

Chapter 18

How did all the different ‘races’ arise (from Noah’s family)?

- What is a ‘race’?
- How did different skin colours come about?
- What are the consequences of false ideas about the origin of races?
- Are black people the result of a curse on Ham?
- What about ‘Stone Age’ people?

ACCORDING to the Bible, all humans descended from Noah and his wife, his three sons and their wives, and before that from Adam and Eve (Genesis 1–11). But today we have many ‘races’, with what seem to be greatly differing features; the most obvious of these is skin colour. Many see this as a reason to doubt the Bible’s record of history, believing that the various groups could have arisen only by evolving separately over tens of thousands of years.

The Bible tells us how the population that descended from Noah’s family had one language and by living in one place were disobeying God’s command to “*fill the earth*” (Genesis 9:1, 11:4). God confused their language, causing a break-up of the population into smaller groups that scattered over the Earth (Genesis 11:8–9). Modern genetics shows how, following such a break-up of a population, variations in skin colour, for example, can develop in only a few generations. There is good evidence

that the various people groups we have today have **not** been separated for huge periods of time.¹

What is a ‘race’?

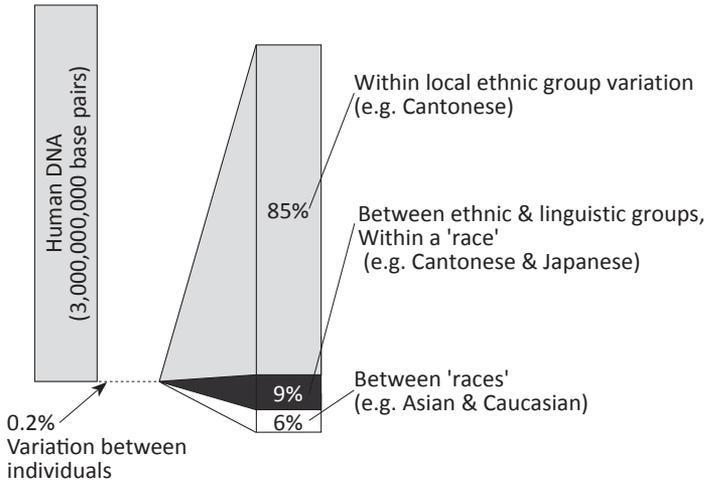
In one sense there is really only one race—the human race. The Bible teaches us that God has “*made from one man all nations of mankind*” (Acts 17:26). Scripture distinguishes people by tribal or national groupings, not by skin colour or physical features. Clearly, though, there are groups of people who have certain features (e.g. skin colour) in common, which distinguish them from other groups. We prefer to call these ‘people groups’ rather than ‘races’, to avoid the unfortunate evolutionary connotations associated with the word ‘race’.

All people can interbreed and produce fertile offspring. This shows that the biological differences between the ‘races’ are small. In fact, the DNA differences are almost trivial. The DNA of any two people in the world typically differs by just 0.2%.² Of this, only 6% (i.e. a minuscule 0.012%) can be linked to ‘racial’ categories; the rest is ‘within race’ variation.

Anthropologists often classify people into several main racial groups: Caucasoid (European or ‘white’),³ Mongoloid (which includes the Chinese, Inuit or Eskimo, and Native Americans), Negroid (black Africans), and Australoid (Australian Aborigines).

Virtually all evolutionists would now say that the various people groups did not have separate origins. That is, different people groups did not each evolve from different groups of animals. So they would agree with the biblical creationist that all people groups have come from the same original population. Of course, they say that such groups as the Aborigines and the Chinese have had many tens of thousands of years of separation. Most people believe that there are such vast differences between groups that there *had* to be many years for these differences to develop.

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1. Worldwide variations in mitochondrial DNA (the ‘Mitochondrial Eve’ story) were claimed to show that all people today trace back to a single mother (living in a small population) 70,000 to 800,000 years ago. Subsequent findings on the rate of mitochondrial DNA mutations shortened this period drastically to put it within the biblical time-frame. See Loewe, L. and Scherer, S., Mitochondrial Eve: the plot thickens, *Trends in Ecology and Evolution* 12(11):422–423, 1997; Wieland, C., A shrinking date for Eve, *Journal of Creation* 12(1):1–3, 1998; creation.com/eve.
 2. Gutin, J.C., End of the rainbow, *Discover*, pp. 71–75, November 1994.
 3. However, people inhabiting the Indian subcontinent are mainly Caucasian and their skin colour ranges from light brown to quite dark. Even within Europe, skin colour ranges from very pale to brown.



