Prologue

Asking Questions and Defining Terms

Our common sense seems to tell us that people belong to different groups. We look around in a crowded theater or shop and we can see that some people are female and others are male, for example. Similarly, there are people who would belong to the group children and others who seem to be adults. Then there are the groups we think of as "racial." Our eyes seem to tell us that we can divide humanity into groups of people based on physical characteristics such as skin color, hair type, or the shape of the eye. In common American usage, someone with straight black hair, epicanthic folds around their eyes, and yellow skin is a member of the Asian race. Similarly someone with blonde hair, blue eyes, and white skin is a member of the white race.

Yet, merely because common sense tells us something does that necessarily make it so? In particular, because common sense tells us that there are racial differences between people, does that mean that these differences can be proven to exist scientifically? After all, science sometimes tells us things that contradict what our common sense tells us. Science tells us, for example, that solid objects are made up of atoms and molecules and are mostly empty space rather than solid matter. Yet this scientific truth is small consolation to a person hit in the head by a foul ball at a baseball game.

So, take our examples of common sense racial differences. Clearly, people do differ by skin color. But why do we choose skin color as the important physical trait for racial classification? Why not some other physical trait, perhaps height, foot size, or handedness? Why aren't left-handed people and right-handed people considered different races? Why aren't people over, say, 5'8" considered members of one race and people under that height considered another? Why is skin color or eye shape an important factor for defining racial groups when these other physical characteristics are not?

The answer is that, historically, some physical characteristics, especially skin color, have been imputed to have great social and scientific significance for human differences and others have not. In the United States and much of Europe, skin color has been seen as an indicator of a person's moral and intellectual worth while other physical characteristics have not. Left-handed people may have experienced some inconveniences in a predominately right-handed world, but they were never enslaved because they were left-handed.

So, our common sense about racial groups is the product of social circumstances rather than anything natural or essential about skin color. As we will explore in this book, any number of physical factors have been taken to be scientific "proof" of racial differences. Although it may seem strange to us, physical factors such as head shape or nose shape have been taken to be the key to dividing up people racially.

As we will see, what counts as a racial group in one time and place may not count as a racial group at different times and places. In our time and place, people may speak of someone as Asian American. Yet, does this mean that there really is some natural racial group of Asians? Asia is the largest, most populous continent, and its residents do not by any means think of themselves as one race. A Korean and a Japanese person could be horrified to find out that many Americans think of them simply as Asians.

Is there a British "race"? Many in the United Kingdom would draw some sort of distinction between an English person, a Welsh person, a Scottish person, and an Irish person. Presently these differences would probably not be thought of as "racial" but one hundred years ago they might have been. Are the Jews a race? Sixty years ago, in Nazi Germany, many believed they were. A century ago, in the United States, many thought they were. Today, few would make that claim.

In this book, we will try to make sense out of these puzzles. In particular we will try to answer the following questions:

- What, historically, has the term "race" meant? How has the term been used and how has its meaning changed? How, if at all, has it differed from "ethnicity" or "culture"? How has its appropriation by scientists influenced, and been influenced by, its folk meanings? How is it that a given group of people, most notably Jews, can be considered a "racial" group at one time and not considered a racial group at another?
- What has the relationship been between the scientific study of race and racism? Has "racial science" always meant "scientific racism"? What attempts have been made to pry the two apart?
- How have the debates about and the changing consensus on the physical reality of race affected, and been affected by, the concept's social power? Rather than trying to separate the questionable physical reality of race from its immense social power, we will show how the two are interconnected and mutually constitutive.

In order to answer these questions, this volume will survey scientific ideas about race from 1500 to the present as they developed mainly in Europe and North America but will also set them in a global context, considering their impact on and shaping by imperialism, colonialism, the slave trade, genocide, and world war. We will consider it as important to explain the rise of racist thinking in the sciences—including anthropology, psychology, genetics, and medicine—as to understand why scientists ever began to turn their backs on racism. The popular assumption is that scientific racism results from the political or religious biases of individual scientists, and that these biases prevent scientists from seeing the truth (which is whatever we believe today). When the biases are removed (through the self-correcting nature of science), racism in science naturally disappears. The more our science progresses, the less racist we will become.

This volume will reject such a simplistic assumption and argue instead that the growth of antiracism in the sciences, especially in the latter half of the twentieth century, needs to be explained as much as the flourishing of racist ideas. If the concept of race arose with the establishment of modern science, then we cannot simply conclude that the growth of science naturally banishes the concept. The development of the concept of race in the sciences, its fluctuating fortunes, and its connections both to racism and antiracism, all stand in need of sophisticated historical explanation. Thus, we will argue, the transparent social construction of racial science, its shaping by political, social, and moral beliefs, makes it more—not less—difficult to understand historically.

All of these beliefs and attitudes regarding race can be thought of as an ideology. By ideology we mean a structured set of beliefs and attitudes that people within a society bring with them when they view the world; hence we will use the word interchangeably with "worldview." Often, people are unaware of any ideology that they hold. Ideologies are the background assumptions that are unquestioned by those holding them, and they not only affect what people see in the world but also affect how people behave or prescribe the behavior of others.

There are five basic beliefs that underlie racial ideology:

1. People can be classified into distinct, biological groups on the basis of physical characteristics, either phenotypic or genotypic.
2. These groups can be ranked on a hierarchy with some better than others.
3. Outer characteristics of people are linked to inner characteristics. In other words, some physical characteristics, such as skin color, are a sign of inner, unobservable attributes, such as intelligence, temperament, or moral capacity.
4. These outer signs and inner capacities mentioned above are inherited and innate. You are born into your race and you are always the same race as your parents.

5. These differentiated races are fixed either by nature or God. You cannot escape your racial classification.

Certain aspects of this list need comment. For example, the first belief seems more "scientific" than some of the other beliefs. Certainly it is simply a factual matter to decide if people can be divided into separate groups. Science excels at classification, after all: there are three kinds of rocks (sedimentary, igneous, and metamorphic); there are five kinds of vertebrate animals (fish, amphibians, reptiles, birds, and mammals). As we will see, however, dividing people into different racial groups has been a profound problem that defied any sort of scientific consensus from the earliest attempts in the seventeenth century to those scientists currently working on the human genome project. No list of physical characteristics has ever been agreed upon to be the correct one for dividing people into racial groups. When geneticists started dividing people into population groups in the twentieth century, their divisions had little or nothing to do with our "common sense" ways of identifying races.

If the first belief seems scientific on first glance, the second, that some races are better than others, seems to violate what we consider good science. Modern science is built on the notion that there is a sharp division between "facts" and "values." By calling for an explicit value judgment, the second belief seems unscientific. However, as we will show in the chapters that follow, this value judgment about the worth of races was built into the concept of race from its very beginning. Value judgments, especially aesthetic judgments about physical beauty, were explicitly tied to almost every definition of race from the seventeenth century onward.

