মানুষের জ্ঞান ও ভাবকে বইয়ের মধ্যে সঞ্চিত করিবার যে একটা প্রচুর সুবিধা আছে, সে কথা কেহই অস্বীকার করিতে পারে না। কিন্তু সেই সুবিধার দ্বারা মনের স্বাভাবিক শক্তিকে একেবারে আচ্ছন্ন করিয়া ফেলিলে বুদ্ধিকে বাবু করিয়া তোলা হয়।

— রবীন্দ্রনাথ ঠাকুর

ভারতের একটা mission আছে, একটা গৌরবময় ভবিষ্যৎ আছে, সেই ভবিষ্যৎ ভারতের উত্তরাধিকারী আমরাই। নূতন ভারতের মুক্তির ইতিহাস আমরাই রচনা করছি এবং করব। এই বিশ্বাস আছে বলেই আমরা সব দুঃখ কষ্ট সহ্য করতে পারি, অন্ধকারময় বর্তমানকে অগ্রাহ্য করতে পারি, বাস্তবের নিষ্ঠুর সত্যগুলি আদর্শের কঠিন আঘাতে ধূলিসাৎ করতে পারি।

— সুভাষচন্দ্র বসু

Any system of education which ignores Indian conditions, requirements, history and sociology is too unscientific to commend itself to any rational support.

— Subhas Chandra Bose

Price : Rs. **250.00**

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Published by : Netaji Subhas Open University, DD-26, Sector-1, Salt Lake City, Kolkata-700 064 and
Printed at : Royal Hlaftone Co., 4, Sarkar Bye Lane, Kolkata-700 007

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NETAJI SUBHAS OPEN UNIVERSITY

Choice Based Credit System (CBCS)

SELF LEARNING MATERIAL

HGR
GEOGRAPHY

CC-GR-04

Under Graduate Degree Programme

PREFACE

In a bid to standardise higher education in the country, the University Grants Commission (UGC) has introduced Choice Based Credit System (CBCS) based on five types of courses viz. *core, discipline specific generic elective, ability* and *skill enhancement* for graduate students of all programmes at Honours level. This brings in the semester pattern, which finds efficacy in sync with credit system, credit transfer, comprehensive continuous assessments and a graded pattern of evaluation. The objective is to offer learners ample flexibility to choose from a wide gamut of courses, as also to provide them lateral mobility between various educational institutions in the country where they can carry acquired credits. I am happy to note that the University has been accredited by NAAC with grade 'A'.

UGC (Open and Distance Learning Programmes and Online Learning Programmes) Regulations, 2020 have mandated compliance with CBCS for U.G. programmes for all the HEIs in this mode. Welcoming this paradigm shift in higher education, Netaji Subhas Open University (NSOU) has resolved to adopt CBCS from the academic session 2021-22 at the Under Graduate Degree Programme level. The present syllabus, framed in the spirit of syllabi recommended by UGC, lays due stress on all aspects envisaged in the curricular framework of the apex body on higher education. It will be imparted to learners over the *six* semesters of the Programme.

Self Learning Materials (SLMs) are the mainstay of Student Support Services (SSS) of an Open University. From a logistic point of view, NSOU has embarked upon CBCS presently with SLMs in English / Bengali. Eventually, the English version SLMs will be translated into Bengali too, for the benefit of learners. As always, all of our teaching faculties contributed in this process. In addition to this we have also requisitioned the services of best academics in each domain in preparation of the new SLMs. I am sure they will be of commendable academic support. We look forward to proactive feedback from all stakeholders who will participate in the teaching-learning based on these study materials. It has been a very challenging task well executed, and I congratulate all concerned in the preparation of these SLMs.

I wish the venture a grand success.

Professor (Dr.) Subha Sankar Sarkar
Vice-Chancellor

Netaji Subhas Open University

Under Graduate Degree Programme

Choice Based Credit System (CBCS)

Subject : Honours in Geography (HGR)

Human Geography

Course Code : CC - GR - 04

প্রথম মুদ্রণ ঃ নভেম্বর, 2021

First Print : November, 2021

Printed in accordance with the regulations of the
Distance Education Bureau of the University Grants Commission.

Netaji Subhas Open University

Under Graduate Degree Programme

Choice Based Credit System (CBCS)

Subject : Honours in Geography (HGR)

Course : Human Geography

Course Code : CC - GR - 04

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UG : Geography
(HGR)

Human Geography

[CC - GR - 04]

Module - 1 ❑ Nature and Principles of Human Geography

Content of Module-1

1. **Nature and scope and recent trends. Elements of Human geography**
2. **Approaches to the study of Human geography; Resource, Locational, Landscape, Environmental**
3. **Evolution of human, concept of race and ethnicity**
4. **Space, Society and Cultural regions (language and religion)**

Introduction of Module-1

Human geography is one of the major branches of geography that deals with the study of people and their communities, ulturas, economics and introduction with the surrounding by studying their relations with the surrounding space and place. Though several definations of Human Geography have been given, the most important in vogne is that given by Richard Hartshone in his famous work – **Perspectives on the Nature of Geography (1959)** in which he stated that geography is concerned to provide accurate, orderly, and rational description and interpretation of the variable character of the earth's surface.

Today, Human Geography not only deals with evolution of humans and their social or cultural identities but also considers their spatio-temporal marginalities and economical as well as environmental sustainabilities.

Objectives of Module-1

These are the objectives of the unit :

- Trace the evolution of nature, scope and elements of human gergraphy since the pre-scientific days.
- Identify and analyse the approaches to the study of human geography with special reference to resource, locational aspects, landscape sudy and environmental considerations.
- Explain the significance of race and ethnicity of human beings with special reference to Indian civilisation.
- Analyse the spatio-temporal relationship of different social and cultural regional components.

Unit-1 ❑ Nature, Scope and Recent Trends. Elements of Human Geography

Structure

1.0 Introduction

Geography is a mother field of science devoted to the study of the lands, features, inhabitants and phenomena of the earth and planets. Geography is often defined in terms of two branhes; human geography and physical geography. From the pre-scientific period e.g. eighteenth century human geography deals with the study of people and their communities, cultures, economics and interactions with the environment by studying their relations with and across space and plan. Geography has been called the world decipline (Bonnett, A, 2003) and the bridge between the human and the physical sciences (Dorn. H., 1991).

Historically greek and roman geographers attempted to explain the geo-biological features of life and the associated levels of progress of people and civilization. The idea that environment controls the every course of human action was organisedly revived by a part of western philosphers during European renaissance.

The works of first scientific Geographer **Von Humboult** in the form of **Kosmos** and the **Kod Kunde** of first modern Geographer **Karl Ritter** bestify the interrelationship between man and his environment. Human Geographey became popular in academic wold after the publication of **Origin of Species** by British philospher **Charles Darwin** in 1859.

However, German Geographer **Friednih Ratzel** (1844–1904) is, however, known as **'Founder of Modern Human Geography.** The book for which Ratzel is acknowledged all over ever the wold is **Anthropogeographic.** It was completed between 1872 and 1899. The main focus of this monumental work is on the effects of different physicial features and locations on the style and life of the people.

Before the first world was, human Geography attained great popularity in France because of founder of modern French Geography **Paul Vidal de la Blache** (1845–1918). He stuted that human Geography offers a new conception of the interrelationship between earth and man a move synthetic knowledge of the physical laws govering the our earth and of the relations between the leving beings which in habit it. He published his classic entitled Principles de geographic humane (1922 in French language, 1926 in English language). Finally Human Geography is defined by American Geography **E. Huntigton** (1876–1947) with all its modern sense "Study of the nature and distribution of the relationships betwen geographical environment and human activities and qualities."

1.1 Nature of Human Geography

Nature of Human Geography is interdisciplinary and integrative. Human Geography is a branch of Geography that focuses on the study of patterns and processes that shape the human society. It encompasses the human, political, cultural, social and economic aspects.

BASIS OF GEOGRAPHICAL ENVIRONMENT

Physical Environment of Habitat	**Culture**	
1. Location 2. Topography 3. Drainage 4. Climate 5. Natural Vegetation 6. Soils 7. Minerals	1. Language 2. Religion 3. Technology 4. Social Organisation 5. Economic Institutions 6. Political Systems 7. Aesthetic Drive : Arts, Paintings, Drama, Literature, Folklore, Music, Dance, Paintings, Sports	**Geographical** or **Total** **Environment**

The impact of environment on man and his adaptation to physical environment have been emphasized by the Greek, Roman and Arab philosphers.

Apart from material gains and cultural achievements, the food, clothing, shelter, tools, technology, customs traditions, socio-econmic institutions, higher needs like

religion, faith, language, literature, fine arts and folklore, etc., are directly or indirectly influenced by physical environment. In other words, man has moulded his habits and life style according to his physical surroundings and natural endowments.

Human geography has been defined by different scholars at different times. The early philosphers such as **Aristotle** focused on the influence of physical environment on human activities. Later in the mid of 20th century, **Huntington** emphasised upon the influence of climate upon society, culture and history.

The Eskimos of the American Arctic and Asiatic Tundra are representatives of hundreds of tribal peoples who lave adjusted in the extreme cold climate. Their main living challenges are not only climate and seas. At the time of seascity of food in long dask dreated winters of stormy mights, the senior most menber walks out of the Igloo and bracks down on ice, leare-footed, till he gets exhansted. After reaching at unknown destination, he exposes his four clothes and waiting for natural death at the temperature of below –50°C. Human Geography learns that this unique way of committing suicide by eladerly Eskimos justified by them as it saves the limited food supplies for rest of the family members.

The life in the arid and semio arid region is quiet different than that of mountanous region. Accorolig to human Geography, transhuman is a practice in many hilly regions from India to Latin America. In the summer, when snow melting and cover the field with green pasture, the transhmants ascent in the alpine pastures, while in the winter when temperature goes below freezing point, they descend to the winter camps at lower altitudes. This periodical shifting movement assumes that they have two separate dwellings— a permanent one in a village at lower altitude and a hut in upper pasture area. This scenasio is partially true in desert life also. Owing to uncertain and precasions supply of water that all human life is of an unstable lharneter. In order to feed their cattle, goats and sheep, the shepherds have to move about from pasture to pasture, from a temparary hut to another temporay village fronties... life goes on.

The story of human progress both in space and time is a process of human adaptation to their geographical milien. The various ethnic groups and indigenous peoples have developed certain norms, tradition and values to protect their environment while obtaining their food, fuel and other basic needs. The Gujjars and Bakarmalas of Jammu and Kashmir, Bhutian and Lapchas of Skkim and Bhutan oscilate in the valleys and upper alpine pastues in the different season accomodating ecological compulsions. In Africa Pygunies of Congo Basin Constract their honses on the tree. The Mesais of the grassland live in circular endosunes in order to protect their cattle from the mild animals.

Environmental Constraints are quiet different in other parts of world. Nomadic pasturation in the classic example of a livelihood adaptation to widely dispersed

folder and water ressources. The indigenous peoples have adjusted well in their natural environment without disturbing the ecological orders.

The Pygmies of Congo Basin, the Masai of the Eastern Highlands of Aftica, the Badwins of Arabia, the Kirghiz and Kazak transhumans of Central Asia republics, the Gujjars and Bakarwals of Jammu and Kashmir, the Ladakhis, the Tharus of the *Tarai* and mountains of U.P. Himalayas, the Lapchas and Bhutias of Sikkim and Bhutan, teh Apatanis of Arunachal Pradesh and numerous tribes of the North-East Indian states and that of Chotanagpur Plateau are utilizing their resources in a way so that they may keep their habitats in healthy condition and sustain themselves at a reasonable standard of nutrition. The key to the success is sustainability. These people use the resources available without depleting them. They use their intimate knowledge of plants, animals, soils, climate, and seasons, not to exploit nature but to co-exist alongside it. This involves careful management, control of population, the use of small quantities but a wide diversity of plants and animals, small surpluses, and minimum wastage. Plants provide food, medicines, pesticides, poisons, and building materials, whereas animals provide meat, clothes, strings, implements, and oil (Hussain, M).

1.2 Scope of study

Today human Geography is a very broad subject. Accoding to **E. Hugtington** (1956) human geography is concerned with the physical conditions and the human responses to the physical environment. The American Geographers **Finch** and **Trewartha** divided the subject matter of human geography into two borad sections, physical or natural environment and cultural or man made environment.

Each of the physical, biological and social sciences has its own philosophy, methodology and scope. Geography examines numerous tangible and intangible natural and man-made phenomena. In human geography, the major thrust is on the study of human societies in their relation to the habitat or environment. Dealing with the spatial distribution of societies, human geography covers a very wide field or its scope is enormous. Human geography also takes into account the types and patterns fo rural settlements, the site, size, growth and functions of urban settlements, and the functional classification of towns. The study of spatial distribution of economic activities, industries, trade, and modes of transportations and communications.

All these elements profoundly modify the landscape. **Jean Brunhes** in his books divided human Geography into a study of three groups and six types of essential facts : those connected with the unproductive occupation of the soil— (i) houses and (ii) highways : those connected with the longuest or the plant and animal worlds— (iii) cultivated plants, (v) domisticated animals and those pertaining to destrivetive

occupation of the soil— (v) destruction of plants and animals and (vi) exploitation of minerals.

Besides the above stated essential facts, human geography is also concerned with the study of the following aspects of human environment.

Human geography deals with the world as it is and with the world as it might be made to be. Its emphasis is on people : where they are, what they are like, how they intereact over space, and what kinds of landscapes of human use they creat upon the natural landscapes they occupy.

Human geography's content provides integration for all the social sciences, for it gives to those sciences the necessary spatial and systems viewpoint that they otherwise lack.

Human geography admirably serves the objectives of a liberal education. It helps us to understand the world we occupy and to appreciate the circumstances affecting peoples and nations other than our own.