The variation in DNA between human individuals shows that racial differences are tiny.

One reason for this is a false perception that different racial characteristics such as skin colour are due to profoundly different genetic make-ups. This is an understandable but incorrect idea. For example, it is easy to think that since different groups of people have 'yellow' skin, 'red' skin, black skin, 'white' skin, and brown skin, there must be many different skin pigments. Different chemicals for colouring would mean different codes in the DNA for each people group, so it appears to be a problem. How could those differences develop within a short time?

However, we all have the same colouring pigment in our skin, melanin. This is a dark-brown pigment that is produced in different amounts in special cells in our skin. If we had **none** (as do albino people, who inherit a mutation-caused defect, and cannot produce melanin), then we would have a very 'white' or pink skin colouring. If we produced a little melanin, we would be 'white'. If our skin produced a lot of melanin, we would be 'black'. And in between, of course, are all shades of brown.⁴

4. Other substances can in minor ways affect skin shading, such as the coloured fibres of the protein elastin and the pigment carotene. However, once again we all share these same compounds, and the principles governing their inheritance are similar to those outlined here. Factors other than pigment in the skin may influence the shade perceived by the observer in subtle ways, such as the thickness of the overlying (clear) skin layers, and the density and positioning of the blood capillary networks. In fact, 'melanin', which is produced by cells in the body called melanocytes, consists of two pigments, which also account for hair colour. Eumelanin is very dark brown, pheomelanin is more reddish. People tan when sunlight stimulates eumelanin production. Redheads, who are often unable to develop a protective tan, have a high proportion of pheomelanin. They have probably inherited a defective gene which makes their pigment cells "unable to respond to normal signals that stimulate eumelanin production". See Cohen, P., Redheads come out of the shade, *New Scientist* 147(1997):18, 1995.

So the most important factor in determining skin colour is the *amount* of melanin produced.

Generally, whatever feature we may look at, no people group has anything that is essentially different from that possessed by another. For example, the Asian, or almond, eye differs from a typical Caucasian eye in having a tiny ligament that pulls the eyelid down a little (see figure 1). All babies are born with the ligament, but non-Asians usually lose it before 6 months of age. Some retain the ligament and thus have almond-shaped eyes like Asians, and some Asians lose the ligament and so have round eyes like most Caucasians.

Melanin protects the skin from damage by ultraviolet light from the sun. Too little melanin in a sunny environment leads to sunburn and skin cancer. A lot of melanin where there is little sunshine will make it harder to get enough vitamin D (which needs sunshine for its production in the skin). Vitamin D deficiency can cause a bone disorder such as rickets and has been linked with higher incidence of some cancers.

Scientists have also discovered that UV light destroys folate, an important vitamin in preventing spina bifida. Melanin protects folate, so this is a further advantage of having dark skin in areas with high UV levels (the tropics and at high altitudes).⁵ Melanin also protects against tropical skin ulcers.

We are born with a genetically fixed *potential* to produce a certain amount of melanin, and the amount increases up to that potential in response to sunlight—skin ‘tanning’.

Could many different shades of skin colour arise in a short time? If a person from a black people group marries someone from a very white group, their offspring are mid-brown. It has long been known that when such brown-skinned people marry each other, their offspring may be virtually any ‘colour’, ranging from very dark to very light. This suggests



Figure 1. Caucasian and Asian eyes differ in the amount of fat around the eye, as well as a ligament called the epicanthus that is lost in most non-Asian babies at about six months of age (arrow).

5. Jablonski, N.G., Sun, skin and spina bifida; in: Bruce, N.W. (Ed.), *Proc. 5th Annual Conf. Austral. Soc. Human Biol.*. Centre for Human Biology, Perth, Australia, pp. 455–462, 1992.

an answer to our question, but first we must look at some basic principles of heredity.

