have many of the attractions of a foreign country, which are entirely unknown to most scientific men of the eastern, central and western states. Further, it is a real privilege for the scientific men and other residents of the city to entertain the association for the first time, and the entertainments and excursions will be more attractive and characteristic than at the ordinary meetings.

The American Chemical Society, The Botanical Society of America and some seven other societies will meet with the association at New Orleans. But many of the national scientific societies will this year meet in widely separated places, as shown in the program printed under 'Societies and Academies.' It is natural that these societies, whose programs depend largely on a compact group of members, could not undertake the wider mission of the American Association. It is also true that there are attractions in smaller meetings in university towns, which can not be sacrificed without regret. It is to be hoped that ultimately convocation week will be left free for a national meeting of scientific men, and that the association will in the summer organize a less formal meeting at one of the smaller university towns or other places where social life may be informal and pleasant. Such a plan is proposed next year for Ithaca. The national societies devoted to special sciences will of course meet when and where their interests will be best served, but it is not likely that it will prove advantageous to meet at the same time as the larger group and in a different place. We may in any case count on an increasing spirit of cooperation among our scientific men and a gradual elimination of difficulties that are inevitable when adjustments must be made to new conditions. Perhaps all that can be expected or is desirable at present is that all scientific men should meet at the same place every second or third year. It was intended to arrange for a common meeting in Boston next year, but owing to the fact that the American Medical Association and the International Zoological Congress will meet in that city, it may be found wise to postpone the Boston meeting. In that case New York City appears to be the most desirable place for a convocation week meeting of the scientific men of the country.

ANTHROPOLOGY AT THE LOUISIANA PURCHASE EXPOSITION.[1]

I.

THE motive of the department was to diffuse and incidentally to increase knowledge of man and his works. Hence, the primary purpose was essentially educational; and the work of the department was distinctive, if not unique, in that it embraced research in a degree comparable with that accorded to original work in modern institutions of higher learning.

Anthropology is the science of man. In the broad sense it deals with all mankind and their attributes. Its aims and purposes are connected with man as an organism, and as the type of the class of living things distinguished by mentality; also it deals with mankind as an assemblage of

[1] Opening chapter of the final report of the chief of the department of anthropology, entitled 'Motive and Scope of the Department'; published with approval of Hon. David R. Francis, president, and Hon. F. J. V. Skiff, director of exhibits of the Louisiana Purchase Exposition.

varieties or races, and as social creatures united by language and law and organized in families, communities, societies, commonwealths and nations. In like manner the science in its broader aspects deals with man as a producer or creator of artificial things, and so as a progressive power in the conquest of lower nature; and in its highest aspect the science deals with the development of both man and his works, and seeks to trace the paths of human progress not only in the interest of definite knowledge concerning our own kind, but in the hope of wiser guidance toward future progress.

Such, in brief, is the broad science of anthropology; and of such were the field and the motives of the department.

II.

Practically, the field of anthropology is divided among several subsciences, each pertaining to a class of human attributes:

1. The science or subscience of man considered as an organism, or as the highest genus and species of the animal realm, is called physical anthropology or andrology; its object-matter is the individual human organism, or anthropos; its methods include anthropometry and the comparison of the characteristics obtained thereby. It embraces anatomy and physiology, and is closely related to the beneficent sciences connected with medical theory and practise.

2. Of late, the science of the human mind and of man as an organism dominated by mental power is called psychology; its object-matter is the psyche, individual and collective; it deals with the brain and nervous system considered in relation to bodily movements and actions, both individual and collective; its methods embrace psychometry and the comparison of the characters of individuals and classes ascertained thereby. Especially in the practical applications which grew up before the science assumed systematic form, it embraces several branches of more or less definite knowledge, and is related to the most important directive and repressive instrumentalities of modern life, including education, alienism and social regulation.

3. The still broader science of the human activities, or of man as a producer or creator, and also of human productions, is commonly known in its descriptive aspect as demography and in its systematic aspect as demology; its object-matter is the demos, or artificial group; it deals with what men do; and it embraces several subsciences each dealing with an important class of activities, viz., arts, industries, languages, laws and philosophies.

4. The science of man considered as an assemblage of races is known as ethnology; its object-matter is the ethnos, or natural group, of mankind defined in terms of physical, of mental, or of activital features or of these combined; and its methods combine those of the fundamental sciences (andrology, psychology and demology). In its descriptive aspect this is known as ethnography.

5. The several sciences dealing with man and his works touch that development or phylogeny of mankind in which lie the chief interest and value of anthropology; for whatever the immediate aims, it is the ultimate aim of the science to trace the course of human progress and classify individuals and peoples in terms of that progress, and thus to learn so much as may be of the origin and destiny of man. Up to the present, the field of systematic knowledge dealing with the progress of mankind (the science of human phylogeny, sometimes called anthropogeny) has not been clearly defined; for ever since Darwin and Huxley and Haeckel discussed the evolution of man, a third of a century ago, this has been the frontier of anthropology, the

campus of the leading pioneers, the virgin soil of teeming yield whence the richest fruits of each passing decade are gathered. Naturally, in view of the vigorous vitality symbolized by the Universal Exposition of 1904, the virile subject of human progress formed the leading motive of the department of anthropology—the exposition, indeed, affording the world's finest opportunity for framing the science and setting is on a firm basis. The objects-matter embrace the generations, families, stocks and races of men, with the human activities and products in their endless variety; the methods comprise observations and comparisons of growth, heredity, viability, fecundity, and development by exercise and cultivation, together with manufacture and other forms of production. Its leading divisions are: (1) archeology, or the science of human relics, with the human paleontology covering fossil and other remains of prehistoric man, and the paleography dealing especially with ancient writings; (2) history; and (3) the unclassified and nameless body of knowledge concerning current conditions and events in the human world.