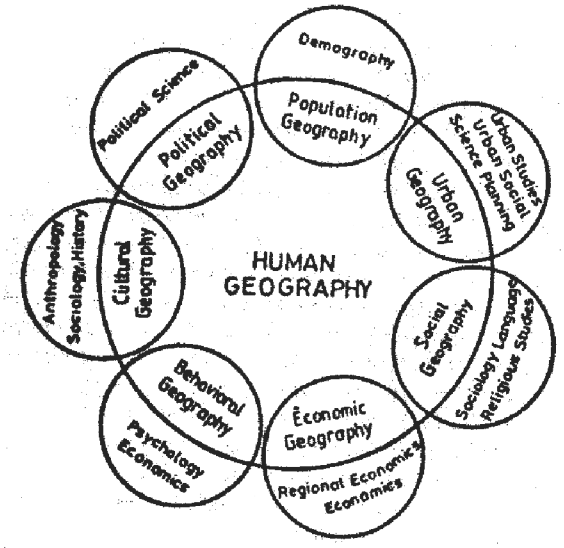


Figure 1.1

It clarifies the contrasts in societies and cultures and in the human subdivisions of Human Geography and the allied Disciplines to which they are related and explanations of spatial interaction allow us to better comprehend the economic, social, and political systems within which we all, singly and collectively, live and operate.

Its analyses of spatial systems make us more aware of the realities and the prospects of our own society in an increasingly troubled and competitive world. Findly study of human geography, therefore, can help make us better in formed

citizens, more able to understand the important issues facing our communities and our countries and better prepared to contribute to their solution.

1.3 Recent Trends

The post world war II period has witnessed rapid developments and reorientation of human geography with the help of critical revolution as well as quantitative revolution.

By the 1980s, human geography has widened to become an omnibus term, describing all those parts of geography which are not solely concerned either with the physical environment or with the technical sub-fields will ***cartography***.

In parallel with geography as a whole, human geography is made up of three closely linked components : (i) the spatial analysis of the human population, i.e., its numbes, its demographic characteristics, as spread over the earth's surface; (ii) the ecological analysis of the relations between the human population so defined and its environment, i.e., the human biosphere system; and, (iii) the regional synthesis which combines the first two themes in ***areal differentiation*** of the earth's surface. All these three themes are pursued at various spatial scales leading down from the macro-level (that of the globe itself and major world regions) to the micro-level (that of individuals and groups and their immediate local environment (Hussain, M)

Human geography has its origin in some countries from the earth sciences and in others from the social sciences. Human Geography, however, has continuing links with physical geography. It has created acute problems of philosophical orientation of human geographers. Some whould argued that we need a much more fully specified model of human beings and their societies before the question of their geography can be understood; such an approach would point towards a more separate type of human geography, linked to social sciences. In this view, human geography can be consistently defined as that part of the social sciences which studies people solely in relation to space and place. The growing inequalities among different regions of the world and within countries along with different socio-political groups especially under the impact of cold-war and nes-imperialism led to the proper debate on welfare approach in geography.

The focus of the welfare approach is on 'who gets what, where and how' ? The 'who' refers to the area under review, 'what' refers to the various commodities, services, surroundings etc. The 'how' refers to the process whereby the observed differences aries. This is the now line of argument in human geography.

It is currently dominated by several philosophical approaches, such as humanism, positivism, realism, structuralism and functionalism, each of which leads to separate geographical research and writing.

Others would argue that it is precisely the link with the physical environment and with the analytical methods shared with other geographers that gives special character to the field, and allows it to contribute to problems which are, in the final analysis, multi-disciplinary or extra-disciplinary in character. The debate is continuing one with the bulk of opinion swinging strongly from the latter view in the 1960s in the 1980s.

Swings are partly associated with changes in scale of analysis. In both physical geography and human geography, the last four decades have seen a shift towards a concern with *processes*, and with this the intensive study of small geographical areas at a high level of resolution. Such studies are typified in human geography by research on the perception of environmental hazard, on voting behaviour, and on migration patterns. They demand a style of analysis different from the wider view of behaviour observed at the macro-scale. After 1990's there are some contemporary parallels between human geography and economics. It is encouraging to note that in some parts of unipolar world suits of models have been developed which can take the analysis through from macrostructure at the world level, through mesostructures, to microstructures particularly after the fall of communisum and rise of globalization. Human geography still lacks the conceptual or technical basis for achieving this cross-scale linkage. It is likely that it will continue to be structured as a cluster of loosely related fields, i.e., economic geography, political geography, etc., until such suitable bases have been established.

This evolution in thought about human geography can be summarized in a simple table as under :

Table 1.1
Evolution of Human Geography

Early Writers		The in fluence of lands upon history.
Classical, e.g., Modern. e.g., Montesquicu, Buckle, Ritter	Thueydides, Aristotle,	
Later Writers	Ratzel, Semple	Physical environment influences man
	Vidal de Lablache	Society viewed ecologically and terrestrial unity as the twin principles of human geography.
	Huntington	Climate in influences society, culture and history.

1.4 Elements of Human Geography

History in its broadest aspect is a record of man's migrants from one environment to another. This view and other observations of Hungtington to the foundation of the elements of Human Geography have revolved around some deterministic ideas. Geography of the first vital necessities : Fundamental physiological needs–food, sheltor and clothing.

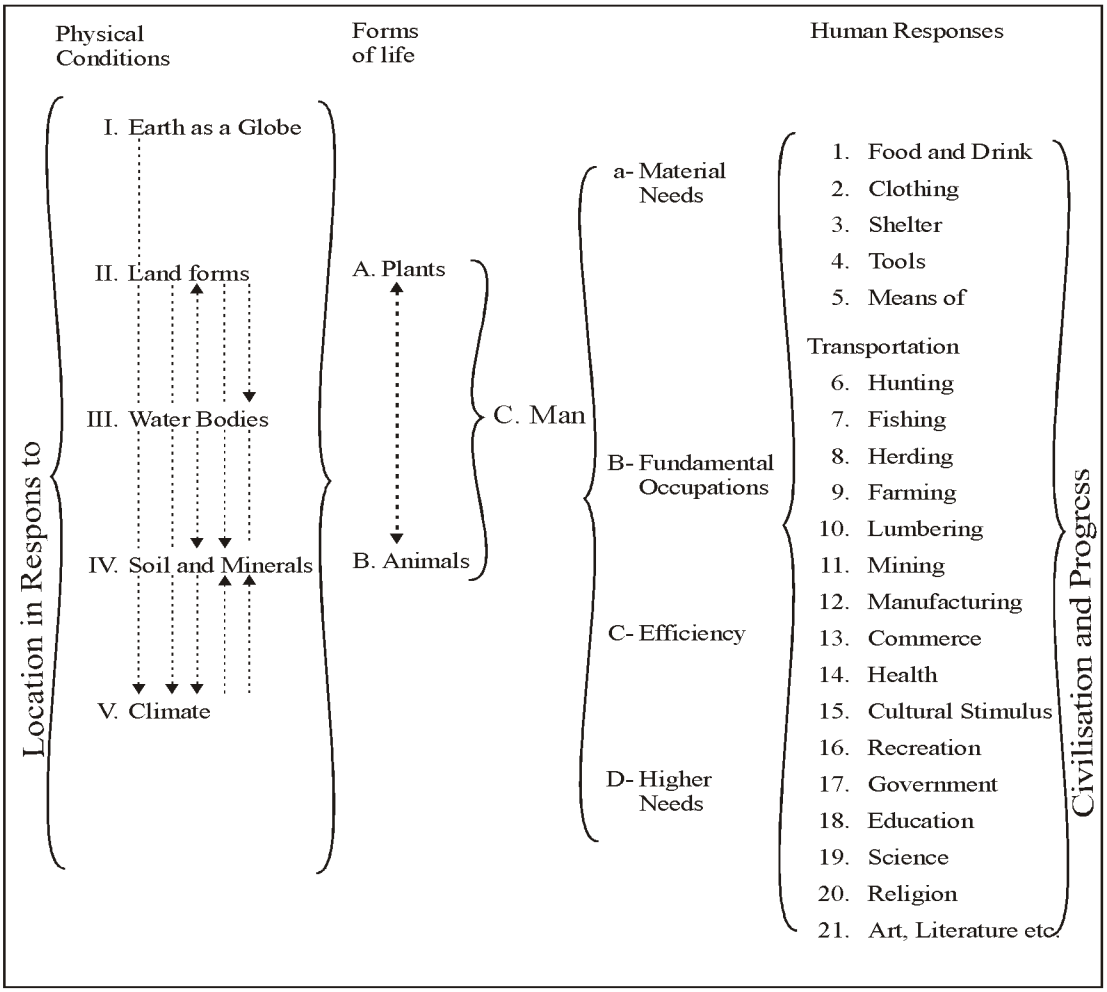


Table 1.2 : Elements of Human Geography According to Huntington

Note : The arrows and their dotted extension indicate the chief ways in which the physical conditions influence one another; climate for example, is influenced by the earth's spherical shape, by the from of the land, and by bodies of water such as oceans. It in turn influences the form of the earth's surface, the quality of the soil, and the nature of mineral deposits. It also influences bodies of water....but this relationship and certain others have been omitted to avoid crowding.

Geography of the Utilisation of the Earth Resources : The material things which satisfy the prime needs of human life—agricultural, pastoral and industrial activities.

Economic and Social Geography : Production, transportation and exchange of goods and services and geography of the culture.

Political Geography and Geography of History : Frontiers, territories, routes, groups of states etc.

Human geography consists of a number of sub-disciplinary fields that focus on different elements of human activity and organisation for example health geography or cultural geography. The subject can be broken down into fine essential elements— (a) The world in spatial terms covers the location of things in the world. (b) Human systems is about studying how human affects the landscape. (c) Environment and Society (d) State policies and programmes. (e) Application of human geography.

The subject matter of human geography continues to grow and has widened considerably over the period. From an earlier thrust on cultural and economic aspects in the early twentieth century, several new branches emerged out of it to study emerging issues and problems like political dimensions, social relevance, urbanisation and urban systems, health and social well-being, gender, inequality, and public policy, to name a few. At the same time human geography draws on other social sciences in the analysis identified with it sub-fields such as behavioural, political, economic or social geography (Yadav and Sinha).

Unit-2 ❑ Approaches to the Study of Human Geography

Structure

2.0 Introduction

There are several important approaches to the study of human geography. Human geography is truly concerned with the spatial aspects of people, we can identify a given physical region or cultural area and seek to learn everything that characteries the geography of that location or area.

Human geography or anthropocentric geography is the branch of geography that deals with the study of people and thier communities, cultures and other essential elements of human living and suffering.

2.1 Approaches

The man-environment relationship, the man focus of human geography, has been interpreted in saveral ways— resources, locational, landscape and environmental. In the ninteenth century, the post Darwinian an period has witnessed several new approachs adapted to examine this relationship. Determinism refers to the pont of view supporting environmental control on human action. The determinists generally, consider humans as passive agents, influenced by the surrounding factors with in change of socio-political scenario of the world, approaches to study the subject matter of human geography have been changing. Accordingly, history, culture, life-style and stage of development of social groups, commities or nations are exclussively or broadly covered the components of physical or ecological structure and practices of contemporary periods.

Resources :

Resources is a main source or support from which a benefits produced in human society and it has some utility in socio-economic growth . Three most basic resources are land, labour and capital; and other resources include energy, enterpreneurship,

information, experties and orientation. Before Second World War it was economical approach of resources. But as resources planning is essential to bring about sustainable existence, which is a part of sustainable development. Sustainable economic development refers to development of resources without causing any harm to the environment. This approach is so important in human geography as because such development should not compromise with the needs of the future generations.

Locational :

In human geography the approach known as 'locational' is nothing but a spatial analysis or spatical science. It focussed on spatial organisation, and it key concepts were ombedded into functional region tributory area of a major node, wheather a port, a market town, or a city shopping centre. In human geography approach locational analysis focuses on the spatial arrangement of phenomena and on related flow pattens. From the 1950's of last century, mostly American geographes advocated the causes and consequences of locational analysis in more complex relationships of them components of the society. William Buge (1966) of USA, wrote a thesis on theoratical geography based on the premises who stated that geography is the science of locations.

Landscape :

In the study of landscape was a core topic of geography. It was seen as a unique synthesis between the natural and cultural characteristics of a region. The major task of human geography is to define the characteristics of a landscape which helps to determine the self-image of the people who inhabit at and a sense of place that differentiates on region from other regions. Combining both their physical origins and the cultural overlay of human presence, often created over millennia, landscape reflect a living synthesis of people and place that is rital to local and national identity. In 1927, Carl Sauer worte the article "Recent developments in cultural geography" which consider how cultural landscapes are made up of "The forms superimposed on the physical landscapes". His paper "The Morphology of landscape was probably the most influential article in introducing ideas of landscape approach in human geography.'' As a critic of environmental determinism, Sauer once wrote ''within each landscape there are phenomena that are not simply there but are either associated or independent each other."

Environmental :

Human geography attends to human pattens of social interactions, as well as spatial level interdependencies, and how they influence or affect the earth's

environment consequently the idea that humans are controlled by nature was rejected and other geographers stressed the fact that humans were free to choose. Human geography is very close to ecological analysis, where the focus is on studying human environment linkages with in a geographical region. Although the nature has offered human a lot of scope for development, it has also set the ultimate limits, crossing of which would mean a point of no return. After the second world war environmentalist movements across the world has ontlined a new understanding of environment in the newly formed urban industrial globalized developmental world. Grifth Taylor once said a geographers role is essentially that of an advisor and not to interpret the nature's plan. The 21st century realisation of environmantal approach to human geography is one harmonious world.

