

Racial Prejudice and Science

We are All Related

The Bible teaches that all humans are descended from Adam and Eve (Genesis 1:26-2:25; 5:1ff). Paul tells the members of the Athenian Areopagus, "From one man he made every nation of men, that they should inhabit the whole earth" (Acts 17:26).

There is some possible, though far from conclusive scientific corroboration of the idea that all humans are indeed related. In 1987 research was conducted into the genetic material of women from around the world by biologists Rebecca Cann, Mark Stoneking and Allan C. Wilson.¹ They concluded that every human being alive today shares genetic material that originated with a woman who lived c. 100,000-150,000 years ago² in sub-Saharan Africa, whom they dubbed "Eve." She is sometimes referred to as MRCA, that is, "most recent common ancestor", though, more correctly, she is thought of as the most recent common matrilineal ancestor. She may also be called African or Mitochondrial Eve, because for those who accept this research - and there are many scientists who strenuously reject it³ - the mitochondrial DNA of all living persons is derived from her.

As indicated before, this is by no means an endorsement of the Genesis creation account. For example, biologists believe other women were living at the same time as Mitochondrial Eve, whose mitochondrial DNA has since gone, but whose nuclear genes are still present in humans living today. Besides "Mitochondrial Eve" does not denote a particular individual, in contrast to the biblical Eve because as maternal lineages become extinct Mitochondrial Eve is revised, moving forward not backward in time to a more recent female ancestor.

In addition to this, Eve's counterpart, the so-called Y-chromosomal Adam or patrilineal MRCA is believed, by those who accept this research, to have lived at a different time to "Eve."

All of this cannot be used to prove the accuracy of the creation account and, indeed, only represents a very limited explanation of human origins. For as we have seen above, Mitochondrial Eve herself has always had a mother. But at least the "Out of Africa" theory is in synch with the Bible's insistence that we are all related, something integral to the point Paul was making in the famous speech mentioned before.

Biology and Race

The biological concept of race is at odds with the Bible's teaching that we are all related. Rather it understands "race" to refer to a large body of people characterised by similarity of descent.

Possibly this biological concept emanates from Linnaeus' division of humanity into four classes (1735): Africanus, Americanus, Asiaticus and Europeaeus. This approach involved the notion of *geographical race*, which later was thought to include as many as eight divisions: Caucasoid (European), Mongoloid (Asiatic, or Oriental), Negroid (African; sometimes considered two distinct groups, Congoid and Capoid), Indic (Hindu), Australoid (Australian), Polynesian, Melanesian,

Micronesian (sometimes these three, or combinations of them, are classed as Oceanic), and American Indian.⁴

In the 19th century hospitals separated blood supplies in the false belief that such races had different kinds of blood (Jandt, 4).

Local race has been used by sociologists to describe any population in which mating is almost exclusively among themselves. A geographical race was thought to be a collection of local races that shared a similar hereditary makeup, with members of the same local race even more closely similar in appearance. For example, according to this way of thinking Europeans might be regarded as a geographical race with Scots and Italians, in general, sharing some physical features such as (normally) “white” skin. Mediterranean peoples might be deemed a local race and, generally speaking, Italians and Spaniards would resemble each other even more than Italians and Scots.

Some smaller, isolated groupings would be regarded as providing even clearer examples of such local races and the term *microrace* has been used to describe “a local population that behaves as a distinct genetic group.” Some small towns in Europe would be considered as microraces, that is centres where there is a high population density and low mobility, so that most individuals don’t travel far from their birthplace to marry or make a living.

The problem with the concepts of geographical race, local race and microrace is with the use of the term “race”. The work of scientists like Franz Boas in anthropology and Gunnar Myrdal and others in the social sciences helped destroy much of the mythological thinking associated with race. Herskovits speaks of the race concept as being ‘a scientific dead-end’ in the explanation of culture.⁵ Most scientists today reject the idea of biological race as a meaningful scientific concept.