Such, in general terms, are the main divisions of anthropology, outlined with special reference to the work of the department.

III.

It is a leading aim of anthropology to classify the peoples of the world in convenient and useful ways; and different classific systems have been devised.

The prevailing classification of mankind during the eighteenth and nineteenth centuries was ethnic, *i. e.*, the peoples of the world were divided into natural groups, defined chiefly by physical characteristics, called races. Partly by reason of limited information concerning the remoter peoples, ethnologists differed somewhat as to the definition and number of the races of mankind; some held that the world's peoples were better divided into twenty or thirty or even into fifty or more races, while others found it more convenient to reduce the number. During the later half of the nineteenth century there was a strong tendency to reduce the races or principal varieties of mankind to five, viz.: (1) the Caucasian or white race, especially characteristic of the central and western portions of the Eurasian continent; (2) the Mongolian or yellow race, inhabiting the eastern-central portion of the same continent; (3) the Malayan or brown race, occupying the southeastern border and islands; (4) the African or black race, inhabiting the continent of Africa; and (5) the Amerind or red race, inhabiting the two continents of America. This classification is simple and convenient, but open to the objection that certain peoples hardly fit any one of the five classes; the Japanese are neither white nor yellow nor brown, much less red or black, forming, indeed, an ethnologic puzzle, if not a distinct race; while the Blackfellows of Australia and the Papuans of New Guinea, the tribes of eastern Madagascar, various islanders of Polynesia, the Ainu of northern Japan, certain peoples of southern Eurasia with the Laps and Tartars of the north, the Eskimo of the western hemisphere, and several other peoples depart in greater or less measure from the five race-types.

From the earliest times, thinking men classed mankind in two or more divisions, of which the lower was regarded as ranking with brutes; and this view survives to-day among most primitive peoples. So the ancients divided the human genus into two species, *Homo sapiens* and *Homo brutus,* and held the former to possess and the latter to lack mind and soul. As exploration proceeded and knowledge of remoter peoples progressed during recent

centuries, scientific observers were more impressed by the resemblances among than by the differences between the human types, and were unable to discover or define the brutal species recognized by the ancients. Yet the question of affinity or relationship between man and lower organisms—and no greater question has arisen in all human history—refused to down, and reappeared in inquiries concerning the origin of man. In England Huxley and Darwin, and in Germany Haeckel, showed that the structure of the lowest humans more nearly resembles that of the highest quadrumanes (the 'four-handed' ape-like animals) than that of the highest humans, and from all known facts of both structure and development drew the inference that just as lower humans grow into higher types, so, in earlier times, some of the higher quadrumanes grew into lower humans; and much was said of the prospective finding of a 'missing link' combining more nearly than any known organisms the characters of human and quadrumane beings—a prophecy verified a quarter-century later by the discovery of *Pithecanthropus erectus* (erect monkey-man) in Java. The effect of the discussions and discoveries was to keep alive the idea of the close connection between man and the lower animals. Even before the discovery in Java, renowned anthropologists in Europe, and especially in Germany, noted a correspondence between the white, yellow, brown and black races of the old world and four leading types of quadrumanes, and suggested that the four human stocks were fundamentally distinct and had descended (or ascended) from the subhuman species. From this suggestion sprang the doctrine of polygenesis, which was opposed by those who preferred the theory of monogenesis, *i. e.*, the descent of all mankind from a single pair—the theory fostered by tradition and the doctrine of evolution, and originally held by all peoples. One effect of the ensuing discussion was to fix more clearly in all minds the classification of the peoples of the old world in four ethnic divisions or races; another was to keep in mind the idea of our ancestors that at least some men and the lower animals are closely akin. At every stage the views of the experts found their way into general thought, too often with some distortion; and partly for this reason all the world desires to see the lowest and remotest types of mankind, preferably in connection with those higher quadrumanes whose man-like features and movements form a source of endless interest to old and young alike.

In the early discussion of types of mankind and of human prototypes, little account was taken of the western hemisphere and the red race; when not altogether neglected, the aborigines of the American continents were commonly dismissed as emigrant offspring of an old-world stock admitted to the new world during prehistoric times over Behring Strait or some other transoceanic way. Especially during the later half of the nineteenth century the native tribes of the western hemisphere were brought under systematic observation, as were various other little-known peoples; and the observers were impressed by the number of aberrant or outstanding types—peoples like the Japanese, the Papuans and others who fail to conform to the conventional varieties or subspecies of *Homo sapiens*. The new world natives were easily defined as an additional variety or race, at first miscalled Indian in perpetuation of Columbus's error, then known generally as American, and afterward designated specifically as the Amerind type or race; yet even this race was found to present a considerable variety of physical types or subspecies, such as the Eskimo of the north, the so-called 'giants' of Patagonia, the light-skinned and almost flaxen-haired deni-

