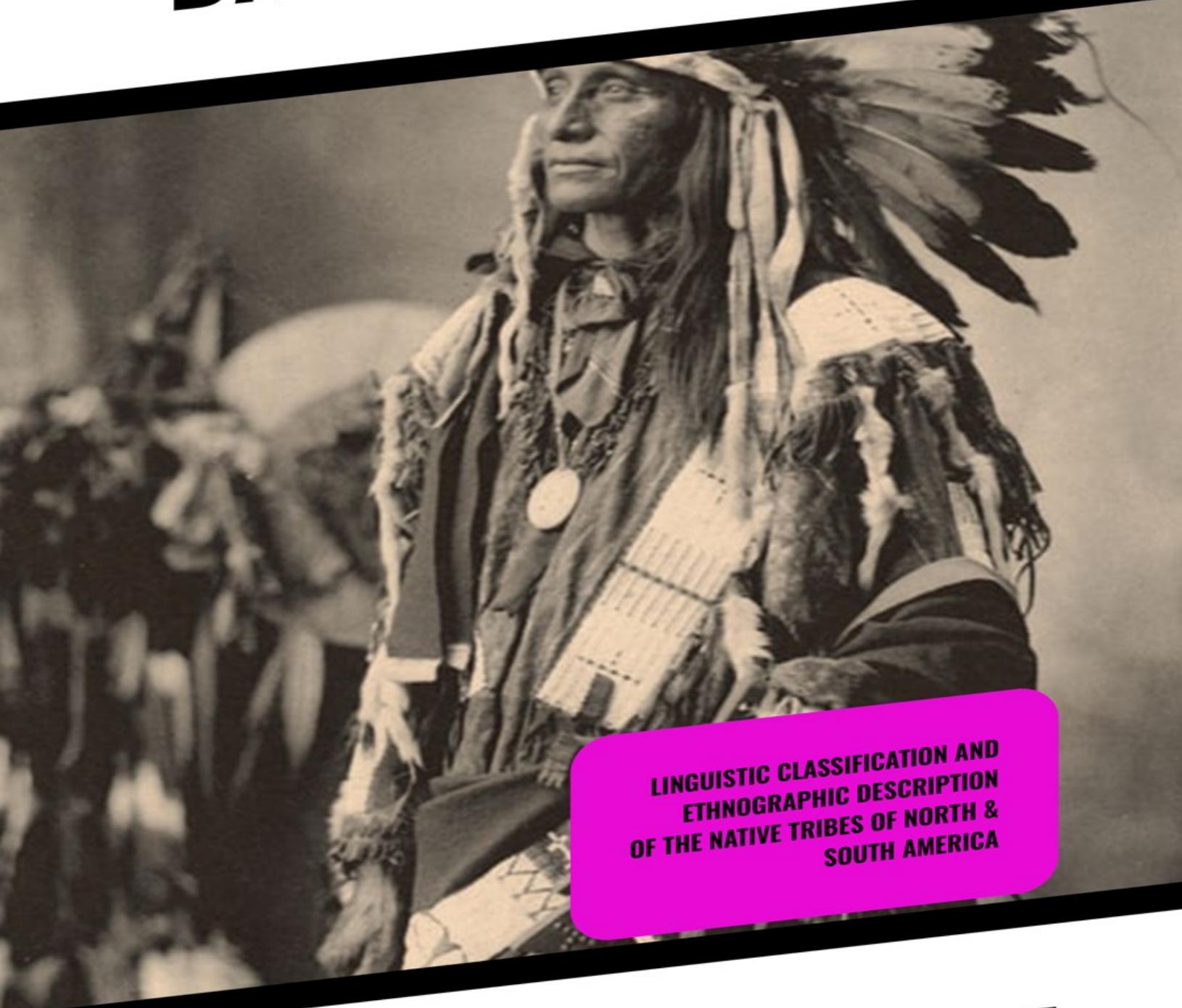


DANIEL G. BRINTON



LINGUISTIC CLASSIFICATION AND
ETHNOGRAPHIC DESCRIPTION
OF THE NATIVE TRIBES OF NORTH &
SOUTH AMERICA

THE AMERICAN RACE

Daniel G. Brinton

The American Race

**Linguistic Classification and Ethnographic Description
of the Native Tribes of North & South America**

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So far as I know, this is the first attempt at a systematic classification of the whole American race on the basis of language. I do not overlook Dr. Latham's meritorious effort nearly forty years ago; but the deficiency of material at that time obliged him to depart from the linguistic scheme and accept other guides.

While not depreciating the value of physical data, of culture and traditional history, I have constantly placed these subordinate to relationship as indicated by grammar and lexicography. There are well-known examples in the ethnography of other races, where reliance on language alone would lead the investigator astray; but all serious students of the native American tribes are united in the opinion that with them no other clue can compare to it in general results. Consequently the Bureau of Ethnology of the United States and the similar departments in the governments of Canada and Mexico have agreed in adopting officially the linguistic classification for the aboriginal population within their several territories.

