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ON LIMITATIONS TO THE USE

OF SOME

ANTHROPOLOGIC DATA.

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### ARCHÆOLOGY.

Investigations in this department are of great interest, and have attracted to the field a host of workers; but a general review of the mass of published matter exhibits the fact that the uses to which the material has been put have not always been wise.

In the monuments of antiquity found throughout North America, in camp and village sites, graves, mounds, ruins, and scattered works of art, the origin and development of art in savage and barbaric life may be satisfactorily studied. Incidentally, too, hints of customs may be discovered, but outside of this, the discoveries made have often been illegitimately used, especially for the purpose of connecting the tribes of North America with peoples or so-called races of antiquity in other portions of the world. A brief review of some conclusions that must be accepted in the present status of the science will exhibit the futility of these attempts.

It is now an established fact that man was widely scattered over the earth at least as early as the beginning of the quaternary period, and, perhaps, in pliocene time.

If we accept the conclusion that there is but one species of man, as species are now defined by biologists, we may reasonably conclude that the species has been dispersed from some common center, as the ability to successfully carry on the battle of life in all climes belongs only to a highly developed being; but this original home has not yet been ascertained with certainty, and when discovered, lines of migration therefrom cannot be mapped until the changes in the physical geography of the earth from that early time to the present have been discovered, and these must be settled upon purely geologic and paleontologic evidence. The migrations of mankind from that original home cannot be intelligently discussed until that home has been discovered, and, further, until the geology of the globe is so thoroughly known that the different phases of its geography can be presented.

The dispersion of man must have been anterior to the development of any but the rudest arts. Since that time the surface of the earth

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has undergone many and important changes. All known camp and village sites, graves, mounds, and ruins belong to that portion of geologic time known as the present epoch, and are entirely subsequent to the period of the original dispersion as shown by geologic evidence.

In the study of these antiquities, there has been much unnecessary speculation in respect to the relation existing between the people to whose existenee they attest, and the tribes of Indians inhabiting the country during the historic period.

It may be said that in the Pueblos discovered in the southwestern portion of the United States and farther south through Mexico and perhaps into Central America tribes are known having a culture quite as far advanced as any exhibited in the discovered ruins. In this respect, then, there is no need to search for an extra-limital origin through lost tribes for any art there exhibited.

With regard to the mounds so widely scattered between the two oceans, it may also be said that mound-building tribes were known in the early history of discovery of this continent, and that the vestiges of art discovered do not excel in any respect the arts of the Indian tribes known to history. There is, therefore, no reason for us to search for an extra-limital origin through lost tribes for the arts discovered in the mounds of North America.

The tracing of the origin of these arts to the ancestors of known tribes or stocks of tribes is more legitimate, but it has limitations which are widely disregarded. The tribes which had attained to the highest culture in the southern portion of North America are now well known to belong to several different stocks, and, if, for example, an attempt is made to connect the mound-builders with the Pueblo Indians, no result beyond confusion can be reached until the particular stock of these village peoples is designated.

Again, it is contained in the recorded history of the country that several distinct stocks of the present Indians were mound-builders and the wide extent and vast number of mounds discovered in the United States should lead us to suspect, at least, that the mound-builders of pre-historic times belonged to many and diverse stocks. With the limitations thus indicated the identification of mound-building peoples as distinct tribes or stocks is a legitimate study, but when we consider the further fact now established, that arts extend beyond the boundaries of linguistic stocks, the most fundamental divisions we are yet able to make of the peoples of the globe, we may more properly conclude that this field promises but a meager harvest; but the origin and development of arts and industries is in itself a vast and profoundly interesting theme of study, and when North American archaeology is pursued with this end in view, the results will be instructive.

## PICTURE-WRITING.

The pictographs of North America were made on divers substances. The bark of trees, tablets of wood, the skins of animals, and the surfaces of rocks were all used for this purpose; but the great body of picture-writing as preserved to us is found on rock surfaces, as these are the most enduring.