zens of certain mountain districts, and other peoples departing from the copper-tinted, black-maned and medium-size standards. In seeking to classify the local tribes, ethnologists were led to note industrial and social (*i. e.*, activital) features in addition to physical characters; and so began a system of classifying peoples on the basis of conduct, or in terms of what they *do* as human creatures rather than what they merely *are* as animal beings. In Europe there was a tendency to classify both living peoples and the relics of their precursors in terms of industrial development, and the stone age, the bronze age and the iron age were defined; in America the native tribes were classified first by the statesman-scientist Gallatin, and more fully by the scientist-statesman Powell, in terms of language; while some authorities classified so many as might be of the world's peoples according to their respective modes of social organization. An outcome of these essays was a system in which known peoples are combined in groups defined by distinctively human attributes; defined on the industrial basis, the groups were some time denoted (1) Paleolithic, (2) Neolithic, (3) Bronze and (4) Iron, and afterward and more broadly (1) Protolithic, (2) Technolithic, (3) Metallurgic and (4) Mechanical; and defined on the basis of social organization the peoples were grouped as (1) Maternal (or Avuncular), (2) Patriarchal, (3) Civic and (4) Democratic—the classes or groups in either case representing types of culture. A more important outcome was clearer recognition of the classific distinctness of man, coupled with living realization that, whatsoever his genetic affinities, man as an active and creative being rises far superior to any quadrumane or other animal prototype—for even the lowest human is an upright, two-handed and two-footed hairless body with his face to his fellows, while even the highest quadrumane (or quadruped) is but a groveling and bristly beast with his gaze and half-hands on the ground.

As the world's peoples and tribes were classed by race and culture jointly, it was soon seen that the types of culture really represent grades or stages in development, and also that the exercise of function and organ attending culture is a material factor in development; and hence that the course of human progress is not that of vital evolution alone, but one affected increasingly through the ages by activital forces arising in and with man himself. Like other beings of the animal realm, man is indeed a creature of birth and heredity and is influenced by environment; but through his collective activities, themselves the product and measure of culture, it becomes his chief function to modify environment and make conquest over lower nature. Even the primal factor of heredity passes partly (and increasingly) under social control; while the races occasionally blend, sometimes with so ill effect that the mixed family fades, yet often with so good result that to-day the world's peoples may be graded by ethnic complexity, the world's strongest blood being the world's most-mixed blood—and this blending reveals a law of convergent development (or intensification) extending the doctrine of polygenesis far beyond the four old-world types and suggesting that any or all of the more isolated tribes may represent primary stocks developed independently from fit local prototypes. So in the human realm the activities are paramount; and mankind may be classified either independently of or in conjunction with racial affinities in accordance with the activities and with the culture-stages defined in terms of the activities. Classified in this way, the peoples of the world fall into one or another of the four principal stages according to the degree of their advancement in some or all

of the activities; and it is the special merit of this classification that it is based on and in turn becomes an index to what the peoples habitually do, and hence to their aptitude and capacity for uniting with other peoples to promote human interests and the welfare of the world. Reduced to a scheme somewhat more consistent and arbitrary than might be found in any single continent, the activities and the principal stages of their development are as follows:

Activities.	*First Stage.*	*Second Stage.*	*Third Stage.*	*Fourth Stage.*
Arts,	Mimetic,	Symbolic,	Conventionalistic,	Idealistic.
Industries,	Imitative,	Divinative,	Constructive,	Inventive.
Laws,	Maternal,	Patriarchal,	Royal,	Social.
Languages,	Demonstrative,	Descriptive,	Associative,	Reflective.
Philosophies,	Zooic,	Theurgic,	Metaphysic,	Scientific.

When the world's peoples are classified by culture-grade, or in terms of progress from the lowest to the highest stages, it at once becomes manifest that they are arranged in accordance with mentality, knowledge and cerebral capacity, and measurably (with a few apparent exceptions) in accordance with general physical development, including strength, endurance and viability. It is especially significant that the distinctively human attributes of mentality and knowledge characteristic of each culture-grade are essentially alike among all the peoples pertaining to that grade, however remote their homes and however diverse their physical characters; for these correspondences reveal a comprehensive law now recognized as forming one of the five cardinal principles of science: the first of these is the indestructibility of matter, established by Lavoisier; the second is the persistence of force, discovered by Rumford and Joule; the third is the uniformity of nature, demonstrated by Tyndall and Spencer; the fourth is the development of species, brought to light by Darwin, Wallace and Huxley; the fifth is the responsivity of mind, suggested by Bacon and established by current researches in anthropology. The fundamental quality of these laws is such that the phenomena of nature (including those of the human realm) can not be interpreted without recognizing or at least postulating all of them; and that no other postulates are required for the interpretation of phenomena. The last-named law summarizes observation in such wise as to show that all mankind are closely bound in a potential if not actual community of thought, sentiment, aspiration and interest; and that, although the germ of mentality springs among the lower organisms, the psychic chasm separating man from the beasts is far wider than the physical break. Now when the world's tribes and peoples are classified by mind and knowledge, they fall into groups each characterized by those activital relations and motives peculiar to particular stages in the conjoint development of mental and manual processes; so that the final classification is a systematic arrangement of man and his works, both viewed in the broadest aspect and reduced to terms of works. Somewhat provisionally expressed in a conspectus, which like any other tabular arrangement is simpler and more arbitrary than the apparent chaos of unreduced facts might seem to demand, the better-studied classes (industries and industrial products, laws and institutions, and philosophies) may be represented as on p. 817.

Such are the leading classifications of mankind, by race, by genetic affinity, by activity, by stages of activital development, and by those steps in mental progress which during the ages have raised man from the

plane of the animal to his distinct and exalted position as a progressive conqueror of lower nature; and of such are man and the works of his hand and mind.