Biological Adaptations and Race

Those who try to use nongenetic factors to discriminate between supposedly different racial groups run into a spate of problems.⁶ A people group may adapt to its environment in ways that distinguish it from other people groups. Yet this is a precarious basis on which to treat this distinctive people group as a discrete racial type for it is usually the case that individual members of a people group will differ considerably from one another. Added to this is the fact that groups themselves change over long periods of time.

Harris (32) remarks,

The problem with genetic interpretations of history and of cultural evolution is that they cannot account for the ups and downs of different regions and races except by adding or subtracting hypothetical genes for this or hypothetical genes for that.⁷

Some physical characteristics may distinguish groupings of people from other groupings, e.g. body weight and proportions, skin pigmentation, hair texture

and colour, blood composition, and fingerprints. It has been argued that most such characteristics have developed among such human groupings because of their adaptive usefulness in the environments in which such groupings have been located over long stretches of time.

Arabs are often associated with long, narrow noses. Many consider this to be an adaptation to breathing in dry air in desert environments, since long, narrow noses humidify dry air better than shorter or broader noses.

It is also believed that differences in body weight between groupings of people reflect adaptation to particular environmental conditions. As a broad generalisation groupings of people that have been located for long periods in colder climates tend to have higher body weights than those who have been located in warmer climates.⁸ But sometimes the environment seems to be linked not with positive adaptations but with genetically related disorders. It would seem, for example, that people groups that consume high proportions of meat and fish and low proportions of sugar and starch are less likely to experience problems with diabetes.

But it is unwise to attribute higher incidences of diabetes as indicative of particular environmental factors. For example, studies have shown that there are higher levels of diabetes found among Mexican Americans in San Antonio than among Anglos living in the same area. This is commonly attributed to Native American genetic admixture, though some argue that it may also be the result of Spanish genetic admixture.

But there are other physical differences that distinguish people groupings from each other that are hard to explain as due to environmental factors. The blood condition sickle-cell anemia is especially common among people of African descent and it has been argued by many that this has developed as an adaptation to hot, damp climates to protect people against malaria.⁹ But this is not convincing since malaria does not have any direct causative effect on sickle-cell anemia and there are many parts of the globe in which malaria poses a significant health threat where sickle-cell anemia is rare.

Other physical differences not easily explained as adaptation to environment include such things as differences in blood type, differences in the excretion of amino acids and inherited enzyme deficiencies. For example, cystic fibrosis primarily is found among people of European descent. The indigenous people of Australia are distinguished by the absence of blood type B. Impacted wisdom teeth (third molars) are most prevalent among Asians and Europeans.

Genetics and Race

The Human Genome Project began formally around 1990 and identified all of the 3.1 billion molecules of adenine (A), cytosine (C), guanine (G) or thymine

(T) that make up the double helix strands of DNA, the master blueprint of each and every human.¹⁰

J. Craig Venter, the lead researcher for the body responsible for research on this project in the private sector, Celera Genomics, concluded that “the concept of race has no genetic basis”. That is, genetically speaking human beings are 99.9% the same. Physical differences between humans are very superficial. Given these findings the American Anthropological Association declared that it is impossible to test or prove “race” scientifically and maintained the concept of race “is a social and cultural construction”. From a biological and scientific standpoint it makes no sense to use the term “race” to refer to language groups (e.g. Aryan race), national groups (e.g. the Scottish race), religious groups (e.g. the Jewish race) or even humanity as a whole (the human race).

Certain physical attributes are more typical of some people groups. For example, while there are tall, thickset Bengalis and short, slender Samoans it is nevertheless clearly the case that shortness and slowness of build is relatively common among Bengalis, while tallness and thickness of build is relatively common among Samoans. Given the findings of the Human Genome Project we recognise that such observable differences are not expressive of fundamental racial differences but rather result from the development and continuance of *gene pools*.

Richard Dawkins comments,

“The very idea of a gene pool has no meaning if there is no sex. ‘Gene Pool’ is a persuasive metaphor because the genes of a sexual population are being continually mixed and diffused, as if in a liquid. Bring in the time dimension, and the pool becomes a river, flowing through geological time...”