Wherever the material permitted it, I have ranked the grammatic structure of a language superior to its lexical elements in deciding upon relationship. In this I follow the precepts and examples of students of the Aryan and Semitic stocks; although their methods have been rejected by some who have written on American tongues. As for myself, I am abidingly convinced that the morphology of any language whatever is its most permanent and characteristic feature.

It has been my effort to pay especial attention to those portions of the continent whose ethnography remains obscure. The publications of official bodies, as well as those of numerous

societies and individuals, have cleared up most of the difficulties in that portion of the continent north of Mexico; hence it is to the remainder that I have given greater space. The subject, however, is so vast, and the material so abundant, that I fear the reader may be disappointed by the brevity of the descriptions I have allowed to the several stocks.

The outlines of the classification and the general arrangement of the material are those which for several years I have adopted in my lecture courses before the Academy of Natural Sciences, Philadelphia. In fact, this volume may properly be regarded as an expansion of the ninth lecture—that on “The American Race,”—in my lectures on general ethnography, published last year under the title “Races and Peoples.”

In defining the locations of the various tribes, I have encountered many difficulties from their frequent removals. As a rule I have assigned a tribe the location where it was first encountered and identified by the white explorers; though sometimes I have preferred some later location where its activity was longest known.

The great variety of the orthography of tribal names has led me to follow the rule of selecting that which is locally the most usual. This variety has been not a little increased by what seems to me the pedantry of many learned writers, who insist on spelling every native name they mention according to some phonetic system of their own devising—thus adding to the already lamentable orthographic confusion.

I have not thought it advisable to adopt terminations to designate stocks as distinguished from tribes. The Bureau of Ethnology has adopted for stocks the termination *an*, as “Algonkian,” “Siouian.” This frequently gives terms of strange appearance, and is open to some other objections. It would be desirable to have this question of terminology decided by the International Congress of Americanists, on some plan applicable

to French, German and Spanish, as well as English, rather than to have it left to a local body or a single authority.

My thanks are due Mr. H. W. Henshaw, editor of the *American Anthropologist*, for revising the list of North Pacific Coast Stocks, and various suggestions.

I regret that I have not been able to avail myself of the unpublished material in the Bureau of Ethnology at Washington; but access to this was denied me except under the condition that I should not use in any published work the information thus obtained; a proviso scarcely so liberal as I had expected.

Philadelphia, February, 1891.

THE AMERICAN RACE.

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RACIAL HISTORY AND CHARACTERISTICS.

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The differentiation of the species Man into various races, with permanent traits and inhabiting definite areas, took place early in the present geologic epoch. Of these races there are four which are well-marked, each developed in one of the continental areas as they existed at the time referred to. They are the Eurafrikan or white, the Austafrikan or black, the Asian or yellow, and the American or red race. The color-names given them are merely approximations, and are retained for the sake of convenience, and as expressing a general and obvious characteristic.[\[1\]](#)

The American race was that which was found occupying the whole of the New World when it first became revealed to Europeans. Its members are popularly known as "Indians," or "American Indians," because Columbus thought that the western islands which he discovered were part of India; and his error has been perpetuated in the usually received appellation of its inhabitants. To the ethnographer, however, they are the only "Americans," and their race is the "American Race."

When investigation proved that the continent was not a part of Asia, but a vast independent land-area surrounded by wide oceans, the learned began to puzzle themselves with the problem of the origin of its inhabitants. The Hebrew myths of the creation of man and of a universal deluge in which the whole species perished except a few in Western Asia, for a long time controlled the direction of such speculations. The wildest as well as the most diverse hypotheses were brought forward and defended with great display of erudition. One of the most curious was that which advanced the notion that the Americans were the descendants of the ten "lost tribes of Israel." No one, at present, would acknowledge himself a believer in this theory; but it has not proved useless, as we owe to it the publication of several most valuable works.[\[2\]](#)

Another equally vain dream was that of "the lost Atlantis," a great island or land-connection which was imagined to have existed within recent times between Northern Africa and South America. A reminiscence of it was supposed to have survived in a story of the Egyptian priests preserved by Plato, that beyond the Pillars of Hercules was a great island which had since sunk in the sea. The account may have referred to the Canary Islands, but certainly not to any land-bridge across the Atlantic to the American Continent. Such did exist, indeed, but far back in the Eocene period of the Tertiary, long before man appeared on the scene. The wide difference between the existing flora and fauna

of Africa and South America proves that there has been no connection in the lifetime of the present species.[\[3\]](#)

Scarcely less incredible are the theories which still have some distinguished advocates, that the continent was peopled from Polynesia, or directly from Japan or China. Several laborious works have been compiled with reference to "Fu Sang," a land referred to as east of China, and identified by these writers with Mexico. A distinguished ethnologist has recently published a map showing the courses by which he supposes the Japanese arrived in America.[\[4\]](#)

It is not impossible that in recent centuries some junks may have drifted on the Northwest coast. But their crews would undoubtedly have been promptly slaughtered; and it is only in later ages that the Chinese or Japanese constructed such junks. The theory, therefore, offers no solution to the problem. Still less does that in reference to the Polynesians. They had no such craft as junks, and though bold navigators, were wholly unprepared to survive so long a voyage as from the nearest of the islands of Oceanica to the coast of America. Moreover, we have satisfactory proof that the eastern islands of Polynesia were peopled from the western islands at a recent date, that is, within two thousand years.