	Stage.	Nature.	Relation.	Motive.	Type-product.	
Industries.	I.	Protolithic,	Imitative,	Zoomimic,	Organ-adjunct,	Age of stone.
	II.	Technolithic,	Divinative,	Fatalistic,	Implement,	
	III.	Metallurgic,	Constructive,	Dynamic,	Tool,	Age of metal.
	IV.	Panurgic,	Inventive,	Kinetic,	Device,	
Laws.	I.	Maternal,	Adelphiarchal,	Zoocratic,	Clan,	Tribal society.
	II.	Paternal,	Patriarchal,	Theocratic,	Gens,	
	III.	Hereditary,	Oligarchal,	Aristocratic,	Kingdom,	National society.
	IV.	Electional,	Representative,	Democratic,	Republic,	
Philosophies.	I.	Zootheistic,	Instinctive,	Zoic,	Animism,	Age of myth.
	II.	Mythologic,	Subjective,	Theurgic,	Mysticism,	
	III.	Metaphysic,	Deductive,	Taxic,	Scholasticism,	Age of reason.
	IV.	Scientific,	Originative,	Telic,	Research,	

IV.

In the general view (in which the outlines are strengthened by classification), mankind are separated from all lower animals by certain small differences in size, form and structure, and by several large distinctions in habits of life; so that while the anatomist finds connecting links between simians and men, and while physiologists find their functions much alike, the student of broad anthropology defines man as the fire-making animal, and hence a user of cooked food and in other ways a creator of his own chief distinctions from the brutes—for all men known of themselves or from relics enslaved fire, while no lower animal masters this most potent of forces for the conquest of nature. So man stands out as a unique and dominant organism in the animal realm; and at the same time as a type or order of creative beings bound together by the power of control over natural forces for the common welfare.

The fire-maker, man, is distributed over all lands in a number of races and a still larger number of industrial and social varieties. Until recently all of both Americas was occupied by the Amerind race, and the red men were confined to these continents with their neighboring islands and a small section of adjacent Asia; nearly all of Africa was occupied by the African race, while the black men extended beyond this continent and a few neighboring islands only in a modified or negroid type; and the great Eurasian land-mass with its peninsulas and islands was the home of three races—the white men who lead and the yellow men and brown men who follow in that conquest of lower nature through the control of natural forces begun by the making of fire. The physical variations were least in America, more in Africa, most in Eurasia, where the physical break between highest and lowest (albeit spanned by numberless links) is greater than the chasm between the lowest human and the simian.

Until within a few centuries, most of the fire-making folk remained isolated, partly because of intervening seas, chiefly because of intervening gulfs of faith and custom; though some tribes were united in confederacies in which the chief bond was similarity in belief, the next similarity in speech, and the next similarity in work and industrial standards. In North America there were at the time of exploration some 1,200 or more tribes speaking some 75

totally distinct languages, each in several dialects; some of these were united in confederacies, like the Iroquois or Six Nations, and the Dakota or Seven Councilfires, and others lived in an inchoate feudal system, like the Montezuma group of Mexico; some tribes traced kinship in the female line and gave little thought to paternity, while about an equal number (including many of the wanderers and the most advanced sedentary folk) rested their social laws on paternal kinship; while the food-sources, implements, customs and habitations varied first with local peculiarities of habitat and in less degree with ancestral customs and migrations —the range running from corn-growing dwellers in stone, adobe and palm-wattled houses in the southwest, to hunting and fishing folk living in birch-bark wigwams in the east and thence to walrus-hunting occupants of snow-houses in the north and back to the buffalo hunters of the plains lodging in skin tipis in summer and earth-houses in winter, and thence to the salmon fishermen in single-log boats and hewn-slab houses (both consecrate unto carved and painted totems) in the northwest. In South America the fiducial and linguistic, social and industrial varieties were fully half as many; and the range from the stalwart Patagonians of the south to the puny woodsmen of the upper Orinoco, or from the knifeless Guayaqui savages to the aqueduct-building Inca kings, was even wider than that of North America. In Africa there were hundreds of tribes, speaking scores of distinct languages, of which some suggest the inconsequent chatter of Kipling's Bandarlog and really express some community of interest and feeling between lowly men and lower monkeys; and the tribes belong to two leading physical types, the shy and secretive aboriginal people of pygmy stature, and their full-size conquerors—sometimes stalwart and strong-limbed and of heroic stature, who long ago overspread the dark continent, bartering in iron and ivory and gold and often in slaves, and still live in a curious condition of mutual toleration and interdependence with the half-tamed little people. In Australia there were at least scores of negroid tribes, or Blackfellows, speaking a dozen or more distinct and notably primitive tongues, in which, as among some of the African pygmies, bird-like clicks and beast-like gutturals and monkey-like chatterings served in lieu of well-defined words, if not of entire parts of speech; though timid and generally peaceful, the tribes were often at bloody war, and though varying in physical form and feature, they were much alike in that few could count above five, none above seven or nine, and many stopped at three, in that their marriage laws were the most elaborate known, and in that many of the tribes merged sex-differences by ceremonial and surgical devices. On the miniature continent of New Zealand dwelt a composite people whose physical types were largely welded through similarity in esthetic and industrial and philosophic traits and customs, including the world's most elaborate system of heraldic genealogy in the form of facial tattooing; and in Oceanica most of the hundreds of islands and insular groups were inhabited by distinct tribes of two or three dominant physical types, each tribe commonly speaking its own language and pursuing its own special vocations with its own peculiar devices. In Asia there were the world's largest populations in three races, each including divers physical types; even the most homogeneous—the Mongolian—comprised a dozen or more divisions whose differences in speech and customs are not yet fully realized, partly because most of them are dominated alike by a vigorous Manchu dynasty and the terrifying Yellow Dragon; while the northern steppes were ranged by a dozen tribes of varying physique and speech and faith,

