

## A SHORT HISTORY OF SCIENTIFIC RACISM IN AMERICA

*Racial determinism was the form taken by the advancing wave of the science of culture, as it broke upon the shores of industrial capitalism. It was in this guise that anthropology first achieved a positive role alongside of physics, chemistry, and the life sciences, in the support and spread of capitalist society.*

—Marvin Harris (1968), *Anthropologist*

WHEN COLUMBUS AND Queen Isabela debated whether to enslave the Indians of the Caribbean Sea, they were rehearsing arguments first articulated in antiquity. Beyond the civilized world of classic Greece and Rome lay the land of the *barbarphonoi* (literally, the speakers of *bar-bar*). The “barbarians” wore only skin clothing, behaved unpredictably, and refused to submit to proper religious and legal guidance. Beyond the known barbarians—whom Aristotle considered natural slaves—was the land of the “monstrous races.” According to the Roman Plinius, some sported but a single eye in the middle of the forehead, others had dog faces, and still others walked upside down.

This three-part split into the civilized, the barbarian, and the monstrous

was transformed under Christendom into the faithful, the unredeemed, and the unredeemable. A map from Columbus’ era echoes this division of races in its depiction of how the sons of Noah repopulated the world after the Flood—Japheth went to Europe to father the Caucasians, Shem’s descendants became the Asian Mongolians, and Ham ended up in Africa. Johann F. Blumenbach, an anatomy professor at the University of Göttingen in Germany, formalized these racial divisions in his dissertation *On the Natural History of Mankind*, published in 1775. Working from a sample of 82 skulls, Blumenbach defined the first scientific classification of human races: Mongoloid, Caucoid, Negroid, plus a couple of intermediate “oids.” In his *The Mismeasure of Man*, Stephen Jay Gould calls Blumenbach “the founder of anthropology.”

Like Buffon and all other educated Europeans, Blumenbach never questioned the biblical view that humanity was the product of a single divine Creation. What, then, accounted for racial differences? As people spread around the world after the Flood, the differences in their bodies must have resulted from the various environments they encountered. The closest living relatives to the primordial type were the people of the Caucasus Mountains, who had strayed the least from the Ark’s landing point. “The Caucasian must, on every physiological principle, be considered as the primary or intermediate of these five principal Races. The two extremes from which it has deviated, are on the one hand the Mongolian, on the other the Ethiopian [African blacks].” According to Blumenbach, the Caucasian skull was the most symmetrical when viewed from the top and from the back. Since the circle was the most perfect shape in nature, Blumenbach concluded that the near-perfection of the Caucasian skull must have been the type created by God. Climate, diet, mode of life, hybridization, and disease had all contributed to its degeneration in the non-Caucasian races. With a liberalism unusual for his time, Blumenbach asserted that environmental damage could be undone—that with proper education, there were no limits to human achievement, irrespective of race.

The Swedish botanist Carl von Linné, better known by his Latinized name Linnaeus, was the originator of modern systematic biology. In his attempt to classify all living things, Linnaeus divided *Homo* into distinct races much like those of Blumenbach: Asians (pallid, dour, and governed by opinion), Africans (black, wily, and ruled by whimsy), American Indians (reddish, single-minded, and guided by tradition), and Caucasian Europeans (white, gracious, and governed by reason). The Linnaean classification embodied the very essence of raciology—the conflation of physical attributes, personality, politics, and ethics—and further reinforced traditional white images of Indian people. This basic scheme was refined *ad nauseam* throughout the cen-

turies, with Caucasians universally considered to be the original ("purest") of the races.

## THE AMERICAN SCHOOL OF SKULL SCIENCE

Until the time of Darwin, most nineteenth-century European thinking on racial origins was grounded in Christian theology. The Bible was taken as direct support for the theory of monogenesis (origin from a single source): God created humanity at one time, in one place, and everyone was descended from Adam and Eve. This assumption led Blumenbach and others to theorize that observable racial differences had arisen after the Creation due to racial degeneration.

Between 1830 and his death in 1851, Samuel George Morton, a Philadelphia patrician with two medical degrees, promoted a different line of biblical reasoning. A dedicated scientist, Morton electrified his generation with an empirical demonstration that race could be correlated with skull size and, by extension, with various levels of human intelligence. The "American School" Morgan founded was one of this country's first homegrown scientific theories and the first to capture the serious attention of the European scientific community. Morton's obituary in *The New York Tribune* noted that "no scientific man in America enjoyed a higher reputation among scholars throughout the world, than Dr. Morton." His rigorous approach triggered a new wave of scientific research on human skulls, and also set loose the wholesale looting of Indian graves across America.

Morton argued against the single creation theory, developing a view of

Lithograph of mummified Egyptian skulls published in Samuel Morton's *Crania Aegyptiaca* (1844).



multiple racial creation (polygenesis). Still operating within a biblical framework, his theory held that the various races had been created separately and each given specific, irrevocable characteristics. After inspecting several mummies from the ancient Egyptian catacombs, Morton concluded that blacks and Caucasians were already distinct three thousand years ago. Since his Bible indicated that Noah's Ark had washed up on Mount Ararat only a thousand or so years before this, Morton reasoned that Noah's sons could not possibly account for all the modern races. Therefore, the races must have been separate from the start. Thus Morton's theory of polygenesis attracted a loyal and enthusiastic following.

To Morton, the human skull provided a highway back in time, a way to trace racial differences to their beginning. But when it came to demonstrating to his medical students how this worked in 1830, Morton was surprised that he could not find the necessary skulls to make his point. "Strange to say, I could neither buy nor borrow a cranium of each of these races," he later wrote. "Forcibly impressed with this great deficiency in a most important branch of science, I at once resolved to make a collection for myself."

As Morton would soon learn, demand for human anatomical specimens greatly outstripped the legal supply of excavated criminals. Physicians increasingly turned to professional body snatchers, who called themselves "resurrectionists." Understandably, these grave robbers ran into considerable public resistance. New Yorkers rioted for three days in 1788 when some children discovered medical students dissecting human cadavers—including one child's recently deceased mother. A mob numbering in the thousands stormed the hospital and the jail, where the physicians had taken refuge. The militia was called out to quell the so-called "Doctor Riots."

Nineteenth-century physicians had no compunctions about digging up the graves of Euroamericans (in fact, cadavers from the white race were most highly prized for medical purposes). But because it was less dangerous to rob the graves of African Americans and Indians, resurrectionists began concentrating on graveyards of poor people and nonwhites.

