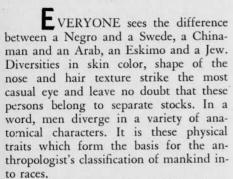
Dr Forrest E. Clements is head of the department of anthropology of the university. He is a graduate of the University of California from which institution he obtained his doctor of philosophy degree. He held a social science research fellowship at Yale university for two years and while there developed quantitative methods in ethnology, an original contribution. He was made a member of the Yale faculty and resigned there to become head of the department at Norman in February, 1931. He is especially interested in the Indian and his principal study has been racial differences. The present article was the address Doctor Clements delivered before the Society of Sigma Xi December 17

## Innate racial differences

## BY FORREST E. CLEMENTS



There is a great popular confusion about races for many people do not know what the term really means. We constantly hear references to the "French race," the "Anglo-Saxon race," the "Semitic race" and so on. But when we speak of the "French race" we really mean the people living in the national subdivision known as France. "Anglo-Saxon" refers to English speaking peoples and is a linguistic expression. "Semitic" relates to the languages of that name or the people speaking those tongues.

In other words, we have here a muddling of political, linguistic and biological terms. These "races" are like the unicorn in that neither today nor in the past has either ever existed. They are social rather than organic groups and the term race is misapplied. One language may be spoken by people of several divergent stocks. Again, members of one race may extend over half a dozen political units and speak totally different languages in different parts of the area. Organic groups, as such, have nothing to do with political or linguistic factors and contravene such boundaries more often than not.

Race is a biological term and refers to the varieties of a species. All living men belong to one species, *sapiens*, but there are a number of varieties of this species. Mankind is divided into three main racial stocks and each of these into a number of sub-races as follows:

I. Caucasoid

(a) Nordic-around the Baltic sea

(b) Alpine—central Europe, Russia, Persia, Armenia, Turkestan

(c) Mediterranean—around Mediterranean sea in southern Europe, West Asia and North Africa

(d) Hindu—northern India

II. Negroid

(a) Negro proper—tropical and south Africa and Tasmania

(b) Oceanic negroes or Melanesians—New Guinea, Fiji, Solomon and adjacent islands

(c) Negritoes or pygmy blacks—sporadically in Africa, New Guinea, Philippines and Malay Peninsula

III. Mongoloid

(a) Asiatic Mongol—China, Japan and northern Asia

(b) Malaysian—southeast Asia and East Indies

(c) Eskimo—Greenland and Arctic North America

(d) American Indian—North and South America

This grouping includes all but about one per cent of humanity. The remaining people are the *Polynesians*, the *Australian aborigines*, the *Ainu* of Japan and the *Indo-Australians* of south India and some of the Indonesian islands. These latter groups possess features of two or more of the other stocks and may be the result of blending. The geographical range given here is that occupied by the races before the age of European exploration and colonization.

The above classification is based on inborn anatomical features and is thus founded upon organic factors alone. Physical traits are easily recognized and measured. It is another story when we come to deal with psycho-physical and psychological characters also supposedly innate. Are there differences between races in



bodily function and in mentality? Is one race more emotional or more intelligent than another? Are some peoples well fitted for civilization while others can never aspire to rise from barbarism by reason of their congenital lack of brains? Questions of this sort are hard to answer unless one knows nothing of the facts and can fall back on the glib solutions of prejudice. The ignorant know everything; only the learned have doubts.

The real difficulty arises from the scarcity of trustworthy evidence as opposed to mere opinion. Nevertheless, there are a few bits of information of racial differences of this sort which may be provisionally accepted, even by the doubt-

ing learned.

It seems fairly well established that races differ in their susceptibility to color blindness. This is an inborn trait and, in its most common form, consists of an inability to distinguish between red and green. It is a sex linked character appearing commonly in males and is comparatively rare among women. About eight per cent or eight out of every hundred West European and American men are color blind but less than two per cent of American Indian males suffer from the defect. The Negro incidence is approximately four per cent. Inasmuch as most color blind persons are unaware of their

aided brave may purchase gaudy raiment with reasonable confidence that he is really getting the colors he thinks he sees. Another possible racial difference that has suggested itself to investigators is diversity in innate susceptibility to various diseases but we have very little evidence

deficiency, it behooves twice as many

white as negro men to take their wives

along when they buy a new necktie. The Indian percentage is so low that an un-

on the matter. It is unquestionably true that certain diseases are more frequent among some races than among others but this may be due to differences in sanitation and medical attention rather than congenital factors. Recent studies on cancer indicate that whites are more subject to the disease than are negroes even when the greater efficiency of medical diagnosis among whites is given its due weight. This may mean that negroes and other dark skinned races are innately less prone to cancer than whites. So far as other diseases are concerned it is most likely that the racial differences known to exist are not due to inborn factors but are best explained on the basis of social causes.