From Dightou Rock to the cliffs that overhang the Pacific, these records are found—on boulders fashioned by the waves of the sea, scattered by river floods, or polished by glacial ice; on stones buried in graves and mounds; on faces of rock that appear in ledges by the streams; on cañon walls and towering cliffs; on mountain crags and the ceilings of caves—wherever smooth surfaces of rock are to be found in North America, there we may expect to find pictographs. So widely distributed and so vast in number, it is well to know what purposes they may serve in anthropologic science.

Many of these pictographs are simply pictures, rude etchings, or paintings, delineating natural objects, especially animals, and illustrate simply the beginning of pictorial art; others we know were intended to commemorate events or to represent other ideas entertained by their authors; but to a large extent these were simply mnemonic—not conveying ideas of themselves, but designed more thoroughly to retain in memory certain events or thoughts by persons who were already cognizant of the same through current hearsay or tradition. If once the memory of the thought to be preserved has passed from the minds of men, the record is powerless to restore its own subject-matter to the understanding.

The great body of picture-writings is thus described; yet to some slight extent pictographs are found with characters more or less conventional, and the number of such is quite large in Mexico and Central America. Yet even these conventional characters are used with others less conventional in such a manner that perfect records were never made.

Hence it will be seen that it is illegitimate to use any pictographic matter of a date anterior to the discovery of the continent by Columbus for historic purposes; but it has a legitimate use of profound interest, as these pictographs exhibit the beginning of written language and the beginning of pictorial art, yet undifferentiated; and if the scholars of America will collect and study the vast body of this material scattered everywhere—over the valleys and on the mountain sides—from it can be written one of the most interesting chapters in the early history of mankind.

**HISTORY, CUSTOMS, AND ETHNIC CHARACTERISTICS.**

When America was discovered by Europeans, it was inhabited by great numbers of distinct tribes, diverse in languages, institutions, and customs. This fact has never been fully recognized, and writers have too often spoken of the North American Indians as a body, supposing that statements made of one tribe would apply to all. This fundamental error in the treatment of the subject has led to great confusion.

Again, the rapid progress in the settlement and occupation of the country has resulted in the gradual displacement of the Indian tribes, so that very many have been removed from their ancient homes, some of whom have been incorporated into other tribes, and some have been absorbed into the body of civilized people.

The names by which tribes have been designated have rarely been names used by themselves, and the same tribe has often been designated by different names in different periods of its history and by different names in the same period of its history by colonies of people having different geographic relations to them. Often, too, different tribes have been designated by the same name. Without entering into an explanation of the causes which have led to this condition of things, it is simply necessary to assert that this has led to great confusion of nomenclature. Therefore the student of Indian history must be constantly on his guard in accepting the statements of any author relating to any tribe of Indians.

It will be seen that to follow any tribe of Indians through post-Columbian times is a task of no little difficulty. Yet this portion of history is of importance, and the scholars of America have a great work before them.

Three centuries of intimate contact with a civilized race has had no small influence upon the pristine condition of these savage and barbaric tribes. The most speedy and radical change was that effected in the arts, industrial and ornamental. A steel knife was obviously better than a stone knife; firearms than bows and arrows; and textile fabrics from the looms of civilized men are at once seen to be more beautiful and more useful than the rude fabrics and undressed skins with which the Indians clothed themselves in that earlier day.

Customs and institutions changed less rapidly. Yet these have been much modified. Imitation and vigorous propagandism have been more or less efficient causes. Migrations and enforced removals placed tribes under conditions of strange environment where new customs and institutions were necessary, and in this condition civilization had a greater influence, and the progress of occupation by white men within the territory of the United States, at least, has reached such a stage that savagery and barbarism have no room for their existence, and even customs

and institutions must in a brief time be completely changed, and what we are yet to learn of these people must be learned now.

But in pursuing these studies the greatest caution must be observed in discriminating what is primitive from what has been acquired from civilized man by the various processes of acculturation.

#### ORIGIN OF MAN.

Working naturalists postulate evolution. Zoölogical research is largely directed to the discovery of the genetic relations of animals. The evolution of the animal kingdom is along multifarious lines and by diverse specializations. The particular line which connects man with the lowest forms, through long successions of intermediate forms, is a problem of great interest. This special investigation has to deal chiefly with relations of structure. From the many facts already recorded, it is probable that many detached portions of this line can be drawn, and such a construction, though in fact it may not be correct in all its parts, yet serves a valuable purpose in organizing and directing research.