Probably the favorite theory at the present day is that the first inhabitants of the New World came from northeastern Asia, either by the Aleutian islands or across Behring Strait. Concerning the Aleutian islands we know by the evidence of language and archæology that they were first peopled from America, and not from Asia. Moreover, they are separated one from the other in places by hundreds of miles of a peculiarly stormy and dangerous sea.[\[5\]](#)

It is otherwise with Behring Straits. From East Cape in Siberia one can see the American shore, and when first explored the tribes on each side were in frequent communication. No doubt

this had been going on for a long time, and thus they had influenced each other in blood and culture. But so long as we have any knowledge of the movements at this point, they have been *from* America into Asia, the Eskimos pushing their settlements along the Asian coast. It will be replied that we should look to a period anterior to the Eskimos. Any migration at that remote epoch is refuted by other considerations. We know that Siberia was not peopled till late in the Neolithic times, and what is more, that the vicinity of the strait and the whole coast of Alaska were, till a very modern geologic period, covered by enormous glaciers which would have prevented any communication between the two continents.[\[6\]](#) These considerations reduce any possible migrations at this point to such as may have taken place long after America, both North and South, possessed a widespread population.

The question which should be posed as preliminary to all such speculations is, *When* did man first appear on this isolated continent?

To answer this we must study its later geological history, the events which have occurred since the close of the Tertiary, that is, during the Quaternary age.

In North and also in South America that age was characterized by one notable event, which impressed its presence by lasting memorials on the surface of the continent. This was the formation of a series of enormous glaciers, covering the soil of nearly half the temperate zones with a mass of ice thousands of feet in thickness. The period of its presence is called the Great Ice Age or the Glacial Epoch. Beyond the immediate limits of the ice it may not have been a season of extreme cold, for glaciers form more rapidly when the temperature is not much below the freezing point. Nor was it continuous. The ice sheet receded once, if not twice, causing an "interglacial" epoch, when the climate was comparatively mild.

After this interim it seems to have advanced again with renewed might, and to have extended its crystalline walls down to about the fortieth parallel of latitude, touching the Atlantic near Boston and New York harbors, and stretching nearly across the continent in an irregular line, generally a little north of the Ohio and a little south of the Missouri rivers. Enormous ice masses covered the Pacific Slope as far south as the mouth of the Columbia river, and extended over 1200 miles along the coast, submerging the whole of Queen Charlotte and Vancouver islands and the neighboring coast of British Columbia, which at that time were depressed about two hundred feet below the present level. The ice also covered for four hundred miles or more the plateau or Great Basin between the Rocky Mountains and the Coast Range, rising in some places in a solid mass five or six thousand feet above the soil.[\[7\]](#)

The melting of the second glacial inroad began at the east, and on the Pacific coast has not yet ceased. Its margin across the continent is still distinctly defined by a long line of débris piled up in "moraines," and by a fringe of gravel and sand called the "overwash," carried from these by the mighty floods which accompanied the great thaw. This period of melting is the "Post-glacial Era." It was accompanied by extensive changes in the land-levels and in temperature.

In the glacial and early post-glacial periods, the northern regions of the continent and the bottom of the Northern Atlantic were considerably above their present levels; but in the late post-glacial or "Champlain" period the land had sunk so much that at Lake Champlain it was five hundred feet lower than now, and at New York Harbor ten feet lower. The St. Lawrence river was then an arm of the sea, Lake Champlain was a deep bay, and the mouth of the Delaware river was where the city of Trenton now stands, the river itself being a wide inlet.[\[8\]](#)

The climate, which in the early post-glacial period had been so cold that the reindeer enjoyed an agreeable home as far south as Kentucky, changed to such mildness that two species of elephants, the giant sloth and the peccary, found congenial pasturage in the Upper Ohio and Delaware Valleys.[9]

The interest which this piece of geologic history has for us in this connection is the presence of man in America during all the time that these tremendous events were taking place. We know he was there, from the evidence he has left behind him in the various strata and deposits attributable to the different agencies I have described. How far back his most ancient relics carry us, is not quite clear. By some, the stone implements from Table Mountain, California, and a skull found in the auriferous gravel in Calaveras county, California, are claimed to antedate any relics east of the mountains. These stone utensils are, however, too perfect, they speak for a too specialized condition of the arts, to be attributable to a primitive condition of man; and as for the Calaveras skull, the record of its discovery is too unsatisfactory. Furthermore, in a volcanic country such as the Pacific coast, phenomena of elevation and subsidence occur with rapidity, and do not offer the same evidence of antiquity as in more stable lands.