Heredity

Each of us carries information in our body that describes us, like plans and specifications that describe a complex building. It determines not only that we



will be human beings, rather than bananas, but also that we will have brown eyes, short nose, etc. When a sperm fertilizes an egg, **all** the information that specifies how the person will be built (ignoring such factors as exercise and diet) is already present. Most of this information is in coded form in our DNA.⁶

This is by far the most efficient information storage system known, greatly surpassing foreseeable computer technology.⁷ This information is copied (and reshuffled) from generation to generation as people reproduce.

'Gene' refers to a small part of that information that carries the instructions for only one type of protein.⁸ For example, a gene carries the instructions for making hemoglobin, the protein that carries oxygen in your red blood cells. If that gene has been damaged by mutation (such as copying mistakes during reproduction), the instructions will be faulty, so it will make a crippled form of hemoglobin, if any. (Diseases such as sickle-cell anemia result from such mistakes.)

Genes come in pairs, so in the case of hemoglobin, for example, we have two sets of code (instruction) for hemoglobin manufacture, one coming from the mother and one from the father. An egg that has just been fertilized gets one set of genes from the father (carried in the sperm) and another set from the mother (carried in the egg).

This is a very useful arrangement, because if you inherit a damaged gene from one parent that could instruct your cells to produce defective

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6. Most of this DNA is in the nucleus of each cell, but some is contained in mitochondria, which are outside the nucleus in the cytoplasm. Sperm contribute only nuclear DNA when the egg is fertilized. Mitochondrial DNA is inherited only from the mother, via the egg.
 7. Gitt, W., Dazzling design in miniature, *Creation* 20(1):6, 1997; creation.com/dna.
 8. Incredibly, the same stretch of DNA can be 'read' differently, to have more than one function, by starting the reading process from different points, or editing the result of the reading process. The creative intelligence behind such a mechanism is astonishing.

hemoglobin, you are still likely to get a normal one from the other parent that can continue to give the right instructions. (In fact, each of us inherits hundreds of genetic mistakes from one or the other of our parents, but these are often ‘covered up’ by being matched with a normal gene from the other parent—see *Who was Cain’s wife?*, Chapter 8).

Skin colour

M=high levels of melanin **m**=low levels of melanin

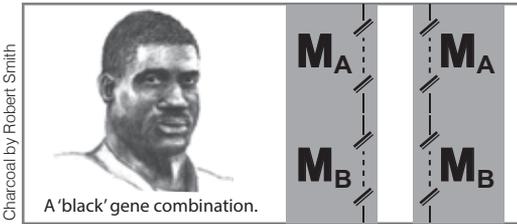


Figure 2. A ‘black’ gene combination

Skin colour is governed by more than one pair of genes. For simplicity, let’s assume there are only two,⁹ located at positions A and B on the chromosomes. One form of the gene, ‘M’, ‘says’ make lots of melanin; another form of the gene,¹⁰ ‘m’, says

only make a little melanin. At position A we could have a pair such as $M_A M_A$, $M_A m_A$ or $m_A m_A$ ¹¹, which would instruct the skin cells to make a lot, some, or little melanin.

Similarly, at position B we could have the gene pairs $M_B M_B$, $M_B m_B$ or $m_B m_B$, instructing cells to make a lot, some, or little melanin. Thus very dark people could have $M_A M_A M_B M_B$ (see figure 2). Since both the sperm and eggs of such people could only be $M_A M_B$ (remember, only one from each A or B pair goes to each sperm or egg), they could only produce children with the same combination of genes as themselves.

So the children will all be very dark. Likewise, very light people, with $m_A m_A m_B m_B$, could only produce children like themselves (see figure 3).

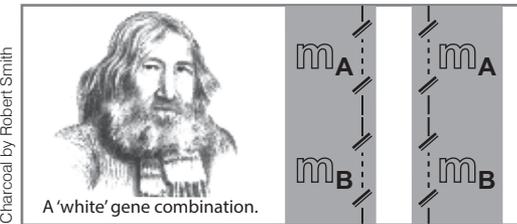


Figure 3. A ‘white’ gene combination

What combinations

9. This simplification is not done to help our case—the more genes there are, the easier it is to have a huge range of ‘different’ colours. The principle involved can be understood by using two as an example.
10. Variant forms of a gene are called ‘alleles’, but that is not important here.
11. For the technically minded, this type of genetic expression, where allele dosage affects the trait, is called partial dominance.