The genes of each new generation are not a simple copy of the genes of the successful members of the previous one, but rather a random sampling. *Genetic drift* is the cumulative effect of this on *allele*¹¹ frequencies in a given sexual population. When this occurs in an isolated people group then over time it drifts to the point of being homozygous¹². So this group may be homozygous for allele “a” while a different isolated people group may become homozygous for allele “A”. Consequently, as time passes these isolated people groups diverge from each other so that a variation that began as one present within populations, now becomes a variation between populations. This phenomenon of genetic drift is most observable in small populations. The need of isolated people groups to adapt to their physical environments also seems to result in the preservation of at least some favourable genetic aspects thus again serving to create genetic differences from other people groups.

Small populations may grow and then split into new subgroups. Each subgroup will develop its own distinct gene pool. But all subgroups will have a gene pool that corresponds to the genetic makeup of the founders of the population from

which they have split. This is called the *founder effect* and it can lead to the development of distinctive genetic characteristics such as those observable among the descendants of an HMS Bounty mutineer on Pitcairn Island.¹³

Clearly, intermarriage results in further mixing and diffusing of the genes of a sexual population and may in fact result in the obliteration of gene pools, e.g. the disappearance of Carib Indians as a distinct group. The mixing of people groups is an ancient reality. Stott notes the findings of Dunn and Dobzhansky showing such mixing in human pre-history and cites Ashley Montagu:

“Not one of the major groups of man is unmixed, nor is any one of its ethnic groups pure; all are, indeed, much mixed and of exceedingly complex descent.”¹⁴

Gene flow (admixture or miscegenation) occurs when genes constantly flow from one gene pool to another. This happens during times of political disturbance, population pressure and war.

From the above it is apparent that the concept of a “pure” race has no foundation in fact. Some popular ideas that heredity is like a fluid transmitted through “blood” are quite absurd. Merrill sees the notion of pure race as due to “a deep-seated emotional need in some persons to belong to a group that is undefiled by alien influences and therefore ‘better’ than others.”¹⁵

Skin colour

Polymorphism is the presence of two or more distinct forms of a genetically determined character, for example, differences in skin and eye coloration and differences in such things as stature, head shape, hair, fold of skin in the inner upper eyelid, blood groups and brain size.

The colour of the skin is the most obvious distinguishing characteristic of race. It is also one of the least trustworthy. There is a very wide variation of skin colour within the same racial groups; members of the ‘white’ race, for example, range in colour from very light to very dark. The pigmentation of many Caucasoids is darker than that of many African Negroids. In Pakistan shades of skin coloration vary considerably with many Pathans having white skin and even blue eyes. Further

people with the same skin colour can come from groups with very different supplies of genes and...people with different-coloured skins can have fairly similar genes. Unlike dogs and livestock, human populations are not kept separate, and finding even relatively homogeneous groups is a much more difficult task than it seems even when only a few bodily characteristics are considered.¹⁶

In countries like India and Pakistan black-skinned people are often highly sensitive to their skin-colouration. At one time in Pakistan we took photos of one of the ladies we had employed to do some house-cleaning. the photos captured her holding our then tiny daughter in her arms. We offered her a choice of two photos to take for herself. The one she chose was, in our view, a

poorer production, and so we asked her why she liked that one best. Her reply? “In this one my skin is fairer.”

Salman Rushdie’s novel *Midnight’s Children* alludes to this same skin consciousness. He describes how the family of the central character, Saleem Sinai, harbours a fugitive named Nadir Khan who is hidden in the cellar. Each day one of the daughters, named Mumtaz, takes him his food. He falls in love with her and wants to marry her. We are also told that Mumtaz was born with a much darker skin than her spouses. Rushdie says she “had come out of her mother’s womb black as midnight.” Then he tells us about the attitude of Naseem, her mother, whom he terms the Reverend Mother because of her autocratic ways and inflexible attitudes, towards her daughter, Mumtaz:

But then, one night, she entered the dreams of her daughter Mumtaz, the blackie whom she had never been able to love because of her skin of a South Indian fisherwoman, and realized the trouble would not stop there; because Mumtaz Aziz - like her admirer under the carpets - was also falling in love (56).