and the southern plains and foothills and jungles gave homes to literal hundreds of peoples, distinguished by physical type, by speech and faith, by caste, and by distinctive customs or clear territorial limits—and out of this hive of humanity sprang all the great religions the world has known. In the western fraction of the Eurasian land-mass there were, a half-century ago, several scores of tribes varying in physical type from the blond Dane and rufous Viking to the swart Iberian, speaking some dozens of distinctive tongues, adoring the shrines of countless nature-deities, and garnering germs of drama and letters and philosophy in the Walhalla of the north, the Elysium of the south, and the legion lost fanes and faiths of the middle lands. As the centuries sped, the tribes and tongues were partly blent through conquest by Aryan leaders who carried the cult and the color of the Caucasus northwestward, until by the middle of our era the shore-lands of the North Sea region throbbed with the most commingled blood and the most complex culture of the globe—then the human blood spanned the straits and rose pent in Britain to flow out in streams of compelling vigor, bridging all seas and reaching the remotest lands of the earth. All these—of the Americas and Africa, Australia and Oceanica, Asia and Europe—are among the peoples whose multifarious resemblances and differences appeal to every observer. They are alike in that all are fire-makers and so control thermic force for the weal of their kind through conquest over other nature; and with this suggestion of force as the primary factor in human affairs, the apparent chaos of humanity falls into order—for all are controlled by a few types of law, *i. e.*, of human force directed to human ends. The simplest type of law is that of control of the maternal family, under which the mother protects and directs her own children, appealing when needful to her own mother's strongest offspring, *i. e.*, her eldest brother; and this was the law of the less-developed aborigines of the Americas, Africa, Australia, Oceanica and Asia. More comprehensive is the law of control of the paternal family group, in which the physically stronger father guards and guides his own children and their offspring and dependents and those of his younger (*i. e.*, weaker) brethren; this law befits militancy and nomadic habit and the pastoral condition, and prevailed among the more advanced aborigines of America and Africa and many of the peoples of Oceanica and Asia. Still more comprehensive is the law of control of tenure; in arid lands, where the chief values inhere in springs and wells with adjacent lands, the control is essentially territorial, and in the east Mediterranean region the law gave demos and urbs—*i. e.*, the artificial group and the ancient city; in fruitful lands, where the chief values inhere in occupations and products and good-will, the law is essentially industrial, and in India yielded caste, and elsewhere trades and guilds, *i. e.*, overlapping artificial groups; and in broken country (including archipelagoes) the control is partly territorial and partly industrial, and in eastern Asia, most of Europe, and much of Oceanica, the law produced the province—*i. e.*, the more or less independent region of interdependent interests: and everywhere the basis of the law was economic and proprietary, and its observance reacted on the mind in such manner as to awaken recognition—especially in Greece and Rome and Kong (China) and more especially in Palestine—of the correlative interests of neighbors. While the law of control of tenure rose above the law of control of kindred in principle, the two ran together in practise so that the demos and urbs,

caste, the province, and the nation into which the urbs and province grew, were long controlled by family lines. Most comprehensive in applicability though simplest in ethical essence of all the fundamental types of law is that of control of the individual for the common good; in spirit this law rises above consanguinal and proprietary bonds and gives origin to government of the people, by the people, for the people. Thus, just as man, the fire-maker, rises above lower nature through control of external force, so does man, the law-maker, rise in successive groups above the lower of his own kind through control of the movements and motives reflecting his own internal force; and viewed in the light of law, the apparent chaos of uncounted thousands of the world's tribes and peoples, speaking unreckoned hundreds of tongues and pursuing innumerable vocations, is readily reduced to order.

Viewed as a law-maker, man reveals the stages of his own progress from a primal state to the condition of highest enlightenment—from the low level of the Australian Blackfellows or the African pygmies to the elevated plane of constitutional government. The law of the maternal family befits only a sparse population living largely in a state of nature, *i. e.*, small and isolated tribes of too low intelligence to recognize paternity or organize confederacies, to devise economic systems or to realize humanitarian motives and institutions; in this stage scores of living tribes still rest, while others (like the Muskwaki and Cocopa tribes, some of the Pueblo folk, and a number of Polynesian peoples) are just emerging from it; and its conditions are those under which all early men must have lived. The law of the paternal family is adapted to a denser population of industrial habits, *i. e.*, to large tribes entering on pastoral or agricultural life, and of intelligence sufficient to recognize paternity and to confederate with neighboring tribes for defense and offense, but not to frame economic systems or humanitarian institutions; the clearest early picture of this stage is that afforded by the children of Israel, and its best living illustrations are found among the aborigines of America; and the transition to the next higher stage is recounted in the earliest writings of many peoples and in the interpretations of these by modern genius—such as Fustel de Coulanges's 'Ancient City,' and Matthew Arnold's 'Light of Asia' and 'Light of the World.' The law of tenure is adjusted to still denser populations of commingled lineage, living in large and growing communities, *i. e.*, to industrial peoples gathering into cities and spreading over countries under the influence of intelligence sufficient to frame economic systems coupled with cults tending to foster humanitarian impulses and institutions; the development of this stage makes up most of the world's written history; and the movement toward the next is marked by nearly every popular revolt and by most cabinet revolutions of modern times. The law of the individual (or of constitutional citizenship) is framed for large and progressive industrial populations, *i. e.*, interdependent peoples of intelligence sufficient to recognize lineage and organize alliances, to create economic systems and frame humanitarian institutions, and to live and move in accordance with those principles of benevolence and tolerance and justice underlying all law. It is especially noteworthy (because too commonly overlooked) that in each stage the law is more formal and rigorous and better known in its letter than in the next higher stage, *i. e.*, that with each step in progress the control passes more and more from external domination toward internal force—the inner sense of right among men and

over nature. The way is long from benighted Blackfellow or savage Seri to the apostle of a kindly cult, the founder of a parliament, or the framer of a constitution; yet the world's laws are its mile stones.

