liberty or give me death", excluded not only Negro slaves but even free Negroes and white indentured servants who were subject to taxes but who had no part in making the laws which governed them.

Notwithstanding this cruel treatment, people of color were aware of world events and conscious of the Divine law entitling them to liberty and the pursuit of happiness.

The Negroes asserted themselves in many ways. Toussaint L'Ouverture's success in Haiti, for example, spread to the blacks in America and encouraged them to continue their struggle for emancipation. Efforts of the Negro to obtain freedom during this period, 1750 - 1800 could not be properly evaluated without extensive historical research far beyond the limits of a single thesis. Such a work has been started by the Negro

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7 "Constitution of the French People of 1791, Article XXXVII,", Higgins, 475.
9 Ibid., 80.
historian Carter Goodwin Woodson who received his degree as Doctor of Philosophy from Harvard University in 1912, and who is founder and president of the Association for the Study of Negro Life and History.

The purpose of this thesis is to discuss an eighteenth century American Negro whose accomplishments produced evidence to refute the theory of the Negro's mental inferiority and to demonstrate his capacity for a complete life.

After careful research the writer decided that Benjamin Banneker, the Negro mathematician, scientist, and almanac calculator of Maryland was the most complete embodiment of such purposes. Throughout the thesis when reference is made to Banneker or to Negroes in general the following words will be used synonymously: "colored", "man of color", "black man", and "Negro". In this manner monotony through constant repetition will be avoided.

In view of the fact that the numerous handicaps experienced by Banneker only added to his fame, the general aims of this thesis will be threefold. First,
to investigate through critical analysis the combined factors which entitled him to be known by following generations as the "Father of Negro Enlightenment", second, to indicate the influence of Banneker's heritage and environment which so greatly enriched the educational and scientific value of his work, and third, to present and critically analyze Banneker's letters and journal notations which remain as proof of his intellectual merit.
CHAPTER I

THE STATUS OF THE AMERICAN NEGRO FROM 1750-1800; ITS EFFECT ON THE WORKS OF BENJAMIN BANNEKER

It is the opinion of the writer that the Negro's place in American history during the period from 1750-1800 experienced three changes which can be classified as the late colonial change, the Revolutionary War change, and the industrial change. The study of this thesis begins with 1750, which was a quarter of a century before the Declaration of Independence was signed, and nearly four decades before the adoption of the Constitution of the United States. Being under colonial rule, each colony made individual statutes concerning Negroes within its boundaries.

Precedents set by Virginia were to a great extent followed by the other colonies. In 1748 and 1753 Virginia defined slaves as "imported non-Christians," but provided that the definition should not apply to Turks and Moors on good terms with England, and with proof that they were free in that country. Yet, according to the same codes, conversion to Christian-

1 J. P. Guild, Black Laws of Virginia, Whittet & Shepperson Co., Richmond, Va., 1936, 136-140.
ity could not result in the freedom of the slaves. Intermarriage of the races was forbidden.² Manumission was restricted to liberation for meritorious service. A Negro could not enslave any person other than one of his own color. Being considered "property", fugitive servants and slaves could be advertised for, and if found, whipped for escaping from their masters.³ Slaves, according to the codes, who rebelled or who were caught conspiring with free Negroes or indentured servants, or administered medicine, were to be put to death. The right of assembly was restricted. Any Negro who lifted his hand against a white man received thirty lashes on his bare back. "Testimony of Negroes was admissible only in the case of a capital offense charged to a slave. Even in that case the judge warned the witness beforehand that if he falsified he would be pilloried, his ears would be cut off, and he would get thirty-nine lashes. Negro criminals were tried by special courts without the assistance of a jury."⁴ This law of Virginia tended to become the

² Ibid., 139.
⁴ Work, Negro Year Book, 341. Also, Edward Hosea, A Treatise on the Condition of Colored People, Dozier Press, Boston, 1837, 223.
code of all the slaveholding colonies, and modified to suit local conditions, it was enforced to debase the Negro in non-slave colonies. 5

With the agitation for freedom of the American colonies, a change took place which helped the Negro's condition in America. "Every great war", said one historian, "in which the United States has engaged has resulted in political and social advance for the Negro." 6

The reason is because at that time the life of a country is unsettled and the tempo accelerated, so that changes which otherwise might have taken decades come to pass within a year or two, or even within a few months. Thus, it was during the era of the American Revolution, that war for independence offered colored people their first opportunity to fight for a freedom which they so earnestly desired.

When not restricted because of their color or colonial legislation, the blacks were eager to rally to the call of the colors. One of the first Negro martyrs was Crispus Attucks, who died during the Boston Massacre. 7

Inscribed on a monument which was erected by the city of Boston a century later, in memory of the men who died on that memorable Monday night, March 5, 1770, is the following:

Long as in Freedom's cause the wise contend,
Dear to your Country shall your fame extend;
While to the world the lettered stone shall tell,
Where Caldwell, Attucks, Gray, and Maverick fell.

There was hesitancy at first among the colonies, concerning acceptance of Negroes into the Revolutionary army. Massachusetts protested forcefully against the enlistment of Negroes. The Committee of Safety, of which John Hancock and Joseph Ward were members, contended that inasmuch as the contest then between Great Britain and her colonies respected the liberties and privileges of the latter, the admission of any persons but freemen as soldiers would be inconsistent with the principles supported, and would reflect dishonor on the colony. In both the Continental Congress and the council of the army the race question was brought up and it was decided to reject slaves and refuse Negroes altogether. Many individual colored

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soldiers serving in white regiments were affected by the ruling and dismissed from duty. As commander of the army, George Washington was governed by those instructions until late in 1775. The following notations from the diary of Richard Smith, a delegate at the Continental Congress has reference to the Negro soldiers:

Tuesday 26 Sept. Comee. (sic) brought in a letter to Gen. Washington, in the Course of it E Rutledge moved that the Gen. shall discharge all the Negroes as well Slaves as Freemen in his Army. He (Rutledge) (sic) was strongly supported by many of the Southern Delegates but so powerfully opposed that he lost the point.10

Even as late as 1779 some colonies were reluctant to consider large formations of colored troops. The following quotation from a letter written by Colonel Alexander Hamilton to General George Washington on March 14, 1779 was a plea for more black patriots:

Head-quarters, March 14th, 1779

Dear Sir,

Colonel Laurens, who will have the honor of delivering you this letter, is on his

way to South Carolina, on a project which I think, in the present situation of affairs there, is a very good one, and deserves every kind of support and encouragement. This is to raise two, three, or even four battalions of negroes, with the assistance of the government of that State, by contributions from the owners, in proportion to the number they possess. If you should think proper to enter upon the subject with him, he will give you a detail of his plan. He wishes to have it recommended by Congress to the State; and, as an inducement, that they would engage to take those battalions into continental pay.

... I foresee that this project will have to combat some opposition from prejudice and self-interest. The contempt we have been taught to entertain for the blacks, makes us fancy many things that are founded neither in reason nor experience; and an unwillingness to part with property of so valuable a kind, will furnish a thousand arguments to show impracticability, or pernicious tendency, of a scheme which requires such a sacrifice. But it should be considered that if we do not make use of them in this way, the enemy probably will; and that the best way to counteract the temptations they will hold out, will be to offer them ourselves. An essential part of the plan is to give them their freedom with their muskets. This will secure their fidelity, animate their courage, and, I believe, will have a good influence upon those who remain by opening a door to their emancipation...  

Lord Dunmore, the deposed British governor of Virginia and Messrs. Clinton and Cornwallis bid for the services

11 Ibid., 194.
of the Negro before the Americans finally realized that the peril of slaves entering the army of the British faced them, unless they allowed the blacks to enter the conflict as patriots. 12

When colored soldiers were finally allowed to enter the conflict, they were brave and performed their duties nobly. So many slaves deserted their masters for the army that a law was passed which provided that no Negro could enlist thereafter without having a certificate of freedom. Hundreds of slave owners issued certificates of freedom to enable slaves to fight in the army. To prevent the re-enslavement of colored soldiers upon their return to that state, by masters who might have had designs of disregarding the free papers after the conflict, Virginia passed an act of emancipation which gave freedom to all those who served a term faithfully in the Continental Army. 13 Such emancipation laws were soon passed in other states.

The American Revolution was another turning point in the status of the Negro between 1750 and

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and 1800, for he had experienced the feeling of freedom, had applied himself to the demands of rigid army discipline, had been in close contact with other members of his race through group formations, and through valor and fidelity had shown the nation that he could adjust as a successful member of a free American community, if given an opportunity. Being excluded from full membership in nearly every type of group because of color, the intense fraternal consciousness which developed among Negroes in Revolutionary barracks, resulted in the formation of race organizations whose influence has increased in scope and power into the twentieth century. To properly evaluate the status of the Negro at that time, and concisely couple Banneker with his era, the personal records of various pioneer organizers are pertinent.

Prince Hall, the founder of the secret society of Free Masonry for the Negro in 1787, was a Negro native of Bridge Town, Barbados, British West Indies. He had been apprenticed as a leather worker and came to America at the age of seventeen. He industriously

applied himself to common labor during the day and to private study at night. At the age of twenty-seven, having acquired the fundamentals of an education and an amount of capital, he purchased property, joined the Methodist church, was ordained as a preacher, and successfully conducted a church in Cambridge, Massachusetts. The significant fact underlying his becoming a minister was that during the colonial era Negro preachers were respected by the whites and allowed to gather followers for religious purposes. Once thus assembled, the leaders could, and often did permit their little group to enjoy other benefits of life, such as reading, writing, and organization for social purposes. Hall was admitted, prior to the Revolutionary era, to the white order of Free Masonry and advanced to the degree of Master Mason. With a few other Negroes a charter was obtained for limited powers, and the membership increased by accessions from New York, Pennsylvania, and foreign countries. In fact, the colored branch of the Masons as begun
by Hall served as an ideal "melting pot" for all Negro Masons of the time. When Hall's group contended for full rights and powers of the lodge, the American lodge flatly denied the request. Hall then appealed to England, and, in a Grand Lodge session there March 2, 1784 his request was granted.\(^{15}\) When the warrant of authority was finally delivered in 1787, the lodge was organized and the officers duly installed. The movement spread so rapidly that a Grand lodge was necessary and less than ten years later the organization had become a most thriving adventure in Negro cooperation.