Charcoal by Robert Smith

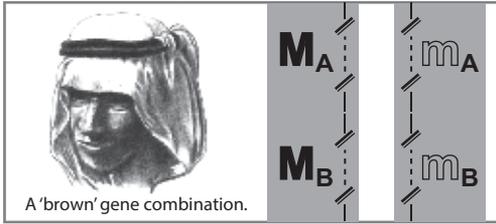


Figure 4. A 'brown' gene combination

would result from brown-skinned parents with $M_A m_A M_B m_B$ (the offspring of an $M_A M_A M_B M_B$ and $m_A m_A m_B m_B$ union, for example; see figure 4)?

We can do this with a diagram called a 'punnet square' (see figure 5). The left side shows the four different gene combinations possible in the sperm from the father and the top gives the combinations possible in the eggs from the mother (remember that a parent can only pass on one of each pair of genes to each sperm or egg). We locate a particular sperm gene combination and follow the row across to the column below a particular egg gene

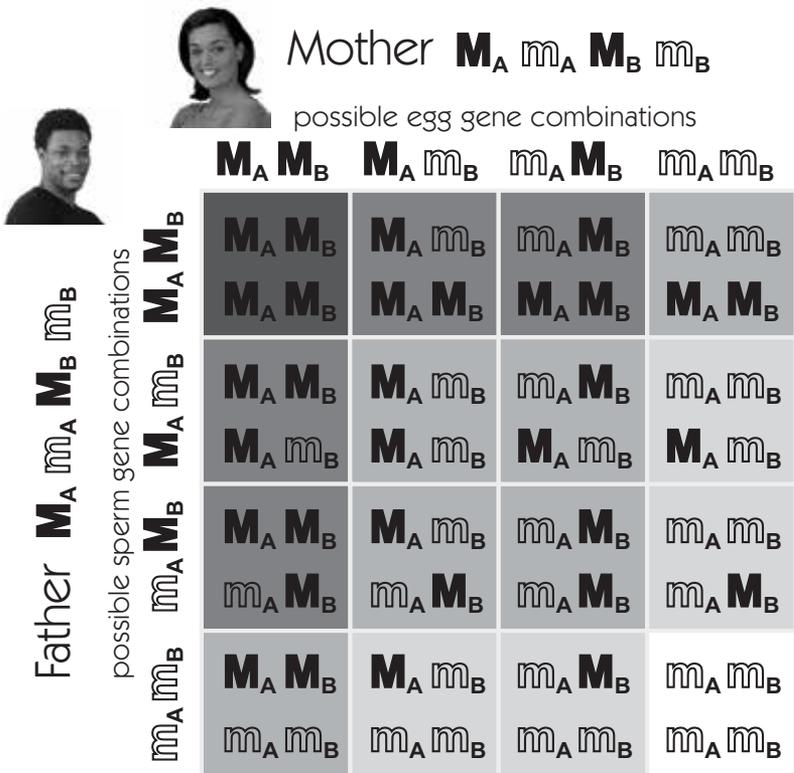


Figure 5. 'square' showing the possible offspring from brown parents with $M_A m_A M_B m_B$ genes

combination (like finding a location on a street map). The intersection gives the genetic makeup of the offspring from that particular sperm and egg union. For example, an $M_A m_B$ sperm and an $m_A M_B$ egg would produce a child with $M_A m_A M_B m_B$, the same as the parents. The other possibilities mean that five levels of melanin (shades of colour) can result in the offspring of such a marriage, as roughly indicated by the level of shading in the diagram. If three gene pairs were involved, seven levels of melanin would be possible.

Thus a range of ‘colours’, from very light to very dark, can result in only **one generation**, beginning with this particular type of mid-brown parents.

If people with $M_A M_A M_B M_B$, who are ‘pure’ black (in the sense of having no genes for lightness at all), were to migrate to a place where their offspring could not marry people of lighter colour, all their descendants would be black—a pure ‘black line’ would result.

If ‘white’ people ($m_A m_A m_B m_B$) were to migrate to a place where their offspring could not marry darker people, a ‘pure’ (in the same sense) ‘white line’ would result—they would lose the genes needed to produce a large amount of melanin and so could not produce ‘black’ children.