Unit - 3 ❑ Evolution of Human Concept of Race and Ethnicity

Structure

3.0 Introduction

The timeline of human evolution designs the major events in the development of the human species, Homo sapiers and the evolution of the human ancestors. It includes brief explanation of some of the species, genera and the highest ranks of taxa that are seen today as prsible ancestors of modern humans.

There i no direct evidence to establish when the first man appeared on the earth surface and at which place he was born. About the evolution of early man, we may, however, learn something in two different ways, i.e., (i) by comparin the biology of man with the of other animals and so determining the degree of their relationship

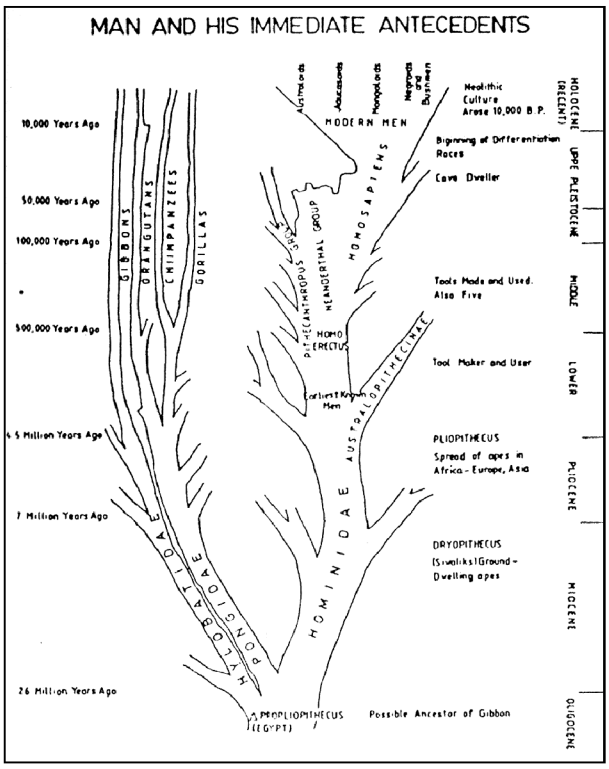


Figure 3.1

(taxonomy); and (ii) by looking at fossils and so determining their age and development (paleontology).

3.1 Humans : Concept on Evolution

The word *homo*, the name of the biological genus to which humans belong, is **Latin** for "human". It was chosen originally by **Carl Linnaeus** in his classification system. The word "human" is from the Latin *humanus,* the adjectival form of *homo.* The Latin "homo" derives from the **Indo-European** root **dhghem,* or "earth".

By comparing man with other living creatures we know that he is a *prtmate* (one of the highest order of mammals) having a large brain, a grasping hand with nails instead of claws, and eyesight which has been developed at the expense of his sense of smell. Within primates group man shows the greatest resemblance to apes, not only in posture and means of locomotion but in the development and coordination of his brain and hands, and in the bio-chemistry of his blood.

Biologically, man is related to the apes and diverged from a common ancestral species which, not generally specialized, lived both upon the ground and in trees during the Tertary Era (65 million years to 63 million years. The Tertiary Era witnessed the Alpine Orogeny and the emergence of mammals. Apes have become, on the whole, arboreal and vegetarian.

3.1.1. Contribution of Darwin

The possibility of linking humans with earlier apes by descent became clear only after 1859 with the publication of **Charles Darwin's *On the Origin of Species,*** in which he argued for the idea of the evolution of new species from earlier ones.

The first debates about the nature of human evolution arose between **Thomas Henry Huxley and Richard Owen.** Huxley argued for human evolution from apes by illustrating many of the similarities and differences between humans and apes, and did so particularly in his 1863 book ***Evidence as to Man's Place in Nature.*** Darwin applied the theory of evolution and **sexual selection** to humans when he published ***The Descent of Man*** in 1871.

3.1.2. Dispersal of modern *Homo sapiens*

Recent evidence suggests that humans may have left Africa half a million years earlier than previously thought. A joint Franco-Indian team has found human artifacts in teh Siwalk Hills north of New Delhi dating back at least 2.6 million years. This is earlier than the previous earlist finding of genus *Homo* at **Dmanisi,** in **Georgia**, dating to 1.85 million years. Although controversial, tools found at a Chinese cave strengthen the case that humans used tools as far back as 2.48 million years ago. This suggests that the Asian "Chopper" tool tradition, found in Java and northern China may have left Africa before the appearance of the **Acheulian** hand axe.

Up until the genetic evidence became available there were two dominant models for the dispersal of modern humans. The **multiregional hypothesis** proposed that the genus *Homo* contained only a single interconnected population as it does today (not separate species), and that its evolution took place worldwide continuously over the last couple of million years. This model was proposed in 1988 by **Milford H. Wolpoff.** In contrast the "out of Africa" model proposed that modern *H. sapiens* **speciated** in Africa recently (that is, approximately 200,000 years ago) and the subsequent migration through **Eurasia** resulted in nearly complete replacement of other *Homo* species. This model has been developed by **Chris B. Stringer** and Peter Andrews.

Ape-men, moving to and fro across the world where confronted with new perils, and new economic crisis, which their greater mental powers overcame. By the third interglacial period, between the Riss and Wurm glaciations, they were sufficiently advanced to be able to fashion a variety of crude tools and weapons, although we can only guess at the range of their equipment, because only stone implements have survived, and we can but presume that they also used wood, bone, and perhaps skin. Certainly during the fourth (wurm) glaciation, which began about 75,000 years ago and ended about 10,000 years ago, men differing but little from ourselves and spread widely in the Old World. They were able to survive in more rigorous climates, not by retreat into warmer regions, but to caves, where, by the use of fire and skin garments, they could continue to live close to the glaciers and ice-sheets. Among the best known of these early races was Neanderthal man, having larger bones and more powerful muscles than modern man, and possessing a more primitive skull, with protruding, massive jaw, a receding forehead and a very prominent bony ridge above the eyes.

3.1.3. Timeline for the Evolution of Homo Sapiens (Modern Man):

Table 3.1

Date	Event
300–130 ka	Fossils attributed to *H. sapiens,* along with stone tools, dated to approximately 300,000 years ago, found a **Jebel Irhoud,** Morocco yield the earliest fossil evidence for **anatomically modern *Homo sapiens***. Modern human presence in **East Africa (Gademotta)**, at 276 kya. A 177,000-year-old jawbone fossil discovered in Israel is the oldest human remains found outside Africa. **Neanderthals** emerge from the ***Homo heidelbergensis*** lineage at about the same time (300 ka). **Partilineal** and **matrilineal** most recent common ancestors (MRCAs) of living humans roughly between 200 and 100 ka with some estimates on the partilineal MRCA somewhat higher, ranging up to 250 to 500 kya. *Homo sapiens* (***Homo sapiens idaltu***) in Ethopia, **Awash River** (near presentday **Herto village)** practiced mortuary rituals.
130–80 ka	**Marine Isotope Stage 5 (Eemian).** Modern human presence in **Southern Africa** and **West Africa.** Appearance of mitochondrial haplogroup (mthaplogroup) **L2.**

80–50 ka	**MIS 4,** beginning of the **Upper Paleolithic.** Early evidence for **behavioral modernity.** Appearance of mt-haplogroups **M** and **N. Southern Dispersal migration out of Africa, Proto-Australoid peopling of Oceania. Archaic admixture** from **Neanderthals** in Eurasia, from **Densovans** in Oceania with trace amounts in Eastern Eurasia, and from an unspecified African lineage of archaic humans in Sub-Saharan Aftica as well as an interbred species of Neanderthals and Denisovans in Asia and Oceania.
50–25 ka	**Behavioral modernity** develops, according to the **"great leap forward"** theory. Extinction of ***Homo floresiensis.*** **M168** mutation (carried by all non-African males). Appearance of mt-haplogroups **U** and **K. Peopling of Europe,** peopling of the North Asian **Mammoth steppe. Paleolithic art. Extinction of Neanderthals** and other archaic human variants (with possible survival of **hybrid** populations in Asia and Africa.) Appearance of Y-Haplogroup **R2;** mt-haplogroups **J** and **X.**
after 25 ka	**Last Glacial Maximum; Epipaleolithic / Mesolithic / Holocene. Peopling of the Americas.** Appearance of : Y-Haplogroup **R1a;** mt-haplogroups **V** and **T**. Various **recent divergence** associated with environmental pressures, e.g. light skin in **Europeans** and **East Asians (KITLG, ASIP),** after 30 ka; **Inuit** adaptation to high-fat diet and cold climate, 20 ka. Extinction of late surviving **archaic humans** at the beginning of the **Holocene** (12 ka). Accelerated divergence due to selection pressures in populations participating in the **Neolithic Revolution** after 12 ka, e.g. East Asian types of **ADH1B** associated with **rice domestication** or **lactase persistence.**

Souce : https://en.wikipedia.org/wiki/Timeline_of_human_evolution

3.2 The Race Concept

The belief that human beings can be readily divided into a series of discrete races is now widely regarded as fallacious instead races are now widely regarded as a political and social construction rather than a biological fact, the product of racism rathar than human genetics.

The definition of a race cannot be made with absolute precision, for man is one of the most variable *tool making* animals, and each man is a distinct individual, differing in greater or less degree from each of his fellows.

Coming from English usage in the 16th century, race look on its current problematic range of meaning in 19th century. When many European writers begen to confuse physical criteria with value judgement with social status and moral worth. A Negro child speaking English and born in England would by these fallacious criteria be incorrectly classified as a member of the English 'race'.

3.2.1. Difficulties of Classification

The origin of race is not only controversial but also general one encounters two contrasting schools of thought. According to one school of thought, race differentiation existed at the earliest stage of man evolution. The classification of man races, is however, based on the possession of certain combinations of fined, in herited traits. The other belive in common evolution of all races.

Table 3.2 : *Characteristics of Major Races*

Traif	Caucasoid	Mongoloid	Negroid
1. Skin colour	Pale reddish white to olive brown	Saffron to yellow brown, some reddish brown	Brown to brown-black, some yellow brown
2. Stature	Medium to tall	Medium tall to medium short	Tall to very short
3. Head form	Long to broad and short, medium high to very high	Predominantly broad, height medium	Predominantly long, height low to medium
4. Face	Narrow to medium broad, tends to high, no prognathism	Medium broad to very broad, malars high and flat, tends to medium high	Medium broad to narrow, row, tends to meium high, strong prog nathism
5. Hair	*Head hair* colour, light blonde to dark brown; texture, fine to medium; form, straight to wavy	*Head hair* colour, brown to brown black; texture, coarse; form, straight	*Head hair.* colour, brown black; texture coarse; form, light curl to wooly or frizzly
	Body hir. Moderate *to profuse*	*Body hair* Sparse	Body hair *Slight*

6. Eye	Colour : light blue to dark brown; lateral eye-fold occasional	Colour : brown to dark brown, medial epicanthic fold very common	Colour : brown to brown black, vertical eye-fold common
7. Nose	Bridge : usually high; form : narrow to medium boad	Bridge : usually low to medium; form : medium broad	Bridge : usually low; form : medium broad to very broad
8. Body build	Linear to lateral; slender to rugged	Tends to be lateral; some linearity evident	Tends to be lateral and muscular
9. Blood group	More A than B	High in B	High in Rhe (cDe)

Source : 1. Haddon, A.C. 1925; 2, Krogman, W.M. 1945.

The evolution of *Homohabilis* (tool making animal) occurred some two million years BP, by which time the ability to make curde stone tools had also developed and diet may have included more meat as scavenging became part of the food-procuring strategy. *Homo habilis* was the ancestor of *Homo erectus* which had evolved by C. 16 million years BP. Evidence from East Africa (Leaky, 1982), for example, indicates that hunting, possibly in organized groups and using fire, had superseded scavenging at a time when stone tool kits were becoming more.

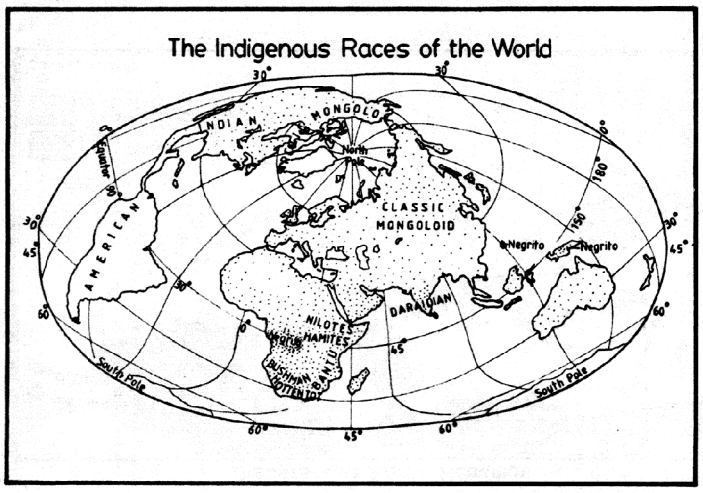


Figure 3.2

The important features on the basis of which the races are identified and classified include colour of skin, stature, shape of head, face, nose, eye, type of hair and group of blood.

1. ***Colour of skin*** **:** On the basis of colour, races are classified into white, yellow and black. But calling the races as white, yelow or black is an over-generalization.

The little pigmentation and deep blood vessels result into yellow colour as in the case of Mongoloid race. Colour alone, however, may not be an adequate indicator to classify race, as in Northern India there are many people who belong to the Caucesoid race but the colour of their skin is more dark or darker than many persons who belong to the negroid race.

2. ***Stature*** **:** Although stature is influenced by the quantity and quality of food one eats, it is nevertheless an inherited quality. On the basis of stature, peoples may be classified into short, medium and tall.