Just as the fraternal organizations served as an outlet for discussions of Negro problems, in even a greater manner the founding of the first Negro church helped to relieve the tension of the Negro status in late eighteenth century America. Richard Allen, the founder of the African Methodist Episcopal Church, was born a slave in Philadelphia.\(^ {16}\) With his entire


family he was sold to a planter living near Dover, Delaware where he grew into manhood. Coming under the Christian influence, he was converted in 1777 and began his career as a minister three years later. His master was impressed by Allen's sincere and genuine piety, and permitted him to conduct prayers and to preach in the big house. The master himself finally became one of Allen's converts, then feeling that slavery was wrong, permitted both Allen and his brother to purchase themselves for two thousand dollars in the depreciated currency of the Revolutionary War. As a freedman, Allen did not depend upon the followers of his religious teachings for a livelihood, but hauled wood and did other menial work to support himself and preached during his free time. Later, the Reverend Richard Watcoat, on the Baltimore circuit of ministers, permitted Allen to travel with him. Then Bishop Asbury of the Methodist church began to give him preaching assignments. Allen went to Philadelphia in 1786, and was invited to preach at the St. George Methodist Episcopal Church, and other churches in that city.

17 Woodson, *Negro In Our History*, 345.
It may be well to note that the colored people had no churches of their own at that time. Therefore, they attended churches of white congregations. Allen soon saw the peculiar needs of his people, \(^{18}\) and being a man of independent character, strict integrity, business tact, and thrifty habits, he decided to do something about it. \(^{19}\)

Richard Allen and his followers withdrew from the St. George Church where segregation was practiced within the sacred edifice, and formed the Free African Society, which was at first, more of a social uplift organization. \(^{20}\) Absalom Jones who had been co-organizer with Allen differed with him on the plans of the new society, and withdrew, taking with him a few of the followers who formed into a group called the African Protestant Episcopal Church of St. Thomas. The majority of the people however, remained with Allen and organized Bethel Church. A site was secured and in 1794 the church was dedicated.

Similar African religious societies were begun in

\(^{18}\) Ibid., 347.  
\(^{19}\) Ibid., 350.  
\(^{20}\) Delaney, 10-11.
Baltimore, Maryland, Attleboro, Massachusetts and Philadelphia, Pennsylvania. Maintaining themselves independently throughout the remainder of the eighteenth century, they formed a national church organization in 1816 in Philadelphia, elected Richard Allen their first functioning bishop, and have continued to wield a powerful religious, cultural and educational influence to the present day. 21

Thus the church and the secret order lodge became the joint focus of social, domestic and religious life, and also the most potent uplift movement in every Negro community, as well as a perpetual monument to the ideals of Prince Hall and Bishop Richard Allen. Minutes of early meetings held by the above organizations have been found and read but no evidence could be found to indicate that Benjamin Banneker was a member of either group. He did, however, attend some services of the Society of Friends. 22

22 De laney, Origin, 16.
From the description just given of the rise of all-Negro organizations two facts are evident regarding the status of the colored people in the last half of the eighteenth century. In the first place, religious expression was the chief outlet through which race people could gather into groups without creating friction or suspicion on the part of their white neighbors. Even in the South where cruel treatment was prevalent and insurrections sometimes occurred, colored people could gather in limited numbers to discuss the Bible and to pray. From those prayer meetings resulted classes in reading and writing as well as such national movements as have just been described. The second fact made plain by the formation of Negro organizations was the dependence of the early Negro pioneers upon the cooperation of their white friends for the complete success they desired. In like manner of the pioneers described, Benjamin Banneker also has

24 Ibid., 46-48.
influential Caucasian friends who recognized his great genius and aided him in the successful attainment of his goals.

With the invention of the cotton gin in 1793 by Eli Whitney, a new change took place in America regarding the status of the Negro. The cotton gin did the work of separating the cotton from the seeds with such rapidity that a man operating one machine could do as much work as three hundred men working by hand. The South which had formerly suffered financial losses because of her inability to furnish the markets with as much cotton as could have been sold, due to poor methods of cleaning the cotton, realized that the cotton gin would soon make cotton "King" over woolens, lindsey-woolens, linen and other fabrics most generally used at that time. To insure a rapid production of cotton for the North and foreign markets it was absolutely necessary for

25 Ibid., 53.
26 Ibid., 58.
the planters not only to keep the Negroes in slavery which they owned at the time, but also to import thousands of others from the coast and interior of Africa. Thus the slave trade began to flourish. Dark days had begun for the Negro in his desire for freedom. To justify the evils of slavery numerous doctrines and opinions were widely advanced to discredit the Negro as well as to show that he was incapable of conducting himself as a free man. 27

For personal reasons, numerous people previously identified as "friends of freedom" changed their point of view, becoming either pro slavery through rationalization, or silent on the question and thereby ceasing to offend their slave neighbors or business associates of the cotton-producing South. 28

Congressional action had made it clear at even an earlier date that the non-interference policy as set forth in a special report on March 5, 1790,

27Hosea, A Treatise, 45.
would be for many years the attitude of Congress on the slavery question. As a result of a memorial from the Quakers in their annual meeting in Philadelphia and New York in 1789 requesting that Congress adopt measures for the abolition of slavery, and a similar one shortly afterwards from the Pennsylvania Society for the Abolition of Slavery, bearing the signature of its president, Benjamin Franklin, Congress engaged in much discussion of the slavery question. The following decisions resulted after much debate and committee work, showing clearly that Congress did not care to risk discord among the newly formed states by interfering with their individual slavery problems. Upon investigation of the Constitution the committee found that:

Firstly: That the General Government is expressly restrained from prohibiting the exportation of such persons as any of the States now existing shall think proper to admit until the year 1808...

Secondly: That Congress, by a fair construction of the Constitution are equally restrained from interfering in the emancipation of slaves, who already are, or who may,

29 Ibid., 234, 242.
30 Woodson, Negro in our History, 359.
within the period mentioned be imported into, or born within any of the said States...

Thirdly: That Congress have no authority to interfere in the internal regulations of particular States, relative to the instructions of slaves in the principles of morality and religion; to their comfortable clothing; accommodations and subsistence; to the regulation of their marriages, and the prevention of the violation thereof, or to the separation of children from their parents; to a comfortable provision in cases of sickness, age, or infirmity; or to the seizure, transportation, or sale of free negroes; but have the fullest confidence in the wisdom and humanity of the Legislatures of the several States, that they will revise their laws from time to time, when necessary, and promote the objects mentioned in the memorials, and every other measure that they may tend to the happiness of slaves...

From a careful study of representative State Legislatures it was clear that the majority attitude among State governments was to humiliate and degrade the Negro below the status of a man. Note the following practices:

1. The right to hold office was taken away from the free Negroes in Virginia and by a law passed in 1723, they were not allowed to vote. The act stated

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that "no negro, mulatto, or Indian shall hereafter have any vote at the elections of burgesses or any elections whatever..."32

2. In Maryland, the birthplace and residence of Benjamin Banneker, free Negroes had the right to vote down to 1783. In that year it was enacted that "no colored person freed thereafter, nor the issue of such, should be allowed to vote, or to hold any office, or to give evidence against any white, or to enjoy any other rights of a Freeman than the possession of property and redress at law, or equality for injury to person or property..."33

3. The right of free movement which the free Negro possessed during the colonial period, was more and more restricted toward the end of the century. In 1793, free Negroes in Virginia were forbidden to enter the state to take up permanent residence.34

"A free negro living within the state could not go from one town or county to another to seek employment without a copy of his register which was kept

33 Cooper, The Statutes, 59.
in the court of his county or corporation."

Violators of the law were often committed to jail until they made proof of their freedom and paid the jailor's fee. 35

4. Referring again to the law of Maryland which greatly restricted Banneker and without a doubt accounted for his failure to visit other cities and thereby broaden his experience, the following is noted:

Any negro who might leave Maryland and remain away over thirty days, would be deemed a non-resident and liable to the law, unless before leaving he should deposit with the county clerk a written statement of his plans, or on returning, could prove by certificate that he had been detained by sickness or coercion. 36

Different attitudes were taken by Negroes themselves concerning their treatment in the United States. The masses of slaves resented the bondage but realized that they as individuals were powerless to do anything about it. Most free Negroes of the time recognized that the existing caste system restricted them to the most menial drudgery for purposes of earning a living and made their mode of

35 Charles Johnson, Race Relations; Adjustments of Whites and Negroes in the United States, Farrar & Rhinehart, N.Y., 1934, 123.
36 W.J. Simmons, Men of Mark, Revell Publishing Co., Cleveland, 1887, 291.
life very little better than that of their slave relatives. In an effort to live as peacefully as possible that majority of colored people submitted to the humiliating treatment they received and tried to avoid all types of racial clashes. As slaves they were loyal to their masters, and as freedmen and freemen submissive to the whites with whom they came in contact. Negro historians have recorded life stories of thousands who could be classified in that group. A very small group of race members from 1750 to 1800 were radical, highly emotional men who resented bondage so intensely that they would rather risk death than remain slaves. Many of that small group became successful runaway slaves finding freedom and safety in the North, with the Indians, or in Canada. 37 Others of that group participated in insurrections thereby causing many innocent people to suffer as a result of their activities. 38

The third and most successful group of colored people during that period was made up of those who took a cooperative "good neighbor" attitude regard-

37 Eppes, 29.
ing slavery and tried to prove by their example that slaves and free Negroes were mentally equal to others, and, if given an opportunity could be successful members of society. Hundreds of thrifty members of that class purchased their own freedom, bought their relatives for purposes of freeing them, acquired property, considerable wealth; they struggled to gain an education and resulted in becoming writers, artists, teachers, ministers, doctors, dentists, and scientists, - and thus became the spiritual and temporal leaders of the Negro race of the eighteenth century. By far the most outstanding member of the group was the versatile astronomer, mathematician, scientist, musician, free landowner, and cultured gentleman, Benjamin Banneker, who was cited by philosophers and statesmen during his era, 1750-1800, to challenge the existing doctrines regarding the mental inferiority of the Negro. Although mindful of the slight esteem to which the Negro was held and the unstable position regarding his people's personal safety, that man of broad reading and keen intellect,

compelled to assume a meek spirit without recourse to debate among his provincial acquaintances, found through his mechanical and intellectual pursuits an escape from the numerous social inequalities of his day thereby earning for himself the title, "Father of Negro Enlightenment".
CHAPTER II
THE BIOGRAPHY OF BANNEKER

Benjamin Banneker, more fortunate than the majority of Negroes of his era, was born a free man, an ancestry which could be directly and proudly traced for two generations, and remained an independent property owner until his death. This colonial man of color was born November 9, 1731 in Baltimore County, Maryland. Most historians agree on the date of his birth since that date was recorded in an old Banneker family Bible. Although not available now, this Bible was often used for recording important happenings during the lifetime of Banneker. It was seen by a member of the Ellicot family who preserved the most accurate account of Mr. Banneker's life. The notation of significant family data in a family Bible was a colonial custom which is still practiced by many families of the twentieth century. Among the notations in the Banneker Bible were the following:

I bought this Book of Amora Buskanan, the 4th day of January, 1763...