It is thus easily possible, beginning with two middle-brown parents, to get not only all the ‘colours’, but also people groups with stable shades of skin colour.

But what about people groups that are permanently mid-brown, such as we have today? Again, this is easily explained. If those with genes $M_A M_A m_B m_B$ or $m_A m_A M_B M_B$ no longer intermarry with others, they will be able to produce only mid-brown offspring. (You can work this out with your own punnet square.)

If either of these lines were to interbreed again with the other, the process would be reversed. In a short time their descendants would show a whole range of colours, often in the same family.

If all people were to intermarry freely, and then break into random groups that kept to themselves, a whole new set of gene combinations could emerge. It may be possible to have almond eyes with black skin, blue eyes with black frizzy short hair, etc. We need to remember, of course, that the way in which genes express themselves is much more complex than this simplified picture. For example, sometimes certain genes are linked together so that they tend to be inherited together.

Even today, within a particular people group you will often see a feature normally associated with another people group. For instance, you will occasionally see a European with a broad flat nose, or a Chinese

person with Caucasian eyes. Most scientists now agree that all humans are genetically extremely similar (unexpectedly so for evolutionists). This argues strongly against the idea that the people groups have been separated for a long time.

What really happened?

We can now reconstruct the true history of the people groups, using:

- the information given by the Creator Himself in the book of Genesis
- the background information given above
- some consideration of the effect of the environment.

God created the first man, Adam, from whom all other humans descended. 1656 years after Creation, a worldwide Flood destroyed all humans except Noah, his wife, his three sons, and their wives. This Flood greatly changed the environment. God commanded the survivors to multiply and fill the earth (Genesis 9:1). The people disobeyed God and united to build a city, with the Tower of Babel as the focal point of rebellious worship.

Genesis 11 indicates that up to this time there was only one language. God judged the people's disobedience by imposing different languages, thus stopping their work against God and forcing them to scatter over the earth as God intended. So all the people groups have come into existence since Babel.

Noah and his family were probably mid-brown, with genes for both dark and light skin, because a medium skin colour would seem to be the most generally suitable (dark enough to protect against skin damage and folate destruction, yet light enough to allow vitamin D production). Adam



Figure 6. Nottingham's amazing two-tone twins show how different combinations of existing genes from the parents gives variety in the offspring.

What was Adam and Eve's skin colour?

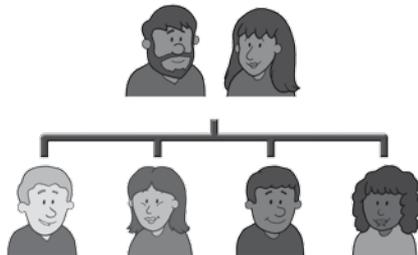


Image by Keaton Halley

and Eve would most likely have been mid-brown as well, with brown eyes and brown (or black) hair. In fact, most of the world's population today is mid-brown.

After the Flood, until Babel, there was only one language and one culture group. Thus, there were no barriers to marriage within this group. This would tend to keep the skin colour of the population away from the extremes. Very dark and very light skin would appear, of course, but people tending in either direction would be free to marry someone lighter or darker than themselves, ensuring that the average colour stayed roughly the same.

The same would be true of characteristics other than skin colour. Under these sorts of circumstances, distinct, consistent differences in appearance will never emerge. To obtain such separate lines, you would need to break a large breeding group into smaller groups and keep them separate; that is, prevent interbreeding between groups. This is true for animal as well as human populations, as every biologist knows.

The effects of Babel

This actually happened at Babel. God's imposition of separate languages created instant barriers. Not only would people tend not to marry someone they couldn't understand, but groups that spoke the same language would have difficulty relating to and trusting those that did not. Thus, they would move away from each other, into different environments. God intended this so they would 'fill the earth'.

It is unlikely that every small group would carry the same broad range of skin colours as the original, larger group. One group might have more dark genes, on average, while another might have more light genes. The same thing would occur with other characteristics: nose shape, eye shape, etc. And since they would intermarry only within their own language group, these differences would no longer be averaged out as before.

As these groups migrated away from Babel, they encountered new environments. Consider a group of people who moved to a region with little sunlight. Here, the dark-skinned folk would not be able to produce enough vitamin D, and thus would be less healthy and have fewer children. So, in time, the light-skinned members would predominate.

