

Introduction to Biological Anthropology

**School of Social Sciences
Indira Gandhi National Open University**

EXPERT COMMITTEE

Professor A. Paparao
Department of Anthropology
Sri Venkateswara University Tirupati

Professor A. K. Kapoor
Department of Anthropology
University of Delhi, Delhi

Professor Satwanti Kapoor
Department of Anthropology,
University of Delhi, Delhi

Professor Rajan Gaur
Department of Anthropology Punjab
University, Chandigarh

Professor Subho Ray
Department of Anthropology
University of Calcutta
Kolkata

Professor Rashmi Sinha,
Faculty of Anthropology,
School of Social Sciences,
Indira Gandhi National Open
University, New Delhi

Dr. P. Venkatramana
Faculty of Anthropology
School of Social Sciences,
Indira Gandhi National Open
University, New Delhi

Dr. Rukshana Zaman
Faculty of Anthropology
School of Social Sciences
Indira Gandhi National Open
University, New Delhi

Dr. Mitoo Das
Faculty of Anthropology,
School of Social Sciences,
Indira Gandhi National Open
University, New Delhi

Dr. K. Anil Kumar
Faculty of Anthropology,
School of Social Sciences,
Indira Gandhi National Open
University, New Delhi

COURSE PREPARATION TEAM

Block	Unit Writers
Block 1 Understanding Biological Anthropology	
Unit 1 Introducing Anthropology	Dr. Prashant Khattri, Department of Anthropology, University of Allahabad, Allahabad Dr. Rameeza Hasan, Department of Anthropology, Madhab Choudhury College, Barpeta Professor Rashmi Sinha, Faculty of Anthropology, School of Social Sciences, Indira Gandhi National Open University, New Delhi
Unit 2 Relationship and Applications of Biological Anthropology	Dr. N. K. Mungreiphy, Amity Institute of Anthropology, Amity University, Noida
Unit 3 Fundamentals and subfields of Biological Anthropology	Dr. Ratika Samtani, Amity Institute of Anthropology, Amity University, Noida
Unit 4 Approaches of Traditional and Modern Biological Anthropology	Professor A. K. Kapoor, Department of Anthropology, University of Delhi, Delhi
Block 2 Understanding Human Variation and Theories of Evolution	
Unit 5 Human Variation and Evolution	Professor A. K. Kapoor, Department of Anthropology, University of Delhi, Delhi
Unit 6 Theories of Organic Evolution	Dr. P Venkatramana, Faculty of Anthropology, School of Social Sciences, Indira Gandhi National Open University, New Delhi Professor A. K. Kapoor, Department of Anthropology, University of Delhi, Delhi Professor Jaydip Sen, Department of Anthropology, University of North Bengal, Darjeeling, West Bengal.
Unit 7 Basic Concepts of Evolution	Professor Rashmi Sinha, Faculty of Anthropology, School of Social Sciences, Indira Gandhi National Open University, New Delhi
Block 3 Living Primates: Human and Non-human	
Unit 8 Classification and Characteristics of Living Primates	Professor Rajan Gaur, Department of Anthropology, Panjab University, Chandigarh
Unit 9 Behaviour of non-human primates	Dr. Ajeet Jaiswal, Assistant Professor, Department of Anthropology, Pondicherry University, R.V. Nagar, Kalapet, Puducherry
Unit 10 Comparative Anatomy of Human and Non-human Primates	Dr. Ajeet Jaiswal, Assistant Professor, Department of Anthropology, Pondicherry University, R.V. Nagar, Kalapet, Puducherry
Block 4 Great Divisions of Humanity	
Unit 11 Major Races of the World	Professor S.P. Singh, Retired, Human Genetics Department, Punjabi University, Patiala
Unit 12 Racial Classification	Professor Subir Biswas, Department of Anthropology, West Bengal State University, Berunanpukuria, PO-Malikapur, Barasat, West Bengal
Unit 13 Race and Racism	Professor Ranjana Ray, (Emeritus Professor), Department of Anthropology, University of Calcutta, Kolkata Professor Subha Ray, Department of Anthropology, University of Calcutta, Kolkata.
Practical Manual	Professor Rashmi Sinha, Faculty of Anthropology, School of Social Sciences, Indira Gandhi National Open University, New Delhi (Portions adopted from Practical Manual of the Course Physical Anthropology (MANI 002) of the Programme Masters in Anthropology (MAAN).

Course Coordinator : Professor Rashmi Sinha, Discipline of Anthropology, SOSS, IGNOU, New Delhi

General Editor : Professor Rashmi Sinha, Discipline of Anthropology, SOSS, IGNOU, New Delhi

Editor (Content, Format & Language) : Prof. Rashmi Sinha and Dr. Monika Saini (Academic Consultant)
Faculty of Anthropology, SOSS, IGNOU, New Delhi

PRINT PRODUCTION

Mr. Manjit Singh
Section Officer (Pub.),
SOSS, IGNOU, New Delhi

Secretarial Assistant
Mr. Rampal Singh and
Mr. Naresh Kumar

Cover Page Design : Dr. Monika Saini
(Academic Consultant), Faculty of Anthropology,
SOSS, IGNOU, New Delhi

November, 2019

© Indira Gandhi National Open University, 2019

ISBN-

All rights reserved. No part of this work may be reproduced in any form, by mimeograph or any other means, without permission in writing from the Indira Gandhi National Open University.

Further information about the School of Social Sciences and the Indira Gandhi National Open University courses may be obtained from the University's office at Maidan Garhi, New Delhi-110 068, India or the Official Website of IGNOU : www.ignou.ac.in

Printed and published on behalf of the Indira Gandhi National Open University, New Delhi, by Director, School of Social Sciences.

Lasertypeset by Rajshree Computers, V-166A, Bhagwati Vihar, Near Sec. 2, Dwarka, Uttam Nagar, New Delhi.

Printed at :

Content

Block 1 Understanding Biological Anthropology

Unit 1	Introducing Anthropology	9
Unit 2	Relationship and Applications of Biological Anthropology	22
Unit 3	Fundamentals and Subfields of Biological Anthropology	33
Unit 4	Approaches of Traditional and Modern Biological Anthropology	47

Block 2 Understanding Human Variation and Thoughts and Theories of Evolution

Unit 5	Human Variation and Evolution	63
Unit 6	Theories of Organic Evolution	76
Unit 7	Basic Concepts of Evolution	89

Block 3 Living Primates: Human and Non-human

Unit 8	Classification and Characteristics of Living Primates	101
Unit 9	Behaviour of Non-Human Primates	115
Unit 10	Comparative Anatomy of Human and Non-Human Primates	128

Block 4 Great Divisions of Humanity

Unit 11	Major Races of the World	143
Unit 12	Racial Classification	157
Unit 13	Race and Racism	174

Practical Manual	185
------------------	-----

Suggested Readings	208
--------------------	-----



ignou
THE PEOPLE'S
UNIVERSITY

INTRODUCTION

Biological anthropology is the study of human variations, adaptations and evolution of our living and fossil relatives from a biological perspective. The subject matter of biological anthropology encompasses a wide range of topics such as human palentology, evolutionary biology, primate behaviour, human genetics and biological variations. In order to understand the contemporary human biological variations and the evolutionary history of humans, biological anthropologists study fossil hominin records as well as the nonhuman primates. The discipline also analyses individual human behaviour in terms of evolution and adaptation to understand the human uniqueness and distinctiveness.

With this backdrop, the present course on biological anthropology has been organized into four blocks keeping in mind the necessities of understanding the important aspects of human evolution and variations. The first block provides a detailed introduction of biological anthropology in four units. Unit 1 introduces Anthropology and its various branches, with a special reference to physical anthropology. The historical development, aim and scope of the discipline and as well as a discussion of the usage of the term “physical or biological anthropology” have been presented in this introductory unit. In Unit 2, the interdisciplinary approach of physical or biological anthropology in relation with other disciplines like biological sciences, earth sciences, chemical sciences, health sciences, medical sciences have been discussed. Unit 3 provides a detailed exploration of fundamentals and sub-fields of biological anthropology. Unit 4 expands on the traditional and modern approaches of biological anthropology and highlights the new methods to study human variations and evolution.

In the second block (Unit 5 through 7) a balanced coverage of the major components of human evolution and variation has been presented. Unit 5 describes the early ideas and theories on the origin of life. This unit also deals with the major sources of human variations that are responsible for racialization of humans. The last section of the unit gives an account of the racial classifications proposed by Francois Bernier, Carl Linnaeus and De Buffon. In unit 6, important theories that explained the process of organic evolution have been critically discussed. Unit 7 explains the basic principles of evolution that are crucial in understanding the mechanism of evolution. These principles include speciation, irreversibility, convergence and parallelism, adaptive radiation and extinction.

The third block comprises three units (Unit 8 through 10) on our evolutionary cousins, the non-human primates. Unit 8 focuses on the characteristics and taxonomic classification of primates. This unit also provides a detailed discussion on the origin of primates and how modern humans have developed from other living primates with which they share so many physical and behavioural similarities. Units 9 and 10 give a comparative exploration of human and non-human primates and provide additional information on how they are closely connected to us anatomically and behaviourally.

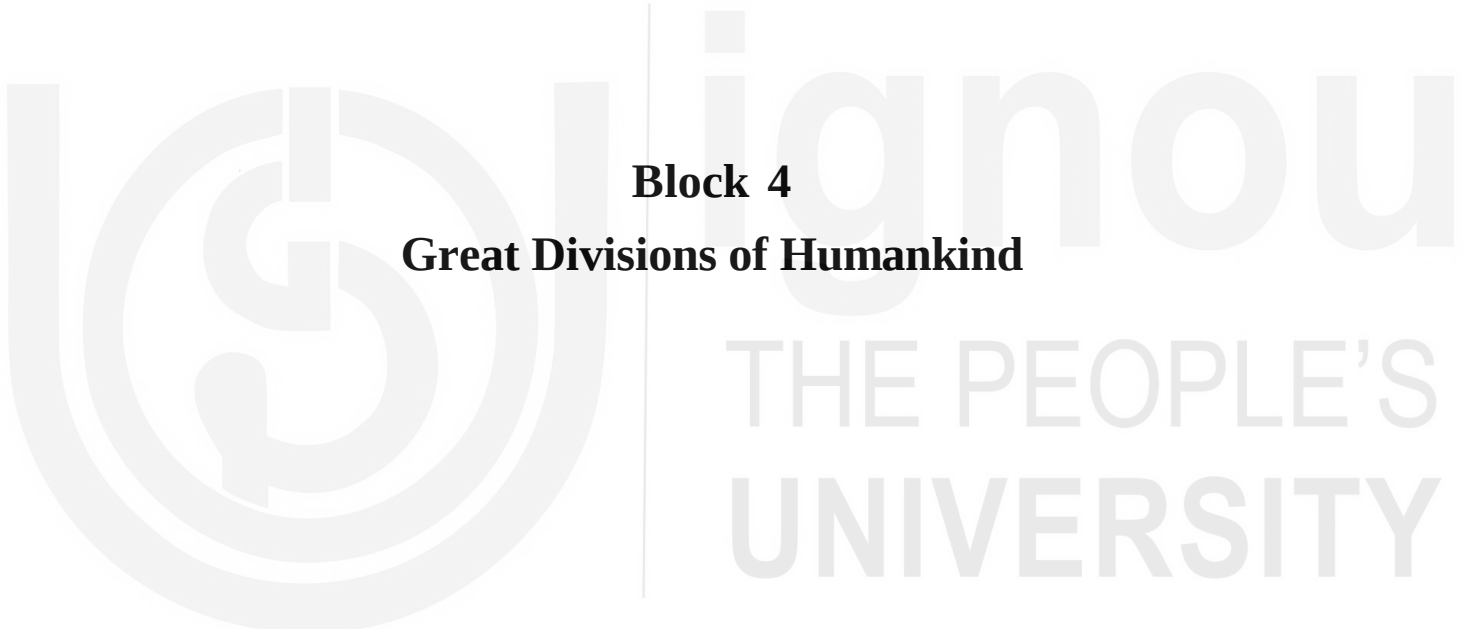
In the last block of this course (Unit 11 through 13), a detailed description on the concept of race has been presented. Unit 11 provides information on the major racial groups of the world along with a discussion on the criticism of racial classification. Unit 12 gives an account of important racial classifications proposed by various scholars. The unit also delineates the biological basis of

proposed racial classifications. Finally, Unit 13 deals with the social construct of the concept of race and racism. Various statements on race given by renowned international organizations like UNESCO and American Anthropological Association have been also included in the unit.

There is a manual concerning the practicals for this course. The practical manual on physical anthropology comprises of three sections. The first section provides the illustration and description of various instruments that are used for taking accurate and precise measurements on human body. Second section deals with Somatometry, the metric study of living human body. In the third section, a description of Somatoscopy has been given which is defined as the visual observation of physical features of various parts of human body. The practical manual also contains various diagrams and drawings depicting somatometric landmarks and standard charts of somatoscopic features for the better understanding. This practical manual will enable to understand various tools and techniques required for metric and visual observations of human body. You will be able to enumerate and describe the significant measurements of human body. Furthermore this practical manual will help to acquire knowledge of the somatoscopic features and their subsequent classification in standard forms/categories.



ignou
THE PEOPLE'S
UNIVERSITY



Block 4

Great Divisions of Humankind



UNIT 11 MAJOR “RACES” OF THE WORLD*

Contents

- 11.0 Introduction
- 11.1 Classifications of Major Races
 - 11.1.1 Negroid Group
 - 11.1.2 Caucasoid Group
 - 11.1.3 Mongoloid Group
- 11.2 Criticism of Various Classifications of Races
- 11.3 Summary
- 11.4 References
- 11.5 Answer/Hints to Check Your Progress

Learning Objectives

After going through this unit you will know the:

- different races and other racial sub-groups of mankind; and
- detailed information of all the three major groups of mankind known as the Negroid, Caucasoid and Mongoloid.