3. ***The shape of the head*** **:** The shape of the head is one of the first parameters, used scientifically for the diision of mankind into races. The shape of the head, expressed as an index of breadth over length x 100. It is known as the *Cephalic Index.* The index may be obtained by the following formula :

$$C.I. = \frac{Width\ of\ head \times 100}{Length\ of\ head}$$

4. ***The shape of the face*** **:** It gives a variety of features. The face may be long or broad, the chin jutting out or receding. Generally, the faces of the Chinese and Polish people have more horizontal dimensions or width of the face as against the narrowness of that of the Scandinavian or the Nilotic African.

5. ***The shape of the nose*** **:** The width and height of the nose is also of great importance in the physical measurements of the various races.

   Generally, the noses of Europeans are narrow, and those of Africans broad. Among the broadest nose, Negroes are the Kajji of the Niger Delta of West Africa; among the Caucasoids with narrowest nostrils are the Swedes.

6. ***The eye*** **:** Eye colour can be classified in the same way as skin colour. But even more significant in the shape of the eye, for in this respect Mongoloids differ from other races. The upper fold of the Mongoloid eye droops over to give the impression of a slit-like opening. This is the *epicanthic fold,* and when it is more emphasized at the inner corner of the eye it tends to give the impression of an outward and upward slant, often accentuated because of the comparative absence of browridges and eyebrows in Mongoloids.

7. ***Hair*** **:** The forms and colours of hair also vary from race to race.

8. ***Body build*** **:** For the determination of body build and constitution of the body, the shoulder width, breadth, and depth of chest, width of hip and other dimensions not named here are measured in some of the social groups.

9. ***Blood group*** **:** Of the physiological traits that are employed in the classification of races, blood-types is one of the most important and it has been most studied. Among the Caucasoids (whites) the blood group is more A than B, among the Mongoloids blood group B is most dominant while among the Negroes both A and B groups are found.

Table 3.3 : ***Races and Subraces***

Primary Race/Region	Sub-races	Composite Races	Residual Mixed Type
I. Caucasoid—White (European, Euro-Africo-Asian)	1. Mediterranean 2. Ainu 3. Celtic 4. Nordic 5. Alpine 6. East Baltic	7. Armenoid 8. Dinaric *Predominantly white* (a) Australian (b) Indo-Dravidian (c) Polyneian *Predominantly Negroid* (a) Tasmanian	9. Nordic Alpine 10. Nordic Mediterranean
II. Negroid (Africa, Asia, Pacific Islands)	1. African Negro (Niguri Forest Negro) 2. Nilotic Negro 3. Negrito	Predominantly negroid 4. Malanesians 5. Papuans *Secondary subrace* 6. Bushman 7. Hottentot	
III. Mongoloid (Asia, Pacific Islands, North and South	1. Classic Mongoloid 2. Arctic Mongoloid (Eskimos)	*Predominantly Mongoloid* 3. Malaya Mongoloid 4. Indonesian Mongoloid 5. American Indians	

Source **:** After E. A. Hooton, 1946, *Up from the Ape* (rev. ed.), New York.

3.2.2. Races of India : an ontline

Historical attempts have been mad, under the **British Raj** and since, to classify the **population of India** according to a **racial typology**. After **independence,** in pursuance of teh government's policy to discourage distinctions between comunities based on

race, the 1951 Census of India did away with racial classifications. Today, the national Census of independent India does not recognize any racial groups in India.

Scientific racism of the late 19th and early 20th centuries divided humans into four races : **Caucasoid (white), Mongoloid (vellow), Negroid (black)** and **Australoid.**

The indigenous population of India was assumed to be intermediate between Caucasoid and **Australoid. Edgar Thurston** named this type *Homo Dravida* and described it close to Australoids, with Caucasoid **(Indo-Aryan)** admixture. As evidence, he adduced the use of the **boomerang** by **Kallar** and **Maravar** warriors and the proficiency at tree-climbing among both the **Kadirs** of the **Anamalai** hills and the **Dayaks** of **Borneo.**

The "Negroid" status of the **Dravidians** however remained disputed. In 1898, **ethnographer Friedrich Ratzel** remarked about the "Mongolian features" of Dravidians, resulting in what he described as his "hypothesis of their [Dravidians] close connection with the population of Tibet", whom he adds "Tibetans may be ecidedly reckoned in the Mongol race". In 1899, ***Science*** summarized Ratzel's findings over India with,

> "India is for the author [of the History of Mankind, Ratzel], a region where races have been broken up pulverized, kneaded by conquerors. Doubtless a pre-Dravidian negroid type came first, of low stature and mean physique, though these same are, in India, the result of poor social and economic conditions. Dravidians succeeded negroids, and there may have been **Malay** intrusions, but Australian affinities are denied. Then succeeded Aryan and Mongol, forming the present potporri through conquest and blending.''

3.3 Ethnicity

According to the Dictionary of Human Geography (Ed. Johnston) Ethnicity is one of the most difficult concepts in the social sciences to define : researches disagree on the meaning of the term; social group differ in their expressions of ethnicity; and some theorist challenge the credibility of the concept in the first place. The etymology of this term dates back to ancient Greece, where the word 'ethno' was used to refer to a distinct 'people'. The word ethnic originally entered the english language us an adjective applied to non-Judeo Chritian people.

Ethnicity is usually an inherited status based on the society in which one lives. Membership of an ethnic group tends to be defined by a shared **cultural heritage, ancestry, origin myth, history, homeland, language or dialect,** symbolic systems

such as **religion, mythology and ritual, cuisine, dressing style, art or physical apearance.**

Ethnic groups often continue to speak related languages and share a similar gene pool. By way of **language shift, acculturation, adoption** and **religious conversion,** it is sometimes possible for individuals or groups to leave one ethnic group and become part of another (except for ethnic groups emphasizing **homogeneity** or **racial purity** as a key membership criterion).

The largest ethnic groups in modern times comprise hundreds of millions of individuals (**Han Chinese** being the largest), while the smallest are limited to a few dozen individuals (numerous **indigenous peoples** worldwide). Larger ethnic groups may be subdivided into smaller sub-groups known variously as **tribes** or **clans,** which over time may become separate ethnic groups themselves due to **endogamy** or **physical isolation** from the parent group. Conversely, formerly separate ethnicities can merge to form a **pan-ethnicity** (such as **Han Chinese**) and may eventually **merge into one single ethnicity**. Whether through division or amalgamation, the formation of a separate ethnic identity is referred to as **ethnogenesis.**

Still much confusion surrounds the concept of ethnicity. Two misconceptions are particularly common. First, many of use. The term only to refer to minority groups, assuring that majority people are 'normal' and rest is ethnic. But truely everyone has ethnic background and we all have ethnic identity. The second contradictions arise when the term ethnicity and race are used inchargeally or when they are seen as variants of same classification system. Races are genetic classification of human being while ethnicity is community or individuals social identity considering specific ancestry and cultural origin.

3.3.1 Ethnicity and Race

- Race and ethnicity are considered as related concepts.
- Ethnicity is used as a matter of cultural identity of a group, often based on shared ancestry, language and cultural tradions, while race is applied as a pseudoscientife grouping, based on physical similarities within groups.
- Race is a more controversial subject than ethnicity, due to common political use of the term.
- Ramon Grosfoguel (University of California, Berkeley) argues that 'racial/ ethnic identity' is one concept and that concepts of race and ethnicity cannot be used as separate and autonomous categories.

- Around 1900 and before, the essentialist primordialist understanding of ethnicity predominated : cultural differences between peoples were seen as being the result of inherited traits and tendencies. With Weber's (1864-1920) introduction of the idea of ethnicity as a social construct, race and ethnicity became more divided from each other.
- In 1950 the **UNESCO** statement, **"The Race Question"**, signed by some of the internationally renowned scholars of the time (including **Ashley Montague, Claude Levi-Strauss, Gunnar Myrdal, Julian Huxley,** etc.), stated :

"National, religious, geographic, linguistic and cultural groups do not necessarily coincide with racial groups : and the cultural trait of such groups have no demonstrated genetic connection with racial traits. Because serious errors of this kind are habitually committed when the term 'race' is used in popular parlance, it would be better when speaking of human races to drop the term 'race' altogether and speak of 'ethnic groups'."

In 1982 anthropologist David Craig Griffith summed up forty years fo ethnographic research, arguing that racial and ethnic categories are symbolic markers for different ways that people from different parts of the world have been incorporated into a global economy :

The opposing interests that divide the working classes are further reinforced through appeals to "racial" and "ethnic" distinctions. Such appeals serve to allocate different categories of workers to rungs on the scale of labor markets, relegating stigmatized popultions to the lower levels and insulating the higher echelons from competition from below. Capitalism did not create all the distinctions of ethnicity and race that function to set off categories of workers from one another. It is, nevertheless, the process of labor mobilization under capitalism that imparts to these distinctions their effective values.

3.3.2. A Case Study of Ethnic Groups

Europe has a large number of ethnic groups; Pan and Pfeil (2004) count 87 distinct "peoples of Europe", of whih 33 form the majority population in at least one sovereign state, while the remaining 54 constitute **ethnic minorities** within every state they inhabit (although they may form local regional majorities within a sub-national entity). The total number of national minority populations in Europe is estimated at 105 million people, or 14% of 770 million Europeans.

A number of European countries, including **France,** and **Switzerland** do not collect information on the ethnicity of ethir resident population.

Russia has over 185 **recognized ethnic groups** besides the 80% **ethnic Russian** majority. The largest group are the **Tatars** 3.8%. Many of the smaller groups are found in the Asian part of Russia (see **Indigenous peoples of Siberia).**

An example of a largely **nomadic** ethnic group in Europe is the **Roma**, pejoratively known as Gypsies. They originated from India and speak the **Romani language**.

3.3.3. Ethno-national Conflict : Europe Experience

The 19th century saw the development of the political ideology of **ethnic nationalism,** prrticularly in Europe when the concept of race was tide to **nationalism,** first by German theorists including **Johann Gottfried von Herder**. Instances of societies focusing on ethnic ties, arguably to the exclusion of history or historical context, have resulted in the justification of nationalist goals. Two periods frequently cited as examles of this are the 19th century consolidation and expansion of the **German Empire** and the 20th century **Nazi Germany**. Each promote the pan-ethnic idea that these governments were only acquiring lands that had always been inhabited by ethnic Germans. Sometimes ethnic groups are subject to prejudicial attitudes and actions by the state or its constituents. In the 20th century, peopl began to argue that conflicts among ethnic groups or betwen members of an ethnic group and the state can and should be resolved in one of two ways.

The history of late-comers to the nation-state model, such as those arising in the Near East and south-eastern Europe out of the dissolution of the Ottoman and Austro-Hungarian Empires, as well as those arising out of the former USSR, is marked by **inter-ethnic conflicts**. Such conflicts usually occur within multi-ethnic states, as opposed to between them, as in other regions of the world. Thus, the conflicts are often misleadingly labelled and characterized as civil wars when they are inter-ethnic conflicts in a multi-ethnic state. Some, like J. Habermas and Bruce Berry, have argued that the legitimacy of modern states must be based on a nation of political rights of autonomous individual subjects. According to this view, the state shuold not acknowledge ethnic, national or racial identify but rather instead enforce political and legal equality of all individuals.

Unit - 4 ❑ Space, Society and Cultural Regions (Language and Religion)

Structure

4.0 Introduction

Cultural mosaic is a term first used by **Victoria Hayward** in the early 1920's to address the changing cultural orientation of Canadian Prairies. It is the min of ethnic groups, languages, religions practices and cultural believes that coexist within society. It is a form of multiculturalism. A society of people of different ethnicities,

all generally maintaing their individual culture and language rather than assimilating into culture around them. Although human population are identified one from another in innumerable ways, but language, religion and customs are of great value in understanding the diversity of cultural landscape. Space, society and cultural regional identity suggest that society should encourage ethnic groups to maintain their ethnic diversity and identity. Everyone has its our space. Participation in sports or cultural exchange may strengthen cultural identity, for example when India team of Squad of India comprised of member from one ethnic background coordinating each other from a different background. It is very popular concept mostly in American-Canadian civilization where multi-national melting pot theory is very vibrant to develop participatory nationalism (in the lands of colonies or new settlers without cultural heritage).

4.1 Cultural Region Sphere/Area : Primary Concept

In anthropology and human geography a cultural region, cultural sphere, a cultural area or culture area refers to a geography with one relatively homogenous human activity or complex of cultural activities. The region is often associated with a ethnolingustic group and the territory it inhabits. Historically the concept derived from Ratzel's notions of a kulturprovinz, and to the concern among German Geographers in the late 19th and early 20th centuries to delimit the boundaries German Reich by means of cultural indicators as language, settlement form and LANDS CHAFT. Today the concept is little used in its classic form as culture as identified much more milk process, connection and network than with areal extent, and because geographical interest has turned from questions of homogeneity and bonding of cultures towards those of connections interactions and contestion between groups for when culture is a mode of Self-Significance, and to matters of transculturation and cultural hydridity (The Dictonary of Human Geography, Ed. Johnston)

4.2 Language

(1) Language is a system that consists of the developement, acquisition, maintence and use of complex system of communication, particularly the human ability to do so; a language is any specific example of such a system. The scientific study of language is called linguistics.

(2) According to ***Ethnologue*** the 7,111 living human languages are distributed in 141 different language families. A "living language" is simply one that is used as the primary form of communication of a group of people. There are also many **dead** and **extinct** languages, as well as some that are still insufficiently studied to be classified, or are even unknown outside their respective speech communities.

One problem which comes in the way of interpretation of language maps is the difinition of language. The linguists do not agree on a single definition which may be taken as the basis of demarcation of language regions. The second problem in the spatial analysis of language maps is the enormous type of languages and the continuous and increasing change in them. According to estimates made by linguists, the total number of languages vary between 3,000 and 8,000. Moreover adequate data is not available on many of the languages. The third problem is the overlapping of languages in the transitional zones.