Philosopher K. Anthony Appiah has called the belief that humankind can be divided into distinct races "racialism." It is possible, at least in principle, to be a racialist without being a racist. It is the addition of the value judgment that the races are ordered on a hierarchy that transforms "racialism" into "racism." Once a society has judged some races to have more moral worth than others, social power is often allocated accordingly. In the United States, racism has meant that members of the "white race" made sure that members of the "black race" were first systematically enslaved, then legally disenfranchised. Similarly, members of the "Chinese race" were judged to be unfit for citizenship for much of the country's history. In Nazi Germany members of "racially valueless" groups—Jews, Roma, and Sinti ("Gypsies")— were confined to concentration camps and eventually exterminated.

Racism can be distinguished from ethnocentrism—the belief that one's culture, beliefs, and value system are superior to those of other groups. Like racism, ethnocentrism is a value judgment that one group of people makes about other groups. The difference between ethnocentrism and racism is in the last three beliefs of the racial ideology outlined above. Unlike a racist society, an ethnocentric society allows those from other societies to escape their inferior position by throwing off

their "wrong" beliefs and values and adopting the "correct" beliefs and values of the dominant group.

Anti-Semitism (anti-Jewish prejudice) is a useful example of the difference between ethnocentrism and racism. For much of European history Christian governments and communities persecuted Jews. Christians justified this persecution because Jews have rejected the Savior, Jesus Christ. In most of these cases, Jews could escape this persecution by accepting the Savior and converting to Christianity. This would be an example of ethnocentric behavior by the Christians because they allowed the possibility that Jews could escape their social oppression by casting off their culture and accepting that of the dominant group (though few Jews did, in practice). Contrast the ethnocentrism of much of European history with the racism of the Nazi regime. For the Nazis, "Jewishness" was defined racially: if you had one grandparent who was Jewish, you were Jewish. It did not matter to the Nazis if you had never practiced Judaism in your life, you were born Jewish and could do nothing to escape your Jewishness. This was a racial form of persecution that offered no escape through a cultural conversion to the dominant society.

In the chapters that follow, we will trace how science contributed to the rise of racial ideology outlined above. As we will see, ethnocentric ideas of the seventeenth and eighteenth century hardened into a full-blown racial ideology in the nineteenth century and the first part of the twentieth century. Then science, which had contributed much to the rise of racial thinking, contributed to the demise of racism in the second half of the twentieth century.

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The Origins of Racial Science, Antiquity–1800

The history of the scientific study of race is a series of puzzles. There is no gradual progression from "primitive" ideas to more enlightened ideas regarding race and its scientific investigation; rather there are a number of seemingly intractable problems. Why is it that race, a seemingly inevitable part of our world, did not even exist as a concept in intellectual thought until a few hundred years ago? Why did the period of European history known as the "Enlightenment," which brought forth the fundamental ideas of our modern democracies, also bring with it a brutal form of racialized slavery? How did the growth of a supposedly objective science during the seventeenth century generate a science of race that made explicit value judgments regarding the aesthetic and moral worth of specific races?

These are difficult and disturbing questions. The answers to them lie in the profound scientific, social, economic, political, and ideological changes in Western Europe as it moved from medieval to modern times. Although many of the ideas explored in this chapter are, to modern eyes, "unscientific," what counts as good science changes over time and space. Indeed, the word "science" did not take on its modern meaning until the nineteenth century, after the time period covered in this chapter. The ideas here were often propounded by men (there were almost no women) who called themselves "natural philosophers." Natural philosophy and natural history were the immediate predecessors to modern science. The first natural philosophers were in ancient Greece.

Was There Race in Antiquity?

At the beginning of the twentieth century, scholars, including historians, were so sure that race was real and that racism was justified that they looked for evidence in the works of ancient authors, such as Plato and Aristotle, in order to prove that early-twentieth-century views about race were supported by ancient

philosophers. The Greek philosopher Aristotle (384–322 B.C.E.) developed a system of thought that, with modifications and adjustments, was the most prevalent in Western European history until the end of the eighteenth century. The idea often interpreted as racist is found in his *Politics*, in which he wrote that the defining feature of man was that he was a "political animal." Aristotle believed that men could be identified by "essence," which was the immutable, unchanging truths behind material things. Because essence was unchanging, they were more "real" than material bodies, which Aristotle considered mere surfaces that

hid the real essence of a human being. So, when Aristotle claimed that man was a political animal, he meant that men were material animals, but that their essence (hence, their reality) was their ability to participate in politics. By politics, Aristotle meant the ability of men to come together in a public space and work together to form rules for a society governed by men themselves, rather than by autocratic rulers. Remember that the ancient Greek city-states were the first democracies. Aristotle also wrote a book called *Rhetoric*, which he meant as a guide for citizens making arguments and speeches in a public space in order to take part in democracy effectively. Through the use of rhetoric, or the art of persuasion, Aristotle believed that men could govern themselves without resorting to violence. So when Aristotle claimed that man was a political animal, he meant that the essence of man was his ability to participate in the public sphere to form a civilized and peaceful democracy. The ability to participate in politics was what separated man from the animals.

There was an obvious limitation in Aristotle's otherwise noble vision of the political animal. Aristotle meant only "men," not "people." Women were not included in Aristotle's democracies because they were thought unfit to participate in public life and govern themselves. Aristotle also drew a sharp distinction between Greek citizens and "barbarians" (meaning those who did not speak Greek), who were, like women, unfit for self-governance. Moreover, Aristotle defended slavery. According to Aristotle, a slave was a mere extension of his or her master's will. A slave was a tool that could be used by someone else, but a slave had no will of his or her own.

For Aristotle, what made a person a natural slave or a barbarian had nothing to do with those physical markers modern people take as "racial." In some of his other writings, Aristotle examined color and physiognomy—the study of the shape of the face— but dismissed them as a lesser form of knowledge than philosophy, which was the study of essences. For Aristotle physical appearance had little or nothing to do with determining servile status; that was determined by the ability to participate in self-governance.

Enslaved barbarians, who were often prisoners taken in war, were not racially different from the Greeks who enslaved them. Slavery is as old as civilization itself and was practiced in those Mesopotamian and Egyptian civilizations that were ancient even in Aristotle's time. For all those millennia, however, slavery was not the racialized system of oppression so familiar to us from the history of the United States and South America. For much of human history people became slaves because they lived in territories conquered by a foreign power or were considered members of an "infidel" religion. Some people were enslaved because they fell into debt and needed to sell themselves (or perhaps their children) into servitude. For five millennia, however, slavery was not "racial" in the

modern sense of the world. To conclude that Aristotle's approval of slavery meant that he approved of racism is simply to read into his work a modern understanding of slavery and impose it on a time when that understanding of slavery did not exist.