11.0 INTRODUCTION

It is a general observation that human beings differ from each other physically and also in morphological features. The anthropologists have tried to categorize groups on the basis of some common physical features. In biology a “race” has been customarily defined as a subdimention of a species that inherits physical characteristics distinguishing it from other populations of the species (Montagu, 2001). These features include the pigmentation of the skin, hair colour, its form and quantity, shape of the nose, head and face, eyes, stature, finger and palm prints. It was a natural curiosity of the anthropologists to club the overall diversity of the mankind in certain groups so that it becomes easier to describe them.

There is a lot of overlapping of characters and mixing of features among the races. The system of classification of races is inadequate; it is hypothesized that the physical features of the different people have originated because of adaptation to different types of ecological zones in which they have lived for centuries together. In this unit, you will get information about the different racial groups of the mankind classified by the anthropologists. It must be understood that the classifications offered by different anthropologists are arbitrary as they are based mainly on the physical features of the body.

* Prof. S. P. Singh, Retired, Human Genetics Department, Punjabi University, Patiala.

Among anthropologists and biologists, race has historically been an idea about the geographic patterning of human biological variations. The term race is never used by modern anthropologists to refer to religious groups, linguistic groups, or nationalities. There are many anatomical or morphological differences between people and populations that reflect underlying biological differences. Some morphological differences are visible to the naked eye, including skin, eye and hair color and body size and shape. Some other biological differences are just as real but are not as easily seen; these include blood type, fingerprint patterns, and disease susceptibilities. Considering all of these traits that differ among members of our species, there is no doubt that Homo sapiens is a species with considerable biological differences. This kind of geographically patterned biological variation is the traditional raw material of racial classification. We can define race, then, as the geographic pattern of variation in some biological traits that distinguish different human populations (Anemone, 2011).

11.1 CLASSIFICATION OF MAJOR RACES

The variety of the mankind has been described by the anthropologists in three major groups or races. These are known as the Negroid, Caucasoid and Mongoloid.

11.1.1 Negroid Group

Negroid race is mainly distributed in Sub-Saharan Africa. They possess very unique facial characteristics. Negroid group is mainly represented by the African people. The distinguishing characteristics of the Negroid group are:

- Skin colour is dark brown to black
- Head hair is woolly and tightly curly
- Head form is more elongated but less broad
- Nose is broad and flat in shape
- Lips are thick and everted
- Body hair is sparsely distributed

There are different sub groups of the Negroid group and these have been described below:

a) The True Negroes

The True Negroes are those who possess almost all the features of the Negroes. They live in West Africa and inhabit areas from the Senegal River to the eastern border of Nigeria. They have an average height of five feet and eight inches. Their arms and legs are long and they are sturdily built. The skin colour is black. Heads are elongated with conspicuous prognathism. The shape of the nose is broad and flat.

b) The Forest Negroes

The Forest Negroes live in Sudan, Uganda and neighboring areas of Africa. They have long arms but short legs. Their chests are barrel shaped and

they have elongated heads. Their lips are everted. Body build of these people is muscular. Forehead is sloping and lower face is protruding.

c) **Nilotic Negroes**

They are the inhabitants of Sudan and upper Nile valley along the great Nile River. The Nilotic Negroes are tall and very slim in body built and have dark skin colour. They have long heads but their face is not protruding. The average height is five feet and ten inches.

d) **Half Hamites**

They inhabit different areas of Kenya, Uganda and Sudan. They have a variety of brown skin colour. The head hair is woolly. Nose is broad and flat and their average height is five feet and eight inches. Their head is long.

e) **Bantu speaking Negroes**

These people are found in a great majority living in Central and Southern Africa. The skin colour varies from yellow to dark brown. The average height of these people is five feet and six inches.

f) **Bushman**

They inhabit southern Angola and parts of Kalahari Desert. In earlier times, they inhabited whole South Africa and tropical areas of central Africa. But now their number has greatly decreased and they have been pushed only to small areas of Africa. The Bushman are typical in appearance and are different from other Negro sub groups. The majority of the Bushman are very small in height and look like pygmies but some of them are also tall. They have an average height of five feet and two inches. They have medium-shaped heads which are neither elongated nor broad. Their hands and feet are small, body build is lean, arms and legs are longer as compared to the trunk. The head hair are tightly rolled in coils and are called "peppercorn". Body hair is lacking and sparse growth of facial hair can be seen. They have short, small and broadened nose. The chin is generally pointed and ears are small without the earlobes.

g) **Hottentots**

The Hottentots are generally distributed in the western part of West Africa. The Bushman and Hottentots are very much similar to each other. The Hottentots have elongated heads as compared to those of the Bushman and are also taller than them.

h) **Pygmies**

The early anthropologists considered the Pygmies as the most primitive people. They are characterized by very small stature. The average height of the Pygmies is 4 feet and 8 inches. They have woolly type of head hair and the colour of their skin varies from yellowish brown to black. The shape of the nose is broad and flat. The lips and the eyes are large. The shape of the head is medium to broad. Prognathism is generally seen. The geographical distribution of the Pygmies extends from Congo region in Africa to Malay and East Sumatra, Andaman Islands and the Philippine islands. On the basis of the geographical distribution and physical

characteristics, the Pygmies are further divided into three distinct groups, viz., the African Pygmies, Asiatic Pygmies and Oceanic Pygmies.

i) **The Veddahs**

The Veddahs of Ceylon have an average height of about five feet. They have wavy or slightly curled head hair which are generally black. Facial hair are sparse on the chin and the body hair are generally lacking. The size of the head is small and its shape is elongated.

j) **The Pre-Dravidians**

They occupy parts of Central and Southern India and are considered to be the oldest inhabitants of these regions. It is argued that formerly they inhabited larger parts of India but now they live in the jungles. Prominent among them are the Bhil, Gond, Oraon, Kadar, Kurumba, Paniyan, etc. They have an average height of five feet and two inches (157 cm). The skin colour is black and the shape of the head is dolichocephalic. Forehead is slightly receding. Brow ridges show moderate development.

k) **Ainu**

The Ainu are considered to be the original inhabitants of Japan who were forced to migrate to the northern regions. Presently they inhabit Hokkaido and Sakhalin islands of northern Japan.

The Ainu people show a very prominent growth of facial and head hair seen in any group of the humans. They show a range of skin colour from brown to white. They have an average height of five feet and two inches and are stockily built. The shape of the head is mesocephalic.

The first classification based on cranial morphology is attributed to the Professor of Anatomy Anders Retzius (1840). Retzius described as *gentes dolichocephalae* those individuals who had an elongated skull shape, and *gentes brachycephalae* those whose skulls were short. However, he assigned no numerical values to set the boundaries between individual types in both groups and neither did he use the intermediate term *mesocephalae*, which was introduced at a later time. The measures used by Retzius-when applied to living individuals are known as cephalic index, and when referring to dry skulls, cranial index. These indices are calculated by determining the ratio between maximum width and maximum length of the head. The concept was subsequently enhanced with the definition of intermediate values, which provide a classification system and reflect more accurately the diversity found in human facial morphology. Both the cephalic and cranial indices are therefore measures related to the shape of the skull. The index used in anthropometry to describe the face proportions is the facial index, a product of morphological facial height, measured from the Nasion (N) to Gnathion (Gn) anatomical landmarks, divided by the bizygomatic width, measured from the right to the left Zygion (Zyr-Zyl). Semantically, the terms used in the facial index are derived from Greek, where the word for face is *prosopon*. According to this classification system, numerical values are assigned which establish the euryprosopic, mesoprosopic and leptoprosopic categories (Franco et al., 2013).

Table 1: Head classification according to the cephalic index

Ultradolichocephalic	x – 64.9
Hyperdolichocephalic	65.0-69.9
Dolichocephalic	70.0 - 74.9
Mesocephalic	75.0 - 79.9
Brachycephalic	80.0 - 84.9
Hyperbrachycephalic	85.0 - 89.9
Ultrabrachycephalic	90.0 – x
Facial index	$\frac{\text{Morphological facial height} \times 100}{\text{Bizygomatic width}}$

Table 2: Face classification according to facial index

Hypereuryprosopic	x - 79.9
Euryprosopic	80.0 - 84.9
Mesoprosopic	85.0 - 89.9
Leptoprosopic	90.0 - 94.9
Hyperleptoprosopic	95.0 - x

11.1.2 Caucasoid Group

The Caucasoid are generally referred to as the 'White' people. However, the term seems to be a misnomer as this group includes many people with dark skin colour too. The major characteristics of this group include:

- Head hair is generally wavy but may be straight or somewhat curly
- Skin colour may range from white to brown
- Shape of the head shows a large variety from narrow headed to broad headed
- Narrow and pointed nose
- Face is straight and does not show prognathism
- Cheek bones are not prominent
- Lips are generally thin
- Forehead and chin are relatively prominent

The Caucasoid include the following sub groups:

a) **Mediterranean**

This is a large group of different populations which inhabit the areas spreading out in every direction from the Mediterranean Sea and extending up to the Northern India. These include the Portuguese, Italians, Spaniards, Frenchmen, Turks, Greeks, Iranians, Indians, Afghans and North Africans, among others. Their skin colour varies from tanned white to brown. The hair is generally black. The head is dolichocephalic. The average height is five feet and four inches. The face does not show prognathism. The lips are full.

Three distinct types can be found in this sub groups which are recognized as the Basic Mediterranean, Atlanto Mediterranean and Irano Afghan Mediterranean.

b) **The Nordic**

The Nordic people live in the Scandinavian countries viz., Iceland, Netherlands, Belgium, Germany, Poland and Western Russia. The hair colour is from blonde to other light colours. The skin colour is white or slightly pinkish. The eyes are either blue or grey. The head is either elongated or of medium breadth. The nose is prominent, long and pointed. The average height is five feet and eight inches (172 cm).

c) **Alpine**

The Alpine people inhabit along all areas of the Alps Mountains of Europe, France, Russia and Siberia. The Alpine people have broad heads with strongly developed brow ridges. The hair colour is blonde or black-brown. The average height is five feet and five inches (165 cm). The nose is prominent at the tip. They are strongly built.

d) **Dinaric**

The area of Switzerland, Slovakia and Albania is the home of the Dinarics. The head form ranges from mesocephaly to brachycephaly. The forehead is generally vertical. The hair colour varies from black to brown whereas the shape of the head hair is straight or wavy. They have full lips and chin is strongly developed. The nose is generally curved with fleshy tips. They have an average height of five feet and eight inches (172 cm).

e) **Armenoid**

The geographic distribution of these people is towards the eastern side of the Black Sea, Armenia and Turkey. They have a good resemblance with the Dinaric people. They have curved and fleshy noses which are prominent at the tips. The head shape ranges from mesocephaly to brachycephaly. The hair colour is dark brown to black. The mean height of Armenoids is five feet and six inches (167 cm).

f) **Hamites**

The Hamites occupy vast areas of East and North Africa. They show a great range of skin colour from white to black. The head hair also shows large variations from straight to frizzly. They have very little body hair. The shape of the head is dolichocephalic. They have elongated face with pointed chin. Their body build is lean and they are of average height of five feet and five inches (165 cm).

g) **East Baltic**

The Baltic group is native to Germany, Poland, Finland and other Baltic areas. They have very little pigmentation of the hair, skin and eyes and hence they are generally blonde, have white skin colour with very light coloured eyes. The head is broad which means they are brachycephalic. They are called square headed people as the head is evenly and proportionately developed in all areas. The average height is five feet and four inches (164 cm).

h) **The Lapp**

The Lapps inhabit areas of Sweden, Norway, Finland and some parts of Russia. They used to live around coastal area, forests and rivers in very harsh snowy conditions. They have broad head (brachycephaly) and the forehead is steep but narrow. The skin colour is yellowish to brown whereas the hair color is brown and black. The texture of hair is straight or wavy. The average height is five feet and three inches (159 cm).

i) **Indo-Dravidian**

The Indo-Dravidians inhabit most parts of India and Ceylon (Sri Lanka). The shape of the head varies largely from dolichocephalic to brachycephalic. The faces are narrow and small and without any prognathism. The skin colour is dark brown and the hairs are generally black. They have full lips and prominent noses and have an average height of five feet and four inches (164 cm).

j) **Polynesians**

The Polynesians inhabit a geographical area spreading from Hawaii Islands to Fiji Islands and New Zealand. They are very strongly built. Their head shape is broad (brachycephalic) and the cheek bones are prominent. They have broad faces with well developed chins. The skin colour is light brown whereas hair colour varies from black to dark brown. The hair form is generally straight or wavy. The average height is five feet and eight inches (172 cm).

11.1.3 Mongoloid Group

Mongoloids have probably originated in Central Asia and moved to different directions. This group has vast and diverse geographical distribution. People of China and Japan are key representatives of this group. The Mongoloid group is characterized as follows:

- Skin colour varies from yellowish to yellowish brown.
- Head form is broad (brachycephalic).
- Hair colour is black and texture of hair is generally straight.
- Cheek bones are very prominent.
- Upper eyelid has a fold of the skin known as the epicanthic fold.
- Hair density per unit of body surface area is very less.