Saleem is telling his mistress, Padma, about all this, and she concludes,

Poor girl. Kashmiri girls are normally fair like mountain snow, but she turned out black. Well, well, her skin would have stopped her making a good match, probably; and that Nadir’s no fool. Now they’ll have to let him stay, and get fed, and get a roof over his head, and all he has to do is hide...¹⁷

Yasmine Gooneratne notes how in the 1890s, as prosperity waned, Australian writers developed an obsession with skin colour. Novels called *The Yellow Wave*, *Yellow and White*, *The Yellow Man* and *White or Yellow?* glutted the market¹⁸:

The Bulletin saw Chinese and Japanese as equally threatening, but in 1895 it was somewhat confused about their colour: ‘The little brown men come leaping over our north-eastern and north-western border by scores and hundreds’. The colour change to brown was necessary because they were being compared to a plague of rabbits¹⁹

Eye Colour

Eye colours for humans include blue, brown, grey, green, blue-green, brown, black, hazel, pink (albinos) and the phenomenon called heterochromia, where one iris is different colour from the other or part of an iris is differently coloured to the rest. There are considerable variations with respect to eye colour within people groups. However, certain eye colours are associated with particular human groupings.

Most people in the world have dark eyes, ranging from a brown colour to a seemingly black colour. Blue eye colour is a recessive trait, meaning that a baby will only be born with blue eyes if both parents have a blue-eyed gene (it is not necessary for both of them to actually have blue eyes). This colour is relatively rare among humans and is found mainly among people of northern European or eastern European descent, though almost all other people groupings will have some blue-eyed members. According to Wikipedia, Finland has the highest percentage of blue-eyed people, approximately 90 per cent.

Because blue eye colour contains less melanin, blue-eyed people are much more sensitive to the sun and more susceptible to the damage it can cause.

People of Celtic, Slavic and Germanic descent are most likely to have green eyes, with the highest percentage, around 20%, being found among Hungarians.

Stature

Height is determined by a complex interaction between genes, nutrition and overall health. Malnourishment delays physical development and stunts growth, leading to shorter stature. Japanese are now growing in height due to better diet. The small stature of Bengalis is related to long periods of poor nutrition.

Head shape

It used to be standard to discriminate between three major racial groups - Caucasoid, Mongoloid and Negroid. This has now been jettisoned by the vast majority of modern scientists and anthropologists. One reason is because it is impossible to distinguish these groups accurately on the basis of the cephalic index. Skull measurements, for example, vary widely not only within communities but even during a person's lifetime.

In 1909 and 1910 Boas measured the heads of 13,000 European-born immigrants and their American-born children. While admitting head shape is also due to genetic factors, he maintained that length of exposure to the American environment was particularly significant in determining variations in cranial form. This conclusion has been challenged by Sparks and Jantz, who emphasise genetic factors. Vigorous debate continues as to what extent head shape is due not to genetic but environmental factors.

Hair

On May 17, 1999 the American Anthropological Association issued a statement on “race” that was thought to represent “generally the contemporary thinking and scholarly positions of a majority of anthropologists”.²⁰ They observed:

Dark skin may be associated with frizzy or kinky hair or curly or wavy or straight hair, all of which are found among different indigenous peoples in tropical regions. These facts render any attempt to establish lines of division among biological populations both arbitrary and subjective.

This being said, it is nevertheless the case that there are broad differences in the nature of hair fibre for people of different ethnic backgrounds. On average Asians have thicker, coarser hair than Whites and African Americans. However, Whites tend to have a higher density of hair follicles than most other peoples. African Americans often have tightly coiled, spiral hair. The chemical composition of hair also appears to vary between people groups.