Well aware of these difficulties, Morton drew upon his connections with the Philadelphia Academy of Science and the American Philosophical Society as he built up his collection. He readily secured a number of skulls dug up from archaeological sites, but had some difficulty coming up with contemporary Indian crania. Eventually, as smallpox and other epidemics swept across Indian Country, appropriate specimens turned up on the flourishing skull market, and Morton bought them.

Louis Agassiz, at the time perhaps the world's best informed and most ca-

pable biologist, was so deeply impressed when he visited Morton's growing skull collection in 1846 that he wrote his mother: "Imagine a series of 600 skulls, most of Indians from all tribes who inhabit or once inhabited all of America. Nothing like it exists anywhere else. This collection, by itself, is worth a trip to America." During his lifetime, Morton's "cranial library" had grown to more than 1,000 specimens and was the world's most comprehensive skull collection. Morton drew upon his collection to establish a new science he called *craniometry*—the scientific analysis of skull size and shape. In his classic *Crania Americana*, published in 1839, he developed his theory of human racial origins, signaling the beginning of physical anthropology in America.

Morton believed not only that the human skull was remarkably resistant to the effects of environment but that it provided an accurate measure of brain size and cognitive powers. Properly analyzed, a large sample of human skulls should simultaneously provide both racial classifications and an index of the mental development of each race.

But the initial problem was what exactly to measure. After considering several possibilities—including exterior dimensions, facial angles, skull shape, suture patterns, and so forth—Morton settled on cranial capacity (brain size) as the single best indicator of race. Cranial capacity was simple to measure—just fill up a skull with something, pour that something out, and then measure the volume. He started with white mustard seeds, but they were too light and tended to compress, producing a variability of perhaps five percent. So he eventually switched to BB-sized lead shot, which provided volume estimates consistent to the nearest cubic inch. Stressing the objectivity of his scientific methods, Morton argued that by using large sample sizes and simple, easily repeatable measurements, he could avoid the aesthetic and subjective judgments that had colored previous cranial studies. His contemporaries were impressed with his scientific rigor, and for decades Morton's cranial statistics provided seemingly unassailable support for scientific doctrines of racial and intellectual inequality.

In *Crania Americana*, Morton demonstrated that Caucasians had big brains (averaging 87 cubic inches), blacks had small ones (78 cu. in.), and Indians fell into the middle (82 cu. in.). But this was not enough: He also wanted to rank the races intellectually and socially. Drawing upon the existing body of phrenological techniques, he correlated cranial size and shape with mental traits as reflected in known customs and behaviors. Morton's colleagues around the world collected skulls for him, and many that arrived in his Philadelphia laboratory were accompanied by specific data about the individual: age, sex, race, occupation, and various personality traits. Morton was

thus able to compare specific metric attributes with known behavior traits, generating phrenological correlates that could then be extended to the rest of his skull collection.

But what were these "phrenological techniques" that enabled Morton to move from measurements to racial mentality? The key assumption guiding his work was that brain size was directly linked to intelligence. This "logical principle," which we now know is incorrect, provided Morton a means for mapping the relative intelligence of the races, and an explanation for why one race seemed to act differently from another. In a time when many phrenologists matched specific bumps on the skull with particular personality traits, Morton took the cautious stance that brain size itself was a sufficiently strong predictor of "national traits." Behavior, he argued, could be projected from cranial capacity alone.

Although this logic today seems murky, Morton believed that his skull sample proved that Caucasians were the superior race—with Teutons and Anglo-Saxons at the top, Jews in the middle, and Hindus on the bottom. He found the "Esquimaux" of Greenland to be "crafty, sensual, ungrateful, obstinate and unfeeling. . . . their mental faculties, from infancy to old age, present a continued childhood." The Chinese were almost as bad, a "monkey race," and the black Hottentots were like "the lower animals." To Morton, these racial differences reflected a divine master plan. The Caucasian type had been and always would be supreme—God's will expressed as natural order and verified by empirical science.

## SKULL SCIENCE AND INDIAN POLICY

Morton concluded from his large skull sample that the phrenology of American Indians reflected an unusually uniform mental makeup. The rather small cranial capacity not only betrayed an intellect inferior to other races, but the other cranial indicators necessary for "predilection for the arts or sciences" were entirely absent. The Indian brain was so deficient, said Morton, that the race would be impossible to civilize: "The structure of [the Indian] mind appears to be different from that of the white man, nor can the two harmonize in their social relationships except on the most limited scale."

In a 1842 speech delivered to the Boston Society of Natural History, Morton expanded on the findings in *Crania Americana*. The Indians were "savage people" with a "peculiar and eccentric moral constitution." Their racial

stock was decidedly inferior to the Mongolians: "Their minds seize with avidity on simple truths, while they reject whatever requires investigation or analysis." Rejecting any significant environmental effects, Morton reiterated that God, not the environment, had shaped the Indian's skull. He concluded, "He who has seen one tribe of Indians has seen it all."

The American school of anthropology gave pre-Civil War America a way to cope with the Jeffersonian dilemma: whereas the Declaration of Independence proclaimed that all men were created equal, black slaves need be considered equal *only* if they were the product of the very same Creation that gave rise to the Caucasian race. To Morton, the question of monitoring racial equality (and the rights that flowed from it) properly belonged in the hands of objective science. If scientific research could document a single Creation—an essential human unity—then the results must support the abolitionist movement, and slavery must be struck down.

But Morton's craniometry concluded the opposite. The races had resulted from multiple Creations, demonstrating God's intent to deliberately create blacks for the purpose of serving their white betters as slaves. Indians, argued the scientists of the American School, had been created for a rather different reason. As Oliver Wendell Holmes wrote in his 1855 poem "Oration," the Redman was a "sketch in red crayons of a rudimental manhood to keep the continent from being a blank until the true lord of creation should come to claim it." By transferring the study of race from theology to science, Morton mounted an elegant and empirical defense of manifest American destiny: Euroamerican-style civilization was fated to control the Western Hemisphere, but America's indigenous people stood in the way. Although an outright policy of extermination would be decidedly un-Christian, the Indian problem might just resolve itself, since America's native inhabitants were doomed by their own biology.

Science had laid bare God's plan for the red and black races. "It must be borne in mind that the Indian is incapable of servitude, and that his spirit sunk at once in captivity, and with it his physical energy [whereas] the more pliant Negro, yielding to his fate, and accommodating himself to his condition, bore his heavy burden with comparative ease." Shortly after Morton's death in 1851, a leading American medical journal lauded Morton's scientific legacy: "We of the South should consider him as our benefactor, for aiding most materially in giving to the negro his true position as an inferior race."