Throughout its growth law is the expression of the best judgment and the highest intelligence of the time; hence it affords a measure of mental capacity, or of mind, in each stage of man's progress from savagery toward enlightenment. In each stage, too, the law is connected with arts and industries and with language and philosophy, expressing corresponding degrees of intelligence and affording other yet cognate measures of the mind of the time; and since the arts and industries, the languages and philosophies, are, like the law, the product of progressively expanding intelligence, it becomes clear that mind is the mainspring of man's progress, the special force underlying human development. In this view, the world's peoples are united in a solidarity of growing interdependence in which the less advanced may profit by association with the more advanced, and all may—indeed, must—proceed toward higher and higher intellectual advance, and toward more and more complete conquest over lower nature. In this view, too, the world's tribes and peoples illustrate steps in the development of intelligent man; and each is at once an object-lesson in the ill-written history of the human past and an object for beneficent example and effort—for man has no higher duty than that of mending the way of human progress. In this, as in every other view, the way is long from savage shaman to an Alexander or a Cæsar, from barbaric bandit to a Cromwell or a Washington, from rapacious elder-woman of a maternal clan to a Jeanne d'Arc or a Florence Nightingale—the way is long from a pygmy or an Ainu to a Roosevelt or a Francis: yet the way is so clear that even those who run may read aright if only the steps are shown in living examples.

V.

As the scope of the department was finally defined, it was necessarily adjusted to economic conditions arising from the curtailment, amounting to nearly 98 per cent., in the estimated needs.[2] It was affected also by the unprecedented breadth of scope of the Universal Exposition of 1904; for before the department was finally vitalized the voluntary participation of all the world's races and most of the nations was assured. The field of the department was materially affected, too, by the plans for the Philippine exposition, developed after the original estimates were submitted and before the department was finally created. Under the conditions, the scope of the department of anthropology came to comprise: (1) a representation of a limited number of the world's least-known ethnic types, *i. e.*, races or subraces defined on the physical basis; (2) a representation of a few of the world's least-known culture types, *i. e.*, of peoples defined on the activital (or mental) basis; (3) a representation of the principal methods and appliances used in research concerning the physical and mental characters of mankind; (4) a representation of typical evi-

[2] The estimate of Chairman Lehmann for maintaining the department of anthropology was $3,000,000; the appropriation was $60,000, or two per cent. of the estimate. The estimate of Chairman Chouteau for creating a department of history was $250,000; the appropriation was $15,000, or six per cent. of the estimate, the projected department being merged in the department of anthropology, where it was made one of six coordinate sections. The exposition appropriations were augmented by governmental appropriations for an Indian school and cognate exhibits amounting to $65,000. The final aggregate was thus $140,000, or 4.34 per cent. of the original estimates of $3,250,000 for anthropology and history.

dences of the steps and general course of human progress, including prehistoric vestiges, protohistoric relics and historical records; and (5) a representation of actual human development from savagery and barbarism toward enlightenment as accelerated by association and training.

1. The physical types first chosen for representation were those least removed from the subhuman or quadrumane form, beginning with the pygmy aborigines of Africa; in stature and proportions, in color and cranium, in form of face and function of limb, the little people of the African jungles are commonly considered to approach subhuman types more closely than any other variety of the genus *Homo*. Much like these are the negrito folk of interior Mindanao and other districts, brought to the fair for the Philippine exposition. The next physical type chosen was the Ainu of Hokkaido (or Yezo), the northern island of the Japanese Archipelago. The aborigines of Japan, the Ainu are of uncertain ethnic affinities (though found to comprise two subtypes divided on sex lines); while fairly developed in many respects, their small stature, their centripetal (or bodyward) movements, their use of the feet as manual adjuncts, their elongated arms and incurved hands, and their facility in climbing, approximate them to the quadrumanes and betoken a tree-climbing ancestry. Another type chosen early was the prognathous and long-armed and hence strikingly ape-like Australian Blackfellow; unhappily, one of the failures in negotiation resulting from the narrow monetary margin of the department intervened, and the exposition lost this most distinctive type of mankind not represented on the grounds—though the loss was mitigated in some measure by the ample representation from the same quarter of the globe in the Philippine exposition. Partly as a contrasting physical type, but chiefly to illustrate a variety of the Amerind race reputed since the time of Magellan to be gigantic and known as the largest type of primitive man, a Patagonian group (of the Tehuelche tribe) was selected; their stature probably exceeds the average of that of the most advanced peoples, and their bodily proportions and physical strength are almost equally heroic. Negotiations were completed also for exhibiting another native American group (the Seri Indians of Tiburon Island, Mexico), of nearly equal stature and superior strength and swiftness, though of less weighty frame, the supposed type of Swift's Brobdignagians, and the most savage tribe of North America; unfortunately, the difficulties and dangers of the expedition prevented the carrying out of the contract. Another Amerind group was selected chiefly to illustrate the consistent maintenance of two physical types in a single primitive folk—the Cocopa Indians, inhabiting the country about the mouth of the Rio Colorado in Mexico; in this tribe the men rank among the tallest and the women among the shortest of the North American natives. Other illustrations of the varying physical types among North American natives were exhibited in the Pawnee group (including Roaming Chief, probably the largest man on the grounds); the Dakota, or Sioux, group, representing the powerful and agile type of the northern plains; Pueblo folk, among the smallest of North American natives; dark-colored desert peoples (Pima and Maricopa), notable for agility and endurance, allied to the conquering Nahuatlan—or Aztec—tribe of Mexico; the short-hand and squat and flat-face natives of California (Pomo); and the singularly light-colored fisherfolk (Kwakiutl and Klaokwaht tribes) of humid Vancouver Island. None of the short and