The Curse of Ham and Medieval Racial Thought

The legacy of the Greek city-states continued under the Roman Republic and Empire until Alaric and the Goths sacked Rome in 410. The medieval world that followed for the next thousand years replaced the ancient political ideas of Aristotle with a Christian worldview. After the rise of Islam in the 630s there was a series of conflicts between Islam and Christianity. The religious conflicts of the medieval world were not themselves racial in nature but did establish some important precedents for racial thought that came to fruition after 1500. But the important division between people at this time was religious, not racial.

One supposedly ancient Christian justification for slavery is the biblical "Curse of Ham." In the biblical account of the Great Flood that destroyed all of humanity, save for Noah and his family, Ham was one of Noah's three sons. After the Flood, Noah fell asleep in a drunken stupor after drinking wine. Ham saw his father naked and mocked him. Ham invited his two brothers, Shem and Japheth to join him, but they refused. When Noah awoke and discovered what happened, he cursed Ham and his descendents: from that day forward they would have black skins. Each son was then assigned a continent of the world: Shem got Asia, Japheth got Europe, and Ham got Africa. The Curse of Ham explained why the inhabitants of Africa have been "cursed" to eternal servitude.

Historians and other scholars have argued that the Curse of Ham was used to justify the enslavement of Africans during the medieval period. Upon close examination we discover that this is another example of people reading into the past what they want to find there. In the medieval world the Bible was available to only a select few in the church, and then only in the form of select passages, always accompanied by extensive commentaries that left serious doubt as to the passage's true meaning. The medieval manuscripts show that Ham was seldom portrayed as having black skin, seldom confined to Africa, and not always seen as a wretched individual. So there was no medieval portrayal of people with black skins as being cursed by God in any special way.

Another problem with looking for medieval belief in some sort of special curse on Africa is that the science of cartography (mapmaking) was much different then. Although modern eyes see in a map a representation of the

world's physical being, the idea that Ham was confined to Africa and that Africa was a separate place from Europe or Asia was simply not part of the medieval worldview.

Europeans had been trading and fighting with Africans and Asians since antiquity—the Mediterranean Sea made such interactions relatively easy. But the notion that these areas were part of different continents, rather than merely bits of shoreline along a common sea, was alien to medieval people and was reflected in their representations of the world. Medieval maps represented the world in a spiritual, rather than physical way. Africa, Asia, and Europe were not represented as separate physical continents but as parts of one unified world. The modern thinking of Africa as a separate place from Europe simply did not exist in medieval times. This helps explain that the late-medieval explorer who "discovered" America in 1492, Christopher Columbus, named those he found there Indians. He was convinced that what he found had to be part of the unified world of the medieval mind.

Medieval Christian thought on slavery resembled that of Aristotle: some people were natural slaves. St. Augustine of Hippo (354–430) taught that slavery was a form of punishment for man's fall from grace in the Garden of Eden. St. Thomas Aquinas in his *De regimine principum* (1266) followed Aristotle closely in arguing that some people were natural slaves, to be viewed as mere extensions of their master's will rather than possessing a will of their own. Moreover, enslaving non-Christians could be interpreted as a divine act, since this would mean bringing the word of God to the infidels. The "just war" doctrine argued that warring against non-Christians was a service to God.

The specific infidels that many Christians had in mind when they argued for a just war were the Muslim inhabitants of the Iberian Peninsula (what are now Spain and Portugal). From 711 to 1492, Muslims inhabited the peninsula and Islam was the dominant religion. The Iberian Muslims developed an important precursor to racial thinking. By the ninth century, Muslims were distinguishing between their white and black slaves. White slaves, often called *mamluks*, had higher value because they could bring a substantial ransom from the Christian enemy. The common word for slave, *abd*, came to be used for black slaves. This differential value was reflected in the work assigned to each type of slave. White slaves were often house servants; black slaves often were given the most strenuous of outdoor labor—working in salt or copper mines, or on plantations in agricultural production.

As time went on, Muslim scholars justified this division between white and black slaves. The hot and humid climate of Africa was used as the explanation for the black skin and supposed weak minds of Africans. Africans came to be portrayed as savages who lived without laws, did not clothe themselves, and had

no civilization. Gradually these negative stereotypes came to be shared by both Christian and Muslim inhabitants of the Iberian Peninsula. Although they regarded each other as infidels, they shared contempt for Africans.

Yet this negative stereotype of Africans, which appears very early in Muslim thought and not long after in Christian thought, was not universally held. The bonds and divisions of faith were far more important than physical differences between different peoples. Christian Ethiopians, for example, were welcomed in Venice in 1402 and in Rome in 1408; regular missions to Rome followed throughout the fifteenth century. The Italians believed that the Ethiopians' physical differences meant little in the universal, spiritual realm where all were equal in the eyes of God.

The Iberian Muslims supplied two facets of racial ideology: that outer physical signs indicated a person's inner, moral worth and that races could be ranked in a social hierarchy. Yet these ideas were not held universally and were seen as rather minor facts in a world of faith. Moreover, the notion that race-based status is fixed and permanent, what Aristotle would call *essential*, was missing. Over the next few centuries, however, scholars would look more and more to the body rather than the soul for a person's essence. Once the body became a person's essence, a great barrier to racial thinking dropped away.

The Age of Exploration

Historians often mark the break between the medieval and modern worlds around the year 1500 because of several events that significantly changed the world. Europeans, starting with Prince Henry the Navigator of Portugal (1394–1460), expanded their control of territory beyond Continental Europe. The Christian expulsion of Islam from the Iberian Peninsula occurred in 1492, the same year as the "discovery" of the Americas by Christopher Columbus. The Age of Exploration created new economic ways of life that required new ideological and scientific justifications for European behavior.

The economic motor driving this enormous change was the European colonial system. Although it had its roots in the medieval world, the colonial economic system recreated the world after 1500. The basis of the system was establishment of an economic resource outside the mother country, for example, Spanish or English sugar plantations in the Caribbean islands or Portuguese mining operations in South America. The wealth generated from such operations, however, did not remain in the colony but was returned to the mother country. The result was the systematic stripping of resources from the colony for the benefit of the mother country. Centuries later, the "lesser developed" countries of the world are still feeling the economic effects of this arrangement.

An additional factor underlying this story is the new form of slavery that arose to generate this wealth. For the first time, Europeans systematically enslaved people with whom they had no territorial dispute—Africans. The "Atlantic system" of commerce had people of one continent, Europe, taking people from a second continent, Africa, to a third continent, the Americas, to serve as a labor supply to generate wealth for the first continent. This rather curious arrangement was a racial system. In fairly short order in the New World blackness and slavery became associated. To be black was to be a slave and to be a slave was to be black.