There are four major sub-groups of the Mongoloid group, viz., the Central or Classical Mongoloids, Arctic Mongoloids or Eskimoids, American Indians or Amerindians and Indonesian Malays.

a) **Central or Classical Mongoloids**

Almost all of the characteristics of the Mongoloids are present in this group. The regions inhabited by this group include areas of the Northern China, Tibet and Mongolia. Their head form is broad and epicanthic eye folds are always present. They have prominent cheek bones and flattened faces.

b) **The Arctic Mongoloids or Eskimoids**

The areas of Greenland, Alaska, Arctic coast of North America, Northeast Asia constitute the home of the Arctic Mongoloids or Eskimoids. This group shows typical epicanthic eye fold, prominent cheek bones, black and straight hair, large torso and small extremities.

c) **The American Indians or Amerindians**

The original Indians of the North, Middle and South America fall in this group of Mongoloid people. The skin colour varies from yellow brown to red brown. The hair are generally straight or wavy and black in colour. The body and facial hair growth is very sparse. The internal epicanthic

eye fold is present but the external epicanthic eye fold is not always present. The face is broad with large cheek bones.

d) **Indonesian-Malays**

The Indonesian-Malays are a little shorter (average height five feet and one inch) than the Malay people (average height five feet and two inches); while the former is long-headed the latter is broad-headed. The other features of the Mongoloid group are more prominent in the Malay group than in the Indonesian group. The Indonesian-Malays inhabit different areas of the South China, Burma and Thailand. This group belongs to the Malay Peninsula, Philippines and Japan.

Check Your Progress 1

- 1) Describe the major features of the Negroid group.

.....

.....

.....

- 2) Draw a comparison between the Negroid and Mongoloid groups.

.....

.....

.....

- 3) Describe the important features which form the basis of racial classifications.

.....

.....

.....

- 4) What is geographic distribution of the Mongoloid people?

.....

.....

.....

11.2 CRITICISM OF VARIOUS CLASSIFICATIONS OF RACES

All human beings inhabiting this world belong to a single species of *Homo sapiens*. Yet by virtue of the external appearance they look very different from each other. May be it is the skin colour, the shape of the nose, the colour of the eyes, the shape of the head or the hair form and colour. The above classification of the mankind into three major groups and numerous sub groups can be considered to be basic but is often termed as flawed because of numerous drawbacks some of which have been listed and described below:

- 1) *Arbitrary and crude*

The classification of the mankind can be referred to as arbitrary and crude simply because of the fact that it is based on visibly distinguishing features. These features include the skin color, shape of the head, nose and hair etc. The underlying genetic relationships have not been considered and thus

do not form the basis of this classification. The humans have always been on the move in search of food and security. Racial admixture has been happening along with confrontation amongst different groups, probably led to the change in gene pools and gene frequencies. The human groups are dynamic and keep on changing their habitat. The racial admixture may have led to the formation of different groups. In short, it is logical to conclude that the criteria on the basis of which the present classification has been made is arbitrary.

2) *Geographic distribution as a limiting factor*

The continuity of geographical areas in describing various groups of the mankind has been the mainstay of this classification. However, people with many similar characteristics may be seen in many areas far flung from each other. But these may not have been included in that group on the basis of geographic discontinuity.

3) *Overlapping of characteristics*

The characteristics used for racial classification show continuity and hence pose a real difficulty of the cut-off limits for each trait. Within group variations for a characteristic should be much smaller compared to between group variations for it to qualify as a classifying trait. But the numerous examples of this not happening are available hence, compromise on the accuracy of the racial classification. Had there been no continuity in the characteristics, the issue of racial classification would have been resolved very easily, but then it is not the case.

4) *No genetic basis*

The present classification does not take into consideration the genetic basis of the differences in different groups. Of course, the anthropologists have studied the genetic structure of different populations and obtained the gene (allele) frequencies of different genetic traits. The best way would have been to consider numerous genetic traits to find out commonality amongst the members of a specific group to name it as a separate group. Most of the characteristics studied and included in the classification may be genetically determined and modifiable under environmental conditions but they are not exclusively determined by genetics such as various blood groups.

Check Your Progress 2

- 5) Describe why the present classification of the mankind into three major groups is arbitrary.

.....

- 6) Why genetic traits should be preferred for classification of the mankind?

.....

- 7) Do you think geographical areas restrict the inclusion of similar groups in a given race?

.....

11.3 SUMMARY

Race is defined as the geographic pattern of variation in some biological traits that distinguishes different human populations. A belief in the existence of biological race within the human species is usually associated with the attempt to classify all human populations into a finite number of races based on some set of features. The mankind has been classified into three major groups, viz., the Negroid, Caucasoid and Mongoloid. It is based on the morphological characteristics such as the pigmentation of the skin, hair colour, hair form and quantity, shapes of the nose, head and face, eyes, stature, finger and palm prints, etc. The Negroid group inhabits various parts of Africa and some other regions of the world. Their skin colour ranges from dark brown to black, the head hair are woolly and tightly curly, head form is more elongated but less broad, nose is broad and flat in shape, lips are thick and everted and body hair is sparsely distributed. The Caucasoid group inhabits areas of the Europe and Central Asia and the Middle East. The head hair are generally wavy but may be straight or somewhat curled, the skin colour may range from white to brown, the shape of the head shows a large variety from narrow headed to broad headed, narrow and pointed nose, the face is straight and does not show prognathism, the cheek bones are not prominent, the lips are generally thin, and the forehead and chin are relatively prominent. The Mongoloid group inhabits areas of the East Asia, Japan, and South East Asia. The skin colour varies from yellowish to yellowish brown, the head form is broad (brachycephalic), hair colour is black and hair are generally straight, the cheek bones are very prominent, upper eyelid has a fold of skin known as the epicanthic fold, hair density per unit of body surface area is very less.

However, this classification of the mankind suffers from the arbitrariness of features, genetic basis being doubtful, geographical distributions being a limiting factor and there being overlapping of the characteristics among different groups.

11.4 REFERENCES

- Anemone, R. L. (2011). *Race and Human Diversity: A Biocultural Approach*, CourseSmart eTextbook. Routledge.
- Coon, C S., Garn, S. M. & Birdsell, J. B. (1950). *Races. A Study of the Problems of Race Formation in Man*. Charles C Thomas, Springfield, Illinois.
- Das, B.M. (2004). *Outline of Physical Anthropology*. Kitab Mahal, New Delhi.
- Deniker, J. (1900). *The Races of Man*. Scribner's, New York.
- Dobzhansky, T. (1958). *Evolution, Genetics and Man*. John Wiley and Sons, New York.
- Franco, F. C. M., Araujo, T. M. D., Vogel, C. J., & Quintão, C. C. A. (2013). Brachycephalic, Dolichocephalic and Mesocephalic: Is it Appropriate to Describe

the Face Using Skull Patterns?. *Dental Press Journal of Orthodontics*, 18(3), 159-163.

Hooton, E.A. (1946). *Up from the Ape*. Mcmillan, New York.

Kephart, C. (1961). *Races of Mankind: Their Origin and Migration*. Peter Owen Limited, London

Montagu, A. (2001). *Man's most dangerous myth: The fallacy of race*. Altamira Press, United States of America.

Singh, I. P. & Bhasin, M. K. (2004). *A Manual of Biological Anthropology*. Kamla-Raj Enterprises, Delhi.

11.5 ANSWERS/HINTS TO CHECK YOUR PROGRESS

- 1) The following are the most important distinguishing characteristics of Negroid Group:
 Skin colour is dark brown to black
 Head hair are wooly and tightly curly
 Head form is more elongated but less broad
 Nose is broad and flat in shape
 Lips are thick and everted
 Body hair is sparsely distributed (Refer section 11.1.1).
- 2) The skin of Negroid group is black whereas that of Mongoloid is Yellow.
 The Former have thick everted lips while the later have epicanthic eye folds.
 Negroid have wooly or tightly curled hair whereas Mongoloid have smooth hair form (Refer section 11.1.1 and 11.1.3).
- 3) All human beings inhabiting this world belong to a single species of *Homo sapiens*. Yet by virtue of external appearance we look very different from each other. May be it is the skin color, the shape of the nose, the color of the eyes, the shape of the head or the hair form and color. The above classification of mankind into three major groups and numerous sub-groups can be considered to be basic but is often termed as flawed because of numerous drawbacks (Refer section 11.0).
- 4) Mongoloid people inhabit the following geographic regions of the world mainly Asia Pacific: China and Japan (Refer section 11.1.3).
- 5) The above classification of mankind can be referred to as arbitrary and crude simply because of the fact that it is based on visibly distinguishing features. These features include skin color, shape of the head, nose, hair etc., which have already been described. The underlying genetic relationships have not been considered and thus do not form the basis of this classification. The humans have always been on the move in search of food and security. Racial admixture has been happening along with confrontation amongst different groups. This may have lead to the change in gene pools and gene frequencies. The human groups are dynamic and keep on changing their habitats. Racial admixture may have led to the formation of different groups. In a nutshell, it is logical to conclude that

the criteria on the basis of which the present classification has been made is arbitrary. (Refer section 11.2).

- 6) The present classification does not take into consideration the genetic basis of the differences in different groups. Of course, the anthropologists gave studied the genetic structure of different populations and obtained the gene frequencies of different genetic traits. The best way would have been to consider numerous genetic traits to find out commonality amongst the members of a specific group to name it as a separate group. Most of the characteristics studied and included in the classification may be genetically determined and modifiable under environmental conditions but they are not exclusively determined by heredity such as blood groups (Refer section 11.2).
- 7) The continuity of geographical areas in describing various groups of mankind has been the mainstay of this classification. However, people with many similar characteristics may be seen in many areas far flung from each other. But these may not have been included in that group on the basis of geographic discontinuity (Refer section 11.2).



UNIT 12 RACIAL CLASSIFICATION*

Contents

- 12.0 Introduction
- 12.1 Contribution of J. F. Blumenbach
- 12.2 Contribution of E. A. Hooton
- 12.3 Contribution of H. H. Risley
- 12.4 Contribution of B. S. Guha
- 12.5 Summary
- 12.6 References
- 12.7 Answers/Hints to Check Your Progress

Learning Objectives

After reading this unit you would be able to:

- understand the basis of classification of human population;
- know about the racial classification given by different scholars; and
- comprehend the characteristic features of major racial groups.

12.0 INTRODUCTION

In biology, more especially in respect of taxonomic classifications, race is an informal rank below the level of subspecies. Therefore, human race is a concept based on categorization of human population into groups. These categorizations were made on the basis of shared physical, genetical, social or cultural traits along with presumed common ancestry.

One can easily find out three distinct types of physical features of ancient Indian population. As per Sanskrit literature; these types are classified as: light coloured Indo-Aryan, yellow coloured Kiratas (Indo-Mongoloids) and dark complexioned Nishadas (Australoids). Even ancient Chinese literatures also attempted to distinguish human groups on the basis of skin colour. However, Bernier, who travelled through the Old World in 1684, may be recognized as founder for attempting to classify human population into different races.

The term “race” was first used in 1684 in something like its contemporary meaning of a major division of humanity displaying a distinctive combination of physical traits transmitted through a line of descent. However, Francois Bernier, the first person to use the word in that way, did not address the crucial question of how these “races” were related to the human species as a whole. Immanuel Kant wrote his essay “Of the Different Human Races” in 1775 both to combat polygenesis and to show that the concept of race was a valuable way of organizing the flood of materials about distant peoples that was

* Professor Subir Biswas, Department of Anthropology, West Bengal State University, Berunanpukuria, PO-Malikapur, Barasat, West Bengal.

newly available to European scholars. One finds in Kant not only a clear and consistent terminological distinction between race and species that was lacking in his predecessors but also an insistence on the permanence of racial characteristics across the generations. Both features contribute to the claim that Kant, rather than, for example, Georges-Louis Leclerc de Buffon, was the first to develop a rigorous scientific concept of race (Bernasconi and Lott, 2000).

In 1758, Carolus Linnaeus, a Swedish botanist established taxonomic classifications and identified four ‘varieties’ of human species – *Homo European*, *Homo American*, *Homo Asiatic* and *Homo African* and he attributed inherited biological and learned cultural traits to each of them. Now-a-days science can recognize ethnocentric assumptions involved in such type of prejudice classifications. Later on European scholars divided *Homo sapiens* into seven distinctive groups based on said physical features and common territory; these are – Australoid, Caucasoid, Mongoloid, Negroid, Native Americans and Polynesians. This unit discusses significant racial classification systems proposed by scholars like Blumenbach, Hooton, Risley and Guha.

Check Your Progress 1

- 1) What are the different types of physical features of ancient Indian population as per Sanskrit literature?

.....

- 2) How many ‘varieties’ of human species were identified by Carolus Linnaeus?

.....

12.1 CONTRIBUTION OF J. F. BLUMENBACH

Johann Friedrich Blumenbach (1752-1840) was a German Physician. In 1775, after studying 60 human crania, he divided human species into five distinctive races based on skull shape. He assumed that *Homo sapiens* had been created in one place and then spread across the world and climate, environment, different modes of life, and the transmission of acquired characteristics shaped these people into different races. Blumenbach coined the term “Caucasian”, derived from the mountain range between Russia and Georgia and for him the ideal skull type was the Caucasian, with degeneration in other skull types. His 1795 classification was similar to that of his teacher Linnaeus’s classification who divided races into four major categories i.e. American, European, Asian and African (Chahal, 2011). Racial classification proposed by Blumenbach is:

- 1) The Caucasian or White: People of Europe (except Laplanders and Finns) also found in North Africa and in Western Asia as far as the Ganges.
- 2) The Mongolian or Yellow: Finns and Laplanders of Europe; Eskimos (now called Inuits) of America, Inhabitants of Asia (except Caucasians).
- 3) The Malayan or Brown: Inhabitants of the Pacific region.