4.2.1. Dialect

Dialect is a veriety of language that is used by one group of persons and has features of vocabulary, grammar, or pronunciation distinguishing it from other varieties of the same language that are used by other groups. Dialect has thus been defined as "a distinct linguistic from peculiar to a region or social group but which, nevertheless, can be understood by speakers of other froms of the same language." The two main types of dialects are the *geographic dialect*, spoken by the peopl of the same area or locality and the *social dialect* used by people of the same social class, educational level or occupational group.

4.2.2. Spatial Distribution of Major Language

The spatial distribution of languages of the world is most complex. Over 95 per cent of the world population, however, speak at least one of teh most common 100 languages. In fact, nearly 50 per cent of teh world population speak at least one of the ten major languages.

The spatial distribution of languages has two main characteristics :

(1) The areal size of the regions are not consistently proportional to their population size. For example, although Chinese is the first language (or native or mother tongue) for more people than any other language, the area where Chinese dominate is much smaller than the combined area making up the English language region,

(2) The second observation is that the regions do not necessarily match national boundaries. English, Spanish, or Arabic is the primary language in many countries. The majority of the Bengali and Portuguese speakers are in two countries each.

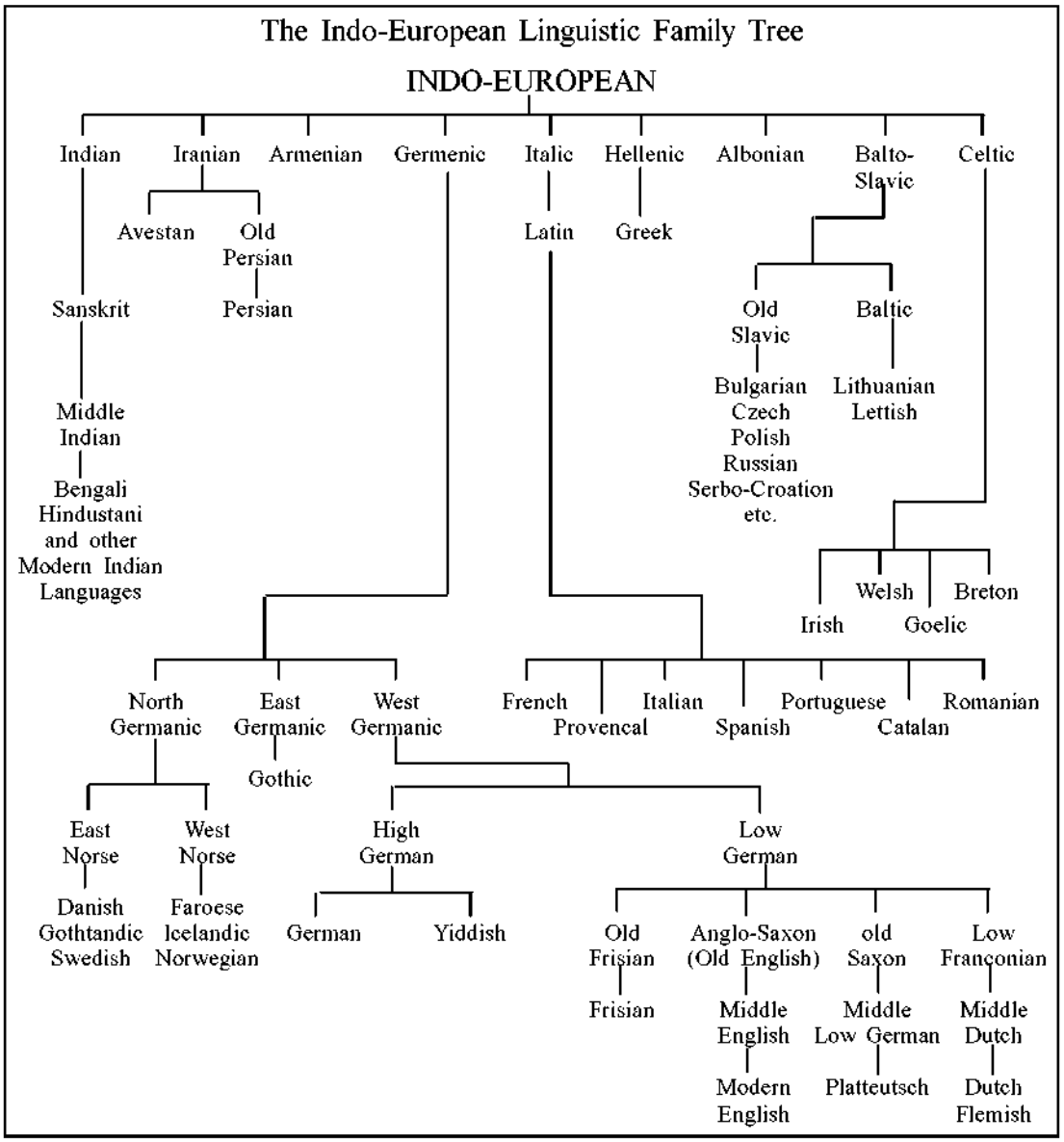
Table 4.1 : *Languages Spoken by More than 40 Million People*

Language	Millions of Speakers
Mandarin (Chaina)	802
English	425
Hindi (India)	315
Spanish	310
Russian	225
Arabic	185
Bengali (Bangladesh, India)	175
Portuguese	163
Malay-Indonesia	131
Japnese	123
German	117
French	114
Urdu (Pakistan, India)	86
Punjabi (India, Pakistan)	74
Korean	66
Telugu (India)	64
Tamil (India, Sri Lanka)	63
Marathi (India)	61
Cantonese (China)	60
Italian	59
Wu (China)	59
Javanese	52
Vietnamese	52
Turkish	51
Min (China)	46
Thai	45
Ukrainian	45
Polish	41
Swahili (East Africa)	40

*Hindi and Urdu are basically the same language : Hindustani, written in the Devangari script, is called Hindi, the official language of India : in the Arabic script it is called Urdu, the official language of Pakistan.

4.2.3. Diffusion of Languages : Impact of culture and society

The existing pattern of major language families records not only the migrations and conquests of our linguistic ancestors but also the continuing dynamic pattern of human movements, settlements and colonizations of more recent centuries. For



example, the Indo-European languages in northern hemisphere have been dispersed far beyond their Eurasian homelands from the sisteenth century onward by Western European colonizers in America, Africa, Asia and parts of Australia.

In the Southern Hemisphere, teh several hundred original Australian languages also loom large spatially on the map but have at most 50,000 speakers, exclusively Australian aborigines. Numerically adn effectively, English dominates that continent.

The spread of language takes place with the migration of one linguistic group to another area. The colonization also lead to spread of language. For example, America, Africa and Australia were colonoized by Europeans and teh languages of the colonizers were adopted by the people of the new territories. Moreover, knowledge and use of a language of dominating culture may be seen as a necessity when that language is the medium of commerce, law, civilization and personal prestige.

For example, in India, during the nineteenth century, the English established an administrative and judicial system that put a very high premium on their language as the sole medium of education, administration, trade, and commerce. Proficiency in English language was the hallmark of the cultured and educated person (as knowledge of Sanskrit and Persian had been in ancient and medieval periods in India). English, French, Dutch, Portuguese and other languages, introduced during the acquisition of empire, retain a position of prestige and even status as the official language in multilingual societies, even after independence has been achieved by the former colonial territories.

There are, however, many cultural barriers in the spread of language. Physical barriers restrict the spread of language. Migrants and in vaders generally follow paths of least topographic resistance and disperse most widely in areas of easy access. For example, on passing the barrier of the Pamirs and teh Hindukush mountains, the Indo-European dialects and languages spread rapidly in the Indo-Gangetic plains. The Caucasus mountains between the Black Sea and the Caspian Sea separate the Slavic speakers to the north and the areas of Ural-Altaic language to the south.

4.2.4. Indo-European Languages : A Case Study

The Indo-European languages have a common ancestry. The first speaker of an Indo-European language, which can be called Proto-Indo-European, were Kurgans, whose homeland was in the steppes to the north of Caspian Sea near the Volga river. The earliest archaeological evidence of th Kurgans dates to around 4300 B.C.

All the Indo-European languages share some common words or, more precisely, have words whose orign can be traced back to common roots. An examination of individual Indo-European languages shows a common word-base for the word *winter* and *snow* but not for *ocean*. The original speakers of Indo-European, therefore, probably lived in a cold climate but did not come into contact with the oceans. The

words for some animals and trees in the Indo-European languages have common rots, wheres others do not. Similar expressions appear for words like beech, oak, bear, deer, bee and pheasant, but there are no such words as elephant, camel, rice and bamboo. The evidence with regard to the homelands of the various animals and trees has helped in pinpointing the origin of the Indo-European languages.

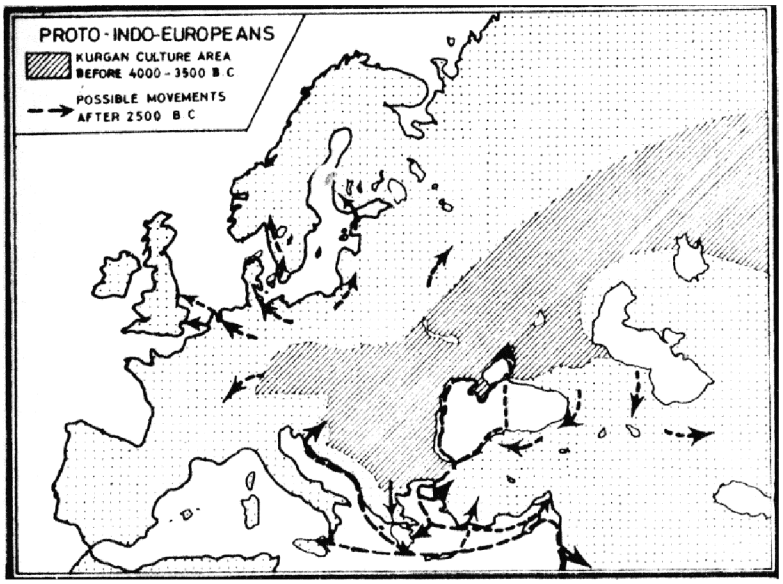


Figure : 4.1 Distribution of Proto Indo-European Languages

4.3 Religion

Religion study is a sub field of human geography, more specifically cultural geography and variously concerned with the description and interpretation of the spatial relationships, landscapes, and places of sacred phenomena and religions practices.

Religion has been defined differently by various scholars. In the eighteenth century, Friedrich Schleirmacher defined religion as "feeling of absolute dependence"—absolute as contrasted to other, relative feelings of dependence. William James called religion as "the enthusiastic temper of expousal." Such definition appears to be more usually applicable to primitive Asian religions than belief-oriented ones.

Otto defines the essence of religious awareness a awe, a unique blen of fear and fascination before the divine. The main characteristics of religious life are : (i) traditionalism, (ii) myth and symbol, (iii) concept of salvation, (iv) sacred places and objects, (v) sacred actions (rituals), (vi) sacred writings, (vii) the sacred community (monastic order), and (viii) the sacred experience.

The earliest and still the largest number of studies are concerned with the pattering of religious phenomena, either as map distributions as as morphological features of the cultural landscape.

An important question for human geographers who seek more than a descriptive approach to the goegraphy of religion is both knowledge of the literature of religion studies and also familarity with the nature of religions experience (on the history and philosophy of the goegraphy of religion in Germany, Buttimer, 1980).

Geographers are concerned with the interaction between religion and the landscape. Religion may be studied as a geographic process, with a point of origin, pattern of diffusion, and current distribution across the earth's surface.

The relationship between physical environment and religion can also be studied. On the one hand, religious content may be derived from events in the physical environment; on the other hand, religious ideas underlie human transformation of the physical environment. This intense identification with religion has led to conflicts between different religions and secular political organizations.

The non-relitious values like Marxism also affect the man and environment relationship. The Russian political ideologies (Communism) for example, have a quasi-religious role.

Thus, beliefs mould the mode of life of people, their exploitation and management of resources, consumer behaviour and their interaction with natural environment.

4.3.1. Classification of Religion

Religion may be classified in a number of ways. Taking the belief is God as the criterion, religion may be *monotheistic* and *polytheistic*. The followers of monotheism believe in a single deity, while the followers of polytheism believe in many gods. With proper detail such distinctions may inform us where particular religions had their roots but not reveal their courses of development, paths of diffusion, or current distributions.

Geographers are mainly concerned with the patterns and processes of diffusion and the spatial distribution of religions Geographers generally classify religions into following :

1. *Universalizing Religions*

These include Christianity, Islam and Buddhism. These are the faiths that claim applicability to all humans and that seeks to transmit their beliefs through missionary work and conversion.

2. *Ethnic Religions*

Ethnicreligions have strong territorial and cultural group identification. An ethnic

religion is an integral element of a specific culture. Judaism, Hinduism, and Japanese Shintoism are the examples of ethnic religions.

3. *Tribal or Traditional Religions*

Tribal or traditional religions are the special forms of ethnic religions distinguished by their small size, their unique identity with localized culture groups not yet fully absorbed onto modern society, and their close ties to nature.

Shamanism is a form of tribal reiligion that involves community acceptance of a *Shaman*, a religious leader, healer, of worker of magic, who through, special powers, can intercede with and interpret teh spirit world.