I recently made a study of age death rates and causes of death among nativeborn whites, Indians and negroes in the rural United States revealing some rather striking racial differences which may be briefly summarized.1

Infant mortality is much higher among Indians than among whites or negroes and the negro rate is higher than the white. This is very probably due to differences in nurture.

Among whites a consistently larger proportion of female than male deaths takes place in the years twenty to forty four years. This sex difference begins five years earlier among both Indians and negroes and the excess of female deaths is greater in the two latter races. The racial difference here may be correlated with the possible earlier onset of puberty among Indians and negroes.

The proportion of deaths at all ages which occur at ages from birth to the beginning of the reproductive period is very much greater among Indians than among whites, with the negro rate intermediate. Among Indians, almost half the total number of deaths that occur at all ages has already taken place by the age of twenty years. Much of the decline of the Indian population seems due to the fact that such a high proportion of deaths occurs at ages too young for individuals adequately to reproduce themselves.

The proportion of females surviving into the reproductive period is greatest among whites and least among Indians. Although the Indian survivors have a much higher birth rate, their number is too small to do more than barely maintain the population, and this only by reason of relatively great fecundity.

The greater part of the high Indian death rate under twenty years is due to tuberculosis and pneumonia. These are the main causes of death among both Indians and negroes while heart disease, kidney disease and cancer are most important among the whites.

Whites, on the average, live consider-

ably longer than either negroes or Indians, the latter being the shortest lived.

These are real racial differences but with one or two exceptions and perhaps not even those, they are merely reflections of differences in sanitation, living conditions, personal hygiene and medical attention. They are due to nurtural rather than inborn organic factors.

So much for this type of racial difference. There remains another where feeling runs high and ethnic, national and religious prejudices becloud the issue. This is the realm of psychological differences, particularly diffences in temperament, emotion and metality. There is a widespread opinion that certain races are more intelligent than others, better adapted for civilization and better fitted for cultural leadership. In this country and to some extent in Western Europe, the feeling among the uninformed is general to the effect that the white race and more particularly the Western European part of the white race, in both the Old and New Worlds, is superior to all others and is really the standard bearer of civilization. Any suggestion to the contrary will generally receive bitter opposition and in some sections of the United States is downright dangerous.

The assumption of racial superiority is highly flattering and it is not surprising that the notion of the dependence of civilization on race and particularly the white race, has reached the proportions of a cult. In the last decade or so prophets have arisen on every side to announce the doom of civilization if the white race does not hold its own. In America, the proposition has been narrowed even further. The white or Caucasian race includes Hindus, Arabs, Turks, Roumanians, Italians, Spanish and Portuguese to name only a few. Surely these fellows are inferior to the Swedes, Danish, English, and Americans of like ancestry. Therefore, not all the white races are to be entrusted with the torch of cultural progress but only those who are tall, blonde, blue-eyed and dolichocephalic; in other words, the Nordics.

It is claimed that the majority of our population is of Nordic ancestry, that the Nordics are the only ones capable of supporting civilization and that therefore the decline of the Nordic element among us presages the collapse of culture. We have such books as Madison Grant's "Passing of the Great Race" and Lothrop Stoddard's "Rising Tide of Color." To quote Mr Stoddard, "If this great race (Nordic) with its capacity for leadership and fighting, should ultimately pass, with it would pass that which we call civilization.'

Mr Grant has glimpsed the same dark future and deplores the immigration of other stocks into this country, lugubriously announcing the downfall of the nation unless it is stopped. Apparently the Nordic race is regarded as such a tender flower that the least dash of another type pollutes and defiles its noble purity; blots from its

germ plasm the God-given impulse to progress.