The truth or error of such hypothetic genealogy in no way affects the validity of the doctrines of evolution in the minds of scientific men, but on the other hand the value of the tentative theory is brought to final judgment under the laws of evolution.

It would be vain to claim that the course of zoölogic development is fully understood, or even that all of its most important factors are known. So the discovery of facts and relations guided by the doctrines of evolution reacts upon these doctrines, verifying, modifying, and enlarging them. Thus it is that while the doctrines lead the way to new fields of discovery, the new discoveries lead again to new doctrines. Increased knowledge widens philosophy; wider philosophy increases knowledge.

It is the test of true philosophy that it leads to the discovery of facts, and facts themselves can only be known as such; that is, can only be properly discerned and discriminated by being relegated to their places in philosophy. The whole progress of science depends primarily upon this relation between knowledge and philosophy.

In the earlier history of mankind philosophy was the product of subjective reasoning, giving mythologies and metaphysics. When it was discovered that the whole structure of philosophy was without foundation, a new order of procedure was recommended—the Baconian method. Perception must precede reflection; observation must precede reason. This also was a failure. The earlier gave speculations; the later gives a mass of incoherent facts and falsehoods. The error in the earlier philosophy was not in the order of procedure between perception and reflection, but in the method, it being subjective instead of objective. The method of reasoning in scientific philosophy is purely objective; the method of reasoning in mythology and metaphysics is subjective.

The difference between man and the animals most nearly related to him in structure is great. The connecting forms are no longer extant. This subject of research, therefore, belongs to the paleontologists rather than the ethnologists. The biological facts are embodied in the geological record, and this record up to the present time has yielded but scant materials to serve in its solution.

It is known that man, highly differentiated from lower animals in morphologic characteristics, existed in early Quaternary and perhaps in Pliocene times, and here the discovered record ends.

#### LANGUAGE.

In philology, North America presents the richest field in the world, for here is found the greatest number of languages distributed among the greatest number of stocks. As the progress of research is necessarily from the known to the unknown, civilized languages were studied by scholars before the languages of savage and barbaric tribes. Again, the higher languages are written and are thus immediately accessible. For such reasons, chief attention has been given to the most highly developed languages. The problems presented to the philologist, in the higher languages, cannot be properly solved without a knowledge of the lower forms. The linguist studies a language that he may use it as an instrument for the interchange of thought; the philologist studies a language to use its data in the construction of a philosophy of language. It is in this latter sense that the higher languages are unknown until the lower languages are studied, and it is probable that more light will be thrown upon the former by a study of the latter than by more extended research in the higher.

The vast field of unwritten languages has been explored but not surveyed. In a general way it is known that there are many such languages, and the geographic distribution of the tribes of men who speak them is known, but scholars have just begun the study of the languages.

That the knowledge of the simple and uncompounded must precede the knowledge of the complex and compounded, that the latter may be rightly explained, is an axiom well recognized in biology, and it applies equally well to philology. Hence any system of philology, as the term is here used, made from a survey of the higher languages exclusively, will probably be a failure. "Which of you by taking thought can add one cubit unto his stature," and which of you by taking thought can add the antecedent phenomena necessary to an explanation of the language of Plato or of Spenser?

The study of astronomy, geology, physics, and biology, is in the hands of scientific men; objective methods of research are employed and metaphysical disquisitions find no place in the accepted philosophies;

but to a large extent philology remains in the hands of the metaphysicians, and subjective methods of thought are used in the explanation of the phenomena observed. If philology is to be a science it must have an objective philosophy composed of a homologic classification and orderly arrangement of the phenomena of the languages of the globe.

Philologic research began with the definite purpose in view to discover in the diversities of language among the peoples of the earth a common element from which they were all supposed to have been derived, an original speech, the parent of all languages. In this philologists had great hopes of success at one time, encouraged by the discovery of the relation between the diverse branches of the Aryan stock, but in this very work methods of research were developed and doctrines established by which unexpected results were reached.