Table 4.2 : *Major religions*

Religion	Adherents	Percentage
Christianity	2.4 billion	33%
Islam	1.8 billion	24.1%
Secular/Nonreligious/Agnostic/Atheist	1.2 billion	16%
Hinduism	1.15 billion	15%
Buddhism	521 million	7%
Chinese traditional religion	394 million	5.50%
Ethnic religions excluding some in separate categories	300 million	4.19%
African traditional religions	100 million	1.40%
Sikhism	30 million	0.32%
Spiritism	15 million	0.21%
Judaism	14.5 million	0.20%
Bahai	7.0 million	0.10%
Jainism	4.2 million	0.06%
Shinto	4.0 million	0.06%
Cao Dai	4.0 million	0.06%
Zoroastrianism	2.6 million	0.04%
Tanrikyo	2.0 million	0.02%
Neo-Paganism	1.0 million	0.01%
Unitarian Universalism	0.8 million	0.01%
Rastafari	0.6 million	0.01%
total	**7.167 billion**	**100%**

Notes

a. These figures may incorporate populations of secular/nominal adherents as well as **syncretist** worshipers, although the concept of syncretism is disputed by some.

b.Nonreligions includes agnostic, atheist, secular humanist, and people answering 'none' or no religious preference. Half of this group is theistic but nonreligius. According to a 2012 study by Gallup International "59% of the world said that they think of themselves as religious person, 23% think of themselves as not religious whereas 13% think of themselves as convinced atheists.

c.Chinese traditional religion is described as "the common religion of the majority Chinese culture: a combination of Confucianism, Buddhism, and Taoism, as well as the traditional non-scriptural/local practices and beliefs."

4.3.1.1 Christianity

The religion with the largst number of adherents and it was founded in the first century A.D. by Jesus of Nazareth (Palestine), was accepted as the *Christ*, the *Messiah* or *Anointed One*, by his disciples who were then called Christians.

His followers accpeted him as the 'Christ'—a chosen one, sent to fulfil God's promise to Abraham, Issac and Jacob. Pagan practices, especielly the worship by the Romans of the ceasure (king) conflicted with monotheism and led to persecution of the Christians.

Christianity is the most widely distributed religion. According to an estimate made in 1987, the total population of Christians was about 1,540 million or 30.6 per cent of the world population. Their continentwise distribution being 462.6 million in Euripe, 393 million in Latin America, 236 million in Africa, 232 million in North America, about 196 million in Asia and 21 million in Ocenania.

The followers of this religion are found in the different geo-ecological setting. The diversity of physical conditions alters the significance of the landscape in forming rituals. Easter, for example, may be related to the agricultural cycle, but Christians in different locations ascribe different significance to the holiday.

The influence of religion can be seen in the arrangement of human activities on the landscape. The impact can be seen at several scales from relatively small pieces of land to entire communities. A prominent example of the religious arrangement of land at relatively small scale is burial practices.

Thus, in Christianity, the spatial expression is quite strong. The initial division of the Eastern and Western Churches was unrelated to dogma and it resulted in a territorial separation still evident on the world map.

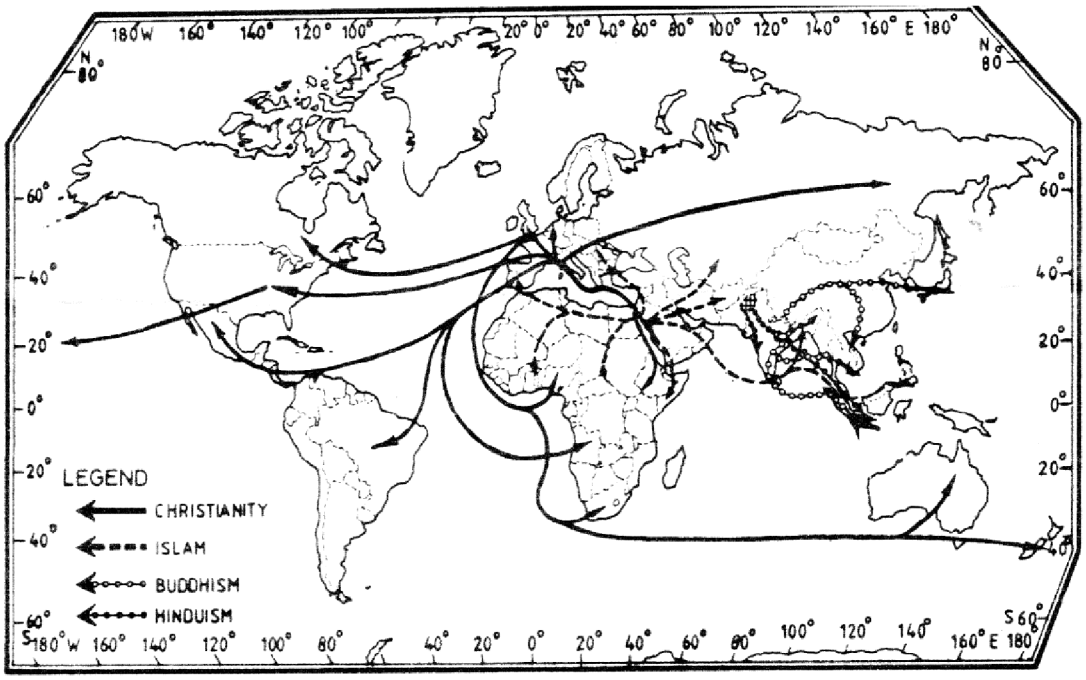


Figure 4.2: Innovation Areas and Diffusion Routes of Major World Religions

4.3.1.2 *Islam*

Islam means 'submission' or total surrender (to God). It is universal religion founded by Prophet Mohammad in the seventh century A.D. It emphasizes an uncompromising monotheism and a strict adherence to certain religions practices.

The Muslim creed consists of five articles of faith : (1) belief in God, (2) in angles, (3) in Quran, (4) in the prophet, and (5) in the day of judgment. All Muslims are enjoined to practice the five pillars of Islam : (1) to recite the profession of faith in God, (2) to observe the five daily public and collective prayers, (3) to pay *zakat* (purification) for the support of the poor, (4) to fast in the month of Ramzan, and to perform *Haj* (pilgrimage) if physically and financially possible.

Islam has two important sects, i.e., Sunni and Shia (Shiite). Sunni comprises over 90 per cent of the Muslims population. (Shias are concentrated in Iran and are an important minority in Iraq, Syria and Lebnon.

The total population of Muslims in 1987 was about 840.2 millions (16.7% of the world population). The major concentrations of Muslims population are in Asia and Africa, having a population of about 559 million and 237 million respectively. There are over 41 million Muslims in Europe and 2.7 million in North America. Latin America has 0.6 million and Oceania 0.1 million Muslims.

The city of Mecca is a place to which every Muslim aspires to perform *Haj.* Each year millions of Muslims make a pilgrimage (*Haj*) to Mecca. Every Muslim who is physically and economically able to do so is expected to undertake a pilgrimage to Mecca known as *Haj*. Regardless of nationality and economic background, all Hajis (pilgrims) are dressed alike to emphasiz the common loyalty to religion and the equality of people in the eyes of God.

The second most holy location in Islam is Madina, about 350 km (220 miles) to the north of Mecca. Prophet Mohammad received his first support from the Ansars of Madina. Islam's first mosque was built at Madina. Prophet Mohammad's grave is in this mosque.

Among the three large universalizing religious, Islam provides the most local autonomy. It has neither a religious herarchy nor a formal territorial organization. While mosque is a place for public prayers, with an *Imam* who leads the prayers, everyone has great authnomy and each one is considered as brother—equal.

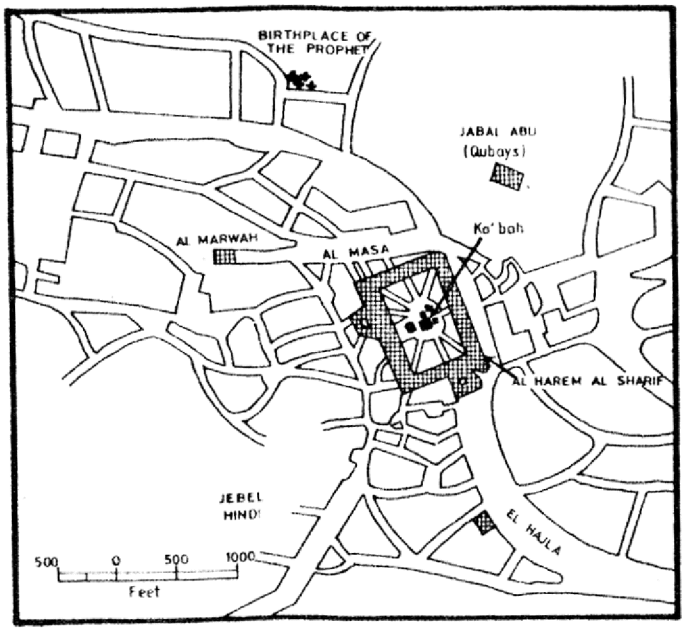


Figure 4.3 : The Al-Haram

The role of Islam is the organization of space is still significant in India. Although, the younger generation has adopted many of the nonreligions ideas of the West, and in many parts of the world communism has harmed Islam, yet the imprints of this religion may be seen everywhere.

4.3.1.3 *Buddhism*

Buddhism was founded by Gautam (563–483) in North India. This religion insists on rigid moral and spiritual discipline in order to attain *nirvana*, a condition where *karma* (deeds) have perished, the cycle of rebirth on earth has ceased, and supreme peace is attained.

The essence of Buddhism was the four noble truths : (1) life is fundamentally disappointment and suffering, (2) suffering is the result of one's desires, (3) to stop disappointment and suffering one must stop desiring, and (4) teh way to top desiring and thus suffering is the noble eight-fold path–right views, intention.

According to an estimate made by Britannica Book of the Year (1987), the total population of Buddhists was 307.6 millions, out of which 306 millions were in Asia, about half a million each in Europe, North and South America. The followers of Buddhism are not found in Africa and Oceania (Australia, New Zealand and South Pacific Island groups). The Buddhists constitute about 6.1 per cent of the total population of the world (Table 5.4).

Buddhism has suffered greatly in Asian lands that have come under Communist control. It has suffered in Mongolia, Tibet, North Korea, China and parts of South-East Asia.

Anti-religious campaigns have reduced open expression of religious observances, and the number of adherents of Buddhism can now be only roughly and uncertainly estimated.

4.3.1.4 *Hinduism*

Hinduism is the age-old religion of India, which honour many gods and goddesses—all of whom, however, are regarded as manifestations of the one divine spirit. The Brahmins, introduced into religious thinking the concept of spiritual peace and happiness which can be attained only through physical and mental discipline (*yoga*).

The caste system apparently originated aroun 1500 B.C., when the Aryans invaded India. The Aryans were divided into four groups : Brahmin, Kshatriya, Vaishya, and Sudras. The Brahmins were the priests and top administrators, the elite

of India. Kshatriyas and the Vaishyas were warriors and businessmen respectively. These two castes were also relatively privileged. The fourth caste Shudras was not entitled to the same status and the basic function of the people of this caste was to do menial jobs like scavenging, cremation and landless labourers.

The total population of Hindus in 1987 was about 594 million out of which 590 million or 99.3 per cent were in Asia, especially in India. The population of Hindus in Africa was 1.4 million, followed by Europe, North and Latin America with about 0.6 million each. There were about 0.3 million Hindus in Oceania. The Hindu constitute about 12 per cent of the total population of the world. Apart from India, the Hindus are found in Indonesia, Malaysia, Thailand, Kampuchia, Laos, Vietnam, Sri Lanka, Nepal, Mauritus and Fiji.

There are numerous pilgrimages centres Haridwar, Badrinath, Amarnath, Puri, Venkateshwara (Tirupati), etc. of Hindus. The Hindus consider a piligrimage (*tirtha*) as an act of purification. Although not a substitute for meditation, the pilgrimage is an important act in achieving redemption. The sacred places attract Hindus from all over the country, while less important shrines attract primarily nearby pilgrims.

Hinduism has no centralized structure of religious control. It is also a highly autonomous religion with worship primarily a private or household occupation. Ideas, however, are transmitted within the Hindu world through pilgrimages, religions and traditional writings.

It has been observed that the traditional food habits are being given up and the younger generation is increasingly taking non-vegetarian food. The consumption of liquor has also increased among the educated and uneducated alike.

4.3.1.5 Other Religions

There are many other well known religions practices like Sikhism, Judaism, Jainism, Shintoism, Bahai and many more. Most of them are ethnic religion. The followers of these religions constitute a distinctive closed community. Another interesting feature fo these veligions that the holidays of these religions are related with agricultural cycle of concerned Geographical region.

Another very interesting point is the religious practices of tribal people. Tribal religions are the special forms of ethnic religion. The people of tribal groups also develop an account of the relationship between many and his environment, provide a concept of, and explanation for the universe, and establish mechanism of assuaging forces that the outside the control of man both as are individual and in groups. They

are mostly committed in majic, mysticism, ritualistic ceremonialism in the prayer an cultural practices.

4.4 Customs

A custom is a common way of doing things. It is a part of cultural tradition and religious belief usually, the people come from the same country, culture, or religion..... truely it is the out which has been adopted by most of the ethnic group of society.

Human Geographers are mainly interested in various aspects of social customs. The spatial distribution of social customs and the relationship between social customs and cultural landscapes. Many customs are things that people do that handed down from the past like ceremonies are a class of customany, collective action. Social customs may also be classified into folk and popular culture. Tradition controls folk culture and recreation and leisure activities outline the popular culture. Traditionally in India and Japan, you take your shoes off before entering the house.....it is a customary practice. Universally accepted custom is like bowing to older people with respect and politeness.

4.5 Conclusions

Human Geography may be defined as the study of the nature and distribution of the relationships between geographical environment and human activities and qualities. Human Geography has a long evolutionary history since eighteenth century pre-scientific branching as well as dichotonies of Geography like physical vs human, systematic vs regional etc. Its traditional focus has been the distribution and activities of mankind like social geography but in contenporary periods human geography mostly deals with challenges of globalization like marginalisation, clashes and displacement due to reformation of social and cultural regions in many parts of the world.