Benjamin Banneker was born November the 9th, in the year of the Lord God, 1731... Robert Banneker departed this life, July the 10th, 1759...

Banneker was tinged with the background of the English indentured servant and the tribesman imbued with African culture; Banneker's grandmother, Molly Welsh, was a native of England who came to America with a ship-load of other emigrants and was sold in Maryland as an indentured servant to a master with whom she served an apprenticeship of seven years. Maryland was an English colony at that time and Miss Welsh who had been unjustly accused of an offense in her native country, of which she was innocent, eagerly took refuge in America despite the fact that she had to become a servant to defray her expenses on the voyage. As the price of land was very cheap in those days, Molly Welsh bought a small farm with the "freedom dues" she received

2 Ibid., 5.
3 A. Mott, Biographical Sketches and Interesting Anecdotes of Persons of Color, Mott & Mason, Printers, New York, 1826, 43.
4 Ibid., 45. Also, Brawley, Builders, 134.
upon the expiration of her term of service.\(^5\)

By 1692 the English-born woman had been so successful with her farm that she was able to purchase two Negro slaves who had just been brought from Africa. One of these two men, Banaky, was reported to have been a descendant of African Royalty.\(^6\) The latter statement is significant when it is recalled that many African tribes had a highly developed form of civilization when the white man came to the shores of their continent. Their membership and royal standing in a clan could be compared with the clan units which existed throughout Europe during the medieval era.\(^7\)

Many of the energetic Africans were tool makers and workers in metal.\(^8\) Sold into American slavery against his will, Banaky never completely adjusted to it. However, he did not revolt to the point of being classified as an incorrigible slave. He was described by one writer as, "intelligent, of agreeable presence, dignified manner and contemplative

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\(^5\)Woodson, *Negro In Our History*, 98.

\(^6\)Journal of the American Museum, Philadelphia, Junel5, 1787. Also Cromwell, 341.

\(^7\)Opinion of the writer as result of study.

\(^8\)Eppes, 45.
habits."9 As a worker on the farm however, the same writer stated that Banaky was not as good a worker as his companion. One who resented servitude herself, Molly Welsh later liberated the two men whom she had purchased as slaves. Later, Miss Welsh and Banaky (who later spelled it Banneker), were married. From his mother's grandparents, Benjamin Banneker inherited characteristics which were dominant in his personality. To the union were born four children, the eldest of whom was Mary, the mother of Benjamin Banneker.

Banneker's parents were thrifty people who created a home atmosphere for their family comparable to that of other poor colonial families in Maryland.10 When Mary Banneker was married in 1730 to a native African baptized "Robert", he had such a high regard for the clan ancestry of Banaky and such an utter distaste for the American practice of slavery, that he accepted the name Banaky, later known as Banneker, for his family name.11 Robert had at one

9Faucet, For Freedom, 28.
10Martha E. Tyson, Banneker the Afric-American Astronomer Toy & Company, Baltimore, 1884.
11Norris, Sketch, 7.
time been a slave. There is difference of statement as to how he obtained his freedom. One writer stated that after their marriage, his wife, a free woman, purchased his freedom. 12 There is no satisfactory proof given for that statement, and judging from the scarcity of funds in the elder Banneker family such action seems highly improbable. The majority of writers contend that Robert purchased his own freedom. He was a very progressive and energetic farmer, and in 1737, just seven years after his marriage, purchased a one-hundred acre farm for the price of seventeen thousand pounds of tobacco. 13 This farm was located in a "primeval wilderness" in Baltimore County, about ten miles from Baltimore, Maryland.

In these surroundings little Benjamin, the oldest child, and his sisters romped and played, helped with chores around the farm, and learned practical lessons of family love, respect, and loyalty.

Banneker's formal education, although of a short duration, was so thoroughly received that he gained mastery of the rudiments of reading, writing, and arithmetic, and used this limited knowledge as a tool with which to pry into intellectual and scientific mysteries. One contemporary said that Banneker had a photographic type of mind which enabled him to remember in most accurate detail nearly everything that he experienced. The Bible which has been a source of inspiration and subject matter for philosophers, past and present, was a dominant influence in the education of Banneker. Its effect was clearly shown in his later writings. Mrs. Molly Banneker, Benjamin's grandmother began the boy's education even before he attended school, by teaching him to read. According to the writer,

"She took great delight in his learning. She much desired to see him grow up a religious man and encouraged him to read the Holy Scriptures. For the advancement of this object whilst he was yet a boy, she wrote to her native country for a large Bible, from which he used to read to her on each sabbath day." 14

Grandmother Banneker also sent him to a school which was taught near their residence where a few white and two or three colored children received together, the instructions of the same master. In the school, a private one, as was the custom of that part of the country, Banneker showed an instinctive ability to grasp the mathematical concept. He thoroughly mastered it in a relatively shorter time than any other member of his class, black or white. In fact, several biographers related in memoirs that he cheerfully solved arithmetic problems for numerous children in the community. Another author stated regarding his interest in arithmetic thus: "whilst all the rest of the boys played and were seeking amusement, Benjamin's only delight was to dive into his books..."\(^{15}\)

According to Mr. James Mc Henry, statesman, surgeon, and one time Secretary of War, who wrote an abbreviated biography of Banneker years later, Banneker progressed in school as a pupil with outstanding ability, learning with unusual speed, and mastering arithmetic as

\(^{15}\)Rights of All, New York, March 28, 1828. Also, Norris, Sketch, 15.
far as "double position". A careful research into obsolete mathematical texts disclosed that "double position" was the method of solving an algebraic question by assuming two numbers and working with each as if it were the true answer, and eventually finding the true answer through comparison of the errors. The following rule is quoted from Eaton's *Arithmetic*, of 1857:

"Rule: Assume any two numbers and proceed with each as the conditions of the question required; compare each result with the result given in the question and call each difference an error; multiply the first assumed number by the second error and the second assumed number by the first error; then if both assumed numbers are too great, or both are too small, divide the difference of the products by the difference of the errors; but if one assumed number is too great and the other too small, divide the sum of the products by the sum of the errors; in either case, the quotient will be the number sought."

The rule for double position is not only rather clumsy, but does not work in all cases. As a result, it has been dropped in favor of a simple algebraic solution which was unknown in colonial days.

There can be found no recorded statement of the reason for Banneker's leaving school or the actual time

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when this private school education ceased. Yet in an attempt to find a cause for his cessation of formal education there seem to be many possible answers to the question. The death of Banneker's grandmother and perhaps the indifference of Banneker's parents to formal education; the failure of the schoolmaster to keep a class large enough to adequately support his material needs, consequently resulting in his departure from Baltimore; the mastery of the rudiments of education as far as was taught in the grammar school classes and Banneker's inability of attending college because of either his race, his scarcity of funds, or both; the pressing duties on the Banneker farm, causing him to have insufficient leisure for continuing in school; all might be advanced as possible reasons for his leaving school.

With a mastery of the rudiments such as Banneker had no doubt acquired during his years of schooling, it is easy to understand how he was able to progress from the known to the unknown and increase his knowledge far after his schooling ceased. At the
age of twenty-eight, Benjamin had to assume full responsibility of the Banaky clan, due to the death of his father, Robert Banneker. He maintained a well stocked farm, earned a living through the sale and barter of his produce, yet sufficient leisure to continue his mechanical experiments, his explorations in the field of nature study, and his reading of history and literature. 17

Every memoir writer and narrator who mentioned Banneker's early life referred to the unusual clock, one of, if not the very first to be made in Maryland out of all American materials, and that by a Negro youth scarcely out of his teens. 18 It created quite a sensation causing the people to come from miles away to gaze upon this product of a Negro brain.

The clock is said to have kept accurate time, striking the hours, and to have run continuously for more than twenty years. 19 It was made entirely of wood.

17 Cromwell, 98. Also, Minutes and Proceedings of the First Annual Convention of the People of Color, Printed by the Society, 32 North Hill Place, Philadelphia, 1831, 49-50.
19 Ibid., 59. Also, Norris, A Sketch, 14.
and Banneker's only model had been a small watch. It is conceivable from such statements that his time for months, or perhaps years, must have been measured by countless weary hours of painstaking effort of the trial and error method with weights, springs, and making tests of wood for hardness, durability, resonance, and beauty. No doubt, endless comparisons of accuracy to determine exact measurements within the small watch, his only standard recording time, were made, then the results compared with the many times enlarged model he was using in his clock. Frequently baffled with the numerous problems of flexibility, resonancy, et cetera, of wood, the sole material used in clocks of the day, yet strengthened with the vision of the perfected machine, he did not falter. The finished clock which accurately functioned over two decades, was the logical and triumphant reward for such weary and toilsome hours of research and experimentation.

In the following quotation from a memoir describing a visit made to Banneker's home, the clock is
referred to thus:

...whilst they were conversing, his clock struck the hour and at their request he gave them an interesting account of its construction. With his imperfect tools, and with no other model than a borrowed watch, it had cost him long and patient labor to perfect it; to make the variation necessary to cause it to strike the hours and produce a concert of correct action between the hour, the minute and the second machinery.

He confessed that its regularity in pointing out the progress of time had amply rewarded all his pains in its construction. 20

Referring to clocks in general it is significant to note that Banneker, when given the place in history he deserves, merits honorable mention with Eli Terry, Seth Thomas, and other American pioneers in clock making. Authentic sources were searched and the following general information obtained:

1. Clock makers in America date back to the beginning of the nineteenth century, although about ten years earlier, 1790, one or two pioneers engaged in the making of occasional clocks for customers who could afford to pay the expensive charges. 21

20 Latrobe, "Memoir", 19.
2. American clocks were first manufactured about 1800, by Eli Terry. His clocks became popular and he continued in business until his death, when his sons succeeded him under the name of the Terry Manufacturing Company. Many neighboring establishments were soon engaged in clock manufacturing and Connecticut thus became and has always remained the centre of the clock industry in the United States.22

3. In the beginning, clock movements were constructed of wood and in the better clocks the pendulum was of wood overlaid with gold leaf.23

Although ignored by chroniclers of clocks and clockmakers, possibly because of background or taboos of the period, plain historic honesty forces the conclusion that Banneker foreshadowed by about forty years the results of such men as Eli Terry and Seth Thomas whose fame has descended to our day. Their efforts brought them lasting fame and fortune through patents and devious ways. A search of the patent

Ibid., 121.
office records revealed no information concerning Banneker's clock, a fact which when compared with other known attitudes which he possessed, led the writer to believe that being a scientist at heart he was interested solely in being of service to humanity, and not in the financial gain therefrom. Had Maryland on the other hand enjoyed a balanced social perspective when Banneker made his clock in 1751, she could have capitalized on his knowledge and art in clock making, and outstripped her sister colony Connecticut, making herself the center of the clock industry, while at the same time have permitted Banneker's genius a maximum fulfillment with the best equipment, active cooperation, sympathetic environment and ample means, thus altering today's historic annals.