So there it was—skull science verified what mainstream America already knew from everyday experience: Blacks could live only in slavery, and Indians could survive only in freedom. In the words of Alexis de Tocqueville, "the ser-

vility of one dooms him to slavery, the pride of the other to death." There was hope for Negroes only so long as slavery persisted. Freed blacks were destined to perish from their racial inability to cope with the competitive stresses of the capitalist system. Although whites could value blacks as slave labor, they were no longer useful once freed.

The American School held out even less hope for Indians. In *Types of Mankind*, a 1854 memorial tribute to Morton, Josiah Nott and the other contributors confirmed that observable racial differences reflected independent episodes of Creation. It was their racial makeup that led Indian people to reject the government's generous offers to remove them to places of long-term safety. Bad biology led Indians to remain in their now-unsuitable (if traditional) homelands, and clearly the Indians' inferior intellects rendered them forever incapable of becoming civilized. "It is as clear as the sun at noon-day, the last of these Red men will be numbered with the dead," Nott wrote in *Types of Mankind*, "To one who has lived among American Indians, it is in vain to talk of civilizing them. You might as well attempt to change the nature of the buffalo."

Although Morton died eight years before *Origin of Species* was published, Darwin's revolutionary theory of natural selection landed on fertile soil already tilled by the American School. After declaring Darwin "clearly crazy," Nott and the other followers of Morton were quick to applaud his anti-religious overtones. But in the long run, Darwinian evolution spelled the end of the monogenist-polygenist debate because the human races were seen as merely transitory stages of a species. In the larger evolutionary context, the races of humanity had not been created separately and they were hardly fixed and unchanging divisions of the human condition.

Morton's methods and findings were readily transplanted into the new evolutionary theory. Where once skull science had supported polygenism, it was not enlisted to support the ranking of races along an evolutionary gradient. The ranking itself, needless to say, did not change. As biological evolution came to be understood and increasingly accepted, most nineteenth-century investigators believed that cultural evolution worked basically the same way—perhaps it was even a part of organic evolution. To this way of thinking, cultural and social factors were secondary, or perhaps even irrelevant, in molding the individual. "Human beings were what they were," noted the historian Robert Bieder, "because of the tilt of the faces and the shape of their skulls." By conflating culture with biology, Morton and others offered an apparently reasoned and scientific explanation for why some cultures did better than others.



## DARWIN AND THE DISAPPEARING AMERICAN INDIAN

*It can now be asserted that savagery preceded barbarism in all the tribes of mankind, as barbarism is known to have preceded civilization. The history of the human race is one in source, one in experience, one in progress.*

—Lewis Henry Morgan (1877), *Anthropologist*

DURING THE LATE nineteenth century, Lewis Henry Morgan, a Rochester lawyer-turned-ethnologist, was America's most influential anthropologist. Raised on a farm in western New York, Morgan encountered his first Indian in the pages of *The Last of the Mohicans*. The powerful imagery of the League of the Iroquois fueled Morgan's life-long fascination with American Indian lore.

As a young lawyer in 1842, Morgan and several upstate New York friends formed a secret literary fraternity called "The Gordian Knot." Their patriotic mission was to pen the great American epic, to distill a fundamentally American national identity. In the process, they would put to rest, once and for all, unfavorable comparisons between the United States and mother Europe. Al-

though members of The Gordian Knot steeped themselves in ancient Greek and Roman imagery, the more they read, the clearer it became that America's elusive character, that essential American ethos, derived not from classical European antiquity but from the First Americans. In 1843, having accepted the importance of the Noble Redman in defining the American identity, Morgan and his friends changed their name to "The Grand Order of the Iroquois" and immersed themselves in Indian imagery. They shifted from meeting halls to campfire sessions in the great outdoors. Through the Grand Order of the Iroquois they hoped to return to an original America, if only through a weekly meeting in Aurora, New York, dressed up in beads and buckskins behind an abandoned Freemason lodge. Reflecting on this toward the end of his life, Morgan admitted, "Whatever interest I have since taken in Indian studies was awakened through my connection with this Indian fraternity." Writing the great American saga was soon forgotten as The Grand Order focused instead on devising its own authentic Indian garb and rituals: "We do not stir a step," wrote Morgan, "until our equipment is right."

"REAL INDIAN PEOPLE  
BOTH HAD — AND HAD  
NOT — DISAPPEARED"

As members of The Grand Order learned more about the Indians, they realized that authentic Iroquois culture was disintegrating. Their focus shifted once again, from dressing up as Indians to documenting the real thing before it passed from the American scene. Morgan escaped his law practice whenever possible to attend ceremonies and dances on the Tonawanda, Onondaga, and Tuscarora reservations in western New York State. He took precise notes and interviewed Seneca elders, collecting both artifacts and customs.

In 1845, Morgan happened on a young Seneca man while browsing in an Albany bookstore. Ely Parker was an extraordinary intellect who would later become aide-de-camp to General Ulysses S. Grant during the Civil War and the nation's first Native American Commissioner of Indian Affairs. Anxious to share his first-hand knowledge of Iroquois family and tribal government and, apparently, quite impressed with Morgan, Parker himself enrolled in The Grand Order, providing Morgan even greater access to Iroquois society.

Whenever he was unable to attend ceremonies at the Tonawanda Reservation, Morgan commissioned Parker to record the speeches and events. He

impressed upon Parker the importance of accurately recording what happened, fostering a level of ethnographic recording unparalleled for the time. After six years of intensive study, Morgan published his classic *The League of the Ho-dé-no-sau-nee, or Iroquois* (1851), which began with the words: "To encourage a kinder feeling towards the Indian, founded upon a truer knowledge of his civil and domestic institutions, and of his capabilities for future elevation, is the motive in which this work originated." The first modern ethnography of an Indian people, Morgan's *League* set the standards for generations to come. Throughout, Morgan also stressed the urgency of ethnographic research because culturally knowledgeable Indians were fast disappearing.

Morgan saw living Indians as belonging to a cultural stage distinct from that of white America. According to the developing logic of Morgan's social evolution, the only real Indian culture—the only culture relevant to anthropology—belonged to the past. Even though they had survived physically and kept having offspring, Indian people in the present tense were "inauthentic" because their culture differed from that of centuries ago. "Their memories were authentic," writes Philip Deloria, "even if their lives were not."