Instead of relegating the languages that had before been unclassified to the Aryan family, new families or stocks were discovered, and this process has been carried on from year to year until scores or even hundreds of families are recognized, and until we may reasonably conclude that there was no single primitive speech common to mankind, but that man had multiplied and spread throughout the habitable earth anterior to the development of organized languages; that is, languages have sprung from innumerable sources after the dispersion of mankind.

The progress in language has not been by multiplication, which would be but a progress in degradation under the now well-recognized laws of evolution; but it has been in integration from a vast multiplicity toward a unity. True, all evolution has not been in this direction. There has often been degradation as exhibited in the multiplicity of languages and dialects of the same stock, but evolution has in the aggregate been integration by progress towards unity of speech, and differentiation (which must always be distinguished from multiplication) by specialization of the grammatical process and the development of the parts of speech.

When a people once homogeneous are separated geographically in such a manner that thorough inter-communication is no longer preserved, all of the agencies by which languages change act separately in the distinct communities and produce different changes therein, and dialects are established. If the separation continues, such dialects become distinct languages in the sense that the people of one community are unable to understand the people of another. But such a development of languages is not differentiation in the sense in which this term is here used, and often used in biology, but is analogous to multiplication as understood in biology. The differentiation of an organ is its development for a special purpose, *i. e.*, the organic specialization is concomitant with functional specialization. When paws are differentiated into hands and feet, with the differentiation of the organs, there is a concomitant differentiation in the functions.

When one language becomes two, the same function is performed by each, and is marked by the fundamental characteristic of multiplication, *i. e.*, degradation; for the people originally able to communicate with each other can no longer thus communicate; so that two languages do not serve as valuable a purpose as one. And, further, neither of the two languages has made the progress one would have made, for one would have been developed sufficiently to serve all the purposes of the united peoples in the larger area inhabited by them, and, *ceteris paribus*, the language spoken by many people scattered over a large area must be superior to one spoken by a few people inhabiting a small area.

It would have been strange, indeed, had the primitive assumption in philology been true, and the history of language exhibited universal degradation.

In the remarks on the "Origin of Man," the statement was made that mankind was distributed throughout the habitable earth, in some geological period anterior to the present and anterior to the development of other than the rudest arts. Here, again, we reach the conclusion that man was distributed throughout the earth anterior to the development of organized speech.

In the presence of these two great facts, the difficulty of tracing genetic relationship among human races through arts, customs, institutions, and traditions will appear, for all of these must have been developed after the dispersion of mankind. Analogies and homologies in these phenomena must be accounted for in some other way. Somatology proves the unity of the human species; that is, the evidence upon which this conclusion is reached is morphologie; but in arts, customs, institutions, and traditions abundant corroborative evidence is found. The individuals of the one species, though inhabiting diverse climes, speaking diverse languages, and organized into diverse communities, have progressed in a broad way by the same stages, have had the same arts, customs, institutions, and traditions in the same order, limited only by the degree of progress to which the several tribes have attained, and modified only to a limited extent by variations in environment.

If any ethnic classification of mankind is to be established more fundamental than that based upon language, it must be upon physical characteristics, and such must have been acquired by profound differentiation anterior to the development of languages, arts, customs, institutions, and traditions. The classifications hitherto made on this basis are unsatisfactory, and no one now receives wide acceptance. Perhaps further research will clear up doubtful matters and give an acceptable grouping; or it may be that such research will result only in exhibiting the futility of the effort.

The history of man, from the lowest tribal condition to the highest national organization, has been a history of constant and multifarious admixture of strains of blood; of admixture, absorption, and destruction of languages with general progress toward unity; of the diffusion

of arts by various processes of acculturation; and of admixture and reciprocal diffusion of customs, institutions, and traditions. Arts, customs, institutions, and traditions extend beyond the boundaries of languages and serve to obscure them, and the admixture of strains of blood has obscured primitive ethnic divisions, if such existed.

If the physical classification fails, the most fundamental grouping left is that based on language; but for the reasons already mentioned and others of like character, the classification of languages is not, to the full extent, a classification of peoples.

It may be that the unity of the human race is a fact so profound that all attempts at a fundamental classification to be used in all the departments of anthropology will fail, and that there will remain multifarious groupings for the multifarious purposes of the science; or, otherwise expressed, that languages, arts, customs, institutions, and traditions may be classified, and that the human family will be considered as one race.