An event of very great significance in the quiet neighborhood where Banneker's clock had created such a sensation, was the erection in 1772 of the flour mills at what is now called Ellicott City.\textsuperscript{24} The machinery, so crude and antiquated by present standards, was more than a nine days wonder in those far-off

\textsuperscript{24}Cromwell, 110.
days. One writer refers to the mills thus:

The valley where Ellicott and Company built their manufactories for flour ... was, until the sound of their axes and hammers were heard, a favorite resort of deer, wild turkeys and other game.

Having a well stocked farm near by, the proprietors of Ellicott mills purchased many of their workmen's provisions from Banneker while the erection of the machinery was taking place. Among the others, Banneker delighted in watching the mills even after their novelty had worn off. To understand its construction and function was to enlarge the sphere of his knowledge of mechanics. The erection of the mills and the coming of the Ellicotts to the neighborhood marked a new era of intellectual development for Benjamin Banneker.

After the mills were completed a store was erected by the Ellicott Company. Roads and bridges were also built, thus establishing intercourse with distant and neighboring towns. In one part of the


26 Tyson, Banneker, 194. Also, "The Negro Benjamin Banneker", Records, 23.
store. a post office was housed while in another, there were chambers where the planters and other gentry of Elkridge assembled for the sale of their grain, for the purchase of necessary merchandise, for the receipt of letters and newspapers, and, most frequently of all, to discuss the news of the day.

By the time the Ellicott general store was a thriving community necessity, Banneker was in his early forties. He had acquired a knowledge of literature, history, arithmetic, mechanics, natural science, and the classical languages, most uncommon for the general public of his day. He favorably attracted the notice of George Ellicott, one of the flour merchants, who, himself was a literary scholar. Ellicott explained many perplexing educational problems to Banneker and further aided the clock maker's education by loaning him scores of books and teaching him much of the information that Ellicott had learned in college. Between the two men of intellect there grew a strong bond of friendship and mutual understanding. Ellicott never failed, when an opportunity

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27 Cromwell, 165. Also, Eppes, 113.
arose, to introduce Banneker to other scholars. One writer stated in reference to Banneker's conduct while in the Ellicott general store:

Here in conversation with those who valued attainments so unusual in a man of color, accompanied also, by general good conduct, Banneker was sometimes induced to overcome the modest reserve for which he has always been represented as having been conspicuous, and speak from the volumes of his traditional lore; of the occupation of Maryland by our first colonists, their disappointments and difficulties. Occasionally he would be led to mention his own labors in the pursuit of knowledge, without the aid of those auxiliaries which had since been presented to him.

Banneker had become expert in the solution of difficult mathematical problems which were then, more than in the present century, the amusement of persons of leisure. Problems were frequently sent to him by scholars residing in different parts of the country who wished to test his capacity.

He is reported to have been successful in every case, and sometimes, he returned his answer with one of his own mathematical puzzles written in rhyme.

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28 Faucet, For Freedom, 41.
29 Benjamin Banneker, Banneker's Almanack and Ephemeris for the Year of Our Lord 1793, Goddard and Angell, Baltimore, 1792, 11.
Around 1788 Ellicott encouraged Banneker to begin the study of astronomy by loaning him three books on the subject, and some astronomical instruments. Banneker was an apt pupil, using the sky as his laboratory, and after a year of diligent study mastered the fundamentals of astronomy. At that time, he was described by one of his contemporaries in the following manner:

By the time Banneker was 58 years of age, he had, from his uncommon circumstances, became quite celebrated and no strangers who visited his neighborhood were willing to depart without conversing with him, or visiting his cottage.30

In another memoir one of Banneker's contemporaries who visited him in 1790 described the visit thus:

He was so occupied that he did not observe us enter. He received us courteously. He alluded to his love of astronomy and his deep interest in mathematical pursuits, and regretted his slow progress therein, from the laborious nature of his agricultural engagements, which obliged him to spend a great part of his time in the fields.31

31 Norris, Sketch, 23.
When Banneker was nearly sixty years of age he exhibited his ability as a business man and at the same time paved the road for his intense study of astronomy that was to follow. He surveyed his land, then sold it to Ellicott and Company for the amount of 180 pounds in Maryland currency of that day. The terms of the contract were stipulated so that Banneker reserved to himself a life estate on the farm and instead of receiving his entire payment at once, received 12 pounds yearly. He had estimated this annual payment by the probable duration of his own life, and in conference with assignees remarked:

I believe I shall live fifteen years, and considering my land with 180 pounds Maryland currency, by receiving twelve pounds a year for fifteen years, I shall in contemplated time receive its full value. If, on the contrary, I die before that day, you will be at liberty to take possession.

Banneker lived several years beyond the computation, yet, the Ellicotts continued payment of the annuity until his death.

32 Ibid., 28.
33 Tyson, 98. Also, Mott, 90.
34 Latrobe, "Memoir", 16.
Having sold his estate he still cultivated sufficient ground to occupy him with outdoor labor and was often seen hoeing in the cornfield, trimming fruit trees, or observing one of nature's many wonders. He devoted most of his time to the study of astronomy and despite his lack of adequate instruments, became so proficient in the art that in 1789 he was able to successfully calculate an eclipse. 35 In 1791 he made an almanac for the following year, which was called, Banneker's Pennsylvania, Delaware, Maryland and Virginia Almanack and Ephemeris for the Year of Our Lord, 1792.

Through the efforts of his friend, James McHenry, a Maryland senator, and United States Secretary of War from 1796 to 1798, a contact was made with Goddard and Angell, Publishers who paid Banneker a fair sum for his work and published it. 36 Mr. McHenry's letter of introduction which was included in the preface of this almanac, was just the proper endorsement Banneker needed for his work. The almanac like others of the day, contained calculations showing the different

35 Letter from Banneker to George Ellicott, October 13, 1789, Tyson, 62.
36 Steiner, 369.
aspects of the planets, a table of motions of the sun and moon, and their risings and settings. In them also were found interesting extracts from books and newspapers, and much literary and historical information.

So successful was the first almanac Banneker calculated, that many firms were anxious to issue his works thereafter. 37 By 1795 Banneker's popularity as an almanac calculator was at its height, for in that year his almanac was published by six different companies. For one of those companies, S. and J. Adams, three different editions were published during the same year. The following quotation from the 1792 Almanack gives a brief insight into the depth of the astronomer's ability:

...The sun, which seems to perform its daily stages through the sky is in this respect fixed and immovable; 'tis the great axle of heaven, about which the globe we inhabit, and other more spacious orbs, wheel their stated courses. A line extended from side to side through the center of that resplendent orb, would measure more than eight hundred thousand miles: A girdle formed to go round its circumference, would require a length of millions...

That which we call alternately the morning and evening star, as in one part of the orbit he rides foremost in the procession of the night, in other ushers in and anticipates the dawn, is a planetary world, which with the four others, that so wonderfully vary their mystic dance, are in themselves dark bodies, and thine only by reflection...

In 1796 when Banneker calculated the almanac for the next year, he realized that he was too aged and ill to remain outdoors every night in order to observe the heavenly bodies and continue his almanacs. At the age of sixty-five he therefore retired from the circle of colonial almanac makers and satisfied his scientific desires by reading and by recording notations in his journal.

At the height of his career Banneker was described as a large man of noble appearance with venerable hair, wearing a coat of superfine drab broadcloth, and again as "of black complexion, medium stature, of uncommonly soft and gentlemanly manners and pleasing colloquial powers."

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38 B. Banneker, Banneker's Pennsylvania, Delaware, Maryland and Virginia Almanack and Ephemeris for the Year of Our Lord, 1792, Goddard and Angell, Baltimore, 1791, 32.
39 Cromwell, 109.
40 Tyson, 203.
41 The Atlantic Monthly, XI, Ticknor and Fields, Boston, 1869, 47.
In the following quotation much insight is given into the character of Banneker.

In the year 1800 I commenced my engagements in the store of Ellicott's mills, where my first acquaintance with Benjamin Banneker began. He often came to the store to purchase articles for his own use. I was anxious to wait upon him. After making his purchases he usually went to the part of the store where George Ellicott was in the habit of sitting, to converse with him about the affairs of our Government, and other matters. He was very precise in conversation and exhibited deep reflection. His deportment whenever I saw him, appeared to be perfectly upright and correct, and he seemed to be acquainted with everything of importance that was passing in the country.42

Although adequate proof could not be obtained to state with absolute certainty the date of Banneker's death, it has been agreed upon by leading authorities on Negro history that he died in the autumn of 1804.43

In a tribute to Banneker which was published years later in the Atlantic Monthly, it was stated:

Banneker died in the year 1804, beloved and respected by all who knew him. Though no monument marks the spot where he was born and lived a true and high life, and was buried, yet, history must record that the most original scientific intellect which the South has yet produced, was that of the pure African, Benjamin Banneker.44

42 Norris, Sketch, 41.
43 Cromwell, 115. Woodson, Negro In Our History, 205.
44 Eppes, 97.
44 Atlantic Monthly, 49.
Benjamin Banneker in keeping a journal can be compared with the English secretary to Queen Anne, Pepys, for in both cases the men recorded actual happenings of the limited world in which they lived, furnished facts which could be checked with counter-happenings, gave insight into the variety of activities experienced by them and indicated the highly organized method which they employed in recording their experiences.  

Like Pepys, Banneker considered insignificant details as necessary to note as he did happenings of a more important nature. Unlike Pepys, Banneker was not a man of royal surroundings who could spend much of every day writing and still earn a living. He was a farmer, and thus living in a limited environment, enjoyed the pleasure of writing only when such literary work did not affect his duties on the one hundred acre farm which he owned and so capably managed.

1 John Smith, Life Journals and Correspondence of Pepys, Richard Griffin Neville, Publisher, London, 1825, 17.

2 Cromwell, 135.
The book in which Banneker made his notations was called by him the *Journal* and in it the astronomer wrote frequently although not at regular intervals. After careful perusal the writer chose those notations for citation here which were representative of the variety of Banneker's interests. Writings in this book fell into four groups being first, notations which dealt with Banneker's relationship with his neighbors; second, notations which indicated the type of estate Banneker maintained; third, notations regarding Banneker's financial transactions; and last, notations which indicated the writer's deep interest in natural science and mathematics.