- 4) The Ethiopian or Black: Rest
- 5) Africans (other than Caucasians).
- 6) The American or Red: People of America (except Eskimos).

Blumenbach argued for 'degenerative hypothesis' of racial origin, and claimed that the Adam and Eve were inhabitants of Asia with Caucasian characteristics. Other races probably originated because of degeneration of environmental factors such as sun and diet. Therefore, Negroid's black pigmentation arose because of heat of tropical sun and Eskimo's (now called Inuits) tawny colour because of cold wind. He also believed in reversed degeneration; all the other forms could revert to the Caucasian form depending on sun and diet. However, one can find (even used for) scientific racism in his idea of degeneration, however Blumenbach never identified any race superior to others.

12.2 CONTRIBUTION OF E. A. HOOTON

Ernest Albert Hooton (1887-1954), a Jewish-American Physical Anthropologist was known for his work on racial classifications and his popular book 'Up from the Ape'. He defined race (1946) as "a great division of mankind, the members of which, though individually varying, are characterized as a group by certain combination of morphological and metrical features, principally, non-adaptive, which have been derived from their common descent" (Hooton, 1946)

In 1931, Hooton recognized three primary races i.e. Caucasoid, Negroid and Mongoloid along with several composite sub-races. However in 1947, he modified his own classification. Following is the Hooton's modified classification of Human races (1947).

A) CAUCASOID

- 1) Mediterranean
 - a) Classical Mediterranean
 - b) Atlanto Mediterranean
 - c) Indo-Afgan
- 2) Nordic
- 3) Alpine
- 4) East Baltic
- 5) Dianaric
- 6) Armenoid
- 7) Keltic
- 8) Lapp
- 9) Indo-Dravidian
- 10) Polynesian
- 11) Ainu

B) (a) ARCHAIC CAUCASOID or AUSTRALOID (subdivision of Caucasoid)

- 1) Australian Aborigines
- 2) Pre-Dravidian or Australoid or Veddoid

C) MONGOLOID

- 1) Classical Mongoloid
- 2) The Archaic or Eskimoid
- 3) Indo-Malayan Mongoloid
 - a) Malay type
 - b) Indonesian type or Nesiot
- 4) Amerindian or the American Indian
 - a) Paleo-Armenoid
 - b) Northern Amerind
 - c) Neo-Amerind
 - d) Tehucleche
 - e) North-west coast Amerind

D) NEGROID:

- 1) African Negro
 - a) True Negro
 - b) Nilotic Negro
 - c) Bantu
 - d) Bushman-Hottentot
 - e) Negritto (African Pygmy)
- 2) Oceanic Negro
 - a) Negrito
 - b) Papuans and Melanesians
- 3) American Negro

Let us learn the characteristics of each classification as mentioned in the subsequent sections.

A) CAUCASOID

Caucasoid race include a number of sub-groups with an array of racial elements and generalized characters among people. This race is further sub-divided into eleven racial sub-types namely Mediterranean, Nordic, Alpine, East Baltic, Dinaric, Armenoid, Keltic, Lapp, Indo-Dravidian, Polenesian and Ainu.

The characteristic features of Caucasoid race are as follows:

- Skin colour is white, olive and different shades of brown, sometimes dark brown;
- Hair form is flat wavy to curly, hair colour is lighter and hair texture is medium to fine;

- Shape of head is dolichocephalic to brachycephalic;
- Nose form varies from leptorrhine to mesorrhine (never platyrrhine) with high nasal bridge;
- Forehead is high and facial prognathism is absent;
- Thin lips with prominent chin; and
- Stature is usually tall.

The important physical characteristics of Caucasoid racial sub-types are:

- 1) **Mediterranean:** They are named after their original habitat, the Mediterranean Shore. Generally, Mediterranean people have light body build, dark complexion and narrow head form. They are again classified into three categories: Classic Mediterranean, Atlanto-Mediterranean and Indo-Afghan.
 - a) **Classic Mediterranean:** People of this category are characterised by light brown skin colour, black curly hair, dolicocephalic to mesocephalic head, leptorrhine nose, long oval face with pointed chin, dark eyes and medium stature.
 - b) **Atlanto-Mediterranean:** The physical characteristics of this racial subtype include dark skin colour, dark, wavy or curly hair, dolicocephalic to mesocephalic head, straight nose, deep jaws, prominent cheek bones, retreating forehead with marked eye-brow ridges, medium brown to dark brown eye colour and tall stature.
 - c) **Indo-Afghan:** Indo-Afghan people exhibit light brown skin colour, black and wavy hair, abundant body and facial hair, dolicocephalic to mesocephalic head, leptorrhine nose, long and narrow face, and tall to medium stature.
- 2) **Nordic:** Nordic people have pinkish to reddish white skin colour, wavy hair, mesocephalic head, straight and leptorrhine nose, long narrow and straight face with prominent chin, blue or grey eyes, thin lips and tall stature.
- 3) **Alpine:** The main characteristic features of Alpines include olive or burnet white skin, wavy hair, brachycephalic head and leptorrhine to mesorrhine nose with short thick fleshy tip. Their face is round or oval with strong eyebrow ridges and prominent chin. They have dark to medium brown eyes with thick lips. Stature is medium to short.
- 4) **East Baltic:** This racial type has white to creamy white skin colour, straight hair and light blue or grey eyes. They have less body hair and moderate facial hair. Their head is brachycephalic and shape of face is squarish. They are mesorrhines with convex nasal profile. They have prominent cheek with medium to thin lips. Their stature varies from short to medium.
- 5) **Dinaric:** Typical features of Dinaric race include lighter burnet to olive skin, medium hair texture, abundant body and facial hair, brachycephalic head, leptorrhine nose with fleshy tip and high nasal root. Other important characteristics include brownish eye colour, thick lips, tall stature and long and narrow face with deeper and projecting chin.
- 6) **Armenoid:** Armenoid race has tawny white or olive skin colour, wavy to curly dark brown to black hair, abundant body and facial hair, brachycephalic head, leptorrhine nose with convex profile, narrow elongated face with well-developed cheek bone. They have medium brown to dark brown eye

colour, moderately thick lips and thick eye brow ridges. Stature is medium to tall.

- 7) **Keltic:** People of this race has pale white skin colour, wavy to curly hair, mesocephalic head, blue or grey eyes and long and narrow face with deep chin. They have leptorrhine nose with high nasal bridge. Their stature is usually tall.
 - 8) **Lapp:** Main characteristic features of Lapp race are greyish yellow to yellowish brown skin colour, dark straight hair, sparse body and facial hair, brachycephalic head, thick lips and mesorrhine nose with concave profile. Their face is moderately broad but very short. They have prominent cheek bones and faintly developed eye brow ridges. Epicanthic fold is occasionally present. Stature is short.
 - 9) **Indo-Dravidian:** Important physical characteristics of Indo-Dravidian race include light brown to dark brown skin colour, plentiful black wavy hair, dark brown eye colour and dolichocephalic head. They have narrow to medium face with little prognathism. They are mesorrhines with straight profile. Their nasal bridge is high with depressed root. Stature is medium.
 - 10) **Polynesian:** People of this category have light brown to yellow brown skin colour, wavy to straight hair, dark brown to black complexion; sparse body and facial hair, medium brown to black eyes, thick lips and brachycephalic head. They have long and broad face with prominent cheek bones. Nose is prominent and mesorrhine with high nasal bridge. Chin is well developed. Average stature is tall.
 - 11) **Ainu:** They have light brown to brownish white skin colour, dark brown to black wavy hair, mesocephalic head, mesorrhine to platyrrhine nose with convex profile. Their face is short and medium in breadth with well-developed jaw and chin. Other features include medium brown to dark brown eyes, thin lips and medium to short stature.
- B) **I (a) Australoid or Archaic Caucasoid** is the subdivision of Caucasoid as mentioned earlier. They are further subdivided into following subtypes:
- 1) **Australian Aborigines:** They have medium brown to dark chocolate brown skin colour, wavy to curly hair, abundant hair on body and face, dolichocephalic head, large eye brow ridges, receding chin and short face with medium to pronounced prognathism. Forehead is also receding with prominent glabella. Furthermore, they have very broad nose (platyrrhines), markedly depressed root, medium to dark brown eye colour and medium thick lips. Stature is variable.
 - 2) **Pre-Dravidian:** Physical characteristics of Pre-Dravidian race include dark brown to black skin colour, black wavy to curly hair, dolichocephalic head, platyrrhine nose with depressed nasal root, short and narrow face with moderate prognathism, prominent eyebrow ridges, receding chin, dark brown eyes, thick lips and short stature.

C) **MONGOLOID**

Mongoloids have probably originated in Central part of Asia and moved to different directions. They are mainly divided into four sub-divisions on the basis of their geographical distribution. These sub-divisions are:

- a) Classical Mongoloid

- b) The Archaic of Eskimoid
- c) Indonesian-Malay Mongoloid and
- d) The American Indian or the Amerindian.

The important characteristic features of Mongoloid race are as follows:

- Yellow or yellowish brown skin colour;
- Straight head hair;
- Scanty body and facial hair;
- Brachycephalic head;
- Low nasal root and nasal bridge;
- Concave or straight nasal profile;
- Broad and flat face with prominent cheek bones;
- Obliquely set eyes with narrow slit-like opening;
- Characteristic epicanthic eye fold and
- Stature is variable.

The significant physical characteristics of Mongoloid sub-racial types are:

- 1) **Classical Mongoloid:** People of this race are characterized by yellow or yellowish brown skin colour, straight coarse black head hair, sparsely distributed body and facial hair, brachycephalic head; low nasal root, medium, concave or straight nasal profile; broad face with square jaws, strongly developed cheek bones; obliquely set eyes with narrow slit-like opening, typical epicanthic eye fold and variable stature.
- 2) **The Archaic of Eskimoid:** Physical features of this race include dark yellow to brownish skin colour, straight and black hair, scanty body and facial hair and black eyes with occasional complete epicanthic fold. Head form varies from brachycephalic to monocephalic. Nose is narrow and prominent. Their face is large and broad with prominent cheek bones. Stature is short but variable.
- 3) **Indonesian-Malay Mongoloid:** Indonesian-Malay Mongoloid has admixture of Caucasoid and Negroid elements. They are scattered throughout the South Asia and further divided into two types: (a) Malay type and (b) Indonesian type or Nesiot.
 - a) **Malay Type:** The Malay type exhibits light to dark yellow brown skin colour, straight black hair, brachycephalic head, mesorrhine to platyrrhine nose, medium brown to dark brown eye colour with internal epicanthic fold and low nasal bridge. Face is short and broad with prominent cheek bones. Stature is short.
 - b) **Indonesian type or Nesiot:** The characteristic features of this racial type are light red brown to medium brown skin colour, black wavy hair, monocephalic head; mesorrhine nose, narrow long and oval face, black eyes, less frequent internal epicanthic fold, thick lips and short stature.
- 4) **The American Indian or the Amerindian:** The Amerindians possess yellow brown to red brown skin colour, straight, coarse and black hair,

sparsely distributed body and facial hair, dolico-mesocephalic or brachycephalic head, long but mesorrhine nose and broad face with prominent cheek bones. Other important features include high and convex nasal bridge, slopping forehead, strongly developed eye brow ridges and glabella, prominent chin, shovel shaped incisors and dark brown to black eye colour. Face exhibits medium prognathism. External epicanthic fold is common. Stature is variable.

This group is further divided into following five categories:

- a) **Paleo-Armenoid or Dolico-Mesocephal:** Paleo-Armenoid possess dolicocephalic head, small skull but high vault, long narrow face, reddish brown to yellowish brown skin colour and black and wavy hair.
- b) **Northern Amerind:** Physical features of this racial sub-type include yellowish brown skin colour, black and straight hair, dolicocephalic or mesocephalic head, mesorrhine nose, oval face, medium to dark brown eye colour with external epicanthic fold and tall stature.
- c) **Brachycephal or Neo-Amerind:** The important characteristic features of Brachycephal are yellowish brown skin colour, black straight hair, brachycephalic head, mesorrhine nose, broad and short face, black eyes with external epicanthic fold and variable stature.
- d) **Thehucleche:** Thehucleche people have brownish skin colour, black and straight hair, brachycephalic head, mesorrhine nose with straight profile, square and broad face, black eyes with external epicanthic fold and tall stature.
- e) **North-west coast Amerind:** Amerinds have medium stature with long arm and short body. Their skin colour and hair colour is lighter than other types.

D) **NEGROID**

Negroid race is mainly distributed in Sub-Saharan Africa. They possess very unique physical characteristics. This race is further divided into three racial sub-types:

- 1) African Negro
- 2) Oceanic Negro and
- 3) The American Negros.

The Negroid race is identified by the following characteristic features:

- Dark brown to black skin colour;
- Black woolly or frizzly hair;
- Sparse body and facial hair;
- Dolicocephalic head with protruding occiput;
- Broad and flat nose;
- Low nasal root and bridge;
- Facial prognathism marked;
- Small eye brow ridges;
- Dark brown to black eye colour;
- Ear form short and wide with rolled helix;

- Thick and everted lips and
- Stature is variable.