### MYTHOLOGY.

Here again America presents a rich field for the scientific explorer. It is now known that each linguistic stock has a distinct mythology, and as in some of these stocks there are many languages differing to a greater or less extent, so there are many like differing mythologies.

As in language, so in mythology, investigation has proceeded from the known to the unknown—from the higher to the lower mythologies. In each step of the progress of opinion on this subject a particular phenomenon may be observed. As each lower status of mythology is discovered it is assumed to be the first in origin, the primordial mythology, and all lower but imperfectly understood mythologies are interpreted as degradations, from this assumed original belief; thus polytheism was interpreted as a degeneracy from monotheism; nature worship, from psychotheism; zoölogy, from ancestor worship; and, in order, monotheism has been held to be the original mythology, then polytheism, then physitism or nature worship, then ancestor worship.

With a large body of mythologists nature worship is now accepted as the primitive religion; and with another body, equally as respectable, ancestor worship is primordial. But nature worship and ancestor worship are concomitant parts of the same religion, and belong to a status of culture highly advanced and characterized by the invention of conventional pictographs. In North America we have scores or even hundreds of systems of mythology, all belonging to a lower state of culture.

Let us hope that American students will not fall into this line of error by assuming that zoötheism is the lowest stage, because this is the status of mythology most widely spread on the continent.

Mythology is primitive philosophy. A mythology—that is, the body

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of myths current among any people and believed by them—comprises a system of explanations of all the phenomena of the universe discerned by them; but such explanations are always mixed with much extraneous matter, chiefly incidents in the history of the personages who were the heroes of mythologic deeds.

Every mythology has for its basis a theology—a system of gods who are the actors, and to whom are attributed the phenomena to be explained—for the fundamental postulate in mythology is “some one does it,” such being the essential characteristic of subjective reasoning. As peoples pass from one stage of culture to another, the change is made by developing a new sociology with all its institutions, by the development of new arts, by evolution of language, and, in a degree no less, by a change in philosophy; but the old philosophy is not supplanted. The change is made by interual growth and external accretion.

Fragments of the older are found in the newer. This older material in the newer philosophy is often used for curious purposes by many scholars. One such use I wish to mention here. The nomenclature which has survived from the earlier state is supposed to be deeply and occultly symbolic and the mythic narratives to be deeply and occultly allegoric. In this way search is made for some profoundly metaphysic cosmogony; some ancient beginning of the mythology is sought in which mystery is wisdom and wisdom is mystery.

The objective or scientific method of studying a mythology is to collect and collate its phenomena simply as it is stated and understood by the people to whom it belongs. In tracing back the threads of its historical development the student should expect to find it more simple and childlike in every stage of his progress.

It is vain to search for truth in mythologic philosophy, but it is important to search for veritable philosophies, that they may be properly compared and that the products of the human mind in its various stages of culture may be known; important in the reconstruction of the history of philosophy; and important in furnishing necessary data to psychology. No labor can be more fruitless than the search in mythology for true philosophy; and the efforts to build up from the terminology and narratives of mythologies an occult symbolism and system of allegory is but to create a new and fictitious body of mythology.

There is a symbolism inherent in language and found in all philosophy, true or false, and such symbolism was cultivated as an occult art in the early history of civilization when picture-writing developed into conventional writing, and symbolism is an interesting subject for study, but it has been made a beast of burden to carry packs of metaphysic nonsense.

### SOCIOLOGY.

Here again North America presents a wide and interesting field to the investigator, for it has within its extent many distinct governments, and these governments, so far as investigations have been carried, are found to belong to a type more primitive than any of the feudalities from which the civilized nations of the earth sprang, as shown by concurrently recorded history.

Yet in this history many facts have been discovered suggesting that feudalities themselves had an origin in something more primitive. In the study of the tribes of the world a multitude of sociologic institutions and customs have been discovered, and in reviewing the history of feudalities it is seen that many of their important elements are survivals from tribal society.