In the late nineteenth century, as the frontier began to close, the Noble and Bloodthirsty imagery of Indians was gradually overtaken by the Vanishing American. Under Morgan, American ethnography emerged as a vital and influential field of study, a powerful new lens through which mainstream Americans could view Indian people. Anthropology assigned itself the task of recording ancient Indian lifeways, already corrupted by the European presence, before they disappeared. To salvage ethnographic detail on the Vanishing Americans, ethnographers developed a new analytical device for separating living Indian informants from the rest of nineteenth-century America. They invented a synthetic "ethnographic present," by which they began reconstructing "traditional" Indian lifeways by factoring out more recent changes. According to the nineteenth-century historian Herbert Howe Bancroft, they tried to describe Indians "as they were first seen by Europeans . . . along the several paths of discovery . . . in all their native glory, and before the withering hand of civilization was laid upon them." The construct of the "ethnographic present" established Indian people as somehow both alive and archaic. Simultaneously, late-nineteenth-century ethnographers became the world's first time-travelers. Only they, it would seem, could cross the boundaries of time and space, moving at will between the present and the world of traditional authenticity.

Although many white Americans could empathize with the plight of the vanishing Indian, they saw these Indians as also somehow outside social

boundaries. Carrying on a tradition begun by Jefferson, anthropologists would express a far greater interest in things "traditionally Indian" than in the modern Indian lives that played out before them. And the Indians being studied would deeply resent them for doing so.

## GENERALIZING THE IROQUOIS

As Morgan worked up his Iroquoian data, he increasingly fixed upon kinship relations, which he believed held the key to the inner workings of ancient social organization. He felt that once he fully grasped the nature of Iroquois kinship—the various ways in which people reckoned their relationship to others through marriage and descent—he could reconstruct how the basic Iroquois institutions of government, property, technology, and economy had developed.

To broaden his experience beyond the Iroquois, Morgan started traveling among Indian tribes of the American West and, casting his net still further, sent out questionnaires asking missionaries and Indian agents to record for him the details of Indian kinship across America. When he discovered that similar terminology existed in India, Morgan expanded his mailings abroad, sending hundreds of questionnaires to U. S. consular officials throughout the world.

This was the first systematic attempt to collect ethnographic data on a global scale. Morgan eventually published his results on kinship relations in *Systems of Consanguinity and Affinity of the Human Family*, published in 1870. A few years later in *Ancient Society: Or Researches in the Lines of Human Progress from Savagery Through Barbarism to Civilization* (1877), he refined his kinship data into a whole new theory of social evolution. In *Ancient Society*, Morgan traced the history of the human family, government, private property, and technology through three sequential stages—as the title suggests, from savagery to barbarism to civilization. Morgan's social evolution arranged both contemporary and ancient societies along a kind of developmental ladder. But except for the addition of evolutionary theory, this scheme differed little from the ancient Roman division of humanity into the monstrous, the barbarian, and the civilized.

On the bottom rung of Morgan's ladder—the "lower status of savagery"—were those primeval, rudimentary, and primitive people who subsisted strictly on fruits and nuts. None of these had survived into the historical period. When people discovered how to catch fish and use fire—as

exemplified by living Australian aborigines and Polynesians—they were elevated to savagery's "middle status." Morgan's "upper status of savagery," defined by the use of bow and arrow, still survived among the Athapascan tribes of Hudson's Bay Territory.

Higher still were the barbarians, inventors, and manufacturers of ceramics. The Woodland Indians of North America typified barbarians at this "lower status." "Middle status" barbarians domesticated animals, irrigated their crops, and built adobe brick and stone architecture. So viewed, the village people of Mexico and New Mexico were "middle status barbarians." In the "upper stage" of barbarism were the ironworkers, exemplified by Grecian tribes of the Homeric Age and Germanic tribes of the time of Caesar. The top rungs of Morgan's ladder were reserved for various "advanced" societies, civilized society beginning with the onset of phonetic alphabets and production of literary records.

American Indians, in Morgan's view, had "commenced their career on the American continent in savagery; and, although possessed of inferior mental endowments, the body of them had emerged from savagery and attained the Lower Status of barbarism; whilst a portion of them, the Village Indians of North and South America had risen to the Middle Status." Despite having clawed their way up the evolutionary ladder, American Indians ranked well below the Aryans and Semites.

Morgan's theory of social evolution became the backbone of late nineteenth-century anthropology, providing a way for museums and universities to classify the cultures they were studying, and enabling curators to group artifacts from around the world in rows of glass-fronted cases. Morgan saw human history not in the static racial terms of Morton and Agassiz, but as a grand progression from the simple to the complex. This evolutionary sequence was also attractive because it melded an empathetic view of "savage" tribes with a rationalization for the ultimate triumph of "civilization." On both sides of the Atlantic, the conquest of Indian people by Euroamericans could now be seen not as the aggression of one people against another but as part of the inevitable, inexorable expansion of civilized people around the world.

Morgan believed that a group's social, economic, and political institutions—the very essence of the savagery-barbarism-civilization continuum—derived from inherited mental "germs," carried like dormant seeds, ready to sprout under appropriate environmental conditions. He attributed the lack of progress in Indian assimilation to innate Indian biology and saw Indian women as particularly important ingredients in the great American melting

pot. Mixed marriages would produce offspring who "will intermarry respectably with our white people and thus the children will become respectable and, if educated, in the second and third generations will become more beautiful and attractive. This is to be the end of the Indian absorption of a small portion, which will improve and toughen our race, and the residue [will be] run out or forced into the regions of the mountains." Such change would take place slowly, however, because Indians retained the "skulls and brains of barbarians, and must grow toward civilization as all mankind have done who attained it by progressive experience." These views on assimilation became central to federal policy when Morgan's protege, John Wesley Powell, created the Smithsonian's Bureau of American Ethnology in 1879.

## THE RISING TIDE OF SOCIAL DARWINISM

*Ancient Society* was published eighteen years after Darwin's *On the Origin of Species*. Darwin had reasoned that since resources are inherently limited, the young of reproductive age struggle to survive. Most do not make it and, in the long run, the survivors persist because they possess traits that give them a competitive advantage of some kind. These physical variations are passed along to the next generation. Thus, with each succeeding generation, the number of individuals with advantageous traits increases, and those with less advantageous traits decline. The evolutionary process, being gradual and continuous, eventually gives rise to new species through what Darwin termed "natural selection." *Origin* introduced the notion that all organisms are descended from a common ancestor and provided evidence that Earth's various life forms are dynamic and ever changing. Darwin thus set out a coherent explanation for Earth's biological diversity. Although he never actually used the term "evolution," the very last word in the first edition of *Origin* is "evolved," and evolutionary theory will forever be associated with his name.