West Europeans are no less naive than Americans. Does any right thinking Frenchman believe the Taureg is innately the intellectual equal of a west European? Do the Belgians think the potential cultural capacities of the Congo natives are as great as their own? Hardly. The English attitude is well reflected in Kipling's poem which contains the lines:-

> 'Take up the white man's burden, Send forth the best of your breed.'

The white man's burden is civilization and it is his obvious duty to carry this precious charge to those "lesser breeds without the Law" in order that they may share in its benefits to the extent of their limited capabilities—even at the point of a bayonet or the muzzle of a machine

There is no lack of quasi-scientific evidence to support these contentions. The mental testers have been busy giving various intelligence tests to little Indians and negroes who invariably do much worse than white and particularly "Nordic" children. These results are taken at their face value by the uncritical and by the adherents of the white superiority dogma, yet it is perfectly plain why the white children perform better, irrespective of any real differences in intelligence. These tests have nearly all been constructed on the basis of the social background common to the whites. Naturally, a person reared in another kind of cultural environment will do poorly on such tests. The inferior showing of Indians and negroes is only a reflection of the social or nurtural differences between the three groups. The Japanese, who have taken over so much of western civilization, have also adopted the notion of intelligence testing. They, however, have constructed their own tests based on their own social environment. These work very well with Japanese reared in the national culture but white persons make low scores. Evidently it makes a great deal of difference who is conducting the examination.

Tests of temperament and emotion, esthetic appreciation, and the like are less well developed than intelligence tests but these too show no difference between races which are not best explained as differences in nurture.

In short, it is safe to say that impartial anthropologists and psychologists, who should know more about the subject than any one else, are agreed that there is no conclusive evidence in support of innate racial differences in intelligence or any other mental capacity.2 Such differences may exist but they have never been satisfactorily demonstrated and the historical evidence is almost wholly against their reality. The touting of test results show-

<sup>1</sup> Forrest E. Clements. Racial Differences in Mortality and Morbidity. Human Biology, Vol. 3, No. 3, pp. 397-419, 1931.

See Race Psychology by T. R. Garth and Race Mixture by E. B. Reuter. Both published in 1931.

ing superiority of any race over another when the results are taken at their face value must be regarded as a serious reflection upon the scientific impartiality of the testers. Differences do exist but most of them are differences in social conditioning rather than inborn traits.

The historical evidence bearing on the question of racial differences in capacity for civilization is enormous but only a few items can be submitted here.<sup>3</sup>

Let us first take the question of housing, for shelter is an important phase of culture. The Hopi Indians of Arizona live in villages built on the tops of mesas. Formerly, the comparative inaccessibility of the mesa tops served as a protection against marauding bands. However, this danger has ceased to exist. Yet the Hopi cling tenaciously to their tablelands although every drop of water and every particle of food and other supplies has to be painfully carried up the steep height while the men have to walk several miles to their fields located down on the plain. Even new villages built in the last few years are perched on the tops of these precipitous cliffs. Why do the Hopi persist in such an inconvenient way of life? Why not build their villages close to the fields? Their silly roosting on mesas surely argues a stupidity of which Nordics would not be guilty.

Well, when the change from rural to town life took place in western Europe in the Middle Ages did the people quickly adapt themselves to the changed conditions? Hardly. When hundreds of wooden houses were crowded together it should have been obvious that there was great danger of fire, especially in view of the use of thatch as roofing material. Nat-urally, conflagrations followed upon one another but even then what should have been patent at first was no more so. In Scandinavia, the very stronghold of the Nordic race, thirty six towns were burned in sixty years, some of them more than once. Royal decrees against thatch were issued by the score in Norway, Sweden, Denmark and England but to no purpose for the people merrily rebuilt their houses of wood and roofed them with straw only to see the towns again reduced to ashes. It took three hundred and fifty years and the governmental authority of thirteen kings to eliminate thatch roofs from Danish towns. Were the Hopi any more stupid than the Danes?