So important are these discoveries that all human history has to be rewritten, the whole philosophy of history reconstructed. Government does not begin in the ascendancy of chieftains through prowess in war, but in the slow specialization of executive functions from communal associations based on kinship. Deliberative assemblies do not start in councils gathered by chieftains, but councils precede chieftaincies. Law does not begin in contract, but is the development of custom. Land tenure does not begin in grants from the monarch or the feudal lord, but a system of tenure in common by gentes or tribes is developed into a system of tenure in seigniorialty. Evolution in society has not been from militancy to industrialism, but from organization based on kinship to organization based on property, and alongside of the specializations of the industries of peace the arts of war have been specialized.

So, one by one, the theories of metaphysical writers on sociology are overthrown, and the facts of history are taking their place, and the philosophy of history is being erected out of materials accumulating by objective studies of mankind.

### PSYCHOLOGY.

Psychology has hitherto been chiefly in the hands of subjective philosophers and is the last branch of anthropology to be treated by scientific methods. But of late years sundry important labors have been performed with the end in view to give this department of philosophy a basis of objective facts; especially the organ of the mind has been studied and the mental operations of animals have been compared with

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those of men, and in various other ways the subject is receiving scientific attention.

The new psychology in process of construction will have a threefold basis: A physical basis on phenomena presented by the organ of the mind as shown in man and the lower animals; a linguistic basis as presented in the phenomena of language, which is the instrument of mind; a functional basis as exhibited in operations of the mind.

The phenomena of the third class may be arranged in three sublasses. First, the operations of mind exhibited in individuals in various stages of growth, various degrees of culture, and in various conditions, normal and abnormal; second, the operations of mind as exhibited in technology, arts, and industries; third, the operations of mind as exhibited in philosophy; and these are the explanations given of the phenomena of the universe. On such a basis a scientific pshyeology must be erected.

As methods of study are discovered, a vast field opens to the American scholar. Now, as at all times in the history of civilization, there has been no lack of interest in this subject, and no lack of speculative writers; but there is a great want of trained observers and active investigators.

If we lay aside the mass of worthless matter which has been published, and consider only the material used by the most careful writers, we find on every hand that conclusions are vitiated by a multitude of errors of fact of a character the most simple. Yesterday I read an article on the "Growth of Sculpture," by Grant Allen, that was charming; yet, therein I found this statement:

So far as I know, the Polynesians and many other savages have not progressed beyond the full-face stage of human portraitre above described. Next in rank comes the drawing of a profile, as we find it among the Eskimos and the bushmen. Our own children soon attain to this level, which is one degree higher than that of the full face, as it implies a special point of view, suppresses half the features, and is not diagrammatic or symbolical of all the separate parts. Negroes and North American Indians cannot understand profile; they ask what has become of the other eye.

Perhaps Mr. Allen derives his idea of the inability of the Indians to understand profiles from a statement of Catlin, which I have seen used for this and other purposes by different anthropologists until it seems to have become a *favorite fact*.

Turning to Catlin's *Letters and Notes on the Manners, Customs, and Condition of the North American Indians*, (vol. 2, page 2) we find him saying:

After I had painted these, and many more whom I have not time at present to name, I painted the portrait of a celebrated warrior of the Sioux, by the name of Mah-to-chee-ga (the Little Bear), who was unfortunately slain in a few moments after the picture was done by one of his own tribe; and which was very near costing me my life, for having painted a side view of his face, leaving one-half of it out of the picture,

which had been the cause of the affray; and supposed by the whole tribe to have been intentionally left out by me, as "good for nothing." This was the last picture that I painted amongst the Sioux, and the last, undoubtedly, that I shall ever paint in that place. So tremendous and so alarming was the excitement about it that my brushes were instantly put away, and I embarked the next day on the steamer for the sources of the Missouri, and was glad to get underway.

Subsequently, Mr. Catlin elaborates this incident into the "Story of the Dog" (vol. 2, page 188 *et seq.*)

Now, whatsoever of truth or of fancy there may be in this story, it cannot be used as evidence that the Indians could not understand or interpret profile pictures, for Mr. Catlin himself gives several plates of Indian pictographs exhibiting profile faces. In my cabinet of pictographs I have hundreds of side views made by Indians of the same tribe of which Mr. Catlin was speaking.