If several different groups went to such an area, and if one group happened to be carrying few genes for lightness, this particular group could in time die out. Thus, natural selection acts on the characteristics *already present*, and does not create new ones.

The Neandertals of Europe, now extinct but recognized as fully human, show evidence of rickets, a symptom of vitamin D deficiency. In fact, this, plus evolutionary prejudice, caused them to be classified as 'apemen' for a long time. They could well have been dark-skinned

people who were unfit for the environment into which they moved because of the skin colour genes *they began with*. Notice (again) that this natural selection, as it is called, does not *produce* skin colours, but only acts on the created capacity for making skin pigment that is *already* there.¹²

Conversely, fair-skinned people in sunny regions could suffer from skin ulcers, skin cancer and folate deficiency. Thus, in these regions dark-skinned people would come to predominate.

Of course people are intelligent and would come to associate dark or light skin with being healthy in the different environments. Thus, marriage choices would come into play: 'black is beautiful' in the tropics, whereas 'white is beautiful' at high latitudes. This intelligent selection would accentuate natural selection, speeding up the development of racial differences.

So we see that the pressure of the environment, plus human choice, can (a) affect the balance of genes within a group, and (b) even eliminate entire groups. This is why, to a large extent, the physical characteristics of people tend to match the environment where they live (e.g. Nordic people with pale skin, equatorial people with dark skin).

But this is not always so. The Inuit (Eskimo) have brown skin, yet live where there is not much sun. Presumably they all have a genetic makeup such as $M_A M_A m_B m_B$, which would not be able to produce lighter or darker skin. The Inuit fish diet also provides plenty of vitamin D, so that they can be healthy without much sunlight. On the other hand, native South Americans living on the equator do not have black skin. These examples confirm that natural selection does not create new information—if the genetic makeup of a group of people does not allow variation in colour toward that colour desirable for that environment, natural selection cannot create such variation (and nor can human choice).

Pygmies live in a hot area, but rarely experience strong sunshine in their dense jungle environment; yet they have dark skin. Pygmies may be a good example of another factor that has affected the racial history of man: discrimination. People different from the 'norm' (e.g. a very light person in a dark people group) have historically been regarded as abnormal and rejected by the group. Such a person could fail to get a marriage partner. This would further tend to eliminate light genes from

12. Indeed a mutant form of the MC1R gene has been found in Neandertal fossils—a mutation that causes red hair due to depressed production of normal brown melanin. So it seems that at Neandertals could have had the range of colouration seen in Europeans today. See Carles Lalueza-Fox, C. *et al.*, A melanocortin 1 receptor allele suggests varying pigmentation among Neanderthals, *Science* **318**:1453–1455, 2007; DOI: 10.1126/science.1147417.

a dark people, and vice versa. In this way, groups have tended to ‘purify’ themselves.

Also, in some instances, breeding within a small group can accentuate a commonly occurring unusual feature that would otherwise be swamped by marriage outside the group. There is a tribe in Africa whose members all have grossly deformed feet from such inbreeding.

If people possessing genes for short stature were discriminated against, a small group of them might seek refuge in the deepest forest. By marrying only each other they would ensure a pygmy ‘race’ developed. The fact that pygmy tribes speak dialects of neighbouring non-pygmy tribal languages suggests that this happened.

Certain genetic characteristics may have influenced people groups to make deliberate (or semi-deliberate) choices concerning the environments to which they migrated. For instance, people with genes for a thicker, more insulating layer of fat under their skin would tend to leave areas that were uncomfortably hot.

Common memories

The evidence for the Bible’s account of human origins is more than just biological and genetic. Since all peoples have descended from Noah’s family a relatively short time ago, we would expect to find some memory of the catastrophic Flood in the stories of many people groups. In fact, an overwhelming number of cultures do have accounts of a world-destroying flood. Often these have striking parallels to the true, original account, such as: eight people saved in a boat, the sending out of birds, a rainbow, and more.