The important physical characteristics of Negroid sub-racial types are:

- 1) **African Negro:** Five subdivisions of African Negro are as follows:
 - a) **True Negro:** People of this subtype are characterized by dark brown to black skin colour, black woolly hair, dolichocephalic head, platyrrhine nose, prognathous face, dark brown to black eyes, thick and everted lips and tall stature.
 - b) **Nilotic Negro or Nilotes:** Physical features of Nilotic Negros include very dark to bluish black skin colour, black woolly hair, dolichocephalic head, platyrrhine nose with low nasal bridge, short face with facial prognathism, receding forehead, well developed chin, dark brown eye colour, thick and everted lips and tall stature.
 - c) **Bantu:** Bantu people exhibits dark chocolate skin colour, black woolly or frizzy hair, dolichocephalic head, narrow and prominent nose, marked prognathism, dark brown eye colour and medium to above average stature.
 - d) **Bushman-Hottentot:** This race is characterized by light to brownish yellow skin colour, black and paper corn hair, sparsely distributed body and facial hair, dolichocephalic head, platyrrhine nose with very broad and flat nasal root and concave nasal profile. Face is short and square with prominent cheek bones. Other facial features include thick lips, small chin, dark brown to black slanting eyes and lobeless ears. Forehead is bulbous with little developed eye brow ridges. Stature is medium. Steatopygia is pronounced among women.
 - e) **Negrillo (African Pygmy):** People of this category have yellowish light brown to reddish brown skin colour, short woolly or paper corn hair, monocephalic head, broad and flat nose, prognathous face with narrow chin, dark brown eyes, full lips and short stature.
- 2) **Oceanic Negro:** Oceanic Negros are majorly distributed in New Guinea and neighboring islands. This racial type is further divided into following two sub-types:
 - a) **Negrito:** Negrito population is characterized by light brown to dark chocolate brown skin color, dolichocephalic to mesocephalic head, short and straight nose, round face and short stature. This type has two subtypes i.e. Asiatic Pygmy and Oceanic Pygmy.
 - b) **Papuans and Melanesians:** Physical characteristics of this racial subtype include dark chocolate brown skin colour, black frizzly hair, dolichocephalic head, platyrrhine nose, prominent eyebrow ridges, dark brown to black eye colour and short to medium stature.
- 3) **The American Negros:** The American Negros have olive to dark brown skin colour, woolly and dark brown hair colour, dolichocephalic head and light brown to dark brown eyes. Face is somewhat longer with little prognathism. Lips are medium or thick. Nose characters are intermediate between Forest Negro and Caucasoid. Stature is variable but usually tall.

Check Your Progress 2

- 3) What is meant by degenerative hypothesis of racial origin?

.....

.....

.....

.....

- 4) Who is the author of the book “Up from The Ape”?

.....

.....

.....

.....

- 5) Write down Hooton’s modified classification of human race.

.....

.....

.....

.....

- 6) Write down important characteristic features of Negroid race.

.....

.....

.....

INDIAN SCENARIO

Anthropologists of twentieth century attempted to classify Indian population into different racial groups. Among them, racial classifications proposed by Risley, Glufida-Ruggeri, Haddon, Eikstedt, Guha and Sarkar are important. In this section, we would be learning the racial contributions of Sir H. H. Risley and B. S. Guha.

12.3 CONTRIBUTION OF H. H. RISLEY

Sir Herbert Hope Risley in 1915 tried to classify Indian population on the basis of anthropometric measurements. According to Risley, three principal racial types of India are Dravidian, Indo-Aryan and Mongoloid. Other racial types originated because of mixture of these three in varying degrees. Altogether he identified following seven ‘physical types’ in the Indian population.

- 1) The Dravidian type
- 2) The Indo-Aryan type
- 3) The Mongoloid
- 4) The Aryo-Dravidian
- 5) The Mongolo-Dravidian
- 6) The Scytho-Dravidian
- 7) The Turko-Iranian

1) **The Dravidian type**

Physical feature: Stature is short or below medium; complexion is dark, approaching to black; hair is dark and plentiful with an occasional tendency to curl; eye colour is also dark; head is long and the nose is very broad, sometimes depressed at the root.

Distribution: From Ceylon to the valley of the Ganges covering the southern part of India, Western Bengal, Tamil Nadu, Andhra Pradesh (Hyderabad), Central India and Chotanagpur.

Example: Paniyans of Malabar (South India) and the Santals of the Chottanagpur.

2) **The Indo-Aryan type**

Physical features: Tall statured with fair complexion, dark eyes, and plentiful hair on face and body, predominantly dolichocephalic with narrow and long (leptorrhine) nose.

Distribution: Predominantly Punjab, Rajasthan and Kashmir.

Examples: Kashmiri Brahmins, Rajputs, Jats and Khatris.

3) **The Mongoloid**

Physical features: Broad-head, dark complexion with yellowish tinge, scanty hair on face and body; stature is usually short or below medium, nose shows a wide range of variation from fine to broad, face is flat and eyes are oblique with epicanthic fold.

Distribution: Himalayan region, especially North East Frontier, Nepal and Burma.

Examples: Kanets of Lahul and Kulu Valleys, Lepchas of Darjeeling and Sikkim, Limbus, Murmis and Gurungs of Nepal; Bodo of Assam.

4) **The Aryo-Dravidian**

Physical features: Long head with a tendency towards medium size, complexion varies from light brown to black, medium and broad nose. They are shorter than the Indo-Aryans who usually show a below average height.

Distribution: Found in Uttar Pradesh, and some parts of Rajasthan and Bihar.

Examples: Peoples of said areas.

5) **The Mongolo-Dravidian**

Physical features: Broad and round heads with a tendency towards medium, dark complexion and plentiful hair on face, medium nose with a tendency towards flatness. Stature is also medium but sometimes short.

Distribution: Bengal and Orissa.

Examples: Bengali Brahmins and Bengali Kayasthas.

6) **The Scytho-Dravidian**

Physical features: Medium to broad head, low to medium stature, fair complexion, moderately fine nose, scanty hair on face and body.

Distribution: Western India-Madhya Pradesh, Maharashtra-Gujrat border region upto the Coorg.

Examples: Maratha Brahmins, the Kunbis and the Coorgs.

7) **The Turko-Iranian**

Physical features: Broad heads and fine to medium nose, tall stature, dark and grey color eyes. Complexion is generally fair and plentiful hair are found on face and body.

Distribution: Afghanistan, Baluchistan and Northwest Frontier Provinces (now in Pakistan).

Examples: Balochis, Brahui, Afghans and other people of North West Frontier Province.

Check Your Progress 3

- 7) How many physical and racial types were identified by H. H. Risley?

.....

.....

.....

.....

.....

- 8) What are the important physical features of Indian Mongoloid race? Give three examples.

.....

.....

.....

- 9) Write down the distribution of Dravidian race in India.

.....

.....

.....

12.4 CONTRIBUTION OF B. S. GUHA

Biraja Shankar Guha (1894-1961), an Indian Physical anthropologist also classified Indian population into several types of races. Guha's classification was mainly based on anthropometric measurements which he conducted between 1930 and 1933. He traced following six major racial types and nine sub-types.

- 1) The Negrito
- 2) The Proto-Australoid
- 3) The Mongoloid
 - a) Palaeo-Mongoloid
 - i) Long-headed
 - ii) Broad-headed
 - b) Tibeto-Mongoloid
- 4) The Mediterranean
 - a) Palaeo-Mediterranean
 - b) Mediterranean
 - c) Oriental

5) The Western Brachycephals

- a) Alpinoid
- b) Armenoid
- c) Dinaric

6) The Nordics

1) **The Negrito**

Physical features: Dark skin colour, short stature, frizzly hair with long or short spirals, head is small, medium, long or broad with bulbous forehead, nose is flat and broad, lips are everted and thick.

Examples: Kadars, Irulas, Puniyans of South India; and tribes living in the Rajmahal Hills.

2) **The Proto-Australoid**

Physical features: Dolichocephalic head, broad and flat nose (platyrrhine) with depressed root, short stature, dark brown to nearly black skin colour, wavy or curly hair, prominent supraorbital ridges.

Examples: Oraons, Santals, and Mundas of Chottanagpur region; Chenchus, Kurumbas, Yeruvas and Badagas of Southern India, Bhils, Kols of Central and Western India.

3) **The Mongoloid**

Physical features: Scanty growth of hair on face and body, obliquely set eyes with epicanthic fold, flat face with prominent cheekbones and straight hair.

Subdivision: Mongoloid race is again divided into two sub-groups, viz., Palaeo-Mongoloid and Tibeto-Mongoloid.

a) Palaeo-Mongoloid: They are further sub-divided as long headed and broad-headed.

- i) Palaeo-Mongoloid long headed type possesses long head, medium stature, medium nose, prominent cheekbones, dark to light brown skin colour and short and flat face.

Distribution: Sub-Himalayan region; more concentration in Assam and Burma Frontier.

Examples: The Sema Nagas of Assam and the Limbus of Nepal.

- ii) Palaeo-Mongoloid broad headed type exhibits broad head with round face, dark skin colour and medium nose, obliquely set eyes with prominent epicanthic fold (more prominent than that of the long-headed type).

Examples: Hill tribes of Chittagung (Chakmas, Maghs).

b) The Tibeto-Mongoloids: Their physical features are characterized by broad and massive head, tall stature, long and flat face, medium to long nose, oblique eyes with marked epicanthic fold, light brown skin colour and scanty body and facial hair.

Examples: Tibetans of Bhutan and Sikkim.

4) **The Mediterranean:** This racial type is subdivided into three following racial sub types:

a) **Palaeo-Mediterranean**

Physical features: Long head with bulbous forehead, projected occiput with high vault, medium stature, small and broad nose, narrow face, pointed chin, scanty hair on face and body and dark skin color.

Examples: The Dravidian speaking people of South India especially Tamil Brahmins of Madura, Nairs of Cochin, and Telugu Brahmins.

b) **The Mediterranean**

Physical features: Long head with arched forehead and well developed chin, narrow nose, medium to tall stature and light skin colour, dark hair; brownish to dark eyes; plentiful hair on face and body.

Distribution: Uttar Pradesh, Bombay, Bengal, Malabar.

Examples: Numbudiri Brahmins of Cochin, Brahmins of Allahabad and Bengali Brahmins.

c) **The Oriental**

Physical features: Resemblance with the Mediterranean in almost all physical features except the nose, which is long and convex.

Examples: Punjabi Chattris, Benia of Rajputana, and the Pathans.

5) **The Western Brachycephals:** They are classified into three categories:

a) **The Alpenoid**

Physical features: Medium stature, broad head with rounded occiput, prominent nose and round face; abundant hair on face and body and light skin color.

Examples: Bania of Gujarat, the Kathi of Kathiawar and the Kayasthas of Bengal.

b) **The Dinaric**

Physical features: Broad head, rounded occiput and high vault, nose is very long and often convex, long face, dark skin colour, eyes and hair colour is also dark and tall stature.

Distribution: Bengal, Orissa and Coorg.

Examples: The Brahmins of Bengal and Mysore.

c) **The Armenoid**

Physical features: More or less same physical characters as Dinarics, however, among the Dinarics the shape of occiput is much developed and the nose is very prominent.

Examples: The Parsis of Bombay. The Bengali Vaidyas and Kayasthas sometimes show the features of Armenoid.

6) **The Nordics**

Physical features: Long head, protruding occiput and arched forehead, straight nose with high bridge, tall statured with strong jaw and robust body built, blue or grey eye colour and fair or reddish white body colour.

Distribution: Scattered in different parts of Northern India, especially in the Punjab and Rajputana.

Examples: The Kho of Chitral, the Red Kaffirs, and the Khatash.

The present knowledge on Indian racial classification gives insight to conclude that Australoid were the earliest inhabitants of India who might have received some traces of Negrito strains in certain pockets of India. The Mongoloid race is also evident in some parts of India. More researches are required to be carried out in detail to solve the problem of racial classification in India.

12.5 SUMMARY

Biological anthropologists discarded the term 'race' as a biological construct; infact they opined that race is a cultural construct. There are three explanations for variations 'within' and 'between' populations; these are – natural selection, gene flow and genetic drift. Almost all scientists of today's world reject the concept of human race as a scientific way of defining human populations. However to understand 'race; as a historical construct, we should study contributions of above stated scholars. The differences that have historically determined the classification into races are predominantly physical aspects of appearance that are generally hereditary. Genetically the term race is a group with gene frequencies differing from the other such groups of races of the same species. Scientists discover that the genetic differences between so called races are extremely low compared to differences within 'races'. Therefore, now-a-days anthropologists believe that the concept of race is unscientific and racial categories are arbitrary designations. It is also essential to note that, all human groups of today's world belong to the same species- *Homo sapiens sapiens*, and are mutually fertile; races are results of mutation, selection and adaptations.

12.6 REFERENCES

Bernasconi, R., & Lott, T. L. (Eds.). (2000). *The Idea of Race*. Hackett Publishing.

Hooton, E. A. (1946). *Up from the Ape*. The Macmillan Company.

Chahal, S. M. S. (2016). *Concept of Race*. Egyankosh. Accessed on: 2018 July, 06. Retrieved from:

<http://egyankosh.ac.in/bitstream/123456789/41417/1/Unit-1.pdf>

Begum, G. (2016). Classification of Races. ePG Pathshala: A Gateway to all Post Graduate Courses. Accessed on: 2018 July, 08. Retrieved from:

http://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/anthropology/01._physical___biological_anthropology_/27_.classification_of_races/et/7221_et_et_27.pdf

12.7 ANSWER/HINTS TO CHECK YOUR PROGRESS

- 1) There is three distinct types of physical features of ancient Indian population as per Sanskrit literatures; these are light coloured Indo-Aryan, yellow coloured Kiratas (Indo-Mongoloids) and dark complexioned Nishadas (Australoids).