The growth of town life in western Europe naturally brought up grave problems of sanitation. Paris in the thirteenth century had a population of one hundred and twenty thousand which grew in the course of another century to five hundred thousand. But in the metropolis of western Europe and the center of fashion and

learning the streets reeked with filth for they were the repositories of sewage. Pedestrians went about at great peril to their clothes for chamber pots were commonly emptied from the windows of houses with the warning cry, "Gare l'eau" (Look out for the water!) But such luxuries as chambers were only for the wealthy; the bulk of the population scorned such fastidiousness and made more direct use of the streets. At the time of the French Revolution the gardens of the Tuileries and the grounds of the Royal palace became favorite comfort stations, albeit open air. The rank and file of Paris thought nothing of obeying the calls of nature in the vestibules of houses or behind hedges. Even today the disposal of sewage in our rural sections is nothing to cause us to swell with pride; in the towns the real improvements are less than a hundred years old. It took west Europeans about six hundred years to solve a practical problem consequent upon dwelling in towns. They had the splendid example of Rome before them and there can be little excuse for their slowness save the natural ineptitude of the human species.

In parts of Africa, women pierce their lips and stick ornamental plugs in the holes. The apertures are gradually enlarged until the lips are so distended that discs the size of dinner plates can be inserted in the openings and the lower lip actually hangs down on the chest. Is this hideous? African men find it bewitching and a dusky maiden whose lips have been allowed to retain their natural contour feels herself hopelessly out of fashion. Not very long ago all Chinese girls of social pretension had their feet bound from infancy. The practice turned them into incurable cripples but small feet for women were fashionable and movements to abolish the custom met a hostile reception, even from the women themselves. Brazilian Indians put tight ligatures around the fleshy parts of their calves and upper arms. Circulatory disturbances and distortion of the limbs result but the ligatures remain. Who wants to be out of style?

In Eighteenth century western Europe, ladies wore headdresses two and three feet high. They were extremely elaborate affairs composed of hair, feathers, gauze and flowers, all heavily powdered. Once constructed, they were worn for some time and naturally came to swarm with lice. The consequent itching was intensely uncomfortable but the fashion was not abolished. Instead, the powerful brain of Homo sapiens bent itself to the problern and invented a head scratcher in the form of a carved ivory or wooden hand mounted at the end of a wand. It became good form for fashionable ladies to carry these odd swagger sticks and delicately scratch their itching scalps as a nonchalant gesture in social intercourse. Forty years ago American ladies cinched their waists so tightly that normal abdominal functions were seriously affected. The medical faculty issued thunderous denunciations of the practice. The clergy railled against the new mode. All this had its usual effect and the fashion continued unabated. After a few years it disappeared as suddenly as it arose. Apparently no one race has a monopoly of stupidity.

Nor is the blushing virtue of modesty the exclusive attribute of the whites. It is true that many of the less civilized races wear few clothes. The first duty of the newly arrived missionary in the South Seas is to put trousers on the men and mother-hubbards on the girls, thereby introducing a more sophisticated titillation to enhance the arts of native coquetry and courtship. California Indians used to go almost completely naked. In the upper reaches of the Amazon an Indian woman is fully dressed when she has her nose plug in place. Without it, she is ashamed to be seen in public.

to be seen in public.

Such brazen nakedness is only to be expected from uncivilized Indians and Polynesians. Nordics are really modest. Four

hundred years ago in Scandinavia a doctor called to assist a woman in childbirth was not allowed to glimpse any portion of the patient's body except her face. A hole was cut in a large sheet through which the physician stuck his head. The sheet was spread over the woman and the accoucheur blindly conducted his manipulations with his hands under the cloth which not only saved the travailing lady from shame but effectually hindered the doctor. The same lady thought nothing of going to the public baths and sitting around stark naked with other bathers of both sexes for at that time mixed bathing was popular among Nordics. Modern women nonchalantly appear in the most abbreviated beach costumes. Yet the same girl who parades all day on the strand would blush to be seen publicly in her chemise which actually covers more of her body than her bathing suit. Evidently modesty is a matter of time and place

One more group of illustrations must suffice and these we will take from the almost sacrosanct field of medicine and science. When a Siberian native falls ill he sends for a medicine man. In this part of the world disease is held to be the result of having one's soul stolen by ghosts. Hence, the efforts of the doctor are directed toward the restoration of his patient's kidnapped spirit. American Indians believe sickness is due to the presence of a magical disease object placed in their bodies by hostile supernatural power. Native therapeutics acts on this theory and the physician's treatment consists in abstracting the disease object, usually by sucking over the afflicted part, and then proudly exhibiting a bit of bone or a pebble to the gaze of the sufferer who very often proceeds to get well. If the sick man dies, then the supernatural power was too strong for the power of the prim-

rather than innate racial factors.