4.6 Summary

- Human Geography closely deals with scientific and statistical study of population and in particular the size of population, their development and challenges from surrounding.
- Human Geography also describes and analyse the process of human setting and its geographical manifestations.

- Since second world war Human Geography has contained five main divisions. The first four–economic, social, caltural, and political reflect both the main areas of contemporary life and the fifth is historical perspective.

4.7 Model Questions

1. Define Human Geography. Discuss the Scope and Contents of Human Geography. 5 + 10
2. Discuss the contribution E. Hungtington on the nature and elements of Human Geography. 10
3. Mention the recent trends and changing nature of approaches to the study of Human Geography. 5 + 10
4. Highlights the concept of race with historical perspective. 10
5. Compare clan, community and ethnicity. How do you compare cultural regions on the basis of language in India. 5 + 10
6. Discuss the role of religion in society and its spatial interpretation in Indian Context. 5 + 10
7. Highlights major ethnic groups of India with special references to tribals. 10

Short Questions (5 marks)

1. Who was E. Huntington ? What was his contributions in the filed of Human Geography ?
2. What are the elements of Human Geography ?
3. What was the contribution of Charles Darwin in human society ?
4. How the modern Homo sapiens dispersed in ancient world ?
5. Give an idea of race concept.
6. What are two schools on racial concept.
7. Classify major races of the world.
8. Explain cephalic index.
9. What is meant by ethnicity ?
10. Differentiate between ethnicity and race.

11. Define dialect.
12. Explain the concept of religion.
13. What is meant by customs in Human Geography ?

4.8 Key words

Physical environment of habitat, culture, anthropogeography, First peoples, antecedents, nationality, ethnicity, language and dialects, colonialism, tribal cultures, indegenous practices, religions identity and harmony.

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Module - 2 ❑ Society, Demography and Ekistics

Contents of Module-2

1. **Evolution of human societies**
2. **Human adaption to environment : Eskimo, Masai, Jarwa, Gaddi, Santhals.**
3. **Population growth and distribution, population composition; Demographic Transition Model.**
4. **Population-Resource Regions (Ackerman)**
5. **Human population and environment with special referance to Development Environment Conflict**
6. **Social morphology and Rural House Types in India**
7. **Types and patterns of Rural Settlements**
8. **Types and patterns of Urban Settlements**

2.1 Introduction to Module-2

Social processes are closely linked with human population. Therefore, for students of geography, it is important to study characteristis of population and settlements. According to the latest estimate of United Nations (2019)—'the size of world population is about 770 crores. Relationship between society and population is not a one way traffic. This unit deals with the inter-relationship between the demogrophic characteristics of a society (fertility, mortality and migration) and their economic, social and environmental context. This field of study is concerned with how population change, qualitatively and quantitatively deals with changing pattern of development as well as habitation and overall environment.

2.2 Objectives of Module-2

These are the objectives of this unit :

- Trace the evolution of societies from social, economic, cultural and political perspectives.

- Explain and compare the human adaptation to environment with special mention to different indigenous group like Eskimo, Masai, Jarwa, Gaddi, Santhals.
- Elaborate different aspects of population and associated developmental issues of rural and urban
- Identify types and pattern of rural and urban housing with special mention to India.

Unit-1 ❑ Evolution of Human Societies

Structure

1.0 Introduction

MAN is a social animal. Darwinian theories of Origin and evolution of Species include the birth and growth of human beings, or more precisely homo sapiens. The concept of man being a social animal tends to view humans as creatures dominated by animal instincts and desires, while also interested and inclined to build societies. Development and evolution of societies, with all the intellectual activities too, converges at the ultimate purpose of satiating casual desire at another level.

Most 19th century and some 20th century approaches aimed to provide models for the evolution of human kind as a single entity. However most 20th century approaches focussed on changes specific to individual societies. In 1941 anthropologist **Robert Refield** wrote about a shift from folk society to urban society. By the 1940s cultural philospher leslie white rejected the opposition between 'primitive' and 'modern' societies but did argue that societies could be distinguished based on the amount of energy they harnessed. In the area of development studies, economist such as **Prof. Amartya Sen** have developed an understanding of development and human flourshing that also questions more simplistic notions of progress, while retaining much of their original inspiration.

American Sociologist **Gerhard Lenski**, University of North Carolina distinguished four stapes of human development, based on advances in the history of communication. He believed advancements in the technology and communication translate into advancements in the economic system and political system, distribution of goods, social inequality and other spheres of social life. He also differentiates societies based on their level of technology, communication and economy : (1) Hunters and gatherers, (2) Agricultural, (3) Industrial and (4) Special (like fishing societies).

It is very clear that tthe slatus of a human society rests on the productivity of food production. It is directly related with the growth and distribution of human society. While productivity can no longer be increased, Bloomfield has proposed that man will have achieved a stable autometed society.

1.1 Hunting and Food Gathering

Hunting and gathering was humanity's first and most successful adaptation, occupaying at least ninety percent of human history. A hunter-gatherer is a human living in a society in which most or all food is obtained by foraging (collecting wild plants and pursuing wild animals). Following the invention of agriculture, hunter-gatherers who did not changed have been displaced or conguered by farming or pastoralist groups.

Hunting and gathering was presumabery the subsistence strategy employed by human societies begining some 1.8 million years ago. Prehistoric hunters-gatherers lived in group that consistred of several families. It remained the only mode of subsistance entil the end of the Mosolithic period some 10,000 years ago and after this was replaced only gradually with the spread of the Neolithic revolution. In west Eurasia, agriculture led to widespread changes when older hunter-gathers population where largely replaced by Middle Eastern farmers during the Neolithic who in turn oversum by Indo-Europeans during the Bronre age. As the number and sise of agricultural societies increased, they expanded in to lands traditionally used by hunter-gathers. This process of agriculture-driven exparsion led to the development of the first forms of government in agricultural centres such as ancient India, sub-saharn Africa, ancient China, some grasslands of latin America.

Karl Marx defined the socio-economic system of hunters-gatherers as primitive communism. They tend to have as egalitarian social ethos, although settled hunter-gathers like north west coast of North America are an exception of the rule. Nearly all African hunter-gatherers are very much women controlled society where women

are not only influential but also powerful as same as man. Most of the hunter-gatherers are nomadic or semi-nomadic in nature but there are exceptions like chemash people who had the highest recorded population density of any known hunter and gatherer society with an estimated 21.6 persons per sq. mile.

1.2 Pastoral Nomadism

Nomadic Pastoralism was a result of the Neolithic revolution. During this period human began domesticating animals and plants for food. It is a form of pastoralism when livestock are herded in order to find fresh pastures on which to graze. Nomads follow an irregular pattern of movements when transhumance follow strict seasonal route of movements. Juns Zasmins has propored that pastoral nomadism began as a cultural lifestyle in 6200 BC climatic crisis when Harifian pottery making hunter-gatherers in the Sinai fused with a group of agriculturalist.

The herded livestock in this pastoralism include cattle, yaks, sheep, goats, raindeer, horses, camels and many move nomadic pastorialism is comming practised in region with little arable land, typically in the grasslands like Steppes; very close to Euresian agricultural region. Of the estimated 30–40 million nomadic partoralists worldwide, most are found in central Asia and the Sahel region of North and West Africa, such as Fulami and Tauregs. Bedouins of Middle east are also an important pastoralist of Asia.

The heartland of pastoralism is the Eurasian Steppe. Attempts by agrarian civilisations to conquer the Steppe usually failed until the last few countries. There are astimated 30-40 million nomads in the world. They comprise less then 2% of the population in the countries of North Africa except Libya and Mauritania. They are also declining minority in Middle East countries like Soudi Arabia (less than 3%) or tran (less than 4%). In Mongolia about 40% of the population countries to live a traditional nomadic style. In the Middle Hills and Himalayas of Nepal (and some parts of Kashmir region also) people living about 2000 mt. practice transhuance and nomadic postorialism because settled agriculture become less productive due to steep slopes, cold weather and limited cirigatsonal support.

1.3 Subsistence Farming

"Subsistence peasants are people who grow what they eat, build their own houses, and live without regularly making purchases in teh market place."

— Tony Waters, the Persistence of Subsistence Agriculture : life beneath the level of the market place, 2007.

Subsistence farming occurs when farmers grow food crops to feed themselves and there familites. This farming emerged in various areas including Mexico where it was based on Maize and in the Andes where it was based on the production of the potato.

Subsistence agriculture had largely disappeared in Europe by the begining of 20th century and in North America with the movement of share croppers and tentent farmers in mid of same century. But subsistence farming continues today in large part of rural Africa and many parts of Asia and latin America. In recent period more than 2 billion people in 500 million households living in rural areas of developing areas like Indian subcontinent survive as small holders, farmers, working less than 2 hectares of land. Nearly 25% of world population is now still practicing subsistence nature of farming. Socio-economically subsistence agriculture can be used as a poverty alleviation strategy, specifically for low-income countries as a part of policy responses to food crisis in the short and medium term.

There are four major types of subsistence farming —

(a) Shifting cultivation — Farming in a patch of forest land after clearing, buring and crops are grown with an interval (Jhumming in North-East India).

(b) Primitive agriculture — Slash and burn technique to clear land and practive non-shifting intensive agriculture (Some pasts of tropical Africa).

(c) Nomadic Herding — Farming people migrate with there animal from one place to another (Gujjars in Kashmic Hamalaya).

(d) Intensive Subsistence farming — Farming in home plots with simple tool and more labour (Philippnes).

1.4 Industrial and Urban societies

Industrial societies makes urbanisation desirable, in part so that workers can be closer to centres of production and the service industry can provide labour to workers and those that benefit financially from them in exchange for a piece of production profits with which they can buy goods.

Industrial-urban complexes are often constrasted with traditional societies. It is a society in a society by the use of more sophisticated technology to enable mass production supproting a large population with a high capacity for division of labour and other service facilities.

As early as 1850, many European cities were centres of industrial growth. One of the difining and most lasting features of industrial revolution was the rise of cities. In pre-industrial society, over 80% of people lived in rural areas. As migrants moved from the countryside, small towns became large cities. The industrialiation changed material production, wealth, labour patterns and population distribution the concerned society and the rural areas because urban to megalopolis since early nineteanth century's Europe. The social and economic developments of the industrialisation bought significant social changes in urban living and suffers. It is predicted that by 2050 about 64% of the developing world and 86% of the developed world will be urbanised. Eric Hobsbaun's book 'The age of revolution' : 1789–1848 (Pub in 1962 and 2005) stated urban development in our period (1789–1848) was a gigantic process of class segregation, which pushed the new labouring poor into great morasses of misery outside the centres of Government and business and the newly specialied residential areas of the bougeoisie. In many developing countries like India where economic are growing, the growth is often erratic and based on a small number of industries. It is social challenges of the young generation of aspiring knowledge centres to address the opportunities with poritivity and cordinating mind.

Unit-2 ❑ Human Adaptation to Environment : Eskimo; Masai, Jarwa, Gaddi, Santhals.

Structure

2.0 Human adaptation to environment : A Primary Idea

Man is no longer the product of his environment, he is also its transformer and creator. Some experts of Cultural Anthropology belives that the human body readily responds to changing environmental stresses in a variety of biological and cultural way. Humans have biological plasticity or an ability to adapt biologically to physical environment. An adaptation is any variation that can increase one's biological fitness in a specific environment, more simply it is the successful interaction of a population with its environment. Most unfortunately, in some instances, such as that of mega-cities, conurbations and latest smart cities on land and water mas, the human imprint may be so complete that original landscape of nature has been totally wiped away and replaced by man-made cultural environment. The degree and magnitude of man's impact on environment may be appreciated from the fact that just in a small fraction of geological time seale of our brief presence on earth, humans have become a powerful agent of change in the global environment.

Eskimo, Masai, Jarwa, Gaddi and Santhals are the indigenous peoples, also known as first peoples, aboriginal peoples or native peoples are ethnic groups who are the original settlers of a given region, in constrast to group that have settled, occupied or colonized the area more recently. These human groups are usually described as indigenous when they mantain traditions or other aspects of an early culture that is associated with a given region. These indigenous peoples confront a divers range

of concerns associated with their status and ineractions with other cultural groups, as well as changes in their inhabited environment. Here we are discussing living and suffering of these indigenous groups, one from Astic region, another from a Africian grasslands and rest of three are from India. Some challenges of their living and suffering are specific to particular groups; however, other challanges are commonly experienced.

2.1. Eskimo People : Living with environment

In Canada and Greenland, the term "Eskimo" is predominately seen as pejorative and has been widely replaced by the term "Inuit" or terms specific to a particular group or community. This has resulted in a trend whereby some Canadians and Americans believe that they should not use the word "Eskimo" and use the Canadian word "Inuit" instead, even for Yupik speakers.

Several earlier indigenous peoples existed in the region. The earliest positively identified Paleo-Eskimo cultures (**Early Paleo-Eskimo**) date o 5,000 years ago. They appear to have developed in Alaska from people related to the Arctic small tool tradition in eastern Asia, whose ancestors had probably migrated to Alaska at least 3,000 to 5,000 years earlier. Similar artificats have been found in Siberia that date to perhaps 18,000 years ago.

Approximately 1,500–2,000 years ago, apparently in northwestern Alaska, two other distinct variations appeared. Inuit language became distinct and, over a period of several centuries, its speakers migrated across northern Alaska, through Canada and into Greenland. The distinct culture of the Thule people developed in northwestern Alaska and very quickly spread over the entire area occupied by Eskimo people, though it was not necessarily adopted by all of them.