The eventual association of blackness with slavery underscores a very important point about how racial ideology developed in European thought. Race came to mean ever-larger groups of people. Europeans certainly did not believe that all Europeans were alike during this time—indeed, the Spanish, English, Portuguese, French, and other European nationalities were constantly competing with one another; often these competitions became open confrontations. Just as Europeans saw distinctions among different nationalities, they recognized that there were different African nationalities and different nationalities among the indigenous inhabitants of the Americas. Over time the distinctions between the ethnicities of different peoples were erased in European eyes, and they began seeing the white race, black race, yellow race, and red race. This is

not a straightforward story—precisely who counted as a member of the white race was often contested. The roots of these differences in perceptions can be traced back to the discovery of the New World and the people who lived there.

Natural Philosophy and the Colonial Experience: The Sixteenth and Seventeenth Centuries

Europeans in the sixteenth and seventeenth centuries believed that the Bible explained many things about the natural world. Scholars and writers were monogenecists, meaning that they believed that all humans were the descendents of Adam and Eve in a singular act of creation. A few polygenecist writers, such as Giordano Bruno, who argued for a theory of multiple creations, were considered heretics. (Bruno was burned at the stake in 1600 for this and other heretical beliefs.) So when it came to explaining the differences between Europeans and American Indians or Europeans and Africans, scholars made sure that their explanations were consistent with monogenetic interpretations of the Bible.

In addition to their biblical beliefs about human origins, scholars of the sixteenth and seventeenth centuries relied on theories of organic growth and form as taught by natural philosophy. Natural philosophy's theories of physiology

were developed out of the teaching of the ancient medical writers Hippocrates and Galen who, in turn, had based their writings on Aristotle. Like Aristotle, natural philosophers taught that everything in nature was connected to everything else in nature. The celestial spheres of stars and planets were intimately connected to the earthly plane of existence, for example, and natural philosophers would explain these interactions with astrology. Physical nature was described through complex interactions of the four elements—earth, air, fire, and water. Health and disease and other matters of organic form were explained by the interactions of the four elements with the four humors of the body, each associated with a bodily substance, which would result in the disposition of the person. A simplified version of things could look like this:

Natural Philosophy's Four Elements and Human Differences

Humor	*Bodily Substance*	*Dominant Temperament*
Hot and Moist	Blood	Sanguine
Hot and Dry	Yellow Bile	Choleric
Cold and Dry	Black Bile	Melancholic
Cold and Moist	Phlegm	Phlegmatic

According to natural philosophy, people had different physical appearances because they came from different climates. Natural philosophy taught that there were different zones of climate on the earth that have different properties because they reside under different constellations. So natural philosophers routinely divided the world into temperate, torrid, and polar zones, and each zone had different plants, animals, minerals, and people because these things developed according to the peculiar interactions of the elements and stars in that zone. As natural philosopher Richard Eden wrote in 1561, "All the inhabitants of the world are formed and disposed of such complexion and strength of the body, that every [one] of them are proportionate to the climate assigned unto them" (Eden 1885, xlii).

The natural philosophical explanation for the ties between organisms and their climates should not be confused with modern, evolutionary notions about how the environment shapes organic form through natural selection. In the natural philosophical theory of organic form, the climate and stars had a *direct* connection to the shape and complexion of the organism. The doctrine of maternal impression, for example, held that the emotional or moral state of the mother during pregnancy had direct effects on the growing fetus. Moreover, natural philosophy taught that it was not just individual organisms that were affected by the climate but the entire population. Not too surprisingly, these climatic explanations were interpreted ethnocentrically. The English, for example, were con-

vinced of their superiority because their climate was more temperate than the cold of Scotland or the heat of Spain.

The close connection between climate and organism had an implication: travel to and residence in a different climate would change the form of the organism. Moving to a different climate meant that the body had to adapt to the new climate and the new astral influences or it would die. When colonization of the New World started in the early sixteenth century, it was far from clear that Europeans could survive in this strange new place.

In North America, English views of the American Indians were not at all uniform. To begin with, there was considerable dispute as to the natural color of American Indians. Many American Indians wore little clothing, at least by sixteenth-century European standards, and travelers often noted their custom of painting their bodies. Perhaps these two factors could explain the apparent color difference? Dutch traveler Jan Huyghen van Linschoten argued in 1598 that for the North Americans: "When they first come into the world [they] are not so black but very white: the black-yellowish color is made upon them by a certain ointment . . . Their color likewise changeth because they go naked and with the burning heat of the sun" (Linschoten 1885, 220). Many travelers insisted that American Indians were not so dark, certainly no darker than Spaniards and probably no darker than the average Englishman.

Such arguments were not merely disinterested statements of fact for the English colonists in North America; they were attempts to persuade those left behind in England that living in the New World was not dangerous. Because organisms were peculiar to the climate, many English wondered if it would be possible to survive on a diet of American food and water. Many writings of the sixteenth century concern themselves with "seasoning" the English body to the American climate. The writers hoped that through discipline and a careful program of introducing New World foods slowly, the English body could adapt to the strange environment of America.

Because of the teachings of natural philosophy, many colonists suspected that they or their children would eventually come to resemble the American Indian. Natural philosophy did not allow that the English would continue to look like the English once they started living in the climate of the New World; thus, natural philosophy acted as a barrier to the development of racial ideology. Because climate would change bodies so readily, the notion that humanity could be divided into sharply divided races did not have a firm foothold in the sixteenth and seventeenth centuries. As during the medieval period, the soul, not the body, was essential.

The grounds for a racial ideology began developing in the seventeenth century in North America. The English colonists noticed that American Indians

seemed especially prone to disease. A cold or flu that would cause an English person discomfort would kill Americans. Modern medicine explains this as a matter of immunity: Europeans brought with them a number of Old World diseases, the most virulent of which were smallpox and influenza, to which many Europeans had immunity but the American populations did not. The result was that those diseases had a terrible, nearly genocidal, effect on Native Americans.

Modern notions of disease and immunity, however, were unknown in natural philosophy. For the seventeenth-century English, diseases were part of the climate, just as the plants and animals were. This left natural philosophers asking how the English, foreign to the New World, could be hardier than the Americans, who belonged there? The answer to this puzzle was to postulate that the English were actually better acclimated to the environment than the American Indians were. Indians died of diseases—so the belief went—because of some internal constitutional failure within American Indian bodies. The reasons for this were not readily understood, but the notion of a natural difference internal to the body and not affected by climatic influences was an important stepping-stone toward the racial ideology that would come to fruition in the nineteenth century.