- 2) In 1758, Carolus Linnaeus, a Swedish botanist established taxonomic classifications and identified four 'varieties' of human species- Homo European, Homo American, Homo Asiatic and Homo African.
- 3) Blumenbach claimed that the Adam and Eve were inhabitants of Asia with Caucasian characteristics. Other races probably originated because of degeneration of environmental factors such as sun and diet. Therefore, Negroid's black pigmentation arose because of heat of tropical sun, Eskimos (now called Inuits) tawny colour because of cold wind. He also believed in reversed degeneration; all the other form could revert to the Caucasian form depends on sun and diet. However, one can find (even used for) scientific racism in his idea of degeneration, but Blumenbach never identified any race superior to others.
- 4) Earnest Albert Hooton (1887-1954), a Jewish-American Physical Anthropologist was the author of the book 'Up from The Ape'.
- 5) In 1947, Hooton modified his classification of Human races. For further details kindly refer section 12.2.
- 6) The important characteristic features of Negroid are as follows:
 - Dark brown to black skin colour;
 - Black woolly or frizzly hair; little body and face hair;
 - Dolicocephalic head with protruding occiput;
 - Broad and flat nose; nasal root and bridge are low;
 - Facial prognathism marked;
 - Small eye brow ridges;
 - Eye colour is dark brown to black;
 - Ear form short, wide with rolled helix, little or no lobe;
 - Thick and everted lips; and
 - Stature is variable.
- 7) H. H. Risley identified seven following 'physical types' in the Indian population:
 - i) The Dravidian type
 - ii) The Indo-Aryan type
 - iii) The Mongoloid
 - iv) The Aryo-Dravidian
 - v) The Mongolo-Dravidian
 - vi) The Scytho-Dravidian
 - vii) The Turko-Iranian

- 8) The important physical features of Indian Mongoloid race include: They are broad-head, dark complexion with yellowish tinge; scanty hair on face and body; stature is usually short or below medium; nose shows a wide range of variation, from fine to broad; face is flat and eyes are oblique with epicanthic fold.

Examples: Kanets of Lahul and Kulu Valleys, Lepchas of Darjeeling and Sikkim and Limbus, Murmis and Gurungs of Nepal.

- 9) The Dravidian race is distributed in India from Ceylon to the valley of the Ganges covering the southern part of India, Western Bengal, Tamil Nadu, Andhra Pradesh (Hyderabad), Central India and Chota Nagpur.



UNIT 13 RACE AND RACISM*

Contents

- 13.0 Definition of Race
- 13.1 Concept of Race and Racism
 - 13.1.1 Race
 - 13.1.2 Race and Ethnicity
 - 13.1.3 Racism
- 13.2 Racism as Social Disease
 - 13.2.1 Consequences
 - 13.2.2 Voices against Racism (Race to Racism)
- 13.3 Statement on Race
 - 13.3.1 UNESCO Statement (1951)
 - 13.3.2 American Anthropological Association Statement (1998)
- 13.4 Summary
- 13.5 References
- 13.6 Answers/Hints to Check Your Progress

Learning Objectives

After going through this unit you will be able to:

- understand the concept of race and racism;
- comprehend the consequences and criticism of racism; and
- know about different statements on race stated by UNESCO and American Anthropological Association.

13.0 DEFINITION OF RACE

Some definitions on race that came up in the mid of the 20th century were viewed from two perspectives: first with an evolutionary perspective along with the assumption that geographic distribution plays an important role in race formation and second the importance of breeding populations in forming a collection of common traits which sets the groups apart. Scholars such as Hooton, Dobzhansky and Garn in their definitions have explicitly mentioned that these breeding or Mendelian populations can change in time and are not like water tight compartments. Now let us learn some of the important definitions of race given by scholars:

Hooton (1946) defined race as “a group whose members present individually identical combinations of specific physical characters that they owe to their common descent.”

According to Dobzhansky (1944) “Races are defined as populations differing in the incidence of certain genes, but actually exchanging or potentially able to exchange genes across whatever boundaries (usually geographic) separate them. He further added that race differences are objectively ascertainable facts; the number of races we choose to recognize is a matter of convenience.”

* Prof. Ranjana Ray, (Emeritus Professor), Department of Anthropology, University of Calcutta, Kolkata, Prof. Subha Ray, Department of Anthropology, University of Calcutta, Kolkata.

As per Boyd (1950) race is “a population which differs significantly from other human populations in regard to the frequency of one or more of the genes it possesses. It is an arbitrary matter which, and how many, gene loci we choose to consider as a significant ‘constellation’.”

Mayr (1963) attempted to define races with reference to the subspecies as “a subspecies is an aggregate of phenotypically similar populations of a species inhabiting a geographic subdivision of the range of the species and differing taxonomically from other populations of the species.”

According to Baker (1967) “race may be defined operationally as a rough measure of genetic distance in human populations and as such may function as an informational construct in the multidisciplinary area of research in human biology.”

The above definitions may show subtle differences, but at the same time the definitions exhibit certain commonalties like the role of geographic distribution in race formation and sharing of genetic traits among people who are related to each other through common ancestry, i.e. breeding population.

Race has never been, simply about the physical description of human variation. Since its origin in Western science in the eighteenth century, race has been used both to classify and to rank human beings according to inferior and superior types. Although race as a concept developed in the West during the enlightenment, it has spread to many parts of the non-Western world through international commerce, including the slave trade and, later, colonial conquest and administration, which have used it as an effective tool of social division. Anthropology has a complex and often self-contradictory history regarding race. Investment in the race concept shaped its origins; it then tried to dismiss race and deny its scientific existence or dependence on biological theories. Race is now viewed as a social construction that is primarily recognized by physical appearance, or phenotype (Fluehr-Lobban, 2018).

Check Your Progress 1

- 1) Who defined race as a group whose members present individually identical combinations of specific physical characters?

.....

- 2) What commonalties are found in various definitions of race given by different scholars?

.....

13.1 CONCEPT OF RACE AND RACISM

13.1.1 Race

From 18th century onwards Anthropologists became interested to study human physical variations and on the basis of those studies, various attempts

were made to classify the world population into different categories called 'race'. The term 'race' was first used by Buffon, a French naturalist in the 18th century (Joshi, 2015). The criteria that were used to classify the world population were some observable (e. g. skin color, hair color, hair form and nose form), metric (e.g. stature), and other biological characters (e. g. blood groups and blood enzymes).

Apart from the physical variations, the world population is also diversified among various human groups on the basis of cultural practices such as language, food pattern, dressing style, behaviour and many more.

13.1.2 Race and Ethnicity

“An ethnic group represents one of a number of populations, which grade into one another and together comprise the species *Homo sapiens*, but individually maintain their differences, physical and cultural, by means of isolating mechanisms such as geographic and social barriers” (Montagu, 1942). These differences will vary as the power of the geographic and social barriers acting upon the original genetic differences vary.

The work of Frederik Barth in the 1970, emphasized that members of one ethnic group distinguish themselves from the members of other ethnic groups on the basis of a presumed common ancestry and shared cultural traits. As a consequence, the member of a particular ethnic group prefers to choose mate from the same ethnic group (endogamy).

The continuous preference towards endogamy might offer a biological entity to a particular ethnic group. However, these ethnic boundaries are not that rigid; an increase in cross cultural marriages could be a good example. Ethnic boundaries may take in different forms- cultural, linguistic, religious, economic and so on (Heyer et al., 2009).

There is one common thing between the concept of race and ethnicity, i.e. shared common ancestry. Despite this similarity, there are some differences. “First of all, race is primarily unitary. You can only have one race, while you can claim multiple ethnic affiliations. You can identify ethnically as Oriya and Indian, but for racial identity- you have to be essentially either black or white. Compared to the concept of ethnic group, race is hierarchical and there is a built-in inequality in power. Some are of the opinion that both ethnicity and race are socially constructed and both are illusory and imagined. But racial categories have had a much more concrete impact on peoples' lives, because they've been used to discriminate and to distribute resources unequally and set up different standards for protection under law (Race-The power of an illusion, n. d.).

13.1.3 Racism

The concept of race gave birth to racism. Racism is based on the false belief that factors such as intellect and various cultural attributes like values and morality are inherited along with one's physical characteristics like skin color, nose form, hair color and so on. This produced misconception among people that intellect as well as cultural traits was inherited in the same way as the biological features. Such beliefs are based on the assumption that one group is superior to the other. Eugenic movement, notions of purity of races and persecution of people are the outcome of racism- a racial misconception. According to American Anthropological Association Statement on Race (May 17, 1998), “leaders among European-Americans fabricated

the cultural/behavioral characteristics associated with each “race”, linking superior traits with Europeans and negative and inferior ones to blacks and Indians.”

Racial biasness can appear in many forms such as religion, language, food, dress pattern etc. There have also been instances when racial intolerance led to diplomatic crisis. For example, when Bollywood actor Shahrukh Khan was frisked by American immigration authorities at a US airport or students of Punjabi origin were harassed in Australia. People comment on these incidents as ‘racist remark’ or ‘racism’ and so on.

Check Your Progress 2

- 3) What criteria were used to classify the world population during 18th century?

.....

.....

.....

- 4) What are the differences between the concept of race and ethnicity?

.....

.....

.....

- 5) What is meant by Racism?

.....

.....

.....

.....

13.2 RACISM AS SOCIAL DISEASE

Racism is prejudice or discrimination against other people because of their “race” or because of what is thought to be their race (their biology or ancestry or physical appearance). Racism involves the assumption that people’s birth or biology determines who they are: that behaviour is based on biology. Whether or not there is hatred, racism involves prejudice or discrimination. It may be personal or institutional, felt or unrecognized, but it is normally based on a stereotype that people of a particular genetic background all behave in some unappealing way; they *all* do, they have no choice, it is in the genes (Reilly et al., 2003).

13.2.1 Consequences

Racially based physical characteristics were erroneously thought to be tightly bound to mental, emotional, intellectual and cultural attributes as well. In this manner, some races were identified as clearly inferior to the others — primitive vs advanced— western civilized populations were held to be superior to the others. Modern European society tended to believe in the division of the world’s population into distinct biological groups, of ‘Black’, ‘White’, ‘Asian’ or other people that are permanently divided and arranged into a hierarchy of superior to inferior types.

For example, when the European explorers located Hottentot and Bushmen people of Africa they found the appearance, language and cultural practices of those people to be of a low and subhuman standard compared to their own characteristics. Similarly, in India, the colonial rulers used to call Indians 'natives'. In a similar fashion inequalities based on sex and class dominated the western world; and in the Indian subcontinent these were ethnicity and castes. There has been a widespread belief in such categorization and this belief, in turn, has had enormous implications for the way in which 'white' Europeans have historically set out to dominate, exploit and kill 'inferior' peoples. The belief in such biological differences has had enormous impact on behavior and practice (Mac Master, 2001).

13.2.2 Voices against Racism (Race to Racism)

British-born anthropologist Ashley Montagu, a student of both Franz Boas and Ruth Benedict, was the first scientist who criticized the concept of race. "He earned fame in the 1940s by arguing that race was a social construct, a product of perceptions, rather than a biological fact. Montagu vocally opposed anthropologist Carleton Coon's notion that whites and blacks evolved along separate paths" (Critiquing Race, n. d.). Montague (1942) questioned the scientific validity of human races in his classic work, "Man's Most Dangerous Myth: The Fallacy of Race".

"Likewise, when Frank B. Livingstone wrote his chapter on "The Nonexistence of Human Races" in 1964, he criticized the utility of the race concept for explaining genetic variability, arguing that 'if a population is X per cent Negro in one characteristic it must be X per cent in all characteristics for this [racial explanation of difference] to be an adequate explanation'. In fact, as Livingstone explained, genetic traits can often be discordant and 'if two genes vary discordantly, the races set up on the basis of one do not describe the variability in the other' (Outram & Ellison, 2006)." He further suggested that instead of finding out differences between populations, more legitimate and fruitful approach is to understand patterns of biological variation across space. Such an approach would yield greater insight into the adaptive significance of human biological variation because environmental parameters that drive natural selection vary systematically across geographic space.

To go by the words of Jacques Barzun (1965) on racial classification "No argument has ever been advanced by any reasonable man against the fact of differences among men. The whole argument is about what difference exists and how they are to be gauged" (Molnar, 2015). Thus, the use of the word 'race' has long been, and remains controversial and the anthropologists have never been comfortable with this topic.

Check Your Progress 3

- 6) On what basis, some races were identified as superior and advanced than the others? Give one example.

.....

.....

.....

.....

- 8) Name any three scholars who criticized the concept of racism? Write down the types of temperaments of man differentiated by Hippocrates.

.....