It should never be forgotten that accounts of travelers and other persons who write for the sake of making good stories must be used with the utmost caution. Catlin is only one of a thousand such who can be used with safety only by persons so thoroughly acquainted with the subject that they are able to divide facts actually observed from creations of fancy. But Mr. Catlin must not be held responsible for illogical deductions even from his facts. I know not how Mr. Allen arrived at his conclusion, but I do know that pictographs in profile are found among very many, if not all, the tribes of North America.

Now, for another example. Peschel, in *The Races of Man* (page 151), says:

The transatlantic history of Spain has no case comparable in iniquity to the act of the Portuguese in Brazil, who deposited the clothes of scarlet-fever or small-pox patients on the hunting grounds of the natives, in order to spread the pestilence among them; and of the North Americans, who used strychnine to poison the wells which the Redskins were in the habit of visiting in the deserts of Utah; of the wives of Australian settlers, who, in times of famine, mixed arsenic with the meal which they gave to starving natives.

In a foot-note on the same page, Burton is given as authority for the statement that the people of the United States poisoned the wells of the redskins.

Referring to Burton, in *The City of the Saints* (page 474), we find him saying:

The Ynta claim, like the Shoshonee, descent from an ancient people that immigrated into their present seats from the Northwest. During the last thirty years they have considerably decreased, according to the mountaineers, and have been demoralized mentally and physically by the emigrants. Formerly they were friendly, now they are often at war with the intruders. As in Australia, arsenic and corrosive sublimate in springs and provisions have diminished their number.

Now, why did Burton make this statement? In the same volume he describes the Mountain Meadow massacre, and gives the story as related by the actors therein. It is well known that the men who were engaged in this affair tried to shield themselves by diligently publishing that it was a massacre by Indians incensed at the travelers because they had poisoned certain springs at which the Indians were wont to obtain their

supplies of water. When Mr. Burton was in Salt Lake City he, doubtless, heard these stories.

So the falsehoods of a murderer, told to hide his crime, have gone into history as facts characteristic of the people of the United States in their treatment of the Indians. In the paragraph quoted from Burton some other errors occur. The Utes and Shoshonis do not claim to have descended from an ancient people that immigrated into their present seats from the Northwest. Most of these tribes, perhaps all, have myths of their creation in the very regions now inhabited by them.

Again, these Indians have not been demoralized mentally or physically by the emigrants, but have made great progress toward civilization.

The whole account of the Utes and Shoshonis given in this portion of the book is so mixed with error as to be valueless, and bears intrinsic evidence of having been derived from ignorant frontiersmen.

Turning now to the first volume of Spencer's *Principles of Sociology* (page 149), we find him saying:

And thus prepared, we need feel no surprise on being told that the Zuni Indians require "much facial contortion and bodily gesticulation to make their sentences perfectly intelligible;" that the language of the Bushman needs so many signs to echo out its meaning, that "they are unintelligible in the dark;" and that the Arapahos "can hardly converse with one another in the dark."

When people of different languages meet, especially if they speak languages of different stocks, a means of communication is rapidly established between them, composed partly of signs and partly of oral words, the latter taken from one or both of the languages, but curiously modified so as hardly to be recognized. Such conventional languages are usually called "jargons," and their existence is rather brief.

When people communicate with each other in this manner, oral speech is greatly assisted by sign-language, and it is true that darkness impedes their communication. The great body of frontiersmen in America who associate more or less with the Indians depend upon jargon methods of communication with them; and so we find that various writers and travelers describe Indian tongues by the characteristics of this jargon speech. Mr. Spencer usually does.

The Zuni and the Arapaho Indians have a language with a complex grammar and copious vocabulary well adapted to the expression of the thoughts incident to their customs and status of culture, and they have no more difficulty in conveying their thoughts with their language by night than Englishmen have in conversing without gaslight. An example from each of three eminent authors has been taken to illustrate the worthlessness of a vast body of anthropologic material to which even the best writers resort.

Anthropology needs trained devotees with philosophic methods and keen observation to study every tribe and nation of the globe almost *de novo*; and from materials thus collected a science may be established.