This is an important point, and applies to a series of archæological discoveries which have been announced from time to time from the Pacific coast. Thus, in Nicaragua, human foot-prints have been found in compact tufa at a depth of twenty-one feet beneath the surface soil, and overlaid by repeated later volcanic deposits. But a careful examination of all their surroundings, especially of the organic remains at a yet greater depth, leads inevitably to the conclusion that these foot-prints cannot be ascribed to any very remote antiquity.[10] The singular changes in the Pacific seaboard are again illustrated along the coast of Ecuador and Peru. For some sixty miles north

and south near the mouth of the Esmeraldas river there is a deposit of marine clay six or eight feet thick underlying the surface soil in a continuous stratum. Under this again is a horizon of sand and loam containing rude stone implements, and what is significant, fragments of rough pottery and gold ornaments.[\[11\]](#) This shows conclusively that an extensive and prolonged subsidence took place in that locality not only after man reached there, but after he had developed the important art of the manufacture of clay vessels. This was certainly not at the beginning of his appearance on the scene; and the theory of any vast antiquity for such relics is not tenable.

The lowest, that is, the oldest, deposit on the eastern coast in which any relics of human industry are claimed to have been found, is that known as the "Columbian gravel." This is considered by geologists to have been formed in the height of the first glacial period. From its undisturbed layers have been exhumed stones bearing the marks of rough shaping, so as to serve the purpose of rude primitive weapons.[\[12\]](#)

During the first or main Inter-glacial Period was deposited the "modified drift." In a terrace of this material on the Mississippi, near Little Falls, Minnesota, Miss Babbitt found numerous quartz chips regarded by competent archæologists as artificial products. [\[13\]](#) They represent the refuse of an early workshop near the quartz veins in that vicinity, and were cast aside by the pristine implement-maker when the Minnesota glacier was receding for the last time, but still lifted its icy walls five or ten miles above the present site of Little Falls.

The extensive beds of loess which cover many thousand square miles in the Central United States are referred to the second Glacial Epoch. Professor Aughey reports the finding of rudely chipped arrowhead in this loess as it occurs in the Missouri Valley. They lay immediately beneath the vertebra of an elephant, an animal, I need scarcely add, long since extinct.

Another proof of man's presence about that date is a primitive hearth discovered in digging a well along the old beach of Lake Ontario. According to that competent geologist, Professor Gilbert, this dated from a period when the northern shore of that body of water was the sheer wall of a mighty glacier, and the channel of the Niagara river had not yet begun to be furrowed out of the rock by the receding waters.^[14] Other finds which must be referred to about this epoch are those by McGee of a chipped obsidian implement in the lacustrine marls of western Nevada; and that of a fragment of a human skull in the westernmost extension of the loess in Colorado.^[15]

More conclusive than these are the repeated discoveries of implements, chipped from hard stones, in deposits of loess and gravels in Ohio and Indiana, which deposits, without doubt, represent a closing episode of the last Glacial Epoch. There may be some question about the geologic age of the former finds, but about these there is none. They prove beyond cavil that during the closing scenes of the Quaternary in North America, man, tool-making, fire-using man, was present and active.^[16] This decision is not only confirmed, but greatly extended, by the researches of Dr. C. C. Abbott and others in the gravels about Trenton, on the Delaware. These were laid down contemporaneously with the terminal moraine in Ohio and Indiana, from which the palæoliths were exhumed. Abbott's discoveries include several hundred stone implements of the true palæolithic or "Chelléen" type, and some fragments of human skeletons.^[17] They reveal to us not only the presence of man, but a well defined stage of culture strictly comparable to that of the "river drift" men of the Thames and the Somme in western Europe, which has been so ably described by De Mortillet.^[18]

Such discoveries have not been confined to the northern portion of the continent. Barcena reported the relics of man in a

quaternary rock in the valley of Mexico.[\[19\]](#) The geologists of the Argentine Republic describe others which must be referred to a very remote age. The writers who have given the most information about them are Ameghino and Burmeister. They found bone and stone implements of rude form and the remains of hearths associated with bones of the extinct horse, the glyptodon, and other animals now unknown. The stratigraphic relations of the finds connected them with the deposits of the receding Austral glacier.[\[20\]](#)

Such facts as these place it beyond doubt that man lived in both North and South America at the close of the Glacial Age. It is not certain that this close was synchronous in both the northern and southern hemispheres, nor that the American glacier was contemporary with the Ice Age of Europe. The able geologist, Mr. Croll, is of opinion that if there was a difference in time, the Ice Age of America was posterior to that of Europe. In any case, the extreme antiquity of man in America is placed beyond cavil. He was here long before either northern Asia or the Polynesian islands were inhabited, as it is well known they were first populated in Neolithic times.