Fold of skin in inner upper eyelid

The epicanthal fold is a small web of tissue overlapping the nasal corner of the eye. The fold may vary from hardly-noticeable to well-developed. The presence of this fold is normal for

many, though not all, groups of East Asian and Southeast Asian descent and Asians often call it “single-eyelids”. It is also found to some extent among the Sami people of northern Scandinavia. It has been conjectured that the epicanthic fold developed as a defence against both the extreme cold and the extreme light that occurs in the Eurasian arctic and far north.

Blood types

Blood types are classified as groups O, A, B and AB (or, more precisely, O+, O-, A+, A-, B+, B-, AB+, AB-). In some people groups one of these may be particularly dominant, but there are no instances of any people group only having one blood group.

European peoples are characterised by a very low type B frequency (e.g. about 10% in the UK) and a relatively high type A frequency (the most common type in Norway, Denmark, Austria, Armenia and Japan). Type O, considered to be the original blood group, is most common in the UK, especially in the north. Asian people groups are characterised by high frequencies of both types A and B (around 25%). In Japan, Pakistan and China about 10% of the population have type AB blood. In the US 53% of Hispanics and 47% of African Americans are type O+.

Brain size

On a broad scale there are definite differences in average cranial capacity for large people groupings. So, for example, the average brain size of East Asian adults is one cubic inch greater than that of Whites. The average cranial capacity of Whites is between four and five cubic inches greater than that of Africans. Gould regarded these differences as trivial but J.P. Rushton of the Charles Darwin Research Institute points out that a difference of only a single cubic inch equates to millions of neurons. Rushton states:

Studies using magnetic resonance imaging (MRI) find a correlation of brain size with IQ of about 0.40. Larger brains contain more neurons and synapses and process information faster. Race differences in brain size are present at birth. By adulthood, East Asians average 1 cubic inch more cranial capacity than Whites who average 5 cubic inches more than Blacks.²¹

Inevitably, such studies create a great deal of controversy. Gould criticised the foundational studies into brain size conducted by Morton, though, even after allowing for Gould’s retabulation of Morton’s data, there remain differences in brain size between large people groups. However, it also appears that an improvement in diet can lead to an increase in average head size within the space of a generation. Further, there is considerable debate concerning the extent to which differences in IQ tests are due to environmental factors and not simply genetic ones.²² Wade observes that most scientific authorities now reject a connection between “race” and IQ.

It needs to be noted, however, that differences between members of the same population are as great or greater than those between large groupings of people. The Pygmy population is the only one with consistently smaller brains than any other population.

Body odour

It has often been thought that body odour results from differences in diet (e.g., garlic), hygiene, bathing, and other environmental factors and are not characteristic of particular people groupings as such. While these factors are clearly relevant, a joint study from the Twin Research Unit at Guy's and St Thomas' NHS Foundation Trust and Newcastle University has found that genes play a significant part in determining body odour and note that everybody has a unique body odour.²³

Beta-aminoisobutyric acid excretion (called BAIB Excretion)

A recessive allele governs this trait, namely the excretion of BAIB in trace quantities into the urine of almost all humans. Less than 12% of Europeans, Australia's indigenous people and Indic peoples show high levels of BAIB excretion. But it is moderately common among Asians and American Indians (45-50 percent). It is quite common in Melanesians (about 85 percent).²⁴

Phenylthiocarbamide tasting (called PTC Tasting)

Phenylthiocarbamide (PTC) is a synthetic substance that most people find bitter to the taste. However, for others PTC is virtually tasteless, while yet other "super-tasters" find it extremely bitter. This variation in people's ability to taste PTC, and other related substances, is genetic.

Generally speaking, women tend to taste PTC more than men, but there are also broad differences between people groups.²⁵ This gene which gives rise to this trait belongs to a family of bitter taste receptor genes (T2R) and exists in seven different allelic forms. Only two of these occur at high frequency outside sub-Saharan Africa.