A parallel story developed for the Spanish colonists in South America in the sixteenth and seventeenth centuries. If anything, the Spanish settlers had a more difficult time than the English did convincing the mother country that the colonies were a livable place. After all, much of the equatorial region of South America is a true torrid zone and, to make matters worse, the Southern Hemisphere has entirely different constellations than the Northern. Many Spanish natural philosophers in Spain thought that the bad stars of the Southern Hemisphere combined with the hot, humid climate made it an exceedingly dangerous place to live.

The arguments about the habitability of the Spanish colonies introduced another important element to the development of racial ideology: the interaction between gender and racial thinking. Working off Aristotelian notions, natural philosophy taught that climates that were warm and dry were masculine and climates that were cold and moist were feminine. Hence, the American Indians had been emasculated by the humidity of the torrid zone, which explained why they could not grow beards (a notion that was very popular among the English in North America as well). To take up residence in such a place would be risk becoming effeminate. Indeed some Spanish authors maintained that American Indian women urinated while standing up, thus proving the unnatural ways of the land.

In the seventeenth century, Spanish natural philosophers in the South American colonies developed a number of arguments against these widely held beliefs about America. First, the colonial natural philosophers insisted that the constellations of the Southern Hemisphere were every bit as beautiful and the stars were as bright as those that controlled Europe. Moreover, the food found

in the New World was nourishing for the male body and the colonists were every bit as masculine as those left behind in Spain. Indeed, Spanish colonists liked to portray themselves not only as healthy and vigorous but also as nobility: they were aristocrats who deserved better treatment from the Spanish crown.

Such colonial defenses of the climate of South America led to a paradox for the Spanish colonists. Simply put, if it were true that the southern stars were beneficial and the southern climate the paradise that colonists claimed, why did this not lead to the conclusion that the American Indians were superior, or at least equal, to Europeans? After all, the American Indians were born under the southern stars and were native to the climate. The problem for the colonists was that they were the beneficiaries of the portrayal of the American Indians as beardless, effeminate, and degenerate. The Spanish had enslaved a large proportion of the American Indian population by this time and were increasingly dependent on slave labor to maintain their economy. These violent actions were often justified under the Christian "just war" doctrines as necessary to bring the heathens to Christ. But eventually, that the American Indians were anything other than indolent and inferior was unacceptable to many Spanish colonists.

The answer the Spanish arrived at was very similar to that of the English in the Northern Hemisphere. Enrico Martinez, a scholar living in Mexico, postulated in an influential work published in 1606 that the weak constitutions of the Americans made them especially susceptible to the baleful influences of debilitating astrological phenomena. Spanish colonists, however, were constitutionally strong enough to withstand the astrological phenomena. As evidence Martinez pointed to a series of plagues that wiped out American populations while leaving the Spanish relatively untouched. Martinez's explanation, while offered in traditional natural philosophical terms, nonetheless drew a distinction between the weak bodies of Americans and the strong bodies of Europeans. Again, we have the beginnings of the notion that there were internal, *essential* differences between the bodies of different groups of people. No one in the seventeenth century was willing to postulate a mechanism for how these essential differences between people could be inherited. Nor did anyone claim that these different groups were different in a spiritual way—to do so was to run afoul of the church. But the beginnings of these ideas were in play.

The Science of Anthropology

In the European colonies such ideas were born and slowly worked their way back to the continent. There they joined with new sciences—taxonomy and anthropology—to form important building blocks for scientific racial ideology. Anthro-

pology began as a branch of medicine; a form of anatomical study. In the seventeenth and eighteenth centuries anthropology became a science of classification of people and cultures. This was part of a larger intellectual change that often goes by the name the Enlightenment. How people should study nature and people's relationship to nature underwent profound changes during this time period.

Three key ideas underpinned the rise of anthropology as a science:

First, and perhaps the most significant, was removing the sacred as an explanation for natural changes. Scientists increasingly looked to explain natural phenomena on their own terms without postulating God as a direct cause. This did not mean that science suddenly became atheistic: most writers continued to offer scientific explanations that were consistent with Scripture and many scientists conceived of their work as sacred, as another way to understand the mind of God. In Great Britain and other Protestant countries in particular, the beliefs of "natural theology" were seen as an important religious supplement to the "revealed theology" of the Bible. Nonetheless, removing God as an active agent in scientific explanations was an important development in the sciences of the time.

Second was the concept of "progress." The medieval world, in many ways, was a static one. Not only was the world unified, but it was also unchanging. In the seventeenth and eighteenth centuries, by contrast, many believed that not only was the world changing, it was getting better. This was especially so in the realm of people and society. Europeans believed that their societies were more advanced, were *better* than those of other parts of the world. Part of their mission, therefore, was to help these "primitive" people progress toward the European ideal. The barbaric outsiders of the ancient Greeks, for example, became merely those who had not yet advanced to the "enlightened" stage of the Europeans. Although the European colonial powers may have doubted the racial inferiority of non-European peoples at times, they never doubted the superiority of their own society and way of life. This notion of superiority justified the European conquest of non-European peoples around the world—it was justified because of the superior religion and culture of Europe.

Third was the notion that people could be part of the natural world. In one sense, people had been part of the natural world since Aristotle. One of the ancient Greek conceptions was that of the Great Chain of Being in which everything in the universe was a link in the chain, ranked in its proper place. However, in the ancient and medieval conception of the Great Chain of Being, humans were someplace in the middle, poised between the natural world of animals, plants, and minerals and the divine realm of the angels and gods. During the Enlightenment, with the separation of humanity from the spiritual (at least in the scientific realm), humans were on the top of the Great Chain of Being— all else

descended from them. Hence, the notion was that all of nature indicated progress toward humans in general and Europeans in particular.

One of the first figures to reflect these aspects of Enlightenment thought in terms of racial thinking was philosopher Francois Bernier (1625–1688), a traveler who spent time in Poland, Egypt, and India and was a close friend of John Locke, whose political ideas were the basis for the American and French Revolutions. In 1684, Bernier published *The New Division of the Earth*, one of the first attempts to classify humanity according to race. His arguments reflected all the basic themes of Enlightenment thought: separating the sacred from the natural, the notion of progress, and the need to make people part of the natural, not sacred, world.

Bernier argued that the fundamental way to divide people should be by physical types. He showed how Enlightenment thought focused on the material rather than the spiritual aspects of human beings; while Bernier's anthropology was *consistent* with the Bible, he did not *call upon* the Bible as evidence for his position.