The question naturally arises, did he not originate upon this continent? The answer to this is given by Charles Darwin in his magistral statement—"Our progenitors diverged from the catarhine stock of the anthropoids; and the fact that they belonged to this stock clearly shows that they inhabited the Old World."[\[21\]](#) In fact, all the American monkeys, whether living or fossil, are platyrhine, have thirty-four teeth, and have tails, characteristics which show that none of the higher anthropoids lived in the New World.

We are obliged, therefore, to look for the original home of the American glacial man elsewhere than in America. Some interesting geological facts throw an unexpected light upon our investigations. I have already remarked that in the various recent

oscillations of the earth's crust, there occurred about the middle and later Glacial Epoch an uplift of the northern part of the continent and also of the northern Atlantic basin. In the opinion of Professor James Geikie this amounted to a vertical elevation of three thousand feet above the present level, and resulted in establishing a continuous land connection between the higher latitudes of the two continents, *which remained until the Post-glacial period.*^[22] Dr. Habernicht also recognizes this condition of affairs and places it during the "old stone" age in Europe,^[23] which corresponds to the position assigned it by McGee.

Very recently, Professor Spencer has summed up the evidence in favor of the elevation of the northern portions of America and the north Atlantic, about the early Pliocene times, and considers that it proves beyond a doubt that it must have reached from 2000 to 3000 feet above the present level.^[24]

Further testimony to the existence of this land bridge is offered by the glacial striæ on the rocks of Shetland, the Faroe Islands, Iceland and south Greenland. These are in such directions and of such a character that Mr. James Croll, a high authority, maintains that they must have been produced by *land ice*, and that the theory of a land connection between these localities "can alone explain all the facts."^[25] A comparison of the flora and fauna in the higher latitudes of the two continents reveals marked identities which require some such theory to explain them. Thus, certain species of land snails occur both in Labrador and Europe, and the flora of Greenland, although American in the north, is distinctly European in the south.^[26]

Again, in certain very late Pliocene formations in England, known as the Norwich crag and the red crag of Suffolk, "no less than eighteen species of American mollusca occur, only seven of which still live on the Scandinavian coast, the remainder being confined to North America." In consequence of such facts the most careful English geologists of to-day hold that the land

communication, which certainly existed between Europe and North America in Eocene times by way of Iceland and Greenland, which was then a part of the American continent, continued to exist through the Miocene and Pliocene Epochs. This land bridge formed a barrier of separation between the Arctic and Atlantic oceans, so that the temperature of the higher latitudes was much milder than at present.[27]

The evidence, therefore, is cumulative that at the close of the last Glacial Epoch, and for an indeterminate time previous, the comparatively shallow bed of the North Atlantic was above water; and this was about the time that we find men in the same stage of culture dwelling on both its shores.

The attempt has often been made by geologists to calculate the remoteness in time of the close of the Ice Age, and of these vestiges of human occupation. The chronometers appealed to are the erosion of river valleys, especially of the gorge of Niagara, the filling of lake beds, the accumulation of modern detritus, etc. Professor Frederick Wright, who has studied the problem of the Niagara gorge with especial care, considers that a minimum period of twelve thousand years must have elapsed since its erosion began.[28] But as Professor Gilbert justly remarks, whatever the age of the great cataract may be, the antiquity of man in America is far greater, and reaches into a past for which we have found no time-measure.[29]

The same may be said for Europe. De Quatrefages and many other students of the subject consider that the evidence is sufficient to establish the presence of man near the Atlantic coast in the Pliocene Epoch; and excellent English geologists have claimed that the caves in the valley of the River Clwyd, in north Wales, whose floors contain flint implements, had their entrance blocked by true glacial deposits, so that man was there present before the Great Ice Age began.

From this brief presentation of the geologic evidence, the conclusion seems forced upon us that the ancestors of the American race could have come from no other quarter than western Europe, or that portion of Eurafica which in my lectures on general ethnography I have described as the most probable location of the birth-place of the species.[\[30\]](#)

Scheme of the Age of Man in America.

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AGE.	PERIOD.	GEOLOGICAL CHARACTERS.	HUMAN RELICS.
Quaternary or Pleistocene.	1. Pre-glacial.	Auriferous gravels of California(?). Lower lake beds in Great Basin.	Calaveras skull(?).
		Attenuated drift. Columbia formation.	Palæoliths from Claymont, Del.
	2. First glacial.	Sinking of Atlantic Coast. Old glacial drift in Mississippi Valley.	
		Brick clays.	
	3. Inter-	Modified drift	Flint chips and

glacial.	of Minnesota.	rude implements.
	Medial Gravels in Great Basin.	
	Pampas formation.	Bone and stone implements.
	New glacial drift and till. fiords.	
	Moraines of Ohio Valley.	Palæolithic implements from the moraines.
4. Second glacial.	Loess of central United States.	
	British America and N. Atlantic elevated.	
5. Post- glacial.	Trenton gravels.	Palæolithic implements from Trenton.
	Completion of Great Lakes.	Brachycephalic skulls from Trenton.
	Elevation of North Atlantic subsiding.	Hearth on former shore of L. Ontario.