The first two notations to be cited here, showed no entry date but from internal evidence they can be linked with the period in which Banneker studied intensely to supplement his knowledge of astronomy and mathematics for the purpose of computing his almanac. His first almanac was computed in 1791 for the following year. On October 13, 1789, he wrote a letter to one of his fellow astronomers explaining
other astronomical inconsistencies of the textbook writers and scholars, Leadbeater and Ferguson. In a *Journal* entry where no date was given but which was evidently written near the same time, he wrote:

Errors that ought to be corrected in my Astronomical Tables are these; 2 vol. Leadbeater, p. 204; when anomaly is 4s 30o, the equation 3o 38' 41" ought to have been 3o 28' 4". In equation, p. 155; the logarithm of his distance from 0 ought to have been 6 in the second place from the index, instead of 7, that is from the time that his anomaly is 3s 24o until it is 4s 0o.4

"No doubt, both Ferguson and Leadbeater would have looked incredulous, had they been informed that their labored works had been reviewed and corrected by a free Negro in the wilderness of Maryland."5

At another time Banneker questioned the findings of Dr. Ferguson. The following is a direct quotation as taken from the *Journal*.

> It appears to me that the wisest men may at times be in error: for instance, Dr. Ferguson informs us that when the sun is 12o of either node at the time of full, that the moon will be eclipsed: but I find, according to his method of projecting a lunar eclipse, there will be none by the above elements, and yet the sun is within 11° 46' 11" of the moon's ascending

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3 Tyson, 62.
5 Cromwell, 143.
node. But the moon being in her apogee prevents the appearance of this eclipse. 6

For Banneker to have been able to detect mistakes in the works of such learned scholars, certainly indicated his unusual grasp of mathematics despite his lack of formal college training.

Giving a date of between 1789 and 1790 to the two cited Journal notations and knowing with certainty that April 13, 1803, about a year before Banneker's death, the last notation was made, it is reasonable to conclude that Banneker's writings took place in about the last fifteen years of his life, when he was a well established farmer whose income gave him more leisure than he had formerly enjoyed. 7 By far, the majority of his Journal notations were concerned with natural science as he observed it around him. 8

December 23, 1790: About 3 o'clock, I heard the sound and felt the shock like unto heavy thunder. I went out but could not observe any cloud above the horizon. I therefore conclude it must be a great earth-quake in some part of the globe.

8 Banneker, Journal, 17.
As an exhibit of his sensitivity to the speed of sound he noted that several seconds elapsed between his hearing a certain discharge of a gun and the coming of the bullets into his range of vision.

He wrote:

August 27, 1797: Standing at my door I heard the discharge of a gun, and in four or five seconds of time, after discharge, the small shots came rattling about me, one or two of which struck the house, which plainly demonstrates that the velocity of sound is greater than that of a cannon bullet. 9

On further perusal of his Journal it was noted that he made extensive observation over a period of months to determine the reason for a particular vacancy among the beehives on his farm.

The following quotation will aptly illustrate the methodical character of his mind in contrast with that of the casual observer:

January, 1797: In the month of January, 1797, on a pleasant day for the season, I observed my honey bees to be out of their hives, and they seemed very busy, all but one hive. Upon examination I found all the bees had evacuated this hive, and left not a drop of honey behind them. On the 9th February ensuing, I killed the neighboring hives of bees on

9 Ibid., 31.
a special occasion, and found a great quantity of honey, considering the season, which I imagine the stronger had violently taken the weaker, and the weaker had pursued them to their home, resolved to be benefitted by their labour or die in the contest. 10

Banneker made extensive observation and study over a term of forty-eight years, determined the habits, of locusts, their usefulness, and the underlying causes of "locust year"). 11 At the age of 69, he wrote the following:

April, 1800: The first great locust year that I can remember was 1749. I was then about seventeen years of age, when thousands of them came and were creeping up the trees and bushes. I then imagined they came to eat and destroy the fruit of the earth, and would occasion a famine in the land. I therefore began to kill and destroy them, but soon saw that my labour was in vain, and therefore gave over my pretension.

Again in the year 1766, which is seventeen years after their first appearance, they made a second, and appeared to me to be full and numerous as the first. I then, being about thirty-four years of age, had more sense than to endeavor to destroy them, knowing they were not so pernicious to the fruit of the earth as I imagined they would be. Again in the year 1783, which was seventeen years since their second appearance to me,

10 Ibid., 18.
11 Woodson, Negro In Our History, 138.
they made their third; and they may be expected again in the year 1800, which is seventeen years since their third appearance to me. So that if I may venture to express it, their periodical return is seventeen years. 12

Continuing the observation and conclusion of his study, Banneker referred to his astronomical knowledge thus:

...but they, like the comets, make but a short stay with us. The female has a sting in her tail as sharp and hard as a thorn, with which she perforates the branches of the trees, and in the holes lays eggs. The branch soon dies and falls. Then the egg, by some occult cause immerses (sic), a great depth into the earth, and there continues for the space of seventeen years as aforesaid. I like to forgot to inform, (sic), that if their lives are short they are merry. They begin to sing or make a noise from first they come out of the earth, 'til they die. The hindermost part rots off, and it does not appear to be any pain to them, for they still continue on singing 'til they die. 13

Still a student of nature at the age when most people would have retired, he recorded in his Journal on February 2, 1803, this observation:

February 2, 1803: In the morning part of the day, there arose a very dark cloud,

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followed by snow and hail. A flash of lightening and loud thunder crack; and then the storm abated until afternoon, when another cloud arose at the same point, viz: the north-west, with a beautiful shower of snow. But what beautified the snow was the brightness of the sun, which was near setting at the time. I looked for the rainbow, or rather snowbow; but I think the snow was too dense a nature to exhibit the representation of the bow in the cloud... The above was followed by very cold weather for a few days. 14

Despite a few persons who envied his financial independence and his intellectual genius, Banneker had friendly and cooperative relations with his neighbors, white as well as black. Most historians of his biography mention it. 15 Numerous notations in his Journal could be cited to show the relationship that existed:

April 30, 1785: On the 30th day of April, 1795, lent John Ford five dollars, £ 17s 6d. 16

The writer found no notation indicating that the same John Ford repaid the loan to Banneker. Another entry was this:

December 12, 1797: 12th of December, 1797, bought a pound of candles at 1s 8d. Sold to John Collins 2 qts. of dried peaches 6d. 1 qt. mead 4 d. 17

14 Ibid., 27.
17 Ibid., 42.
It is reasonable to decide that the candles were purchased from Ellicott Mills, where the only general store of that region existed.

It is important in the evaluation of Banneker to realize that although he had sold his land for an annuity to the Ellicotts, being thereby financially provided for, he continued farming to a certain degree even until nearly the last year of his life. Note the following as it is borne in mind that the probable date of his death was 1804, in early autumn.

March 26, 1803: On the 26th of March, came Joshua Sanks with 3 or 4 bushels of turnips to feed cows. 18

Then less than three weeks later:

April 13, 1803: 13th of April, 1803, planted beans and sowed cabbage seed. 19

In addition to Banneker's annual income from the sale of his land, he received money from numerous publishing companies for his almanacs. 20 One notation dated April 2, 1795, referred to his successful dealings with Butler, Edwards, and Kiddy, which had been uninterrupted since his first almanac in 1792.

18 Ibid., 16.
19 Ibid., 17.
20 Loggins, Negro Author, 142. Also, Brown, Rising Son, 267.
April 2, 1795: Sold on the 2nd day of April, 1795, to Butler, Edwards and Kiddy, the right of an Almanac, for the year 1796, for the sum of 80 dollars, equal to £ 30.

The fact that the above company continued to use Banneker's almanacs each year, popularizing them so that other companies also used his works, is the finest single proof that Banneker had overcome race prejudice in an intellectual way, by convincing his generation that he, a Negro, had a mind equal to that of white astronomers in the same field. Along with Banneker's letters and almanacs, his quaint *Journal* used as an informal note-book to recall significant happenings to his mind, has stood through the centuries following, as accurate source material to give sidelights on his unusual character, to prove his contributions to his generation and to foster the race's intellectual uplift.
CHAPTER IV
BANNEKER'S SIGNIFICANT LETTERS

Several letters which show significant side-lights on the Negro astronomer, will be evaluated in this chapter. They have proved interesting as to content, general arrangement, and expressions of personal feelings. In addition to indicating prevailing customs of the times, they also give much insight into the life of Banneker, the genius, one who convinced his friends and enemies that the Negro was the intellectual equal to other races of men.

A student of historical research is denied, unfortunately, the majority of Banneker's letters because due to unexplained circumstances the astronomer's comfortable log cabin mysteriously caught fire destroying not only his numerous papers but his famous clock and all his personal effects. The only items preserved were the three letters for discussion in this chapter; the Journal, and a few books.¹

¹ Latrobe, "Memoir", 53. Also, Norris, Sketch, 48.
The first of the three letters to be considered here was dated "October 13, 1789" and addressed to the flour merchant and friend of Banneker, Mr. George Ellicott. Although a technical missive, a lay student could recognize the general idea that Banneker was attempting to present. Evidently, preceding this letter Banneker had sent an astronomical prediction to Ellicott which was slightly incorrect and as a result the latter who was guiding Banneker in his study of the solar system, had pointed out Banneker's mistakes and referred him to certain rules in textbooks. It begins:

Sir,

I received your letter, at the hand of Bell but found nothing strange to me in the letter concerning the number of Eclipses, tho according to authors the Edge of the penumber only touches the Sun Limb in that Eclipse, that I left out of the Number - which happens April 14th day, at 37 minutes past 7 o'clock in the morning, and is the first we shall have; but since you wrote me, I drew in the Equations of the Node which will cause a small Solar Defect...

2 Eppes, 117. Also, Robert R. Moten, What the Negro Thinks, Tuskegee Institute, Tuskegee, Ala., 1929, 349. 3 Norris, Sketch, 50.
Explaining that he understood the rule and how his mistake occurred, as well as indicating that he was at that time occupied with the study of astronomy for the purpose, later of publishing an almanac, he continued:

...but as I did not intend to publish, I was not so very particular (sic) as I should have been, but was more intent upon the true method of projecting a Solar Eclipse (sic). It is an easy matter for us when a Diagram is laid down before us, to draw one in resemblance of it, but it is a hard matter for young Tyroes in Astronomy, when only the Elements for the projection is laid down before him to draw his Diagram with any degree of certainty.  

He then cited the opinions of two learned men in that field, one who counted time from left to right, and the other, vice-versa:

Says the Learned Leadbeater, the projection I shall here describe, is that mentioned by Mr. Flamsted. When the sun is in Cancer, Leo, Virgo, Libra, Scorpio or Sagitty, the axes of the Ecliptic, but when the sun is in Capricorn, Aquarius, Pisces, Aries, Taurus, or Gemini, then to the left.