well-rounded Eskimo type (of form befitting a frigid home and reflecting frequent frosting) were represented in the department by reason of the risk of life of Arctic folk attending the average St. Louis summer; though a concession concern on the grounds assumed the risk, to the interest and benefit of many thousands of visitors. Various other physical types were represented in connection with national pavilions or exhibits, or with concessions on the 'Pike'; and in the exhibit palaces and elsewhere within the exposition walls there were numerous typical representatives of the principal varieties of the Caucasian, Mongolian and Malayan races gathered from all the leading countries of Eurasia as well as from modern America, Africa, Australia and the larger islands of the Pacific region—and in addition to these, a constant stream of visitors from every quarter of the globe. On the whole, the gathering of ethnic types of the genus *Homo* was fairly representative, and might have been considered fully so save for the absence of the Australian aborigines, the natives of certain Pacific islands, and a few Asiatic tribes; even with these defects, the assemblage of physical types of mankind was unquestionably much more nearly complete than was ever before brought together.

2. The activital or culture types first considered comprised the lowest and least known; and the groups finally selected served to represent cultural and physical types combined. The failure of the Seri expedition and the negotiations for Australian Blackfellows was particularly regretted, since the former and some of the latter lack knife-sense and only use fire ceremonially, thus representing the lowest known culture; and to make up so far as might be this defect in the exhibits of the department, a protohistoric collection of relics and models (called the synthetic series), designed to illustrate the conquest of fire, the genesis of the knife and the development of the wheel, was brought together and installed in the anthropology building. The Seri savages of Tiburon and the Blackfellows of the Australian bush also exemplify the lowest known types of law and faith; the former are organized in maternal clans in which the clanmother (or elderwoman) is viewed as the vicar of an animal tutelary or beast-god, while her eldest brother is the executive or war-chief of the clan, and the purity of the tribal blood is maintained by most rigorous regulations concerning marriage; the latter have one of the most primitive yet complex social and fiducial organizations known, in which marriage is an elaborate arrangement, men are made to symbolize women by a severe surgery, and the control of movements and affairs is imputed to animal tutelaries. The African pygmies were selected in part to represent the maternal family (or clan) in which the intratribal control resides in an avuncular council, *i. e.*, the elder brothers of the clanmothers; though tribal law is partly overplaced by the control of full-size tribesmen, much as the industrial arts of the little people are affected by contact and barter with iron-making peoples ever since the iron age dawned probably in northern Africa some thousands of years ago. The Ainu were selected to illustrate industries connected with bodyward movements, a primitive agriculture which has produced a distinctive form of millet, specialized architecture befitting a trying climate, a most primitive musical system, and a bear-cult—and in the hope of acquainting the world for the first time with the full law and faith of a little-known primitive folk; while the Patagonians were selected to illustrate the character and use of one of the most effective

known primitive devices (the bolas) as well as the maternal or clan organization, and also to reveal their own religious feeling and philosophy. The Cocopa Indians were selected to represent on the grounds a native American agriculture pursued unbrokenly since pre-Columbian times and still producing corn and other crops native to the western hemisphere, thereby illustrating such native lore and legend as those embalmed in Hiawatha; they also represent one of the most extravagant known mortuary customs, in which the goods of the decedent are distributed to non-relatives, while his house and his body are burned together, so that the people are perpetually impoverished and prevented from gathering in communities; and their marriage and puberty rites are elaborate, while the tribal law is in a state of transition from that of the maternal family to that of the paternal family. The Klaokwaht and Kwakiutl Indians were selected not merely as physical types but to illustrate a native type of house designed to fix the social organization and facilitate the maintenance of law, partly by virtue of elaborate totems (or animal tutelaries); this representation of northern Pacific coast culture-types being supplemented through cooperation with the Alaskan Commission. Several Amerind groups were selected partly to exhibit the leading native arts and crafts (such as pottery-making, basket-working, blanket-weaving and skin-dressing), partly to illustrate the organization of the paternal family (or gens); the Pawnee, Wichita, Navaho, Pima and Kickapoo groups constructed and occupied houses, each of a distinctive tribal type; while the Sioux tipis and other structures and fabrics exhibited sacred insignia betokening barbaric philosophies, of which some were displayed also in musical or dramatic terpsichorean ceremonies. The culture types at the fair, like the physical types, were greatly extended by the Philippine exposition, itself one of the most impressive exhibits of alien life and customs ever assembled; also in various state and national exhibits (among which the East India Pavilion and the Ceylon Tea House deserve note), and by several Pike concessions; while there were numerous collections of alien culture products, such as the Fred Harvey and Benham exhibits in the anthropology building, much of the collection forming the Queen's Jubilee Tributes, special exhibits in the Japanese, Chinese, Siamese, Belgian, Argentine and other pavilions, the Benguiat Museum, *et al.* Finally, the typical products of the most advanced art and industry filled the exhibit palaces with a richer and more cosmopolitan illustration of man's creative activity than the world ever saw before, while the attendant laws and languages and philosophies were set forth in other departments (especially education and social economy) and with unprecedented fullness in that series of legal and educational and scientific congresses through which the Universal Exposition of 1904 made its most impressive display of the power of man and the force of mind.