Recent.	Reindeer in Ohio Valley.	Skulls of Pontimelo and Rio Negro, S. A.
	Climate cold.	
	Lacustrine deposits.	Argillite implements.
	Seabord deposits.	Earliest kitchen-middens.
	Land below present level.	Limonite bones in Florida.
1. Champlain or Fluvial.	Climate mild.	Lagoa Santa bones in Brazil.
	Elephant, mastodon <i>ohioticus</i> , <i>megatherium</i> , giant bison, horse (all now extinct).	
2. Present or Alluvial.	River deposits.	Quartz and jasper implements.
	Formation of forest loam.	Pottery. Later shell heaps.
		Ohio mounds.

Relics of
existing or
known tribes.

Many difficulties present themselves in bringing these periods into correspondence with the seasons of the Quaternary in Europe; but after a careful study of both continents, Mr. W. J. McGee suggests the following synchronisms:[31]

North America.	Western Europe.
Inter-glacial period	Époque chelléenne.
Early second glacial period	Époque moustérienne.
Middle (mild) second glacial period	Époque solutréenne.
Close of second glacial period and post-glacial	Époque magdalénienne.
Champlain period	Kitchen-middens and époque Robenhausienne.

Of course it would not be correct to suppose that the earliest inhabitants of the continent presented the physical traits which mark the race to-day. Racial peculiarities are slowly developed in certain "areas of characterization," but once fixed are indelible. Can we discover the whereabouts of the area which impressed upon primitive American man—an immigrant, as we have learned, from another hemisphere—those corporeal changes which set him over against his fellows as an independent race?

I believe that it was in the north temperate zone. It is there we find the oldest signs of man's residence on the continent; it is and was geographically the nearest to the land-areas of the Old World; and so far as we can trace the lines of the most ancient migrations, they diverged from that region. But there are reasons

stronger than these. The American Indians cannot bear the heat of the tropics even as well as the European, not to speak of the African race. They perspire little, their skin becomes hot, and they are easily prostrated by exertion in an elevated temperature. They are peculiarly subject to diseases of hot climates, as hepatic disorders, showing none of the immunity of the African.^[32] Furthermore, the finest physical specimens of the race are found in the colder regions of the temperate zones, the Pampas and Patagonian Indians in the south, the Iroquois and Algonkins in the north; whereas, in the tropics they are generally undersized, short-lived, of inferior muscular force and with slight tolerance of disease.^[33]

These facts, taken in connection with the geologic events I have already described, would lead us to place the "area of characterization" of the native American east of the Rocky Mountains, and between the receding wall of the continental ice sheet and the Gulf of Mexico. There it was that the primitive glacial man underwent those changes which resulted in the formation of an independent race.

We have evidence that this change took place at a very remote epoch. The Swiss anatomist, Dr. J. Kollmann, has published a critical investigation of the most ancient skulls discovered in America, as the one I have already referred to from Calaveras county, California, one from Rock Bluff, Illinois, one from Pontimelo, Buenos Ayres, and others from the caverns of Lagoa Santa, Brazil, and from the loess of the Pampas. All these are credited with an antiquity going back nearly to the close of the last glacial period, and are the oldest yet found on the continent. They prove to be strictly analogous to those of the Indians of the present day. They reveal the same discrepancy in form which we now encounter in the crania of all American tribes. The Calaveras skull and that from Pontimelo are brachycephalic; those from Lagoa Santa dolichocephalic; but

both possess the wide malar arches, the low orbital indices, the medium nasal apertures and the general broad faces of the present population. Dr. Kollmann, therefore, reaches the conclusion that "the variety of man in America at the close of the glacial period had the same facial form as the Indian of to-day, and the racial traits which distinguish him now, did also at that time."

The marked diversity in cranial forms here indicated is recognizable in all parts of the continent. It has frustrated every attempt to classify the existing tribes, or to trace former lines of migration, by grouping together similar head-measurements. This was fully acknowledged by the late Dr. James Aitken Meigs, of Philadelphia, who, taking the same collection of skulls, showed how erroneous were the previous statements of Dr. Morton in his *Crania Americana*. The recent studies of Virchow on American crania have attained the same conclusion.[\[34\]](#) We must dismiss as wholly untenable the contrary arguments of the French and other craniologists, and still more peremptorily those attempted identifications of American skulls with "Mongolian" or "Mongoloid" types. Such comparisons are based on local peculiarities which have no racial value.

Yet it must not be supposed from this that carefully conducted cranial comparisons between tribes and families are valueless; on the contrary, the shape and size of the skull, the proportion of the face, and many other measurements, are in the average highly distinctive family traits, and I shall frequently call attention to them.