In constructing his theory about the diversity of life, Darwin unwittingly provided a scientific rationale for Morgan's scheme of social evolution. Social Darwinists argued that, like all other organisms, people struggle to survive. The successful ones—the rich and powerful—must therefore be the "fittest" in an evolutionary sense. Social Darwinists confidently ranked human societies according to their "evolutionary" status—from highly evolved groups (mostly upper class Europeans) downward to those only slightly more advanced than apes. The lower socioeconomic classes of Europe—and the

"primitive" people throughout the world—were "less fit," less capable intellectually and emotionally, and hence less deserving of survival. Nineteenth-century social Darwinists argued that essentially all human progress depends on competition. Stifle competition and you retard progress. The doctrine of social Darwinism became a handy justification for unfettered global imperialism, racism, and capitalist enterprise.

During the 1860s and 1870s, social Darwinism established a fairly tight linkage between archaeology and ethnology. Archaeologists showed that humanity had a deep past, stretching far beyond previous biblical estimates; ethnologists of the era were developing the explanatory tools necessary to flesh out the specifics of that past (by using what Morgan and others called the "comparative" approach). Ethnology established that there were primitives living among contemporary humanity and social Darwinism explained why they were there: the world's primitive people were living fossils, human leftovers from the Stone Age.

Whereas Thomas Jefferson had idealized the American Indian into an emergent identity for the New American Republic, in the hands of the social Darwinists, Indian people became the prototypes of humanity's earliest condition. Anatomical parallels were quickly drawn between Neanderthal skulls—first found in Germany in 1856—and the skulls of living Australian aborigines; some people suggested cultural parallels as well. Both ancient European cave men and the primitive people of Australia were thought to represent an archaic stage in human social development. The Neanderthals had died out long ago, unable to compete. The nineteenth century's "living fossils," American Indians and Australian aborigines, were likewise destined to fall victim to more evolved forms of humanity.

## LUBBOCK'S PRE-HISTORIC TIMES

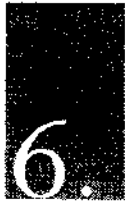
In 1865, John Lubbock—Darwin's next-door neighbor in Kent, England—published his influential *Pre-historic Times, as Illustrated by Ancient Remains, and the Manners and Customs of Modern Savages*. Widely read throughout Europe and America, it became archaeology's primary textbook.

Lubbock advocated a cross-cultural, comparative method to describe the life of "paleolithic" (Old Stone Age) and "neolithic" (New Stone Age) people by reference to contemporary primitives. That is, now that archaeology had put people into the Pleistocene, it became the task of the evolutionist to show how they got out—a task accomplished easily enough by showing that

variation in time corresponded with ethnographic variation across space. Making this case, Lubbock argued that Darwinian-style natural selection had operated on ancient human societies to produce both biological and cultural differences. So viewed, the cultures of the past fell into a neat, linear continuum, with Euroamerican capitalist society being the most advanced. Societies lacking advanced technology, Lubbock argued, were handicapped by inferior intelligence and base emotions.

The message was simple: humanity was improving—biologically, culturally, emotionally, and intellectually—through natural selection. Left to their own devices, capitalist societies would prosper and improve the world. The downside was that the world's primitives were doomed. These backward people had not, in Lubbock's view, evolved sufficiently, and no degree of remedial education could repair the damage done by millennia of natural selection. Although neither Darwin nor Lubbock advocated outright extermination of non-Western people, both seemed to be saying that the modern world was better off without them.





## THE GREAT AMERICAN SKULL WARS

*The dead have no rights.*

—Thomas Jefferson

BY 1864, the tensions between the white settlers flooding into Colorado and the Cheyenne Indians, whose land it was, had spilled over into the Denver newspapers. A front-page editorial urged "extermination of the red devils" and encouraged the local citizenry to "take a few months off and dedicate the time to wiping out the Indians." Disparaging the ongoing treaty negotiations with the Cheyenne, Major John Chivington, Methodist minister and Civil War hero, proposed to his church deacons that "the Cheyennes will have to be roundly whipped—or completely wiped out—before they will be quiet. If any of them are caught in your vicinity kill them.... It is simply not possible for Indians to obey or even understand any treaty. I am fully satisfied, gentlemen, that to kill them is the only way we will ever have peace and quiet in Colorado."

On an icy November morning, Chivington led a regiment of Colorado Volunteers against the unsuspecting Cheyenne villages of Black Kettle and White Antelope at Sand Creek. "Scalps are what we are after," he exhorted

his men. "I long to be wading in gore!" Ignoring the American flag flapping over Black Kettle's lodge—an acknowledged sign of truce for all—Chivington's troops slaughtered hundreds of Cheyenne villagers, mostly women and children. As the wounded moaned unattended, drunken soldiers moved from body to body, scalping, mutilating, and collecting sordid souvenirs. Fleeing children became moving targets for marksmen, and several still-living Cheyennes were scalped. One woman's heart was ripped out and impaled on a stick. Several soldiers galloped around the battleground, sporting bloody vaginas as hatbands.

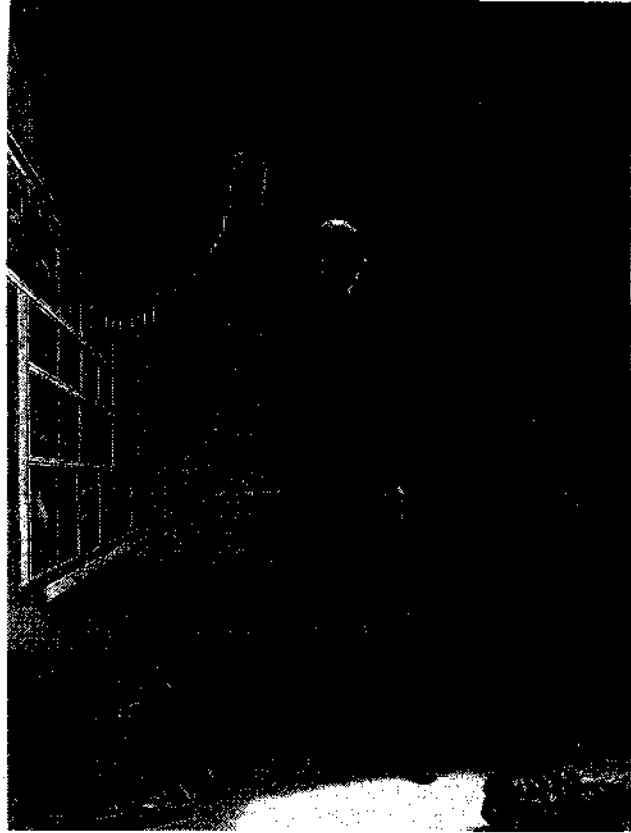
One trooper cut off White Antelope's testicles, bragging that he needed a new tobacco pouch. Later, nobody could remember whether White Antelope was still wearing the peace medal given to him by President Lincoln. Returning to Denver, the Sand Creek heroes paraded through the streets, to the cheers of throngs. Theatergoers applauded an intermission display of Cheyenne scalps and women's pubic hair, strung triumphantly across the stage.