Psychology and racism

(see under *Prejudice and Human Nature*)

Anthropology and Racism

Social Science and the Critique of Racial Mythology

Race still continues to be very important *sociologically* because of the symbolic relationships to society and culture.²⁶

Dr Ashley Montagu wrote *Man's Most Dangerous Myth: The Fallacy of Race* (1942). He accepts that mankind can be divided into four 'major groups': Caucasoid, Mongoloid, Negroid and Australoid and into many smaller 'ethnic groups' - by nationality, language, culture, etc. But he insists that these groupings are arbitrary, overlapping and fluid; that they merely describe populations whose distinctions are due partly to cultural developments (as a result of geographical separation) and partly to 'temporary mixtures of genetic materials common to all mankind'; and that the differences are definitely not due to 'inborn physical and mental traits' which are ineradicable. Indeed, the

concept of 'race' is a superstition, 'the witchcraft of our time', and a stratagem invented to justify discrimination.²⁷ Indeed, not only have the vast majority of modern anthropologists completely abandoned the concept of 'race'²⁸ but also the terms Causasoid, Mongoloid, Negroid and Australoid.

¹ Fred E. Jandt, *An Introduction to Intercultural Communication. Identities in a Global Community* (Thousand Oaks/London/New Delhi: Sage Publications, 2007) 3.

² Research by Poznik et al. conducted in 2013 estimates a range of 99,000-148,000 years ago. See https://en.wikipedia.org/wiki/Mitochondrial_Eve

³ See, for example, the critique by Brad Harrub and Bert Thompson both holders of Ph.D degrees in microbiology: *The Demise of Mitochondrial Eve*. <https://www.trueorigin.org/mitochondrialeve01.php> They identify and challenge two fundamental assumptions: (1) that mtDNA is, in fact, derived exclusively from the mother; and (2) that mutation rates associated with mtDNA have remained constant over time.

⁴ *Encyclopedia Britannica*, Vol 5, 190B.

⁵ Kraft, *Christianity in Culture*, 84.

⁶ *Encyclopedia Britannica* B9, 876. Much of what follows is summarised from this article.

⁷ Harris, 32.

⁸ Bergmann's Rule states that body weight tends to a minimum in warmer regions, increases to a certain threshold as temperature declines, and then falls off again as temperature falls further.

⁹ Sickle cell anemia is a hereditary disorder. Aside from Africans it is also to be found in other ethnic groups, particularly those of Mediterranean and Middle Eastern ancestry. This blood condition results from the inheriting of two abnormal genes (one from each parent). These affect the haemoglobin and cause the red blood cells to assume a sickle-shape, hence the name.

¹⁰ A human's DNA contains about 80,000 genes, which are often depicted as the instruction kit for his or her body.

¹¹ An allele is a specific variation of a gene. All humans have genes for eye colour, but the colour of people's eyes varies because some have one allele, others another.

¹² *Homozygous* means "having the same alleles at a particular gene locus on homologous chromosomes".

¹³ *Encyclopedia Britannica* 9, 876.

¹⁴ Stott, 200.

¹⁵ Merrill, 162-163.

¹⁶ G. Berreman et al., *Anthropology Today* (CRM Books; Del Mar, California: Communications Research Machines, 1971) 31.

¹⁷ op.cit., 57.

¹⁸ *Where TO now?*, 178.

¹⁹ *Where TO now?*, 178.

²⁰ American Anthropological Association website: <http://www.aaanet.org/stmts/racepp.htm> Downloaded 12/12/05.

²¹ http://www.eurekalert.org/pub_releases/2005-04/cdri-bai042505.php Downloaded 13/12/05.

²² See Peter Wade (University of Manchester). "Human nature and race". <http://www.socialsciences.man.ac.uk/socialanthropology/staff/documents/ATarticle.pdf> Downloaded 13/12/05.

²³ <http://www.guysandstthomas.nhs.uk/page3189.htm> Downloaded 13/12/05.

²⁴ *Encyclopaedia Britannica*, Vol 2, 171B,C.

²⁵ *Encyclopedia Britannica*, Vol 9, 361C-362A.

²⁶ Merrill, 164.

²⁷ Stott, 197.

²⁸ Berreman et al., 31.