Conclusion

The dispersion at Babel broke up a large interbreeding group into small inbreeding groups. The resultant groups would have different mixes of genes for various physical features. By itself, this dispersion would ensure, in a short time, that there would be certain fixed differences in some of these groups, commonly called ‘races’. In addition, the selection pressure of the environment would modify the existing combinations of genes so that the physical characteristics of each group would tend to suit their environment.

There has been no simple-to-complex evolution of any genes, for the genes were present already. The dominant features of the various people groups result from different combinations of previously existing created genes, plus some minor degenerative changes, resulting from mutation (accidental changes which can be inherited). The originally created (genetic) information has been either reshuffled or has degenerated.

Consequences of false beliefs about the origin of races

Rejection of the Gospel

The accuracy of the historical details of Genesis is crucial to the trustworthiness of the Bible and to the whole Gospel message. So the popular belief that people groups evolved their different features, and could not all have come from Noah's family (contrary to the Bible), has eroded belief in the Gospel of Jesus Christ.

Racism

One of the biggest justifications for racial discrimination in modern times is the belief that people groups have evolved separately. So, different groups would be at different stages of evolution, with some more backward than others. Therefore, the other person may not be as fully human as you. This sort of thinking inspired Hitler's gas chambers, aiming to establish the 'master race'.¹³ Sadly, some Christians have been infected with racist thinking through evolutionary indoctrination that people of a different 'colour' are inferior because they are supposedly closer to the animals. Such attitudes are completely unbiblical (e.g. Acts 17:26, Col. 3:11), although out-of-context Bible verses are sometimes misused to justify racist views (see Appendix I).

Bad influence on missionary outreach

The spread of evolutionary belief has negatively impacted missionary activity. The idea of savage, half-evolved inferior peoples somehow does not evoke the same missionary urgency as the notion that our 'cousins', closely linked to us in time and heredity, have yet to hear the Gospel.¹⁴ Even many of the finest of today's missionary organizations have been influenced, often unconsciously, by deeply ingrained evolutionary ideas about the origin of other peoples and their religions.

All tribes and nations are descendants of Noah's family!

The Bible makes it clear that any newly discovered tribe ultimately goes back to Noah. Thus their culture began with (a) a knowledge of God, and (b) technology at least sufficient to build a boat of ocean-liner size.

13. Bergman, J., Darwinism and the Nazi race holocaust, *Journal of Creation* 13(2):101-111, 1999; creation.com/holocaust.

14. For example, Grigg, R., Darwin's quisling, *Creation* 22(1):50-51, 1999; creation.com/kingsley. See also creation.com/racism.

Romans Chapter 1 suggests the major reason for this technological loss and cultural degeneration (see Appendix II). It is linked to the deliberate rejection by their ancestors of the worship of the living God. So the first priority in helping a ‘backward’ people group should not be secular education and technical aid, but first and foremost the Gospel.

In fact, most ‘primitive’ tribes still have a memory that their ancestors turned away from the living God, the Creator. Don Richardson, missionary of *Peace Child* fame, has shown that a missionary approach unblinded by evolutionary bias, and thus looking for this link and utilizing it, has been very effective in rescuing people from the squalor of animism, for example.¹⁵

Jesus Christ, God’s reconciliation in the face of man’s rejection of the Creator, is the only truth that can set men and women of every culture, people group or colour truly free (John 8:32; 14:6).

Appendix I. **Is black skin due to the curse on Ham?**

‘Black’ (really dark-brown) skin is merely one particular combination of inherited factors. These factors, though not in that combination, were originally present in Adam and Eve. The belief that the skin colour of black people is a result of a curse on Ham and his descendants is *nowhere taught in the Bible*. Furthermore, it was not *Ham* who was cursed, but his son, Canaan (Genesis 9:18, 25; 10:6). And Canaan’s descendants probably had mid-brown skin (Genesis 10:15–19), not black. False teaching about Ham has been used to justify slavery and other non-biblical racist practices. It is traditionally believed that the African nations are largely Hamitic, because the Cushites (Cush was a son of Ham: Genesis 10:6) are thought to have lived where Ethiopia is today. Genesis suggests that the dispersion was probably along family lines, and it may be that Ham’s descendants were on average darker than, say, Japheth’s. However, it could just as easily have been the other way around.