Several of the Cheyenne dead received special treatment. After the corpses were beheaded, the skulls and bones were defleshed and carefully crated for shipment eastward to the new Army Medical Museum in the nation's capital.

## THE GILDED AGE OF NATURAL HISTORY

It is impossible to comprehend the events at Sand Creek without understanding the power and popularity of scientific racism in mid-nineteenth-century American society.

When Louis Agassiz, famed Swiss naturalist, first visited the United States in the 1840s, he was shocked at the public apathy toward the study of natural history. Like most natural historians of his era, Agassiz believed that the most important scientific task at hand was to collect, describe, and classify the species of the natural world—including man. The small size and poor quality of the natural history collections in the United States appalled him. Although a number of Americans, including Thomas Jefferson, had expressed an interest in classifying the various forms of plants, animals, and minerals, they had either to make their own personal collections or travel to Europe to study the requisite specimens. The few amateur natural history societies that sprang up lacked any public support and members had to store their collections in homes or barns, where they were vulnerable to theft and fire. On ac-



*Self-portrait of Charles Willson Peale (1822), opening the curtain to his newly incorporated Museum in Philadelphia, the first natural history museum open to the American public.*

cepting a professorship at Harvard in 1847, Agassiz lobbied his adopted country to establish some world class institutions to curate and analyze systematic natural history collections.

Agassiz's extraordinary personality and enthusiasm for science attracted a number of wealthy patrons anxious to see America take its rightful place in the global community. After raising sufficient funds to establish Harvard's Museum of Comparative Zoology in 1856, Agassiz set about building a collection of classifiable specimens for his students. But his was a "teaching" museum, not a museum for the general public. Agassiz also urged the creation of large public museums, along the lines of the fabled British Museum and the Musée National de l'Histoire Naturelle in Paris. The United States government had already in 1840 received a half-million dollar gift (in gold) from an Englishman who never set foot on New World soil. James Smithson's wishes were simple enough—to establish an institution "for the increase and diffusion of knowledge among men." But the bequest touched off a torrid debate

over how best to spend the money. After wrestling with several alternatives, including a library, observatory, agricultural experimental station, and university, Congress finally established, in 1846, a new National Museum to be called the Smithsonian Institution. Building the Smithsonian collection began in earnest when zoologist Spencer Baird joined the staff as Assistant Secretary in 1850, and brought his personal collection, part of which had been given to him by John Audubon, with him. Two years after the 1876 Centennial, Baird became Secretary, and the Smithsonian Institution's collecting binge intensified.

Post-Civil War America emerged as the world's first industrial superstate. The transcontinental railroad, the coal and steel complex, and the sophisticated financial markets in New York, Chicago, and San Francisco all came to symbolize America's wealth and power. The new riches generated a wave of homegrown philanthropy and Agassiz's crusade to establish natural history museums soon sparked a response in a culture-hungry America ready to step onto the world stage.

Fearing that the Smithsonian might grab up all the best collections, wealthy private donors founded rival institutions. George Peabody donated part of his huge personal fortune to Yale and Harvard Universities so that each could establish a "Peabody Museum" devoted to the study of natural history, including archaeology and ethnology. He also funded the Peabody Academy of Science in Salem, Massachusetts. Albert Bickmore, an Agassiz student at Harvard, sold his idea of a New York-based natural history museum to that city's social and economic elite, which included J. Pierpont Morgan, Joseph Choate, and Theodore Roosevelt, Sr. The considerable political clout of then-State Senator (later Mayor) William "Boss" Tweed helped establish the American Museum of Natural History in 1869. Located adjacent to Frederick Law Olmsted's Central Park (begun in 1857) and soon joined by the Metropolitan Museum of Art (founded in 1874), the American Museum helped create an urban oasis of culture, education, and amusement. In Philadelphia, the long-standing Academy of Natural Sciences (established in 1812) was joined by the University Museum of Archaeology and Paleontology, established at the University of Pennsylvania in 1887. Chicago's Field Museum was incorporated in 1893, and the Museum of Anthropology at the University of California was founded in 1899. Beyond these major players in the museum world, hundreds of smaller, local museums and historical societies sprang up across America.

Each of these museums began buying up existing natural history collections. The American Museum purchased a huge trove collected by the late

German naturalist Prince Maximilian—more than 4,000 mounted birds, 600 mounted mammals, and 2,000 fish and reptiles preserved in alcohol. In 1874, the same trustees bought, for \$64,000, a collection of tens of thousands of fossils representing more than 7,000 species. Agassiz himself had bid unsuccessfully for it arguing that “whoever gets this collection gets the geological museum of America.”

But such expensive, ready-made collections severely stretched the museums’ limited budgets. The trustees of America’s natural history museums were mostly businessmen, and the high cost of purchasing collections went against their best business sense. Wouldn’t it be more cost-effective, some asked, if we eliminated the middleman and made our own collections?

Museum curators enthusiastically agreed. As practicing natural scientists, they jumped at the chance to launch their own collecting expeditions, scientifically collected specimens could form the basis of understanding the origin of life and our place in it. Not insignificantly, sensational collecting expeditions could bring prestige and celebrity to the scientists, museums, and benefactors who showed the foresight to grab the lead in America’s Golden Age of Natural History.

## “LET ME HAVE THE BODIES OF SOME INDIANS”

Skull collecting—long an avocation of the elite natural historian—became in the words of one critic “a cottage industry on the frontier.” Collecting human skulls was more dangerous than netting butterflies or digging up dinosaur fossils. One nineteenth-century collector wrote that whereas Indians expressed no particular concern over skulls taken from ancient mounds, they did seem disturbed by the plundering of more recent graves. Another complained, “It is rather a perilous business to procure Indians’ skulls in this country—The Natives are so jealous of you that they watch you very closely while you are wandering near their mausoleums & instant & sanguinary vengeance would fall upon the luckless—who would presume to interfere with the sacred relics.... There is an epidemic raging among them which carries them off so fast that the cemeteries will soon lack watchers—I don’t rejoice in the prospects of death of the poor creatures certainly, but then you know it will be very convenient for my purposes.” Reliable documentation, including the individual’s tribe or band, cause of death, level of intelligence, and personality traits, could inflate a skull’s market value, sometimes dramati-

cally, because these data helped skull scientists correlate personality and intelligence with cranial attributes.