Bernier postulated four basic divisions of humanity: the "first race" that included Europeans, North Africans, Middle Easterners, Asian Indians, and American Indians; second, Africans; third, East and Northeast Asians; fourth, the Lapps. Bernier's classification underscored a number of points that hold for nearly every anthropological classification scheme of the eighteenth century. Yet, Bernier was ignorant about some of the races in his categories. Although he admitted almost complete ignorance about the Lapps and had very little experience with this Arctic group, his judgment on them was uniformly negative. His experience with Africans was limited to seeing them in Turkish and Arabian slave markets. By modern standards, his judgment does not seem more accurate in those areas where he had greater experience. For example he spent twelve years in India, but thought that its inhabitants would be as white as the French except for the time they spent in the sun.

Bernier made explicit value judgments about the different races in his classification, especially aesthetic ones. A major part of his work was a detailed analysis of the women of different races in terms of their physical beauty. Although much of this discussion was a titillating description of what he witnessed in, for example, the African women he saw for sale in the slave markets, it nevertheless highlighted two important aspects of racial ideology. First, that discussion of race was nearly impossible to separate from discussion of gender and, second, that value judgments were built into the race concept from the beginning. In other words, racial classification never proceeded from a neutral discussion of physical principles, but had judgments concerning worth and beauty as well.

Francois Bernier (1625–1688)

French physician and traveler Francois Bernier was one of the first Europeans to classify people into human races. Trained as a physician at the University of Montpellier, Bernier achieved greater fame in his lifetime as a world traveler. In 1648, Bernier spent time in Poland. In 1656, Bernier spent a year in Cairo and then traveled to India where he spent twelve years as a physician for a high official. When he returned to France, Bernier published a number of accounts of his travels.

Bernier was a student of philosopher Pierre Gassendi, an important figure in the scientific revolution of the seventeenth century. Gassendi argued for a completely mechanistic philosophy of nature that excluded spiritual forces, including Christianity. Beginning in the 1670s and continuing until the end of his life, Bernier published Gassendi's writings in French; they had been available only in Latin before this time. Bernier's *Abrégé de la Philosophie de Gassendi*, published in seven volumes in 1684, became the definitive edition of Gassendi's work. Like Gassendi, Bernier maintained that humans had a dual nature, possessing both an eternal soul that gave us rationality and a second nonrational aspect that was also possessed by animals. The implication for Bernier was that different groups of people possessed different degrees of rationality and that some people were, therefore, natural slaves, just as Aristotle had described.

The cover of Bernier's Travels in the Mogul Empire *(Stapleton Collection/Corbis)*

Bernier also achieved a measure of fame for his accounts of his experiences in India. Bernier spoke highly of the Indian nobility in whose court he worked as a physician but condemned the lower castes of India as well as the Hindu and Muslim religions of the area.

Bernier's writings were persuasive to his European audience because he had firsthand experience with the people he described. He represents an important transition in science: he was partly the unsystematic world traveler, willing to indulge his audience's desire for exotic accounts of his travels; at the same time, he was a systematic thinker, who attempted to arrange his knowledge of the world in a system of thought that could be verified independently.

More influential than Bernier was Carl von Linné, who wrote under the Latin name Carolus Linnaeus (1707–1778). A professor of botany in Uppsala, Sweden, Linnaeus invented the modern classification scheme in which organisms are arranged in ever more specific categories from "kingdom" to "species"

with a host of intermediate groupings. His *Systema Naturae* went through ten editions between 1735 and 1758 and his system of classification soon became the standard in all universities in Europe.

People were part of Linnaeus's natural order, under the order "anthropomorpha" in the genus "homo." All people were members of the same species for Linnaeus, which meant God created them to be distinct from other forms of life. There were, however, four basic "varieties," which meant that they had acquired some superficial differences from differing climates:

1. Americanus: Reddish skin, black hair, scanty beard, obstinate, merry, regulated by custom.
2. Asiaticus: Sallow skin, black hair, dark eyes, severe, greedy, covered with loose garments, ruled by opinions.
3. Africanus: Black skin, black, frizzled hair, indolent, women without shame, governed by caprice.
4. Europaeus: White, long, flowing hair, blue eyes, gentle, inventive, covers himself with close-fitting clothing, governed by laws.

Linnaeus's catalog of human varieties differed significantly from Bernier's. Linnaeus's varieties of humans were consonant with the modern understanding of divisions between continents. The physical features of the varieties were intermingled with moral and behavioral traits. Linnaeus's claims seem like ethnocentric judgments about moral capacities or styles of clothing. Linnaeus had not traveled as widely as Bernier but based his knowledge on travelers' accounts written by different people. That these early scientific works were based so heavily on hearsay contained in travelers' journals and books demonstrates the futility of claims that the science of race developed outside the social and political world, as the scientists based their judgments on the judgments of merchants, soldiers, and adventurers.

Each of Linnaeus's varieties contains an enormous variety of physical types, demonstrating how racial categories began to include ever-larger groups of people. The Swede, Linnaeus, might have seen that the Europeans around him had blue eyes and blonde hair, but had he been Greek he would not have claimed those traits as ones shared by all Europeans. By grouping all inhabitants of the continent under one variety, Linnaeus's system could gloss over physical differences within the group.

Although Linnaeus's system of classification was very successful it did have a few detractors, the most famous of whom was Georges-Louis Leclerc, Comte de Buffon (1707–1788). Buffon's chief objection was that Linnaeus cre-

ated an inflexible system of classification because Linnaeus thought species were fixed and eternal. For Buffon, Linnaeus's system achieved its order because it was imposed on a messy natural world. Nature consists of groups of individual organisms, argued Buffon, that exist on a continuum and cannot be fit into Linnaeus's strict and unyielding classification system.

Buffon developed his objection to Linnaeus in his masterwork, *Histoire Naturelle* (1749). Where Linnaeus saw fixed species created and forever separate, Buffon saw a group of organisms from common lines of descent that could produce fertile offspring. Where members of the same species seemed to Buffon to be markedly different he called them a new species. Although this may appear to be sloppy work on Buffon's part, it should be understood as marking a deep philosophical break with Linnaeus. For Buffon no divisions that humans made in nature were "real," they were just labels humans use to understand nature. Unlike Linnaeus, Buffon's categories were not supposed to describe actual divisions of the natural world.

In his discussion of different groups of humans, Buffon dispensed with Linnaeus's concept of "varieties" and used a different word, "race." The word had two common meanings in the Romance languages of French and Spanish. First, it referred to a lineage of animals marked by common descent. Second, the word denoted the noble houses of Europe: a race of royalty. Buffon welcomed both connotations.

Buffon did not develop a permanent list of human races. As befitting his idea that categories were mere conveniences, he added and subtracted races throughout the course of his career. A typical list could include: Lapps, Tartars, South Asians, Ethiopians, and Americans. For Buffon these were groups of people of a common descent marked by physical markers that made them resemble each other. But these differences were not eternal, as Linnaeus taught, only transitory. Furthermore, Buffon argued that it was useless to assemble a list of specific traits for classification because one needed to gather general impressions and classify people according to groups of traits. Skin color, stature, intelligence, and face shape could be called upon or discarded according to the needs of the moment.