13.3 STATEMENTS ON RACE

13.3.1 UNESCO Statement (1951)

UNESCO statement on race was drafted at UNESCO house, on 8th June 1951. This statement was drafted by a group of scholars from various disciplines like, Anthropology, Zoology, Genetics, Biometry and so on; Ashley Montague (United States of America) was one of the scholars. Other notable scholars involved Ernest Beaglehole (New Zealand), Juan Comas (Mexico), L. A. Costa Pinto (Brazil), Franklyn Frazier (United States of America), Morris Ginsberg (United Kingdom), Humayun Kabir (India) and Levi-Strauss (France). The major extracts of UNESCO statement are as follows:

- 1) Scientists are generally agreed that all men belong to a single species, *Homo sapiens*, and are derived from a common stock, even though there is some dispute as to when and how different human groups diverge from this common stock. Anthropologically, 'race' should be reserved only for groups of mankind possessing well-developed and primarily heritable physical differences from other groups.
- 2) Some of the physical differences between human groups are due to differences in hereditary constitution and some to differences in the environments in which they have been brought up. In many cases, both influences have been at work. The science of genetics suggests that the hereditary differences are the results of the action of two sets of processes. On the one hand, isolated populations are constantly being altered by natural selection and by occasional changes (mutations) in the material particles (genes) which control heredity. Populations are also affected by fortuitous changes in gene frequency and by marriage customs and breeding structure. On the other hand, crossing is constantly breaking down the differentiations so set up.
- 3) National, religious, geographical, linguistic and cultural groups do not necessarily coincide with racial groups; and the cultural traits of such groups have no demonstrated connexion with racial traits. Americans are not a race, nor are Englishmen, nor Frenchmen, nor any other national group. Serious errors of this kind are habitually committed when the term 'race' is used in popular parlance: the term should never be used when speaking of such human groups.
- 4) Human races can be, and have been, classified by different anthropologists in different ways. Most agree in classifying the greater part of existing mankind into at least three large units, which may be called major groups (in French, *grand-races*). Such a classification does not depend on any single physical character. From the morphological point of view, moreover, it is impossible to regard one particular race as superior or inferior to another.

- 5) Most anthropologists no longer try to include mental characteristics in their classification of human races. Studies within a single race have shown that both innate capacity and environmental opportunity determine the results of tests of intelligence and temperament, though their relative importance is disputed. In any case, it has never been possible to separate members of two groups on the basis of mental capacity, as they can often be separated on a basis of religion, skin colour, hair form or language.
- 6) The scientific material available to us at present does not justify the conclusion that inherited genetic differences are a major factor in producing the differences between the cultures and cultural achievements of different peoples or groups. It does indicate, on the contrary, that the major factor in explaining such differences is the history of the cultural experience which each group has undergone.
- 7) There is no evidence for the existence of so-called 'pure' races. We know the earlier races chiefly from skeletal remains and our knowledge is therefore limited. In regard to race mixture, the evidence points to the fact that human hybridisation has been going on for an indefinite but considerable time. Indeed, one of the processes of race formation and race extinction or absorption is by means of hybridisation between races. As there is no reliable evidence that disadvantageous effects are produced thereby, no biological justification exists for prohibiting inter-marriage between persons of different races.
- 8) We now have to consider the bearing of these statements on the problem of human equality. We wish to emphasise that equality of opportunity and equality in law in no way depend, as ethical principles, upon the assertion that human beings are in fact equal in endowment.

It is worthwhile to set out in a formal manner what is at present scientifically established concerning individual and group differences:

- 1) In matters of race, the only characteristics which anthropologists can effectively use as a basis for classification are physical (anatomical and physiological).
- 2) Available scientific knowledge provides no basis for believing that the groups of mankind differ in their innate capacity for intellectual and emotional development.
- 3) The biological differences between human beings within single races may be as great as the biological differences between races.
- 4) Vast social changes have occurred which are not in any way connected with changes in racial type. Historical and sociological studies thus support the view that genetic differences are of little significance in determining the social and cultural differences between different groups of men.
- 5) There is no evidence that race mixture as such produces disadvantageous results from a biological point of view. The social results of race mixture, whether for good or ill, can generally be traced to social factors (United Nations Educational, Scientific and Cultural Organization Statement on Race, 1951)

13.3.2 American Anthropological Association Statement (1998)

The Executive Board of the American Anthropological Association adopted the following statement on race on 17 May 1998:

“Physical variations in any given trait tend to occur gradually rather than abruptly over geographic areas. And because physical traits are inherited independently of one another, knowing the range of one trait does not predict the presence of others. For example, skin color varies largely from light in the temperate areas in the north to dark in the tropical areas in the south; its intensity is not related to nose shape or hair texture. 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.

Early in the 19th century the growing fields of science began to reflect the public consciousness about human differences. Differences among the “racial” categories were projected to their greatest extreme when the argument was posed that Africans, Indians, and Europeans were separate species, with Africans the least human and closer taxonomically to apes.

Ultimately “race” as an ideology about human differences was subsequently spread to other areas of the world. It became a strategy for dividing, ranking and controlling colonized people used by colonial powers everywhere. But it was not limited to the colonial situation. In the latter part of the 19th century it was employed by Europeans to rank one another and to justify social, economic and political inequalities among their peoples.

“Race” thus evolved as a worldview a body of prejudgments that distorts our ideas about human differences and group behavior. Racial beliefs constitute myths about the diversity in the human species and about the abilities and behavior of people homogenized into “racial” categories. Racial myths bear no relationship to the reality of human capabilities or behavior.

At the end of the 20th century, we now understand that human cultural behavior is learned, conditioned into infants beginning at birth and always subject to modification. No human is born with a built-in culture or language. Our temperaments, dispositions and personalities, regardless of genetic propensities, are developed within sets of meanings and values that we call “culture.”

It is a basic tenet of anthropological knowledge that all normal human beings have the capacity to learn any cultural behavior. The American experience with immigrants from hundreds of different language and cultural backgrounds who have acquired some version of American culture traits and behavior is the clearest evidence of this fact. Moreover, people of all physical variations have learned different cultural behaviors and continue to do so as modern transportation moves millions of immigrants around the world.

How people have been accepted and treated within the context of a given society or culture has a direct impact on how they perform in that society. The “racial” worldview was invented to assign some groups to perpetual low status, while others were permitted access to privilege, power and wealth. Given what we know about the capacity of normal humans to achieve

and function within any culture, we conclude that present-day inequalities between so-called “racial” groups are not consequences of their biological inheritance but products of historical and contemporary social, economic, educational, and political circumstances” (American Anthropological Association Statement on Race, 1998).

Check Your Progress 4

- 8) When the UNESCO and American Anthropological Association statement on race was drafted?

.....

- 9) Write down any two major points of UNESCO statement on race.

.....

- 10) How did the American Anthropological Association describe the concept of race at the end of 20th century?

.....

13.4 SUMMARY

The overall discussion in this unit has shown you that there are a number of diversities observed in mankind. The outward physical features led people to classify human beings into different groups and they called them as races. In course of time this division of mankind led to inequality and development of hatred among human population- a term known as ‘racism’. It is very unfortunate that though there has been a paradigm shift in the construct of race, the racist view of humanity has not changed. The outcome of this is ethnic violence, warfare, terrorism, and genocide which pose a threat to humanity. A number of scholars and international organization like UNESCO and American Anthropological Association became vocal against this social disease called racism. Thus, the use of the word ‘race’ has long been, and remains controversial and the anthropologists have never been comfortable with this topic.

13.5 REFERENCES

American Anthropological Association Statement on Race (May 17, 1998). Accessed on: 2018, May 22. Retrieved from: <http://www.americananthro.org/ConnectWithAAA/Content.aspx?ItemNumber=2583>

Baker, P. T. (1967). The Biological Race Concept as a Research Pool. *American Journal of Physical Anthropology*, 27(1), 21-25.

Boyd, W. C. (1950). *Genetics and the Races of Man: An Introduction to Modern Physical Anthropology*. Little, Brown and Company, Boston.

Critiquing Race (n. d.). Retrieved from: http://www.understandingrace.org/history/science/critiquing_race.html

Dobzhansky, T. (1944). On Species and Races of Living and Fossil Man. *American Journal of Physical Anthropology*, 2(3), 251-265.

Fluehr-Lobban, C. (2018). *Race and Racism: An Introduction*. Rowman & Littlefield.

Heyer, E., Balaesque, P., Jobling, M. A., Quintana-Murci, L., Chaix, R., Segurel, L., & Hegay, T. (2009). Genetic Diversity and the Emergence of Ethnic Groups in Central Asia. *Bmc Genetics*, 10(1), 49.

Hooton, E. A. (1946). *Up from the Ape*. The Macmillan Company.

Joshi, P. C. (2015). Symposium on People of India. *The Eastern Anthropologist*, 68(2), 419-474.

MacMaster, N. (2001). *Racism in Europe: 1870-2000*. Palgrave Macmillan.

Mayr, E. (1963). Populations, Species, and Evolution. *An Abridgment of Animal Species and Evolution*. Cambridge Belknap Press. UK.

Molnar, S. (2015). *Human Variation: Races, Types, and Ethnic Groups*. Routledge.

Montagu, M. F. A. (1942). Man's most Dangerous Myth: the Fallacy of Race. Columbia University Press. New York, US.

Outram, S. M., & Ellison, G. T. (2006). Anthropological Insights into the use of Race/Ethnicity to Explore Genetic Contributions to Disparities in health. *Journal of Biosocial Science*, 38(1), 83-102.

RACE-The Power of an Illusion (n. d.). Accessed on: 2018, May 17. Retrieved from: http://www.pbs.org/race/000_About/002_04-experts-03-02.htm

Reilly, K., Kaufman, S., & Bodino, A. (Eds.). (2003). *Racism: A global reader*. ME Sharpe.

United Nations Educational Scientific and Cultural Organization Statement on Race (1951). Retrieved from: <http://unesdoc.unesco.org/images/0017/001789/178908eb.pdf>

13.6 ANSWERS TO CHECK YOUR PROGRESS

- 1) Hooton in 1946 defined race 'as a group whose members present individually identical combinations of specific physical characters that they owe to their common descent'
- 2) Various definitions of race given by different scholars exhibit following commonalties:
 - a) The role of geographic distribution in race formation and
 - b) Sharing of genetic trait among people who are related to each other through common ancestry, i.e. breeding population.
- 3) During 18th century, observable characteristics were mainly used to classify world population. These observable characteristics include somatoscopic (skin colour, hair colour, hair form and nose form), somatometric (stature) and other biological characters (blood groups and blood enzymes).

- 4) The major difference between the concept of race and ethnicity are as follows:
 - a) First of all, race is primarily unitary. We can only have one race, while we can claim multiple ethnic affiliations. For e.g. one can identify ethnically as Oriya and Indian, but for racial identity- one has to be essentially either black or white.
 - b) Secondly, compared to the concept of ethnic group, race is hierarchical and there is a built-in inequality in power. Racial categories have had a much more concrete impact on peoples' lives, because they've been used to discriminate and to distribute resources unequally and set up different standards for protection under law (RACE-The Power of an Illusion, n.d.).
- 5) Racism is based on the false belief that factors such as intellect and various cultural attributes like values and morality are inherited along with one's physical characteristics like skin colour, nose form, hair colour and so on. This produced misconception among people that intellect as well as cultural traits was inherited in the same way as the biological features. Such beliefs give rise to racism.
- 6) Some races were identified as clearly superior and advanced than the others on the basis of physical and biological characteristics. These characteristics were erroneously thought to be tightly bound to mental, emotional, intellectual and cultural attributes as well. For example, when the European explorers located Hottentot and Bushmen people of Africa they found the appearance, language and cultural practices of those people to be of a low and subhuman standard compared to their own characteristics.
- 7) Three scholars who criticized the concept of racism were: (a) Ashley Montagu (b) Frank B. Livingstone (c) Jacques Barzun
- 8) UNESCO statement on race was drafted at UNESCO house, on 8th June 1951 while the Executive Board of the American Anthropological Association adopted the statement on race on 17 May 1998
- 9) The two major points of UNESCO statement on race (1951) are:
 - a) Physical variations in any given trait tend to occur gradually rather than abruptly over geographic areas. And because physical traits are inherited independently of one another, knowing the range of one trait does not predict the presence of others.
 - b) "Race" evolved as a worldview, a body of prejudgments that distorts our ideas about human differences and group behavior. Racial beliefs constitute myths about the diversity in the human species and about the abilities and behavior of people homogenized into "racial" categories. Racial myths bear no relationship to the reality of human capabilities or behaviour according to.
- 10) According to AAA (1998) statement, "at the end of the 20th century, we now understand that human cultural behavior is learned, conditioned into infants beginning at birth, and always subject to modification. No human is born with a built-in culture or language. Our temperaments, dispositions, and personalities, regardless of genetic propensities, are developed within sets of meanings and values that we call 'culture'."

SUGGESTED READINGS

Unit 1 **Introducing Anthropology**

Boaz, N. T., & Almquist, A. J. (1999). *Essentials of Biological Anthropology*. Prentice Hall, New Jersey.

Buettner-Janush, J. (1973). *Physical Anthropology: A Perspective*. John Wiley and Sons, New York.

Ember, C. R., Ember, M. & Peregrine P.N. (2002). *Anthropology*. Pearson Education. Delhi.

Harrison, G. A., Weiner, J. S., Tanner, J. M., & Barnicot, N. A. (1964). *Human Biology. An Introduction to Human Evolution, Variation and Growth*. Oxford University Press.

Jurmain, R., Kilgore, L., & Trevathan, W. (2011). *Essentials of Physical Anthropology*. Wadsworth Cengage Learning, USA,

Lasker, G. W. (1976). *Physical Anthropology*. Holt, Rinehart and Winston, New York.

Stein, P. L., & Rowe, B. M. (1974). *Physical Anthropology*. McGraw-Hill, New York.

Unit 2 **Relationship and Applications of Biological Anthropology**

Boaz, N. T. (1997). *Biological anthropology: a synthetic approach to human evolution*. Prentice Hall.

Burr, D. B., & Haines, D. E. (1984). Graduate education and the role of the physical anthropologist in biomedical teaching and research. *American journal of physical anthropology*, 64(2), 155-159.

Dash, K. N. (2004). *Invitation to social and cultural anthropology*. Atlantic Publishers & Distributors, New Delhi.

Ghosh, A., Liu, T., Khoury, M. J., & Valdez, R. (2010). Family history of diabetes and prevalence of the metabolic syndrome in US adults without diabetes: 6-year results from the national health and nutrition examination survey (1999–2004). *Public health genomics*, 13(6), 353-359.