Rahab, mentioned in the genealogy of Jesus in Matthew 1, was a Canaanite. A descendant of Ham, she must have married an Israelite. God approved of this union, which shows that the particular ‘race’ she came from was not important—it mattered only that she trusted in the true God. Ruth, a Moabitess, also features in the genealogy of Christ. She expressed faith in God before her marriage to Boaz (Ruth 1:16).

15. Richardson, D., *Eternity in Their Hearts*, Regal Books, Division of Gospel Light, Ventura, CA, US, 1986.

God warns about inter-faith marriage but not inter-racial marriage.¹⁶

Appendix II. 'Stone Age' people?

Archaeology shows that there have been people who lived in caves and used stone tools. There are still people who do the same. We have seen that all people on Earth today descended from Noah

and his family. Before the Flood, Genesis indicates, people had enough technology to make musical instruments, farm, forge metal implements, build cities, and build a huge seaworthy vessel. After the dispersion from Babel, the hostilities induced by the new languages may have forced some groups to scatter rather rapidly, finding shelter wherever they could.

In some instances, stone tools may have been used temporarily, until their settlements were fully established and they found and exploited metal deposits, for example. In others, the original diverging group may not have taken the relevant knowledge with them. Ask an average family group today how many of them, if they had to start again, would know how to find, mine, and smelt metal-bearing deposits? Obviously, there has been technological (cultural) degeneration in many post-Babel groups.

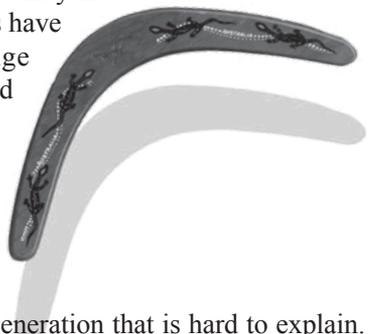
In some cases, harsh environments may have contributed. The Australian Aborigines have a technology and cultural knowledge which, in relation to their lifestyle and need to survive in the dry outback, is appropriate. This includes the aerodynamic principles used in making boomerangs (some of which were designed to return to the thrower, while others were not).

Sometimes we see evidence of degeneration that is hard to explain. For instance, when Europeans arrived in Tasmania, the Aborigines there



Image by Caleb Salisbury

Contrary to popular stereotypes of cavemen, people who dwell in caves were not brutish, ape-like or unintelligent. In a harsh climate, such as during the Ice Age, cave-dwelling would make sense.



16. Wieland, C., The Bible and interracial marriage, *Creation* 34(1):20–22, 2011; creation.com/interracial.

had the simplest technology known. They caught no fish, and did not usually make clothes. Yet recent archaeological discoveries suggest that earlier generations had more knowledge and equipment. Archaeologist Rhys Jones believes that in the Tasmanian Aborigines' distant past these people had equipment to sew skins into complex clothes. This contrasts with the observations in the early 1800s that they just slung skins over their shoulders. It also appears that they were in fact catching and eating fish in the past, but when Europeans arrived, they had not been doing this for some time.^{17,18} So technology is not always retained and built upon, but can be lost or abandoned. Animist peoples live in fear of evil spirits and often invent taboos against healthy practices like washing, and eating various nutritious foods. Again this illustrates how loss of knowledge of the true Creator-God leads to degradation (Romans 1:18–32).

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For much more on race, culture, racism, slavery, etc., read Dr Carl Wieland's book, *One Human Family*, Creation Book Publishers, 2012.

Commenting on Dr Wieland's book, Dr Felix Konotey-Ahulu concluded:

“... the best in-depth account of racism I have ever read. The book has information that will surprise, if not amaze, most readers.”

Dr Jonathan Sarfati commented:

“I can confirm the book is a masterpiece; a great advance on previous works on races, by including vital topics like slavery, apartheid, and race relations in [the USA] ..., cultural history, economic history and how the most productive economies have a Christian underpinning. It avoids the twin problems of non-judgmentalism (too many Christians haven't read John 7:24) about past evils, and political correctness that blames the West for everything.”

17. Jones, R., Tasmania's Ice-Age hunters, *Australian Geographic* 8: 26–45, 1987.

18. Jones, R., The Tasmanian paradox; in: Wright, R.V.S. (Ed.), *Stone Tools as Cultural Markers*, Australian Institute of Aboriginal Studies, Canberra, 1977.