As with other racial writers, Buffon gave a central role to value judgments of the relative worth of the races in his writings. He argued that the original race was the European one and others could be understood as "degenerations" from that norm. Americans were perhaps the least degenerated by the climate in which they lived, Africans and Lapps perhaps the most. This was not a new idea with Buffon; after all Bernier had called Europeans the "first race" because he had believed that the other races had degenerated from them. Again, the value judgments about the moral worth of the different races were evident in Buffon's scientific work.

Georges-Louis Leclerc de Buffon (1707–1788)

Born into a wealthy family, Georges-Louis Leclerc de Buffon showed an early propensity for mathematics while a college student at the Collége des Jésuites in Dijon from 1717–1723. After a period of youthful wandering throughout Europe in his twenties, Buffon came to Paris in 1732 and soon ingratiated himself in French political and social circles. For a few years, he published a few scientific works on probability theory in mathematics and carefully built his personal fortune. He was known in the scientific circles of Paris for his work in mathematics and engineering and was one of the first French defenders of Newtonian physics.

(Time Life Pictures/Mansell/Getty Images)

In 1739, he became the supervisor of the *Jardin du roi* or Royal Garden under King Louis XV. Under his leadership, the Royal Garden grew tremendously in size and reputation and the king eventually rewarded Buffon by making him a Count.

One of Buffon's duties as the administrator of the Garden was to catalog its collection of exotic plant life. However, Buffon set out to organize not just the Garden's holdings but rather the entire natural world in a monumental project that would consume the rest of his life, some five decades. The result was a thirty-six-volume work entitled *Histoire naturelle* (*Natural History*).

Buffon's formal college education was in the law, and he set out to teach himself all there was to know about natural history in order to write his monumental work. Few works met his exacting standards for acceptable scientific work. Buffon thought the ancients, notably Aristotle and the Roman writer Pliny, were more reliable than many of his contemporaries who he thought suffered from the tendency to write without firsthand knowledge of their subjects. Buffon had at his disposal not only the contents of the Royal Garden, the largest in the world, but a worldwide network of correspondents who sent him specimens and accounts of what they had witnessed. The result of Buffon's lifelong effort to describe the natural world was a huge encyclopedia of the natural world, which, for Buffon, included the different races of human beings.

The most influential classifier of human races in the eighteenth century was the German professor of medicine Johann Friedrich Blumenbach (1752–1840). In his *On the Varieties of Mankind* (1775), he divided humanity into five races: first, Caucasians—that is the "European" race, for once including the Lapps; second, Mongolian—the residents of Asia; third, Africans; fourth, Americans; fifth, Malay—the newly discovered people of the South Pacific.

Blumenbach's work echoes many familiar themes found in his predecessors. The aesthetic judgment was obvious in his coining of the term "Caucasian" because Blumenbach considered the women of the Caucasus Mountains to be the most beautiful. He believed that the Caucasians were the most beautiful and the original race, the others having degenerated from them because of climatic influences. Like Buffon, Blumenbach did not see human races as fixed and unbridgeable; instead, he argued that the races faded into one another and that it was impossible to draw sharp lines between them. Moreover, Blumenbach maintained that even the African race, widely believed at the time to be hopelessly degenerate, could produce members that were the equal to Caucasians. Blumenbach even had a library of books written by Africans to prove this point.

The Atlantic Slave System

Blumenbach and other scientists wrote in a period of great economic and social change. The great Atlantic system of commerce was remaking the world and doing it with slave labor, the vast majority of it from Africa. How did this great change affect how people thought and wrote about race?

Nearly every culture had practiced slavery throughout history. But the great slave system that Europe developed in its colonies was different. Africans were not people with whom the Europeans had territorial disputes. Indeed, Africans were taken from their homes and across the ocean and, if they survived the brutal passage, lived out the rest of their lives in slavery. As previously mentioned, European encroachment into Africa was an extension of the just war doctrine. As early as 1415, the Portuguese justified an attack on citadels in Morocco on the grounds that these were infidels; and while they technically did not pose a threat to Christianity at the time they could in the future. Soon this doctrine was codified by Portuguese writer João de Barros in his *Asia* (1539) where he argued that "preventative" strikes at infidels denied them the ability to muster their forces against Christendom. Black slaves, who had first appeared in Portugal in 1441, were commonplace soon after.

The discovery of the New World by Columbus allowed for a great expansion in a traditional form of agriculture: sugar plantations. The cultivation of sugar in large plantations through the use of slave labor began on islands in the Mediterranean during the middle ages and worked its way westward onto islands in the Atlantic Ocean. Soon after Columbus, Europeans began cultivating sugar in the Caribbean islands and in Brazil. Because of the brutal and backbreaking labor required, slaves were necessary for sugar plantations to be profitable.

The existence of the economic need for labor on sugar plantations, however, tells only part of the story and does not explain why Europeans turned to Africa for slave labor. Economically, it made more sense to enslave American Indians or other Europeans. To be sure, the use of American Indians was not uncommon but they could plot revolts with their free countrymen and easily disappear if they escaped. Additionally, their susceptibility to disease made them a poor labor force. These issues were on the table in a famous debate between Bishop Bartolomé de Las Casas and Ginés de Sepúlveda in 1550. Las Casas had just returned from Spanish colonies where he had seen the terrible effect of slavery on the natives of the New World. He argued forcefully that the American Indians should be seen as people, possible brothers in Christ, and that they should not be enslaved. Sepúlveda argued that there were definite physical differences between American Indians and Europeans and therefore they could be considered Aristotle's natural slaves. Both agreed, however, that some people were natural slaves and that enslaving Africans was fully justified.

Africans had additional advantages as slaves in Europeans' eyes. They were less susceptible to many Old World diseases, just as the Europeans were; they had no friendly faces in the populace of the Americas, and they were easily marked as slaves by their skin color. Hence, Africa made an ideal source of slave labor from the European perspective.

African slavery came first to Brazil and the Caribbean Islands and much later to North America. Unlike the sugar plantations in the Caribbean and South America, there was no North American staple crop that benefited from the economies of scale afforded by plantation agriculture. Until the early eighteenth century the most common cash crop in North America was tobacco, which could be grown profitably by small farmers with the aid of a few indentured servants or slaves. It was not until the 1730s that rice was heavily cultivated in the area that is now South Carolina and Georgia.