Faced with the difficulties of financing his new museum at Harvard, Agassiz came up with a novel way to enlarge America’s growing natural history collections. In 1865 he wrote to Secretary of War Edwin Stanton with a simple request: “Let me have the bodies of some Indians. All that would be necessary . . . would be to forward the body express in a box. . . . In case the weather was not very cold . . . direct the surgeon in charge to inject through the carotids a solution of arsenate of soda. I should like one or two handsome fellows entire and the heads of two or three more.” Soliciting the government for skulls to stock the research collections, Agassiz furthered the trend begun by Thomas Jefferson, who declared Indian skulls and bones to be fair game for scientific inquiry.

U. S. Surgeon General William A. Hammond played along, issuing orders to all medical officers “diligently to collect, and to forward to the office of the Surgeon General, all specimens of morbid anatomy, surgical or medical, which may be regarded as valuable. . . . These objects should be accompanied by short explanatory notes. . . . Each specimen in the collection will have appended the name of the medical officer by whom it was prepared.” Hammond’s policy succeeded as hoped. As Indian tribes were being confined to reservations or hunted down, the bones of their dead were systematically gathered up and shipped to the newly founded Army Medical Museum. The skulls and skeletons from the Sand Creek Massacre became one of the earliest accessions, and similar specimens were gathered from other western battlegrounds, reservation cemeteries, and deep inside ancient mounds. U.S. Army hospitals became laboratories for processing Indian bones.

Upon the death of a young Yankton Sioux woman—a “squaw having remarkable beauty”—a post surgeon in the Dakotas dug up her grave, severed her head, and dispatched it to Washington as “a fine specimen.” Ten days later, the same medical officer dispatched the head of an old man who had “died at this post on the seventh day of Jan. 1869 and was buried in his blankets and furs in the ground about a half mile from the Fort, within a few rods of the tippees [sic] occupied by his friends. I secured the head in the night of the day he was buried. From the fact he was buried near these lodges, I did not know but what I was suspected in this business, and that it was their intention to keep watch over the body. Believing that they would hardly think I would steal his head before he was cold in the grave, I early in the evening with two of my hospital attendants secured this specimen.”

Eleven days later in Ellsworth County, Kansas, United States soldiers and

local citizens attacked and slaughtered a trading party of Pawnee men as they were peacefully visiting a white farm on Mulberry Creek. Although accounts vary over what started the skirmish, everyone agrees that when the smoke cleared, the post surgeon from Fort Harker, B. E. Fryer, dispatched a civilian to the massacre site to collect the skulls of the dead Pawnee. After he had found and decapitated one corpse, a blizzard set in, and the Pawnee survivors stopped him from collecting the other's skulls. But two weeks later, the weather moderated and Fryer resumed his search, ultimately recovering five additional crania from the Mulberry Creek Massacre. The Pawnee skulls became part of a shipment of 26 sent to Washington, including skulls from the Cheyenne, Caddo, Wichita, and Osage tribes. Fryer was particularly proud of his Pawnee specimens, four of which were recovered in prime condition, but two others, unfortunately, "were injured a good deal by the soldiers, who shot into the bodies and heads several times in the fight in which these Indians were killed."

Between 1868 and 1872, Fryer shipped at least forty-two Indian skeletons to Brevet Lieutenant Colonel George A. Otis, a curator at the Army Medical Museum. By this time, Otis had measured more than eight hundred Indian skulls in his growing collection, concluding that "the American Indians must be assigned a lower position on the human scale than has been believed heretofore."

"IT IS MOST UNPLEASANT  
WORK TO STEAL BONES . . . ."

Into this bizarre world stepped a thirty-year-old German-born geographer named Franz Boas. Historians of science would one day praise Boas as "the Father of American anthropology," but at the time, he was just another Jewish intellectual coming to 1880s America in search of a good job and a new life.

As a child in Minden, Germany, Boas had learned about the plants found in the woods and the animals of the sea. Over the years, he studied zoology, botany, mathematics, physics, geography, and physiology, and became particularly expert at mapping plant distributions. His doctoral research on the color of seawater reflected Boas' scientific bent toward explicit observation, description, comparison, and classification. He came to America intent upon introducing new canons of empirical research in anthropology, with a distinct emphasis on first-hand fieldwork.

In May 1888, the young Dr. Boas left his editorial assistant's job at *Science* magazine to accept a contract funded by the British Association for the Advancement of Science and the Canadian government. He agreed to undertake a general survey of tribes in British Columbia, concentrating on collecting linguistic and physical anthropological data—mostly measuring skulls of living Indians (many of them locked up in jail). He was also to bring home a collection of Indian skulls and skeletal parts. Discouraged at his inability to become associated with any of the established natural history museums, Boas also used the trip to build up a personal Northwest Coast Indian skull collection as a speculative business venture. He described himself as "just like a merchant," who was hoping that a carefully documented collection, at the going rate of \$5 for a skull and \$20 for a complete skeleton, might return "a tidy profit"—as well as finally open the door to a permanent curatorship.

While digging in a burial ground near Victoria, British Columbia, Boas used a photographer to distract the Indians while he was doing his grave robbing. On June 6, 1888, he wrote in frustration that "someone had stolen all the skulls, but we found a complete skeleton without head. I hope to get another one either today or tomorrow. . . . It is most unpleasant work to steal bones from a grave, but what is the use, someone has to do it. . . ."

After turning up only a dozen or so skulls on his own, Boas heard of another collection of some 75 skulls in Cowichan, amassed by William and James Sutton for sale on the American phrenological market. Boas spent a day measuring the skulls and, sensing that a market indeed existed for them, he bought the whole collection. He also retained the services of the Suttons to collect still more, promising to buy whatever they could dig up.

Before long, the Suttons complained to Boas that securing the dozens of additional specimens required "a great deal more trouble & expense" than anticipated because the bones were available only from caves and "other out of the way places." Because the Suttons occasionally retained Indian guides to show them to graveyards, word of the skull collecting expedition leaked out and "some half breeds at Fort Rupert started quite a disturbance and tried to incite the Indians to shoot them." Concerned about a possible investigation, Sutton confided to Boas that "I would like to get [the skulls] off my hands as soon as possible."

The situation heated up still further when the Cowichan Indians discovered that their tribal graves had been desecrated. Obtaining a warrant to search the Sutton sawmill, the Indians discovered no bones, but they retained counsel to prosecute the case. Meanwhile, Boas arranged to ship the illicit

materials to New York under falsified invoices. Despite some shortages in the Sutton materials—"owing to the rumpus with the Indians"—Boas was looking around for somebody to buy the skeletons. At this point, his collection numbered about two hundred crania, half of which were accompanied by complete skeletons.