3. The methods and appliances used in anthropometry and psychometry (*i. e.*, in measuring the physical and mental characters of men) were selected with the purpose of utilizing the opportunities presented by the fair for observing and comparing the human types assembled on the grounds; while most of the apparatus and materials were obtained, and the installation and operation of the laboratories were made feasible, through the cooperation of educational institutions and manufacturers. It was in this branch of the department that the original or investigative work of the exposition culminated, and the conduct of the work was a constant source of

interest and attraction to visitors, while its results form a substantial contribution to knowledge.

4. The general view of human development opens a vista extending so far into the past and so widely into the field of man's activity that the recorded history of any particular province or people seems small in comparison; yet the history of a province or a people forms an effective introduction to the full history of mankind: accordingly, the written history of the Louisiana Purchase gave a keynote for the department as well as a motive for the exposition, and the exhibits were chosen and arranged in consonance with this view. Here, too, the work was made feasible by the cooperation of liberal institutions and individuals, chiefly historical societies and working historians. The nucleus was the collection of the Missouri Historical Society, illustrating by manuscripts and books, relics and portraits, maps and sketches, every important step in the development of the metropolis of the Louisiana Purchase Territory and in the growth of the commonwealth with which it has come up; and also illustrating by aboriginal relics the protohistoric development of the district from the times of aboriginal settlement, the building of earthen tumuli and temples, the growth of a primitive agriculture, and the advent of the bison and its hunters, into the period and through the centuries of discovery and acquisition and industrial conquest by white men. A supplementary illustration of development and conquest from the aboriginal condition to that of a great commonwealth comes from the Iowa State Historical Department; and collections serving to fill in the details of the general outline were exhibited by the Franco-Louisiana Society, the Louisiana State Historical Society, the Chicago Historical Society, and other cooperating exhibitors. The picture of progress so drawn was extended backward into the unwritten past of protohistory (or of relics interpreted in the light of observation on peoples of corresponding culture) partly by means of the synthetic series, partly by various exhibits representing the period of transition from Indian occupancy to white supremacy; this outline was then perfected by archeologic collections representing the prehistoric period—and the whole was given meaning and color by the presence on the grounds of living peoples with processes and products corresponding to nearly every step in progress betokened by the protohistoric and prehistoric relics. The typical evidences of human development assembled in the department were enlarged by numerous collections in exhibit palaces and pavilions, and especially in several of the state buildings, of which some were historical replicas, while many contained important historical and protohistoric material.

5. The relics and records indicate that a leading factor in man's development is progressive acculturation, or interchange and unification of knowledge. At first slow and inimical and effected chiefly through strife and conquest, the acculturation of the higher stages is rapid and amicable—schools replace armies, confederation supplants conquest, and the white man's burden of the ballad becomes the strong man's burden in the political family of nations as in the personal family of kindred. Long an accident of intertribal enmity, acculturation becomes, under the principles of constitutional government, an intentional and purposeful means of promoting the common weal; and the United States government has performed no worthier function than that of aiding our aboriginal landholders on their way toward

citizenship. The means and the ends of purposive acculturation as applied to the American aborigines, and the actual processes illustrated by living examples, were exhibited in the typical Indian school forming the most conspicuous feature of the department. Here parents still clinging to native customs and costumes delighted in the progress and achievements of their children in the arts and industries and even in the language and letters required by modern life; here the aboriginal maker of moccasins showed (and saw) the contrast between his craft and modern shoemaking; here the actual transformation from comfortless camp life into comfortable householdry was illustrated not only by every intermediate step, but by the actual passages of individuals and families from the one stage to the other during the exposition period; here the once bloody warrior Geronimo completed his own mental transformation from savage to citizen and for the first time sought to assume both the rights and responsibilities of the higher stage—here, indeed, was illustrated in epitome, and also in the actual progress accelerated by purposive cooperation, a considerable part of that course of intellectual development which raised man from dull-minded and self-centered tribal existence into the active and constructive and broad-minded life of modern humanity.

VI.

In a word, the motive and scope of the department of anthropology were to show our half of the world how the other half lives; yet not so much to gratify the untrained curiosity which leads even the child to look with wonder on the alien as to satisfy the intelligent observer that there *is* a course of progress running from lower to higher humanity, and that all the physical and cultural types of man mark stages in that course.

That the chief aim was gained may not now be claimed; though it can not be doubted that the assemblage of the world's peoples at the Universal Exposition of 1904 gave renewed and fuller meaning to the opinion of Pope that—

> The proper study of mankind is man.

The unbroken tally of visitors to the room containing the Victorian Jubilee Tributes exceeded a million, and the partial tallies in the anthropology building gave a tale approaching a million and a half; the estimated number of visitors to the Indian school building was above three millions, and it seems certain that over four million persons made more or less careful inspection of the alien camps and groups; while the current press items and weightier articles inspired by the anthropology exhibits are conservatively counted as forming at least a quarter and perhaps a third of all of the spontaneous publications pertaining to the fair. The full tale of attendance (total admissions, 19,694,855, not including Sundays; paid admissions, 12,804,616) comprised visitors from nearly every state and some foreign countries who came for the special purpose of seeing the African pygmies, the Ainu, the Filipinos, the Patagonians, or the assemblage of North American tribes; and a feature of the department was a formal 'field school of anthropology,' successfully conducted under the auspices of the University of Chicago, which may be considered the first definite step in cooperation for educational purposes between the permanent university and the temporary exposition. So the assemblage of human types was not only a source of attraction, but served serious ends.

W J McGee.

St. Louis Public Museum.