There were definite economic benefits to growing rice in a plantation system, unlike the other crops grown in North America. English planters needed to grow rice in tidal areas where rivers flowed into the ocean; the plantations had a complex system of dams and gateways to irrigate the rice. The technology for this system was unknown in England but had been widely used in Africa for centuries. The technological system that made profitable rice plantations was largely an African one, and the English planters made sure that the slaves they bought knew the intricacies of rice cultivation. Therefore, the existence of rice plantations meant that the English colonialists did not think that "all Africans were the same" but were concerned to get Africans from specific tribes or ethnicities that had knowledge of rice cultivation. The notion that all Africans were the same race was actually not widely held by English colonists in the early eigh-

teenth century. It was not until the close of the slave trade in 1808 and the discovery of a new staple crop, cotton, that the ideological belief in a "black race" served the interests of the dominant planter class in the American South.

Enlightenment Values and Racial Thought

The growth of the Atlantic system of slavery coincided with the growth of Enlightenment thought. This was the time when many great philosophical writers, such as John Locke, Montesquieu, and Condorcet, proclaimed the virtues of natural rights enjoyed by all, rather than reserved for the nobility. Democratic government was put forth as the most just and developed of all forms of government. How could these humanistic and egalitarian values have come to full development when slavery was growing in the New World and racist thought was beginning to take shape?

Part of the answer has to do with the notion of "progress" and the science of society. Many of these thinkers believed that societies develop and get better over time. There was a natural progress of society through various stages, beginning with hunting/gathering societies, moving on to animal husbandry, agriculture, and finally, commerce. Europeans believed that European capitalist society was the most developed of all societies in the world. For many of these thinkers, progress was *natural*—an inevitability. Just as the planets moved in their orbits according to fixed invariant laws, so too did societies progress through these stages of development.

The notion of societal progress seems, at first, to argue against essential racial differences between groups of people. A theory of societal progress presupposes a universal theory of human nature. If all societies are going to go through these stages, then all members of all societies must be essentially the same. Just as Europe had reached the pinnacle of societal development, so too would Africa because they shared in this universal human nature. The word "primitive" to describe Africa and Africans indicates this mode of thought—they were simply less advanced, not fundamentally different.

As the Atlantic slave system reaped huge economic rewards for Europe and the colonies, the argument that Africans (and American Indians) could not progress came to the forefront. Europeans had had contact with Africa for millennia and yet Africa remained backward and primitive. Perhaps there really was some essential difference between African people and European people. Just as the colonial administrators and physicians had posited bodily differences between themselves and their colonial subjects in the seventeenth century, many thinkers began to entertain that notion in the eighteenth century.

Perhaps no figure captures the tensions between Enlightenment notions of natural rights and universal human nature versus the growing racial ideology better than the third president of the United States, Thomas Jefferson. On the rotunda of Jefferson's memorial in Washington, D.C., are inscribed Jefferson's words, "Nothing is more certainly written in the book of fate that these people [the slaves] are to be free." What is not there is the conclusion of Jefferson's sentence, "nor is it less certain that the two races, equally free, can not live in the same government." The tension between the first and second phrases of Jefferson's sentence captures the profound ambiguity of Jefferson as an Enlightenment thinker.

Jefferson was a politician who penned in the opening sentence of the Declaration of Independence, "all men being endowed by their Creator with certain inalienable rights." He was also a learned naturalist who wrote of Negroes (a word that was increasingly popular in his time) that "one could scarcely be found capable of tracing and comprehending the investigations of Euclid; and that in imagination they are dull, tasteless, and anomalous." Jefferson reported his finding in his work, *Notes on the State of Virginia* (1787), the most extensive example of his naturalist thought.

Jefferson was a well-read, capable and brilliant man. His *Notes on the State of Virginia* was similar to the writings of Spanish and English colonists of the previous century: a defense of the New World using the science of the Old. In *Notes* Jefferson concocted an amalgamation of the thoughts of Linnaeus and Buffon. On the one hand, Jefferson spent a great deal of time refuting Buffon's contention that the natural history of the New World is merely a degenerate version of the Old. For example, Buffon had argued that the fossilized remains of mammoths found in the New World were a degenerate species of elephant that went extinct in the degenerate climate of North America. Jefferson, by contrast, argued that the mammoth was a distinct species still extant, though undiscovered by Europeans so far. Jefferson charged the famous Lewis and Clark expedition with finding a living mammoth on their travels in order to prove to the world his notions about the natural history of the New World.

Jefferson also defended American Indians against Buffon's charges that they were degenerate white men who had been affected by the excessive heat and moisture of the New World. Jefferson spoke highly of the American Indians, praising their inherent human propensity for improvement. Any weaknesses in the American Indians were not in their constitutions but in their unfortunate circumstance of not being long exposed to the civilization of Europe.

In other parts of *Notes* Jefferson embraced Buffon's ideas about the complexity and changing nature of the world. He spoke approvingly of what was called "catastrophist geology"—the notion that the geologic record showed evidence of huge floods and earthquakes. Many writers of the time shied away from cata-

strophist geology because it was associated with the heretical notions of polygenesis, the theory of multiple creations of humanity. Jefferson, freethinker that he was, was broaching the possibility of polygenesis without fully taking the plunge.

Nowhere are Jefferson's notions about the possibility of polygenesis more evident than in his discussion of Negroes. Here, he abandoned Buffon's idea regarding race as a mere organizing principle and seems to be closer to Linnaeus's notion of fixed, essential types. Though he couched his writings on the inferiority of Negroes in careful language, he clearly believed that they were fundamentally inferior to whites in intellectual and moral capacities.

Though he produced passionate antislavery writings, he also never manumitted his slaves. Though he urged that the slaves be freed, he also was quite consistent in his call that the "Free Negro" was an oxymoron. The Negroes should be freed, and then returned to Africa. Like James Madison, and others of the Founders, Jefferson was active in the American Colonization Society (founded 1817), a philanthropic organization dedicated to raising money to send Free Negroes to Africa rather than allowing them to remain in the United States. The conflict in Jefferson's writings between freedom and slavery, between equality and racial hierarchy, encapsulated the reality of life during the age of Enlightenment.

Conclusion

By the end of the eighteenth century, many elements of racial ideology were in place. Racial thought had no place in antiquity; the seeds of racial ideology were planted in the thought of Iberian Muslims in the medieval world, with their racialized hierarchy of slavery. During the Age of Exploration, the natural philosophy that saw no fixed types of organic form gave way to notions that there were some essential differences between the bodies of European colonists and those native to the occupied lands. Early taxonomists—Bernier, Linnaeus, Buffon, and Blumenbach—created the idea that humanity could be divided into categories. And Enlightenment thinkers such as Thomas Jefferson began writing that there were unbridgeable differences between black and white people. All these ideas would be given a firm, scientific footing in the nineteenth century as writers began justifying the slave societies that had been created in the wake of European expansion.

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