The American Museum of Natural History agreed to store his skull collection temporarily, but they ultimately declined purchase, and in 1889 Boas moved the bones to Clark University in Worcester, Massachusetts, where he also signed on as a docent in the Department of Psychology. While there, Boas supervised A. F. Chamberlain, this country's first Ph.D. in Anthropology. Boas added another hundred or so skulls to his collection during this period, but he still had trouble selling the specimens (part of which ultimately went to Berlin's Museum für Völkerkunde, and the rest he sold years later to Chicago's new Field Columbian Museum).

Boas then accepted a short-term assignment to help plan the anthropological exhibits at the upcoming 1893 Chicago World's Fair. His job was to pull together an exhibit on physical anthropology and to create a special exhibit of Northwest Coast materials. He was disappointed that his display of skulls from Vancouver Island, systematically arranged in glass cases, was shoved into a poorly visited building along the southeastern corner of the Fair "likely to be overlooked by nine out of every ten visitors."

More popular in Chicago was the exhibit of living Indians. Boas personally arranged for a dozen Kwakwaka'wakh (Kwakiutl) Indians to live at the fair, housed in the livestock pavilion until they could move into a traditional beam and plank longhouse. In the fair's "ethnological zoo," the Kwakwaka'wakh (Kwakiutl) rubbed elbows with Apache and Navajo families, Iroquois living in bark longhouses, even Arawaks from South America. Down the Midway were Egyptians and Sudanese, Javanese, Chinese, Japanese, Eskimos from Labrador, and bare-breasted Dahomians from West Africa. When the fair finally closed in October 1893, the Kwakwaka'wakh returned home via the Canadian Pacific Railway. Boas' boss, Frederick Ward Putnam, resented having to pay their passage and heatedly insisted to railroad officials that the Kwakwaka'wakh should be granted free passage "just like other exhibits, as they were exhibits in every sense of the term." Boas was happy to see them leave, vowing "never again to play circus impresario."

The question naturally arose about what to do with the huge anthropological collection amassed in Chicago. Some of it went to California's Mid-Winter Exposition, and Washington State took parts for the state museum in



*Franz Boas (above) demonstrating a pose of the Kwakwaka'wakh (Kwakiutl) hamatsa dancer for model makers at the U.S. National Museum (February 1895). The Hamatsa life-group (below) as displayed in the Smithsonian exhibit (ca. 1896).*



Chicago, and after considerable prodding the department store magnate Marshall Field—by far the richest man in Chicago—stepped forward with a check for a million dollars. The new Field Columbian Museum opened to the

fully expecting to be retained as permanent curator, Boas was passed over in favor of William Henry Holmes, who stayed until 1896, to be succeeded by George A. Dorsey.

Having resigned from Clark University in a faculty revolt, an embittered Boas was reduced once again to piecework, acquiring and selling more Indian skulls. At this point, several of the country's new museums—especially Harvard, the Field Museum, the Smithsonian Institution, and the American Museum of Natural History—were vying for control of American archaeology, and Boas landed temporary assignments with the latter two.

The American Museum of Natural History finally hired Boas as a curator in late 1895. Still seething over the "unsurpassed insult" delivered in Chicago, Boas harbored a festering grudge against the upstart Field Museum and its curators—especially Holmes and Dorsey. In a letter written on December 25, 1895, Boas growled that "I'll show Chicago I can go them one better." The intense rivalry that arose between the two institutions reflected not only the personal animosity between ambitious curators (who truly detested each other), but also a deep-seated competition between their host cities. As a railway hub for the north and west, Chicago aspired to national and international status, hoping to equal or even overtake New York.

These "dear enemies" fought for years in a furious and well-financed rivalry over American Indian collectibles. Dorsey's first expedition for the Field Museum, in 1897, was a four-month blitz throughout western North America. His first stop was Browning, Montana, where just seven years earlier nearly a quarter of the local Blackfeet population had starved on Ghost Ridge. Dorsey dug into the shallow graves and shipped three dozen whole skeletons back to Chicago. Flushed with this early success, he moved to the Pacific Northwest, searching out the rich graves, coffins, and caves known to exist there. After exhuming sixteen skeletons and "many objects of ethnological interest" at Skungo Cave, he zipped northward into Tlingit territory in Alaska, where skeletal remains were particularly hard to find because the Tlingit cremated almost everyone except shamans.

In August 1897, while waiting for a steamer at Namu, Boas ran into Dorsey and his guide, Jimmy Deans. Boas wrote his wife that night that "I am mad at myself because there is an element of envy in me which I despise but which I cannot suppress altogether. It does not help that one behaves decently when inside oneself one is as shabby as the next fellow. What makes me so furious is the fact that these Chicago people simply adopt my plans and then try to beat me to it. Well, little Dorsey won't have achieved much with the help of that old ass, Deans. . . . In any event I don't think that Dorsey acted honorably."

At the time, local missionaries were complaining that skull and artifact collectors had destroyed almost every grave in the Virago Sound and North Island area. They were shocked by the men "who however laudable their object, could so mercilessly ride roughshod over the susceptibilities of the Indians." Dorsey was briefly arrested on the Columbia River, but was then released when he promised to return the materials he had taken. Elated at this development, Boas boasted that he had "never come into conflict with the feelings of Indians," conveniently glossing over the hundreds of similar grave-robbing forays he and his agents had conducted through the years. Given the bitter rivalry, it is hardly surprising that ethics and honesty became conditional, at times giving way to deception and theft.

Boas and Dorsey were hardly the first to dig graves in the Pacific Northwest. In his book *The Naturalist in Vancouver Island and British Columbia*, published in 1866, John Keats Lord, recounted his earlier experience at Fort Rupert (British Columbia), where he was told of a Koskimo man, reportedly shot and decapitated in a recent enemy raid. This unfortunate had a distinctive "sugar-loaf-shaped" skull, intentionally deformed shortly after birth. The trophy had been hung by a rope from a pole, "fresh, bloody, and ghastly," but Lord was "determined at any risk to have the skull." Under the cover of darkness, he overturned the pole, "bagged the skull," and smuggled it out in a pork barrel. Lord later presented his treasure to the British Museum.

Adrian Jacobson, a private artifact and skull collector who worked for several prominent museums, had a similar experience in 1882. He knew that the deformed Koskimo "longhead" skulls were especially valuable, and secured several more. But the supply soon dried up. At Comox, he tried without success to climb up to tree-hung burial boxes, but he did better in nighttime raids on the local cemetery. Knowing that the local Indians were reluctant to sell skeletons or grave carvings, Jacobson decided that "the rule here is: 'Help yourself.'"