<sup>3</sup> For most of the case illustrations and facts of the succeeding section I am indebted to R. H. Lowie's eminently readable and scholarly work, *Are We Civilized*, Harcourt Brace Company, 1929

itive scientist. In Africa, illness is due to evil sorcery. Accordingly, the native doctor's first step in treatment is to discover the identity of the magician. This done, he directs his own power toward the bewitchment of his adversary. If he triumphs his patient recovers. All over the world primitive people not only regard sickness and death as due to supernatural intervention in mundane affairs but every other untoward occurrence is similarly traced to the unseen influence. Tell an old time Indian that pneumonia is caused by a germ; he will pity your ignorance. Missionaries and government officials have tried for years to educate the African native out of his belief in witchcraft but sorcery still flourishes there. Why such obtuseness? Why this obstinate clinging to notions patently untrue? Would western Europe be guilty of such wilful blindness?

Less than a hundred years ago and for centuries before, surgical operations and childbirth were agonizing affairs. Surgical patients were strapped down and held by husky assistants while the operator worked as quickly as possible to shorten the torment. Eighty five years ago last October, ether anaesthesia was employed for the first time in a surgical operation and was completely successful yet ether had been known to physicians for three hundred years. But when it did come, surely such a boon was quickly adopted by the medical profession? Well, primitive people are not the only conservatives. Anæsthesia in surgery was bitterly opposed and did not come into general use for thirty years after its discovery. For ages women had suffered the cruelest pangs in childbirth but the use of chloroform to ease maternal torments in 1848 was denounced by the clergy as a sacrilege against the will of God. Their voices were ably echoed by the men of science. It took ten years and the approval of Queen Victoria to overcome the medical repugnance to new ideas.

When Harvey demonstrated the circulation of the blood the Parisian Faculty of Medicine denounced the idea as contrary to common sense and Harvey lost most of his practice. When Jenner introduced vaccination he was not only opposed but denied a hearing, for the editor of Philosophical Transactions refused to print his essay. Less than a century ago hundreds of women in European and American lying-in hospitals died of childbed fever. No one knew why. It was ascribed to change of weather, to the air, to the condition of the women themselves. In 1846 Semmelweis hit upon the idea that the doctor's hands carried the infection from patient to patient and that the physicians themselves were thus the cause of the fever. He was in charge of a hospital ward in Vienna and made every physician there disinfect his hands before touching a pregnant woman. The mortality fell from eight to barely over one

per cent and Semmelweis presented to the Faculty an exhaustive statistical study proving beyond all doubt the truth of his conception. The discovery was hailed with the usual enthusiasm. Semmelweis was dismissed from the hospital and subjected to a long campaign of villification and abuse until he finally died in an asylum for the insane.

But the doctors of medicine are no worse and no better than their other learned colleagues. To his dying day Virchow maintained that the Neandertal skull was merely a pathological specimen and not a fossil remnant of a hitherto unknown species of man. When Galileo discovered the moons of Jupiter the head of the philosophy department at Padua refused to look through the telescope and wrote a treatise proving that these satellites could not exist because they were invisible to the naked eye and contrary to reason. The great Kepler looked on a sphere as an image of the Holy Trinity and was a firm believer in heavenly portraits. The astronomer, Tycho Brahe, was an ardent caster of horoscopes and was employed by the Danish king to foretell the future of members of the royal family. The editor of the foremost physical journal in Germany refused to publish Helmholtz's essay "On the Conservation of Force" because it was patently absurd.

Many otherwise informed persons regard organized religion as the chief hindrance in the development of science. This is only a half-truth. The Church did not explain childbed fever by weather changes nor did she require Tycho Brahe to cast horoscopes. The clergy had nothing to do with Virchow's action in swinging the great weight of his authority against the discoverers of man's remote past. Religion did not denounce Harvey's proof of circulation of the blood nor did it strenuously oppose the use of anæsthetics. A great many of the stumbling blocks in the path of science have been placed there by the scientists themselves. For they too are worshipers of tradition; they dislike change and greet the new with irrational unfriendliness. But this only means that scientists are also human.