The lowest cephalic index which I have seen reported from an American skull is 56, which is that of a perforated skull from Devil river, Michigan, now in the medical museum at Ann Arbor university;[\[35\]](#) the highest is 97, from a Peruvian skull, though probably this was the result of an artificial deformity.

It is not necessary to conclude from these or other diversities in skull forms that the American race is a conglomerate of other and varied stocks. As I have pointed out elsewhere, the shape of the skull is not a fixed element in human anatomy, and children of the same mother may differ in this respect.[\[36\]](#)

A special feature in American skulls is the presence of the epactal bone, or *os Incæ*, in the occiput. It is found in a complete or incomplete condition in 3.86 per cent. of the skulls throughout the continent, and in particular localities much more frequently; among the ancient Peruvians for example in 6.08 per cent., and among the former inhabitants of the Gila valley in 6.81 per cent. This is far more frequently than in other races, the highest being the negro, which offers 2.65 per cent., while the Europeans yield but 1.19.[\[37\]](#) The presence of the bone is due to a persistence of the transverse occipital suture, which is usually closed in fetal life. Hence it is a sign of arrested development, and indicative of an inferior race.

The majority of the Americans have a tendency to meso- or brachycephaly, but in certain families, as the Eskimos in the extreme north and the Tapuyas in Brazil, the skulls are usually decidedly long. In other instances there is a remarkable difference in members of the same tribe and even of the same household. Thus among the Yumas there are some with as low an index as 68, while the majority are above 80, and among the dolichocephalic Eskimos we occasionally find an almost globular skull. So far as can be learned, these variations appear in persons of pure blood. Often the crania differ in no wise from those of the European. Dr. Hensell, for instance, says that the skulls of pure-blood Coroados of Brazil, which he examined, corresponded in all points to those of the average German.[\[38\]](#)

The average cubical capacity of the American skull falls below that of the white, and rises above that of the black race. Taking both sexes, the Parisians of to-day have a cranial capacity of

1448 cubic centimetres; the Negroes 1344 c. c.; the American Indians 1376.[39] But single examples of Indian skulls have yielded the extraordinary capacity of 1747, 1825, and even 1920 cub. cent. which are not exceeded in any other race.[40]

The hue of the skin is generally said to be reddish, or coppery, or cinnamon color, or burnt coffee color. It is brown of various shades, with an undertone of red. Individuals or tribes vary from the prevailing hue, but not with reference to climate. The Kolosch of the northwest coast are very light colored; but not more so than the Yurucates of the Bolivian Andes. The darkest are far from black, and the lightest by no means white.

The hair is rarely wholly black, as when examined by reflected light it will also show a faint undercolor of red. This reddish tinge is very perceptible in some tribes, and especially in children. Generally straight and coarse, instances are not wanting where it is fine and silky, and even slightly wavy or curly. Although often compared to that of the Chinese, the resemblances are superficial, as when critically examined, "the hair of the American Indian differs in nearly every particular from that of the Mongolians of eastern Asia." [41] The growth is thick and strong on the head, scanty on the body and on the face; but beards of respectable length are not wholly unknown.[42]

The stature and muscular force vary. The Patagonians have long been celebrated as giants, although in fact there are not many of them over six feet tall. The average throughout the continent would probably be less than that of the European. But there are no instances of dwarfish size to compare with the Lapps, the Bushmen, or the Andaman Islanders. The hands and feet are uniformly smaller than those of Europeans of the same height. The arms are longer in proportion to the other members than in the European, but not so much as in the African race. This is held to be one of the anatomical evidences of inferiority.

On the whole, the race is singularly uniform in its physical traits, and individuals taken from any part of the continent could easily be mistaken for inhabitants of numerous other parts.

This uniformity finds one of its explanations in the geographical features of the continent, which are such as to favor migrations in longitude, and thus prevent the diversity which special conditions in latitude tend to produce. The trend of the mountain chains and the flow of the great rivers in both South and North America generally follow the course of the great circles, and the migrations of native nations were directed by these geographic features. Nor has the face of the land undergone any serious alteration since man first occupied it. Doubtless in his early days the Laramie sea still covered the extensive depression in that part of our country, and it is possible that a subsidence of several hundred feet altered the present Isthmus of Panama into a chain of islands; but in other respects the continent between the fortieth parallels north and south has remained substantially the same since the close of the Tertiary Epoch.

Beyond all other criteria of a race must rank its mental endowments. These are what decide irrevocably its place in history and its destiny in time. Some who have personally studied the American race are inclined to assign its psychical potentialities a high rank. For instance, Mr. Horatio Hale hesitates not to say: "Impartial investigation and comparison will probably show that while some of the aboriginal communities of the American continent are low in the scale of intellect, others are equal in natural capacity, and possibly superior, to the highest of the Indo-European race."^[43] This may be regarded as an extremely favorable estimate. Few will assent to it, and probably not many would even go so far as Dr. Amedée Moure in his appreciation of the South American Indians, which he expresses in these words: "With reference to his mental powers, the Indian

of South America should be classed immediately after the white race, decidedly ahead of the yellow race, and especially beyond the African.”^[44]

Such general opinions are interesting because both of them are the results of personal observations of many tribes. But the final decision as to the abilities of a race or of an individual must be based on actual accomplished results, not on supposed endowments. Thus appraised, the American race certainly stands higher than the Australian, the Polynesian or the African, but does not equal the Asian.