Says the wise author Ferguson, when the sun is in Capricorn, Aquarius, Pisces, Aries, Taurus, and Gemini, the Northern half of the Earth's axes lies to the right hand of the

4 Ibid., 50.
Axes of the Ecliptic and to the left hand, whilst the Sun is on the other six signs. 5

Recognizing that such difference in method employed by astronomers made it difficult for him to understand a certain difficult point, he continued:

Now, Mr. Ellicott, two such learned gentlemen as the above mentioned, one in direct opposition to the other, stagnates young beginners, but I hope the stagnation will not be of long duration, for this I observe that Leadbeater counts the time on the path of Vertex 1. 2. 3. and C. from the right to the left hand or from the consequent to the antecedent, - But Ferguson on the path of Vertex, counts the time 1. 2. 3. and C. from the left to the right hand, according to the order of numbers, so that is regular, shall compensate for irregularity. 6

Judging himself to be near the mastery of the art of almanac making, but still not quite ready to submit his projections to the public, he concluded:

Now sir, if I can overcome this difficulty, I doubt not being able to calculate a Common Almanac. - Sir, no more,

But remain your faithful friend,

Benjamin Banneker,

Mr. George Ellicott, Oct. 13th, 1789 7

5Ibid., 51.
6Ibid., 51.
7Ibid., 52.
Banneker's first calculations for public use were made in 1791 for the year following. He therefore must have spent the next two years in constant study and application to augment his knowledge of the heavens.

The following was one of Banneker's rhymed mathematical poems which was sent to George Ellicott for solution. This problem, frequently mentioned by Negro historians, is important because it reveals indirectly, the type of learning in early America which was tinctured with British tradition, namely, reading, writing, and scanning of Latin and Greek poetry. Being a mathematician as well as a scholar who was proficient in French, Latin, and Greek, Banneker strengthened the orderly processes of his mind by such mathematical exercises.

Banneker's Mathematical Poem

A Cooper and Vintner sat down for a talk,
Both being so groggy, that neither could walk,

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8 Letter from James McHenry to Editors of publishing company, "Preface", B. Banneker, Almanack for 1792, 2.
9 Letter from Miss Lucy Chase to Miss Martha Stevenson, The Freedmen's Record, II, No. 7, Published by order of the Executive Committee, New England Freedmen's Aid Society, Boston, July, 1866.
Says Cooper to Vintner, "I'm the first of my trade, There's no kind of vessel, but what I have made, And of any shape, Sir, just what you will, And of any size, Sir, from a ton to a gill", Then says the Vintner, "you're the man for me, Make me a vessel, if we can agree. The top and the bottom diameter define, To hear that proportion as fifteen to nine; Thirty-five inches are just what I crave, No more and no less, in the depth, will I have; Just thirty-nine gallons this vessel must hold, Then I will reward you with silver and gold, Give my your promise, my honest old friend?"

So the next day the Cooper his work to discharge, Soon made the new vessel, but made it too large; He took out some staves, which made it too small, And then cursed the vessel, the Vintner and all. He beat on his breast, "By the Powers!" he swore, He never would work at his trade any more. Now my worthy friend, find out, if you can, The vessel's dimensions and comfort the man!10

Benjamin Banneker

In an appendix attached to this study the solution to Banneker's problem appears. It was solved by a student of higher mathematic, director of the Collier's Research Bureau, New York City, for the purpose of this thesis.

In her explanation she stated that according to present day standards it would be necessary for one to be a superior student in the higher mathematics of high

10 Faucet, 39. Also, Woodson, Negro In Our History, 132.
school in order to solve or create a problem such as Banneker had done.

Certainly such a statement from a twentieth century mathematician coupled with scientific proof, would indicate that for his age Banneker had attained the educational advancement equal to an advanced college graduate of the early nineteenth century. 11

An author, Mrs. Suzanna Mason, visited Banneker's humble abode with a member of the Ellicott family in 1797. After that visit Mrs. Mason, in writing a letter to Banneker also resorted to a custom of the day which was practiced by literary people. She wrote her letter in rhyme. Although this entire letter is appended to the paper, a part of it will be quoted now to show the high regard of Banneker in his community. Mrs. Mason, herself a Caucasian writer, would not have publicly expressed her views of Banneker had he not been generally accepted by other white people of the age. She wrote:

Transmitted on the wings of Fame,
Thine Eclat sounding with thy name.
Well, pleased, I heard, ere 'twas my lot
To see thee in thy humble cot.

11 Woodson, _Education_, 79-85. Mr. Woodson quotes the prerequisites for receiving a first degree then a masters degree from Harvard and Yale Universities in the eighteenth century.
That genius smiled upon thy birth,
And application called it forth;
That times and tides thou could'st presage,
And traverse the Celestial stage,
Where shining globes their circles run,
Inswift rotation round the sun;
Could'st tell how planets in their way,
From order ne'er were known to stray;
Sun, moon, and stars, when they will rise,
When sink below the upper skies;
When an eclipse shall veil their light,
And, hide their splendor from our sight.

Banneker's long record of seemly and worthy conduct, his scrupulous regard for his cherished heritage and his unquestioned intellect made him merit the following compliment:

But thou, a man exal th high,
Conspicuous in the world's keen eye,
On record now, they name's enrolled,
And future ages will be told,
There lived a man named Banneker,
An African Astronomer!

In Banneker's answer to Mrs. Mason, although in prose, the tone of it indicated that his powers were still unimpaired in his advanced age.

August, 26th, 1797

Dear Female Friend:-
I have thought of you every day since I saw you last, and of my

13 Ibid., 59.
promise in respect of composing some verses for your amusement, but I am very much indisposed, and have been ever since that time. I have a constant pain in my head, a palpitation in my flesh, and I may say I am attended with a complication of disorders, at this present writing, so that I cannot with any pleasure or delight, gratify your curiosity in that particular, at this present time, yet I say my will is good to oblige you, if I had it in my power, because you gave me good advice, and edifying language, in that piece of poetry which you were pleased to present unto me, and I can but love and thank you for the same; and if ever it should be in my power to be of service to you, in any measure, your reasonable requests, shall be armed with obedience of,

Your sincere friend and well-wisher,

Benjamin Banneker

Mrs. Susanna Mason

N.B. The above is mean writing, done with trembling hands.

B.B. 14

When Banneker finished his first almanac, he dispatched a manuscript copy of it to Thomas Jefferson, then Secretary of State, along with a rather lengthy letter pleading for Jefferson's influence in bring-

14 Ibid., 60.
ing about a rightful recognition of the true worth of the Negro. 15 The letter is worthy of special consideration because it is not only a revelation of Banneker's social and racial forces, but is in itself a masterpiece of oratory and logic for the abolition of slavery.

Maryland, Baltimore County, August 19, 1791

Sir,

I am fully sensible of the greatness of the freedom. I take with you on the present occasion, a liberty which seemed scarcely allowable, when I reflected on that distinguished and dignified station in which you stand, and the almost general prejudice which is so prevalent in the world against those of my complexion...

The following paragraph stated the late eighteenth century conception of Negro mentality and sensibility, thus:

It is a truth too well attested, to need proof here, that we are a race of beings, who have long laboured under the abuse and censure of the world; that we have long been looked upon with an eye of contempt; and considered rather a brutish than human, and scarcely capable of mental endowments.

15 Loggins, 98. Also, Cromwell, 146.
16 B. Banneker, Copy of a Letter from Benjamin Banneker to the Secretary of State, with His Answer, Daniel Lawrence Printer, 33 North Fourth Street, Philadelphia, 1833, 21.
I hope I may safely admit, in consequence of the report which has reached me, that you are a man far less inflexible in sentiments of this nature, than many others, that you are measurably friendly, and well disposed toward us; and that you are willing to lend your aid and assistance for our relief from those many distresses, and numerous calamities, to which we are reduced.

If this is founded in truth, I apprehend you will embrace every opportunity to eradicate that train of absurd and false ideas and opinions, which so generally prevail with respect to us; and that your sentiments are concurrent with mine, which are, that one universal Father hath given being to us all, that He hath not only made us all one flesh, but that He hath also, without partiality, afforded us all the same sensations, and endowed us all with the same faculties; and that, however variable we may be in society or religion, however, diversified in situation or in colour, we are all of the same family, and stand in the same relation to Him.

If these are sentiments of which you are fully persuaded, you cannot but acknowledge, that it is the indispensable duty of those who maintain for themselves the rights of human nature, and who profess the obligation of these principles, should lead all to...[17]

Then considering the abolition of slavery, a test as to the white man's sincerity is cited, as

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[17] Ibid., 3, 4, and 5.
he continued:

I have long been convinced, that if your love for yourselves, and for those inestimable laws which preserved to you the rights of human nature, was founded on sincerity you could not but be solicitous, that every individual, of whatever rank or distinction, might with you equally enjoy the blessings thereof; neither could you rest satisfied short of the most active effusion of your exertions, in order to their promotion from any state of degradation, to which the unjustifiable cruelty and barbarism of men may have reduced them...18

Further paragraphs eloquently exhibited dignity of race pride and thankfulness to God that the writer was one whose, body and mind were exponents of the liberty he advocated.

I freely and cheerfully acknowledge, that I am of the African race, and in that colour which is natural to them, of the deepest dye; and it is under as a sense of the most profound gratitude to the Supreme Ruler of the Universe, that I now confess to you, that I am not under that state of tyrannical thralldom, and inhuman, captivity, to which many of my brethren are doomed, but that I have abundantly tasted of the fruition of those blessings, which proceed from that free and unequalled liberty with which you are favoured; and which I hope you will willingly allow that you have mercifully received...19

18 Ibid., 6.
19 Ibid., 7-8.
Recalling to Jefferson's mind the American Revolution as a time when the colonists could recognize clearly the injustices of slavery, he continued:

Suffer me to recall to your mind that time, in which the arms of the British crown were exerted, with respect to every powerful effort, in order to reduce you to a state of servitude; look back, I interest you, on the variety of dangers to which you were exposed; reflect on that period in which even hope and fortitude wore the aspect of inability to the conflict, and you cannot but be led to a serious and grateful sense of your miraculous and providential preservation, you cannot but acknowledge that the present freedom...and tranquillity which you enjoy, you have mercifully received, and that it is the peculiar blessing of heaven.