Gopalan, C., Rama Sastri, B. V., & Balasubramanian, S. C. (2007). Nutrition value of Indian foods. NIN, ICMR, Hyderabad.

Martinez, V. (2013). *What is Anthropology?* Florida Atlantic University. Retrieved from: <https://www.coursehero.com/file/8837996/ANTHROPOLOGY-BOOK-CHAPTER-17/?openRetag=true>

Sing, C. F., Haviland, M. B., & Reilly, S. L. (1996). Genetic architecture of common multifactorial diseases. *Variation in the human genome*, 197.

Wildman, R. E., & Medeiros, D. M. (2000). Advanced human nutrition. CRC Press.

WHO Expert Committee. (1995). Physical status: the use and interpretation of anthropometry. Report of a WHO expert committee, technical report series no. 854. Geneva.

<http://helid.digicollection.Org/en/d/Jh0211e/>.

Unit 3 Fundamentals and subfields of Biological Anthropology

Gardner EL, Simmons MJ, Snustad DP. 2006. *Principle of Genetics* (8th Edition). John Wiley & Sons

Papalia, D. and Olds, S. 2003. *Human Development* (9th Edition) McGraw-Hill

Unit 4 Approaches of Traditional and Modern Biological Anthropology

Campbell, B. G. (1967). *Human Evolution: An Introduction to Mans Adaptations*. Transaction Publishers.

Larsen, C. S. (Ed.). (2010). *A companion to biological anthropology* (Vol. 20). John Wiley & Sons.

Sharma, R. N. & Sharma, R. K. (1997). *Anthropology*. Atlantic Publishers and Distributors, New Delhi.

Singh, I. P., & Bhasin, M. K. (2004). *A manual of biological anthropology*. Delhi: Kamla-Raj Enterprises.

Unit 5 Human Variation and Evolution

Bancel, N., David, T., & Thomas, D. (Eds.). (2014). *The Invention of Race: Scientific and Popular Representations* (Vol. 28). Routledge.

Fenchel, T. (2002). *The origin and early evolution of life*. Oxford University Press, USA.

Jackson, J. P., & Weidman, N. M. (2004). *Race, racism, and science: Social impact and interaction*. Abc-Clio.

Shukla, B. R. K. and Rastogi S. (1990). *Physical Anthropology and Human Genetics An Introduction*. Palaka Prakashan, Delhi.

Unit 6 Theories of Organic Evolution

Darwin, C. (1859). *On the Origin of the species*. London: John Murray.

Diettrich, O. (1992). Darwin, Lamarck and the evolution of Science and culture. *Evolution and cognition*, 2 (3).

Dobzhansky, T. (1953). *Gnetics and the Origin of Species*. New Yorl : Columbia University press.

Suggested Readings

Lewis, R. (1980). Evolution: A System of Theories. *Perspectives in Biology and Medicine*, 23, 551-572.

Mayr, E. (1942). *Systematics and origin of Species*. New York: Columbia University Press.

Rastogi, V. B. (1989). *Organic Evolution*. Meerut: Kedar Nath Ram Nath.

Unit 7 Basic Concepts of Evolution

Dobzhansky, T., & Dobzhansky, T. G. (1982). *Genetics and the Origin of Species* (Vol. 11). Columbia university press.

Endler, J. A. (1977). *Geographic variation, speciation, and clines* (No. 10). Princeton University Press.

Fan, S., Elmer, K. R., & Meyer, A. (2012). Genomics of adaptation and speciation in cichlid fishes: recent advances and analyses in African and Neotropical lineages. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, 367(1587), 385-394.

Nelson, H., & Jurmain, R. (1988). *Introduction to physical anthropology*. St. Paul, MN: West Publishing Company.

Machado, H. E., Pollen, A. A., Hofmann, H. A., & Renn, S. C. (2009). Interspecific profiling of gene expression informed by comparative genomic hybridization: a review and a novel approach in African cichlid fishes. *Integrative and comparative biology*, 49(6), 644-659.

Sahney, S., Benton, M. J., & Ferry, P. A. (2010). Links between global taxonomic diversity, ecological diversity and the expansion of vertebrates on land. *Biology letters*, rsbl20091024.

Tarkhnishvili, D., Murtskhvaladze, M., & Gavashelishvili, A. (2013). Speciation in Caucasian lizards: climatic dissimilarity of the habitats is more important than isolation time. *Biological Journal of the Linnean Society*, 109(4), 876-892.

Unit 8 Classification and Characteristics of Living Primates

Petter, J. J., & Desbordes, F. (2013). *Primates of the World: An Illustrated Guide*. Princeton University Press.

Fleagle, J. G. (2013). *Primate adaptation and evolution*. 3rd edition. Elsevier, New York.

Heads, M. (2010). Evolution and biogeography of primates: a new model based on molecular phylogenetics, vicariance and plate tectonics. *Zoologica Scripta*, 39(2), 107-127.

Rafferty, J. P. (2011). *Primates: The Britannica guide to predators and prey*. Britannica educational publishing.

Rasmussen, D. T. (2002). The origin of Primates. In *The Primate Fossil Record*. W. C. Hartwig (Ed.). pp. 5–11. Cambridge University Press.

Simpson, G. G. (1961). *Principles of animal taxonomy*. Columbia University Press, New York.

Unit 9 Behaviour of non-human primates

Andrews, P. J., & Stringer, C. B. (1989). *Human evolution: an illustrated guide*. Cambridge University Press.

Brauer, G., & Smith, F. H. (Eds.). (1992). *Continuity Or Replacement: Controversies in Homo Sapiens Evolution: Selected Papers from the Symposium on Controversies in Homo Sapiens Evolution/Zagreb/July 1988*. AA Balkema.

Bruce, E. J., & Ayala, F. J. (1978). Humans and apes are genetically very similar. *Nature*, 276, 264-65.

Unit 10 Comparative Anatomy of Human and Non-human Primates

Wood, B. (1994). The oldest hominid yet. *Nature*, 371(6495), 280.

Bilsborough, A. & Wood, B. (1986). The Nature, Origin and Fate of *Homo erectus*. In B. Wood, L. Martin & P. Andrew (Eds.), *Major Topics in Primate and Human Evolution*. (p. 295 – 316). Cambridge University Press, Cambridge.

Birdsell, J. B. (1972). *Human evolution: An introduction to the new physical anthropology*. Rand McNally.

Brauer, G., & Smith, F. H. (Eds.). (1992). *Continuity or Replacement: Controversies in Homo Sapiens Evolution: Selected Papers from the Symposium on Controversies in Homo Sapiens Evolution/Zagreb/July 1988*. AA Balkema.

Bruce, E. J., & Ayala, F. J. (1978). Humans and apes are genetically very similar. *Nature*, 276(5685), 264.

Buettner-Janusch, J. (1966). *Origins of man: physical anthropology*. John Wiley & Sons.

Campbell, B. (1963). Quantitative taxonomy and human evolution. In *Classification and human evolution* (Vol. 37, pp. 50-74). Aldine Chicago.

Campbell, B. G. (1972). Conceptual progress in physical anthropology: fossil man. *Annual Review of Anthropology*, 1(1), 27-54.

Clochon, R. L. & Corruccini, R. S. (Eds.). (1983). *New Interpretations of Ape and Human Ancestry*. New York, Plenum.

Dobzhansky, T. (1937). *Genetics and the Origin of the Species*. New York.

Suggested Readings

- Day M. H. (1988). *Guide to Fossil Man*. University of Chicago Press, Chicago.
- Fleagle, J. G. (1988). *Primate adaptation & evolution*. San Diego; Academic Press.
- Gebo, D. L. (2014). *Primate comparative anatomy*. Johns Hopkins University Press.
- Harrison, G. A., Tanner, J. M., Pilbeam, D. R. & Baker, P. T. (1988). *An Introduction to Human Evolution, Variation, Growth and Adaptability*. (3rd ed.). Oxford: Oxford University Press.
- Jaiswal, A. (2013). *Glossary of Biophysical Anthropology Terms: A Comparative Treatment of Biophysical Anthropology*, Heritage Publishers, New Delhi, India.
- Klein, R. G. (1992). The archeology of modern human origins. *Evolutionary Anthropology: Issues, News, and Reviews*, 1(1), 5-14.
- Melotti, U. (1985). Competition and cooperation in human evolution. *Mankind Quarterly*, 25(4), 323.
- Parker, S. T. E., & Gibson, K. R. E. (1990). "Language" and intelligence in monkeys and apes: Comparative developmental perspectives. Cambridge University Press, New York.
- Pilbeam, D. (1982). Hominoid evolution and hominid origins. In *Recent Advances in the Evolution of the Primates* (pp. 43-61). Vatican Rome.
- Simpson G. G. (1953). *The Major Features of Evolution*. Columbia University Press, New York.
- Simson, E. L. (1972). *Primate Evolution*. New York: Macmillan.

Unit 11 Major Races of the World

- Anemone, R. L. (2011). *Race and Human Diversity: A Biocultural Approach, CourseSmart eTextbook*. Routledge.
- Coon, C S., Garn, S. M. & Birdsell, J. B. (1950). *Races. A study of the problems of race formation in man*. Charles C Thomas, Springfield, Illinois.
- Das, B.M. (2004). *Outline of Physical Anthropology*. Kitab Mahal, New Delhi.
- Deniker, J. (1900). *The Races of Man*. Scribner's, New York.
- Dobzhansky, T. (1958). *Evolution, Genetics and Man*. John Wiley and Sons, New York.
- Franco, F. C. M., Araujo, T. M. D., Vogel, C. J., & Quintão, C. C. A. (2013). Brachycephalic, dolichocephalic and mesocephalic: Is it

appropriate to describe the face using skull patterns?. *Dental press journal of orthodontics*, 18(3), 159-163.

Hooton, E.A. (1946). *Up from the Ape*. Mcmillan, New York.

Kephart, C. (1961). *Races of Mankind: Their Origin and Migration*. Peter Owen Limited, London

Montagu, M. F. A. (1960). *An Introduction to Physical Anthropology*. Charles C. Thomas, Springfield.

Singh, I. P. & Bhasin, M. K. (2004). *A Manual of Biological Anthropology*. Kamla-Raj Enterprises, Delhi.

Unit 12 Racial Classification

Brace, C. L. (2005). *"Race" is a four-letter word: the genesis of the concept*. New York: Oxford University Press.

Molnar, S. (2015). *Human variation: races, types, and ethnic groups*. Routledge.

Shukla, B. R. K., & Rastogi, S. (1999). *Physical Anthropology and Human Genetics: An Introduction*. Palaka Prakashan, New Delhi.

Wolpoff, M. H., & Caspari, R. (1997). *Race and human evolution*. Simon and Schuster, New York.

Unit 13 Race and Racism

American Anthropological Association Statement on Race (May 17, 1998). Accessed on: 2018, May 22. Retrieved from: <http://www.americananthro.org/ConnectWithAAA/Content.aspx?ItemNumber=2583>

Baker, P. T. (1967). The biological race concept as a research tool. *American journal of physical anthropology*, 27(1), 21-25.

Boyd, W. C. (1950). *Genetics and the races of man: an introduction to modern physical anthropology*. Little, Brown and Company, Boston.

Critiquing Race (n. d.). Retrieved from: http://www.understandingrace.org/history/science/critiquing_race.html

Dobzhansky, T. (1944). On species and races of living and fossil man. *American Journal of Physical Anthropology*, 2(3), 251-265.

Fluehr-Lobban, C. (2018). *Race and racism: An introduction*. Rowman & Littlefield. Heyer, E., Balaesque, P., Jobling, M. A., Quintana-Murci, L., Chaix, R., Segurel, L., & Hegay, T. (2009). Genetic diversity and the emergence of ethnic groups in Central Asia. *Bmc Genetics*, 10(1), 49.

Suggested Readings

Hooton, E. A. (1946). *Up from the Ape*. The Macmillan Company.

Joshi, P. C. (2015). Symposium on People of India. *The Eastern Anthropologist*, 68(2), 419-474.

MacMaster, N. (2001). *Racism in Europe: 1870-2000*. Palgrave Macmillan.

Mayr, E. (1963). Populations, species, and evolution. *An abridgment of animal species and evolution*. Cambridge Belknap Press. UK.

Molnar, S. (2015). *Human variation: races, types, and ethnic groups*. Routledge.

Montagu, M. F. A. (1942). Man's most dangerous myth: the fallacy of race. Columbia University Press. New York, US.

Outram, S. M., & Ellison, G. T. (2006). Anthropological insights into the use of race/ethnicity to explore genetic contributions to disparities in health. *Journal of biosocial science*, 38(1), 83-102.

RACE-The Power of an Illusion (n. d.). Accessed on: 2018, May 17. Retrieved from: http://www.pbs.org/race/000_About/002_04-experts-03-02.htm

Reilly, K., Kaufman, S., & Bodino, A. (Eds.). (2003). *Racism: A global reader*. ME Sharpe.

United Nations Educational Scientific and Cultural Organization Statement on Race (1951). Retrieved from: <http://unesdoc.unesco.org/images/0017/001789/178908eb.pdf>

Practical

Mukherji, D., Mukherji, D., & Bharati, P. (2009). *Laboratory Manual for Biological Anthropology*. Asian Books.

Singh, I. P., & Bhasin, M. K. (1968). *Anthropometry: A Laboratory Manual on Biological Anthropology*. Delhi: Nazia Offset Press.

Wilder, H. H. (1920). *A laboratory manual of anthropometry*. P. Blakiston's Son & Company.