A review of the evidence bears out this opinion. Take the central social fact of government. In ancient America there are examples of firm and stable states, extending their sway widely and directed by definite policy. The league of the Iroquois was a thoroughly statesman-like creation, and the realm of Peru had a long and successful existence. That this mental quality is real is shown by the recent history of some of the Spanish-American republics. Two of them, Guatemala and Mexico, count among their ablest presidents in the present generation pure-blood American Indians.^[45] Or we may take up the arts. In architecture nothing ever accomplished by the Africans or Polynesians approaches the pre-Columbian edifices of the American continent. In the development of artistic forms, whether in stone, clay or wood, the American stands next to the white race. I know no product of Japanese, Chinese or Dravidian sculpture, for example, which exhibits the human face in greater dignity than the head in basalt figured by Humboldt as an Aztec priestess.^[46] The invention of a phonetic system for recording ideas was reached in Mexico, and is striking testimony to the ability of the natives. In religious philosophy there is ample evidence that the notion of a single incorporeal Ruler of the universe had become familiar both to Tezcucans and Kechuas previous to the conquest.

While these facts bear testimony to a good natural capacity, it is also true that the receptivity of the race for a foreign civilization is not great. Even individual instances of highly educated Indians are rare; and I do not recall any who have achieved distinction in art or science, or large wealth in the business world.

The culture of the native Americans strongly attests the ethnic unity of the race. This applies equally to the ruins and relics of its vanished nations, as to the institutions of existing tribes. Nowhere do we find any trace of foreign influence or instruction, nowhere any arts or social systems to explain which we must evoke the aid of teachers from the eastern hemisphere. The culture of the American race, in whatever degree they possessed it, was an indigenous growth, wholly self-developed, owing none of its germs to any other race, ear-marked with the psychology of the stock.

Furthermore, this culture was not, as is usually supposed, monopolized by a few nations of the race. The distinction that has been set up by so many ethnographers between "wild tribes" and "civilized tribes," *Jägervölker* and *Culturvölker*, is an artificial one, and conveys a false idea of the facts. There was no such sharp line. Different bands of the same linguistic stock were found, some on the highest, others on the lowest stages of development, as is strikingly exemplified in the Uto-Aztec family. Wherever there was a center of civilization, that is, wherever the surroundings favored the development of culture, tribes of different stocks enjoyed it to nearly an equal degree, as in central Mexico and Peru. By them it was distributed, and thus shaded off in all directions.

When closely analyzed, the difference between the highest and the average culture of the race is much less than has been usually taught. The Aztecs of Mexico and the Algonkins of the eastern United States were not far apart, if we overlook the objective art of architecture and one or two inventions. To contrast the one as a wild or savage with the other as a civilized people, is to assume a false point of view and to overlook their substantial psychical equality.

For these reasons American culture, wherever examined, presents a family likeness which the more careful observers of late years have taken pains to put in a strong light. This was accomplished for governmental institutions and domestic architecture by Lewis H. Morgan, for property rights and the laws of war by A. F. Bandelier, for the social condition of Mexico and Peru by Dr. Gustav Brühl, and I may

add for the myths and other expressions of the religious sentiment by myself.[\[47\]](#)

In certain directions doubtless the tendency has been to push this uniformity too far, especially with reference to governmental institutions. Mr. Morgan's assertions upon this subject were too sweeping. Nevertheless he was the first to point out clearly that ancient American society was founded, not upon the family, but upon the gens, totem or clan, as the social unit.[\[48\]](#) The gens is "an organized body of consanguineal kindred" (Powell), either such in reality, or, when strangers have been adopted, so considered by the tribal conscience. Its members dwell together in one house or quarter, and are obliged to assist each other. An indeterminate number of these gentes, make up the tribe, and smaller groups of several of them may form "phratries," or brotherhoods, usually for some religious purpose. Each gens is to a large extent autonomic, electing its own chieftain, and deciding on all questions of property and especially of blood-revenge, within its own limits. The tribe is governed by a council, the members of which belong to and represent the various gentes. The tribal chief is elected by this council, and can be deposed at its will. His power is strictly limited by the vote of the council, and is confined to affairs of peace. For war, a "war chief" is elected also by the council, who takes sole command. Marriage within the gens is strictly prohibited, and descent is traced and property descends in the female line only.

This is the ideal theory of the American tribal organization, and we may recognize its outlines almost anywhere on the continent; but scarcely anywhere shall we