This, Sir, was a time when you clearly saw into the injustice of a state of Slavery, and in which you had just apprehensions of the horrors of its condition. It was then that your obhorrence thereof was so excited, that you publicly held forth this truth and invaluable doctrine, which is worthy to be recorded and remembered in all succeeding ages.20

Eanneker then reminded Jefferson of the inalienable rights of man for which the Revolutionary War was fought. He declared that the success of that war did not mean freedom for his "brethen" who were held under

20 Ibid., 14.
"groaning captivity and cruel oppression".\textsuperscript{21} Realizing that it would be of little benefit for him to suggest methods for the abolition of slavery or for him to go into further detail concerning the prejudices shown Negroes, Banneker concluded that part of his letter by stating:

Your knowledge of the situation of my brethen is too extensive to need a recital here...but you put your soul in their soul's stead, thus shall your hearts be enlarged with kindness and benevolence towards them; and thus shall you need neither the direction of myself or others in what manner to proceed therein.\textsuperscript{22}

Explaining that his original design was merely to write a short letter asking Jefferson to accept a copy of his almanac which was enclosed, and stating that his "sympathy and affection" for his race had caused his enlargement thus far, Banneker then began to discuss the almanac and his interest in astronomy.\textsuperscript{23} He stated that the Almanack for 1792 was the production of his "arduous study in his advanced stage of life".\textsuperscript{24}

\textsuperscript{21} Ibid., 15.
\textsuperscript{22} Ibid., 16–17.
\textsuperscript{23} Ibid., 18.
\textsuperscript{24} Ibid., 18.
Banneker admitted that for many years he had had unbounded desires to become acquainted with the secrets of nature and that through his own assiduous application to astronomical study that he had finally gratified his curiosity therein.

Referring to his work in 1791 as one of the men on the Commission to survey the federal territory which was to become the permanent seat of the government, Banneker disclosed the following facts:

...and although I had almost declined to make my calculation for the ensuing year, in consequence of the time which I had alloted for it; being taken up at the Federal Territory, by the request of Mr. Andrew Ellicott, yet I industriously applied myself thereto, and hope I have accomplished it with correctness and accuracy.25

In closing, Banneker told Thomas Jefferson that he was sending the manuscript copy of the almanac to him notwithstanding the fact that later the same almanac would be published; because he wanted the Secretary of State to have an earlier inspection of it as well as to view it in the astronomer's own handwriting.26

25 Ibid., 18-19.
26 Ibid., 19.
Doubtless the most important fact revealed by Banneker in his letter to Thomas Jefferson was the knowledge that he had been honored in 1791 as a member of the federal commission to survey the land and lay out a plan for buildings in the new capital, Washington, D. C. The United States government had begun with George Washington's inauguration in 1789, but there was yet no permanent official home for the government. In the second session of the First Congress, on June 8, 1790, Senator P. Butler introduced a bill recommending that a site on the Potomac River be selected for the capital.\(^{27}\) Much debate in both Houses followed this recommendation. An issue of North against South ensued with the northern representatives attempting to sway opinion for choosing Philadelphia which was in the center of the nation's wealth, and the southern gentlemen contending that for the balance of power a southern location should be chosen.\(^{28}\) An extract from President Washington's message to the House of Representatives at the

\(^{27}\) Annals of Congress, II, 1690.

\(^{28}\) Ibid., 1690, 1691, 1693, 1715-1766.
beginning of the Third Session of the First Congress will disclose that a southern location had been given first consideration:

Commissioners have been appointed by the President to survey and limit a part of the territory of ten miles square on both sides of the Potomac, so as to comprehend Georgetown, for a permanent seat of government; selection of sites for public buildings...

By his proclamation, on March 30, 1791 President Washington located the permanent seat of government within the limits of the territory as surveyed by his commissioners some weeks earlier. Since Maryland and Virginia had ceded the territory to the government, and because Baltimore was less than fifteen miles from the location of the land to be surveyed, it seems natural that mathematicians from those states would be asked to assist in the work of planning the Capitol. Pierre Charles L'Enfant, the French-American architect who had remodelled the Federal House in Philadelphia was appointed chief architect and Andrew Ellicott of Maryland was chosen as one of

his assistants. Through the influence of Ellicott, Banneker was invited to assist with the work. Banneker's scientific attainments and professional skill were thus rewarded when he had reached the age of fifty-nine. He accepted the invitation and shared in fixing the boundaries of the District of Columbia, in the selection of the site of the capital building, in locating an eligible spot for the Executive Mansion, the Treasury and other buildings. Because he constantly disagreed with Washington and Jefferson, L'Enfant was dismissed from the Commission and the assistants completed the work. So satisfactory was Banneker's work, so refined his manners, and so agreeable a companion was he that despite prevailing customs of that age, the Commissioners invited him again and again to a seat during their meals; at the same table with themselves. From an investigation of Banneker's important letters, it is evident that his friendly as well as
business association with such people as James McHenry, Senator of Maryland, Andrew Ellicott, scholar and prosperous businessman of Ellicott Mills, Susanna Mason, author, Monsieur Condorcet, Secretary of the Academy of Sciences at Paris, and Thomas Jefferson, Secretary of State at that time, was indeed an exception to the rule and codes governing the conduct of the Negro in that age.
CONCLUSION

Benjamin Banneker surmounted current unstable social and political situations of late eighteenth century America and proved by the power of his intellect and his attainments that the Negro was the mental equal to other races of men. His intellectual ability was tempered by a genuine and tolerant spirit. His mental attainments were superior to his time and his place. His talent was diversified and his manner cultured and retiring. He was aware that since he lived in an era when slavery was an accepted institution and in an era when it was universally believed that the Negro was unsusceptible to attainments in arts and sciences, being naturally inferior to the whites, Banneker could help his race best by assuming a cooperative "good neighbor" attitude regarding the evils of slavery and thereby proving the stated theories to be false.

Quietly and precisely he went about his work; he progressed rapidly while in school and continued his
studies in literature, history, and arithmetic long after his formal education had ceased. He maintained a well stocked farm and was thus able to earn a living by being his own employer. Banneker continued his mechanical experiments during his leisure and climaxed his youthful accomplishments by the construction of a striking clock. In manhood, when the Ellicott family became interested in him, loaning him books and introducing him to their influential friends, Banneker further expanded his knowledge and realized that every success he achieved would be used by his observers as fresh proof of the Colored man's capacity.

In 1791 Banneker was honored by being invited to assist the committee of commissioners in surveying the federal territory and planning building sites for the capital and other structures in what would be the permanent seat of the government, Washington, D.C.

At sixty years of age his arduous study in the science of astronomy was rewarded. His first almanac was published and so thoroughly was it needed by the farmers in that locality, so accurately was it
calculated and so well was it received by the public that for the next five years Banneker's services were engaged by leading publishing firms. He supplied information about the heavenly bodies not only to his native Maryland, but to Delaware, Virginia, Pennsylvania, South Carolina, and Kentucky until 1797 when, because of his advanced age, his physical strength demanded that he retire. He then occupied his alert mind with observations of natural science and with recording his findings in his Journal until his death in the autumn of 1804.

Because of Banneker's influence on a section of colonial America, it seems permissible to name him the Father of Negro "Enlightenment" in similar phraseology to the new scholastic era then dawning in France. Contrary to the belief of many biographers that no fitting memorial remains for Banneker, it is the opinion of the writer that as long as Washington, D. C. remains the seat of the United States Govern-
ment, the black man may point with pride to that city's architectural plan as a memorial to the Negro's first name in the hall of fame. May history record that Benjamin Banneker was a character who proved the colored man's mental ability under hostile, unstable conditions; he pioneered the path of advanced education for Frederick Douglass, Booker T. Washington, George Washington Carver, and countless others in generations to come.
CRITICAL ESSAY ON AUTHORITIES

In compiling a bibliography for the study of Benjamin Banneker, the writer was met with a major difficulty, namely, that the leading historians of the period did not include an evaluation of Banneker's works in their books. Most encyclopedias included a brief paragraph concerning his accomplishments. Negro historians have given him a few pages or in some instances a single chapter. The tendency has been to enumerate his achievements in various fields of his activity without going into sufficient detail about any of them. After searching through volumes of books and making the above discovery, it became necessary for me to examine, then critically analyse Banneker's own writings, to find references to him in works of his contemporaries, to examine periodicals of that era, and to trace his work for the federal government through Congressional documents. The source material used divides itself into several classifications.
Source Material 1. Banneker's Writings

Benjamin Banneker, Copy of a Letter from Benjamin Banneker to the Secretary of State, with His Answer. Daniel Lawrence Printer, 33 North Fourth Street, Philadelphia, 1833. The letter was written to Thomas Jefferson, then Secretary of State, and accompanied Banneker's autographed almanac for the year 1792. It gave much insight into the sincere attitudes and thorough training Banneker possessed. B. Banneker, Journal. William Young, Printer, Corner of Chestnut and Second Streets, Philadelphia, 1859. The Journal contains accounts of many of the author's experiences. It is incomplete as an autobiography because in many places entire years are omitted. However, actual dates of entry are given for most of the notations and much valuable source material is made possible through this journal. B. Banneker, Banneker's Pennsylvania, Delaware, Maryland, and Virginia Almanack and Ephemeris for the Year of Our Lord, 1792, Goddard and Angell, Baltimore, 1791. This almanac
contains in the Preface, a letter written by James McHenry which introduced Banneker to the public as a learned astronomer. In addition to all the astronomical calculations, it also contains many of Banneker’s philosophical statements and historical observations. The following almanacs include autobiographical sketches of Banneker and are therefore very valuable to this study: B.B., Banneker’s Almanack and Ephemeris for the Year of Our Lord, 1793, Goddard and Angell, Baltimore, 1792; B.B., Banneker’s Pennsylvania, Delaware, Maryland, and Virginia Almanack and Ephemeris for the Year of Our Lord, 1794, John Crukshank, 87 High Street, Philadelphia, 1793; B.B., Banneker’s Pennsylvania Delaware, Virginia, Kentucky and North Carolina Almanack and Ephemeris for the Year of Our Lord, 1796, Edwards, Keddie & Butler, Baltimore, 1795; B.B., Banneker’s Virginia, Pennsylvania, Delaware, Maryland, and Kentucky Almanack and Ephemeris for the Year of Our Lord, 1797, Prentiss and Murray Printers, 1796.
SOURCE MATERIAL 2. Biographies and Memoirs,

John H. B. Latrobe, "Memoir of Benjamin Banneker," Proceedings of the Maryland Historical Society for 1854, J. D. Toy and Company, Baltimore, 1854. J. Saurin Norris, "Sketch of the Life of Benjamin Banneker from Notes taken in 1836", Proceedings of the Maryland Historical Society for 1837, J. D. Toy and Company, Baltimore, 1837. These two memoirs consist mostly of excerpts from letters and papers left by Banneker, together with verbatim accounts of people who actually knew him. The few statements made by the authors of these memoirs have been checked with other happenings and it is felt that both Norris and Latrobe were accurate in their statements. Martha Ellicott Tyson, Banneker the Afric-American Astronomer, J. D. Toy and Company, Baltimore, 1884; Mrs. Tyson was a sister of Banneker's best white friend, Andrew Ellicott. Although she was too young to remember Banneker herself, most of her book consists of recollections of Banneker as given her by her relatives. Much of her
material is too sympathetic to Banneker to be used. However, her statements of fact coincide with statements of other authors and are therefore accurate.