No discussion of racial differences would be complete without some mention of that modern pseudo-scientific fetisheugenics. Sir Francis Galton begot this strange combination of manufactured biological facts and uplift but the child has surpassed its father. Galton, usually so clear headed, seems to have completely abandoned his habitual sanity in regard to eugenics. Ancient Athens, to his mind, was the example, par excellence, of the virtue of racial purity and selective breeding whose effects reached their full flower in the Age of Pericles. But the Athenians interbred with outlanders, many of whom by the way were Nordics, and the period of glory faded. The way for modern society was clear. All that was necessary was racial purity with constant improvement

by selective breeding. A few generations of this and the modern world might well approach the splendor of ancient Greece.

The fact that nothing is known about selective breeding in Athens or the effects of Athenian marriages with other races did not deter Galton. No piece of evidence was too slim or too obviously hearsay for him to embrace provided it supported his holy dogma. His successors are no less committed to the monomania. There are eugenics societies by the score in Europe and America. Even some eminent and otherwise sane biologists have been hypnotized by the gaudy claims of the new gospel and have become protagonists of the cult. A whole host of scientific soothsayers has arisen to proclaim the dawn of a new era when men and women shall be graded like prize cattle and the unfit relegated to the outer darkness. The fact that the well-to-do classes limit their families while the poorer masses procreate without stint appears to these seers an infallible portent of decline. They weep at the discovery that Harvard graduates do not reproduce themselves while the hordes of Italians who now own New England are so amazingly prolific. But does anyone really know that the sons of Italian shopkeepers are innately less intelligent than the sons of Harvard men, provided they are given the same cultural advantages? Are large families, per se, an indication of defective germ plasm? Again the ignorant or the bigoted are certain of the answers; those really qualified to form opinions confess they do not know.

One of the most vociferous of eugenical nostrum vendors is Albert Edward Wiggam whose two books, Fruit of the Family Tree and The New Decalogue of Science, have done much to spread extreme ideas and misinformation among the reading populace. A few quotations from the latter work will not be amiss.

The opening sentence sets the tone of the book, to wit, "The first warning which biology gives to statesmanship is that the advanced races are going backward-." Later on we encounter the solemn pronouncement that, "Eugenics is the projection of the Golden Rule down the stream of protoplasm." But the very pinnacles of eloquence are reached in the discussion of ethics for, "Had Jesus been among us (today) He would have been president of the First Eugenics Congress." "Science came not to destroy the great ethical essence of the Bible but to fulfill it. And eugenics, which is simply conscious, intelligent organic evolution, furnishes the final program for the completed Christianization of mankind." Can quasi-scientific claptrap rise to greater heights than this-or sink to lower depths?

In its most humanitarian form, eugenics as an ideal may be praiseworthy. But the plain facts are that we do not know enough about heredity in man or

about what is innate and what acquired, to formulate an intelligent eugenical program. If we did possess the knowledge we have no one to whom it could safely be intrusted. Shameless propagandizing and the glossing of inconvenient facts and lack of knowledge is purely the result of ethnic and class prejudices however it may masquerade in the guise of science.

As Professor Stanley Hall once said, "Man has not yet demonstrated that he can remain permanently civilized." The statement might be amended to read that man has never become truly civilized in the higher sense of the term. He has accumulated a stupendous array of facts and beliefs, his conquest of portions of the physical environment has proceeded apace and he has contrived an amazing number of mechanical wonders. But real civilization is a more subtle thing than motor cars, radios, and notions of spacetime. We have vastly increased the material complexity of our lives; psychologically, it is doubtful whether we have changed one whit since the reindeer and the mammoth roved over western Europe and Cro-Magnon man sketched his paintings on the walls of Palæolithic caves.

It may be that innate racial differences in mentality and emotion really exist but the truly impartial scientist will admit that he does not know one way or the other. However, there is fair certainty on one point. Some races may or may not be superior to others but they all share in the common heritage of mankind bequeathed us by our apelike fore-bears; a dull stupidity in which flares, at rare intervals, a spark of reason. In another 20,000 years it may emit a stronger light.

## Sooner roll call

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