Source Material 3. Collections of Letters

Paul L. Ford, Writings of Thomas Jefferson, Vol. V, The Macmillan Company, New York, 1899. Jefferson's letters to Mr. Condorcet, Secretary of the Academy of Sciences at Paris, is included in this work. In 1791 Mr. Jefferson wrote telling Mr. Condorcet of Banneker's accomplishments and enclosed a copy of Banneker's Alamanack for 1792. In other letters in the work, one can see Jefferson's general opinion of the Negro mentality. B.C. Steiner, The Life and Correspondence of James McHenry, the Burrows Brothers Company, Cleveland, 1907. Many happenings mentioned by Banneker are corroborated through the letters of McHenry who lived
only a few miles from Banneker's residence. McHenry's letter introducing Banneker to the printers, Goddard and Angell is included in the work. J. Smith, *Life, Journal and Correspondence of Pepys*, Richard Griffin Neville, Publisher, London, 1825. Many similarities of style were noted between the journals of Pepys and Banneker.


John M. Smith, A Lecture on the Haytien Revolutions, John Smith, Printer, New York, 1841. A vivid and accurate sketch of the character of Toussaint L'Ouverture is given. The style is too ornamented for history but the facts are true. W. B. Posey, The Development of Methodism in the Old Southwest, 1783-1824, Weatherford Printing Co., Tuscaloosa, Ala., 1933. Accurate and documented.

Lawrence Hayden, Masonry Among Colored Men in Massachusetts, The Masonic Press, Boston, 1871. Minutes and Proceedings of the First Annual Convention of the People of Color, Printed by order of the Society, 32 North Hill Place,
An Article on Banneker's clock is given. The Freedmen's Record, II, No. &., Published by order of the Exec. Committee, New England Freedmen's Aid Society, Boston, July, 1866. In a letter from Miss Lucy Chase to Miss Stevenson, two teachers working for the Society, they discuss the curriculum of Negro schools of the eighteenth century as compared with what they have to work with in the nineteenth century. Names of actual text books given. Several are the same as listed by Banneker. "Benjamin Banneker, the Negro Astronomer", The Atlantic Monthly, XI, Ticknor and Fields, 135 Washington Street, Boston, 1863. Critical and accurate evaluation.

Source Material 5. Government Documents

Superintendent of Documents, Checklist of United States Public Documents, 1789-1909, I, Government Printing Office, Washington, 1911. This work was used to locate documents concerning the surveying of territory for the nation's Capitol. Although complicated, it was very helpful after the key to it had been
thoroughly mastered. Benjamin P. Poore, Descriptive Catalogue of the Government Publications of the United States, September 5, 1774 - March 4, 1881, Government Printing Office, Washington, 1885. Tracing the Congressional proceedings chronologically, it was easier for the writer of Banneker to locate the subjects of interest through Poore's Catalogue than through the Checklist. However, it was frequently found that Poore's references were to House and Senate Journals which were combined under Annals of Congress, and therefore had different page numbers. Joseph Gales, Senior, Annals of Congress, The Debates and Proceedings in the Congress of the United States, II, March 3, 1789 to 1791, Gales and Seaton, Washington, 1834. A report is given of the proposals for a permanent seat of government. Senators of Maryland referred to by Banneker in his writings, were listed among those engaging in the debates. Walter Lowrie and Matthew St. Clair Clarke, ed. American State Papers, Documents Legislative and Executive of the Congress of the United
States from the First Session of the First to the Third Session of the Thirteenth Congress, Inclusive, I, Gales and Seaton, Washington, 1832. The boundaries of the territory of the federal government which Banneker helped to survey, were given in one document; in another of the same volume, the documents submitted to Congress by Major L'Enfant relative to his claim as the chief surveyor of the territory, were given.

State Papers: Foreign Relations, I, Second Congress, First Session, in the annual message of President Washington, a reference to his satisfactory work as a surveyor is recorded. Also in the same volume the Journal of the House", First Congress, Third Session, reference to the Federal Commissioners is given.

1935. A few documents comparing Maryland laws with those of Massachusetts are included. J. P. Guild, Black Laws of Virginia, Whittet and Shepperson Company, Richmond, Virginia, 1936. Laws of Virginia which were soon incorporated in Maryland during the eighteenth century were included in this work, and proved helpful in discovering the Negroes' condition in early America. T. Cooper, ed., The Statutes of Maryland, The Viking Press, New York, 1902. Including statutes for the eighteenth and nineteenth centuries, the period covered in this thesis is included in this work.

Secondary Material. Early Nineteenth Century Books
As a rule, the only secondary works included in this bibliography are those found to be free of bias.
Robert B. Lewis, Light and Truth, Collected from the Bible and Ancient and Modern History, The Newberry Brothers Press, Boston, 1841. Because the scope of the book was too large, many sweeping generalities were given and therefore it was of very little use.
Martin R. Delaney, The Condition, Elevation, Emigration
and Destiny of the Colored People of the United States. The Rogers Print Shop, Philadelphia, 1852. This book is an honest, but not an exhaustive or documented study.

Delaney, M. R., Origin and Objects of Ancient Free-Masonry, The Rogers Print Shop, Philadelphia, 1853. The life and story of Prince Hall, the founder of Negro Masons in America, is given and source material cited.

Secondary Material Late Nineteenth Century Books


George W. Williams, History of the Negro Race in Ameri-

Secondary Material Periodicals. *Journal of Negro History*

York, 1896. Statements regarding Banneker's genius are given critically.

Secondary Material

Twentieth Century Books


APPENDIX I

The following is quoted from Benjamin Banneker's PENNSYLVANIA, DELAWARE, MARYLAND AND VIRGINIA ALMANACK AND EPHEMERIS FOR THE YEAR OF OUR LORD 1792.

"The Editors have taken the liberty to annex a Letter from Mr. M'Henry, containing Particulars respecting Benjamin, which, it is presumed, will prove more acceptable to the Reader, than anything in the prefatory Way."

'Baltimore, August 20, 1791

Messrs. Goddard and Angell,

Benjamin Banneker, a free Negro, has calculated an Alamanack, for the ensuing year, 1792, which being desirous to dispose of, to the best advantage, he has requested me to aid his application to you for that purpose. Having fully satisfied myself, with respect to his title to this kind of authorship, if you can agree with him for the price of his work, I may venture to assure you it will do you credit, as Editors, while it will afford you the opportunity to encourage talents that have thus far surmounted the most discouraging circumstances and prejudices.

This man is about fifty-nine years of age; he was born in Baltimore County; his father was an African, and his mother the offspring of African parents. His father and mother having obtained their freedom, were enabled to send him to an obscure school, where he learned, when a boy, reading, writing, and arithmetic as far as double position; and to leave him, at their deaths, a few acres of land, upon which he has supported himself over since by means of economy and constant labor, and preserved a fair reputation.
To struggle against want is no ways favourable to improvement. What he learned, however, he did not forget; for as some hours of leisure will occur in the most toilsome life, he availed himself of these, not to read and acquire knowledge from writings of genius and discovery, for of such he had none, but to digest and apply, as occasions presented, the few principles of the few rules of arithmetic he had been taught in school. This kind of mental exercise formed his chief amusement, and soon gave him a facility in calculation that was often serviceable to his neighbours, and at length attracted the attention of the Messrs. Ellicott, a family remarkable for their ingenuity and turn to useful mechanics. It is about three years since Mr. George Ellicott lent him Mayer's Tables, Ferguson's Astronomy, Leadbeater's Lunar-Tables, and some astronomic instruments; but without accompanying them with either human hint or instruction, that might further his studies, or lead him to apply them to any useful result. These books and instruments, the first of the kind he had ever seen, opened a new world to Benjamin, and from thenceforward, he employed his leisure in astronomical researches. He now took up the idea of the calculations for an Almanack, and actually completed an entire set for the last year upon his original stock of arithmetic.

Encouraged by his first attempt, he entered upon his calculation for 1792, which, as well as the former, he began and finished without the least information, or assistance, from any person, or other books than those I have mentioned; so that whatever merit is attached to his present performance, is exclusively and peculiarly his own.
I have been the more careful to investigate those particulars, and to ascertain their reality, as they form an interesting fact in the History of Man; and as you may want them to gratify curiosity, I have no objection to your selecting them for your account of Benjamin.

I consider this Negro a fresh proof that the powers of the mind are disconnected with the colour of the skin, or, in other words, a striking contradiction to Mr. Hume's doctrine, that "the Negroes are naturally inferior to the whites, and unsusceptible of attainments in arts and sciences." In every civilized country we shall find thousands of whites liberally educated, and who have enjoyed greater opportunities of instruction than the Negro; his inferiors in those intellectual acquirements and capacities that form the most characteristic feature in the human race. But the system that would assign these degraded blacks an origin different from the whites, if it is not ready to be deserted by philosophers, must be relinquished as similar instances multiply; and that such must frequently happen cannot well be doubted, should no check impede the progress of humanity, which, meliorating the condition of slavery, necessarily leads to its final extinction. Let, however, the issue be what it will, I cannot but wish, on this occasion, to see the Public patronage keep pace with my black friend's merit.

I am, Gentlemen, your most obedient servant,

James MC Henry
SOLUTION TO BANNEKER'S MATHEMATICAL POEM

Solved by Doris Hassell, Director
Collier's Research Bureau, New York.

The vessel of Banneker's problem seems to be a frustrum of a cone, for its upper and lower bases have simple diameters and so must be circles; the upper being smaller. These diameters must be in the ratio of 15 to 9, or 5 to 3.

The formula of the volume of the frustrum of a cone is:

\[ V = \frac{1}{3} \pi h (R^2 - Rr - r^2) \]

Substituting:

\[ V = \frac{22 \times 35}{7} \times \frac{3}{3} (25x^2 - 15x^2 - 9x^2) = \frac{110}{3} \]

The vessel is to contain 39 gallons or 39 x 231 in. cu.

\[ \frac{110(49x^2)}{3} = 9009 \]

\[ x^2 = \frac{351 - 5.014286}{70} \]

\[ x = 2.2392 \]

R = 11.196", v = 6.7176 are then the desired radii.

Check; \[ V = \frac{22 \times 35}{7} (125.35 - 75.21 - 45.12) = \]

\[ 110(81.9) = 110(81.9) = 9009.0 \]
The thesis submitted by Julma B. Crawford has been read and approved by three members of the Department of History.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

[Signature]

January 31, 1947