The Inuit people are also known as Eskimos. They have lived in extreme cold region with very low visibility, the Artic coast and the area is not at all favourable for natural green coverage for over a thousand years. For the particular environment the Eskimo have adapted culturally and biologically. Among the biological adaptation, their bodies altered permitting them to adapt to the environment in five years. In addition to biological adaptations, the Eskimo people adopted culturally, changing

how they dressed, the type of home they lived in (Igloo, or snow hut or house when the snow is easy to compact) and the number of individuals in their groups.

The Eskimo people had high metabolism rates. This is also related to body heat and how they adapted to their cold environment. The way in which Inuit people adapted biologically to their environment most is via adaptation of foods. Their food consists of high protein and fat. They ate foods such as seal, whales and freshwater fishes.

Culturally they are also very much scientifially oriented. The people were clothing that would suit their environment. They dress worn was intended to keep in heat in addition to not expose any part of body/skin. The type of homes they lived in was also meant to keep in heat. They lived in Igloo and Sod (oval) houses. The last way in which the Eskimo people adopted to their choice to live in small groups. They are practicing several social and family rituals to address the food searcity. At the time of natural hazards or climatic disaster, Canadian or Russian Governments are very much supportive with helicopter services or rehabititation in nearby cities with public arrangements. Now more Eskimos are exposed to modern entertainment and values through travel, schooling, television and internet particularly in Canada and some parts of Greenland (Danmark administration).

2.2. Maasai People

Living with environment Maasai are a Nilotic ethnic group inhabiting northen, central and southern Kenya and northern Tanzania. They are among the best known local populations due to their residence near the many game parks of the African Great lakes. They are considered one of the tallest people of the world, with an average height of 6ft 3 inch according to some reports. The Maasai population has been reported as numbering 841622 in Kenya in the 2009 census and 800,000 in Tanzania in the year 2011 census.

According to their oral history the Maasai originated from the lower . Nile valley north of lake Turkana, Kenya and Bengan stretching south around the 15th century. Many ethnic groups that had already formed settlements in the region were forcibly displaced by the incoming Maasai, while other, mainly southern cushitic groups, where assimitalated into Maasai society. From the period of first world war Maasai lands in Kenya were reduced by 60% when the British evicted them to make room

for settler ranches, subsequently confining them to present day Samburu, Narok and many more districts. For last few decades more lands was taken to create wildlife reserves and national parks like Serengeti Nataional Park Tanzuania, Nakuru NP in Kenya and many more.

The Maasai people stood againt stavery and lived alongside most wild animals with an aversion to adopt game and bird. But Maasai society never condoned traffic of human beings, and outsides looking for people to englave avaided the Maasai.

Maasai people are very close to environment. The **"Mountain of God", Ol Doiny Lengai,** is located in northernmost Tanzania and can be seen from Lake Natron in southernmost Kenya. The central human figure in the Maasai religious system is the **Laibon** whose roles include **shamanistic healing, divination** and **prophecy,** and ensuring success in war or adequate reinfall. Today, they have a political rele as well due to the elevation of leaders. Whatever power an individual laibon had was a function of personality rather than position. Many Maasai have also adopted **Christianity** and **Islam**. The Maasai are known for their intricate jewelar and for decades, have sold these items to tourists as a business.

Traditional Maasai lifestyle centres areound their cattle which constitute their primary source of food. The measure of a man's wealth is in terms of cattle and chaildren. A herd of 50 cattel is respectable, and the more children the better. A man who has plenty of one but not the other is considered to be poor. A Maasai **religious belief** relates the God gave them all the cattle on earth, leading to the belief that **rustling** cattle from other tribes is a matter of taking back what is rightfully theirs, a practice that has become much less common.

Though the Maasai's entire way of life has historically depended on their cattle, more recently with their cattle dwindling, the Maasai have grown dependent on food such as sorghum, rice, potateoes and cabbage (known to the Maasai as goat leaves).

It is very interesting to note that there are 22 geographic sectors or subtribes of the Maasai community, each one having the own customs, appearnce leadership and socio-cultural-behavioural patterns.

Educating Maasai women to use climicas and hospitals during pregnancy has enabled more infants to survive. The exception is found in extremely remote areas. For Maasai living a traditional life, the end of life is virtually without **ceremony** and the dead are left out for **scavengers.**

2.2.3 Table : Life and Societies of Three Indian tribes : Jarawa, Gaddi and Santhals

Name of the Tribes	Jarawa	Gaddi	Santhals
Present location	South Andaman and Middle Andaman islands, India	Himachal Pradesh and Jammu and Kashmir of India	Jharkhand, West Bengal, Assam, Odhisa, Bihar, India and Bangladesh and Nepal
Numbers	In 2011: 350–400 (Andaman-Nicobar Islands)	In 2011: 1,78,130 (Himachal Pradesh) 46,489 (J & K)	In 2011: 27 lakh (Jharkhand), 25 lakh (WB) 9 lakh (Odhisa), 4 lakh (Bihar) 3 lakh (Bangladesh) and 45thn (Nepal)
Origin	Jarawa regarded the now-extinct Jangil tribe as a prent tribe from which they split centuries or more time ago. Jangil is were extinct by 1931.	Basnur area of Rajasthan as they are descendants of one of those castelens nomdic shephards of Indian plains.	Mostly male migration from Indo-China to the eastern Indian Subcontinent; This Austro-Asiatic language speakers arrived India about 4000 years ago. Married local tribal girls; close with Munda people.
Physical Orientation / practice	Mid to short height, skin colour black or burnt brown; frizzly and wooly hair, broad nose and round shape head like Dravidian. Their chest guard in order to go hunting or any raids is called 'Kekad'.	Tall and stout body; First they are gathers and later as fomar and postoralists these practice shaping there bodies. Moderate to dark skin colour.	They have stout figure, middle height; skin colour is black. Nose and lips are broad; head is partially tall, forehead moderate. They are more like Negrito or Dravidians.
Social / Economic Status / Practices	Adivasi Group/Traditional folk religion (ST). They are nomadic tribe, hunt wild pigs, lizards with bow and arrow. Women catch fishes.	Scheduled Tribe/parlty isolated [Gaddi herd of sheep and goats is mostly common in Bharmour, Chamba]	Folk religion worships Marong Burn or Bonga as supreme deity. They are aware with evil spirit, now many of them close with christianity. They are ST in many states of India.
Cause of Development	Their Primary threat is a highway, Andaman Trank Road, runing through their territory and reserve of 1,028 sq. km. of dense equational forest. Tourists are also threat for their purity of ecology.	Sex ratio in Himachal Pradesh 1014 and 953 in Jammu and Kashmir. Literary 74% in Himachal and 54% in Jammu and Kashmir growing interactions with pujabi people is noticable.	Santhals are very integral part of India's freedom struggle. They have their script Olchiki. Their culture art, folk dance, music, instruments and literature are now academically accepted by not only India but also rest of the World.

Unit-3 ❑ Population Growth and Distribution, Population Composition; Demo-Graphic Transition Model

Structure

3.1 Population Growth and Distribution : 2019 Before and After

United Nations department of economics and social affairs, population division (2019), came up with the world population prospects 2019 stating that the largest increase in population between 2019 and 2050 will take place in India, Nigeria, Pakistan, the DR Congo, Ethiopia, the Tanzania, Indonesia, Egypt and the USA.

Th World Population Prospect 2019 estimates are based on all available sources of data on population size and levels of fertility, mortality and international migration for 235 countries. For the 2019 revision, the latest assesment, 1690 population censuses conducted between 1950 and 2018, as well as information on births and deaths from vital registration systems for 163 countries and demograpic indicators from 2700 surveys were considered.

The first time was at about 10000 years before present (BP) when man started the domestication of plants and animals. The Vegeculture and Agricultural Revolution (10000 years BP) and the Industrial Revolution (1780) had profound effects on the spatial distribution of population. These revolution altered the population patterns and demographic attributies of the world.

In 1850, the world's population was estimated to be 1,000 million. It means it was doubled from 500 million in 1650 to 1,000 million in 1850. The population

doubled again to 2,000 million by 1930. In 1975 it rose to 4000 million mark and in 1987 became 5,000 million.

WORLD POPULATION GROWTH
8000 B.C. to A. D. 2000

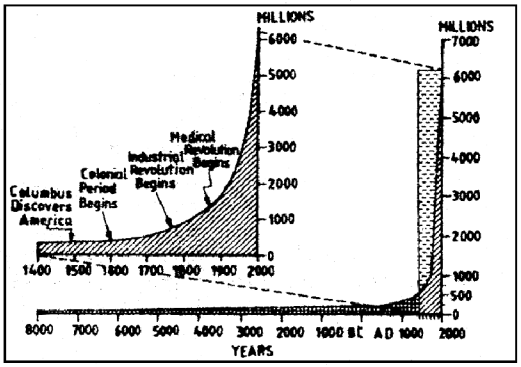

Figure 3.1

Notice that the bend in the j-curve begins in about the mid-1700s. Death rates reduced near the opening of the 20th century in the industrializing society.

Table 3.1

Dubling Time of World Population

Period	Population	Time in which population doubles
10,000 B.P.	5 million	
1650 A.D.	500 million	1500 years
1850 A.D.	1000 million	200 years
1930 A.D.	2000 million	80 years
1975 A.D.	4000 million	45 years
2012 A.D.	8000 million	37 years

Projected figure

According to the estimates, the population, on the average, doubled once after every 1,500 years during the Neolithic Period (New Stone Age). The next doubling, from 500 million to one billion, took two hundred years and the doubling from one billion to two billion took only eighty years. The population reached four billion around 1975, having doubled again in only forty-five years. If the present growth rate of population continues, it will become six billion in 1997 and seven billion in 2005 to reach eight billion in 2012.

The transmission of knowledge about hunting, gathering and preparation of food and identification of enemies helped in the expansion fo agriculture and growth of population. The developemnt of agriculture resulted into decline of death rate. It is guessed that the increased food supply led to better nutrition, greater resistance to disease, increased longevity of life and hence a growth in population.

Rules and sanctions that had been used to keep hunting and gathering bands small and in balance with their resources may have been relaxed in agrarian societies that required more labour to produce food.

However, the population of India in 2019 is 1.37 billion, which 2.3 million (0.2%) less than the previous estimate from the 2017 revision. This decrease results from slightly lower levels of TFR following the avilabiliy of new estimates from the 2015-16 National Fertility and Health Survey (NFHS-4) and SRS for 2016 and others. Around 2027 India is projected to overtake china as the world's most populous country. This report also said the world population is expected to increase by two billion people in the next 30 years, from 7.7 billion currently to 9.7 billion in 2050.

The Industrial Revolution in Europe and North America created a new society in which the primary activities (agriculture, forestry, mining, fisheries) began to decline and the secondary (manufacturing) and tertiary (services) activities began to take an increasingly important role. This led to diversity in national economy. Machines were increasingly utilized to supplement or replace human effort.

The Industrial Revolution resulted in an uneducated peasantry migrating into the expanding urban centres created numerous socioeconomic and cultural problems.

Thus, it is clear that teh world's population has greatly increased in the last few centuries, but the rate of increase quickened only after 1900 and has continued to quicken during the last four decades, particularly after the Second World War.

The unevenness in the distribution of world population may be attributed to the following factors :

1. Availability of arable land and water.
2. Age of civilization.
3. Accessibility of places.
4. Restrictions of national boundaries.

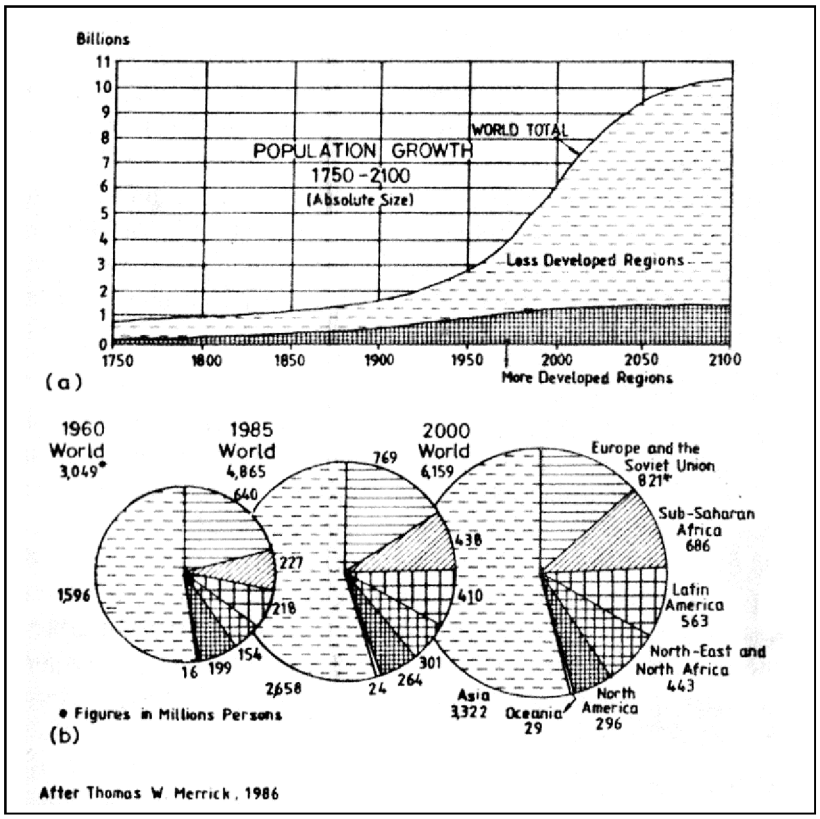

Figure 3.2 : World Population Numbers and Projections

China, with 1.43 billion people in 2019, and India, with 1.37 billion, have long been the two most populous countries of the world, comprising 19 and 18 per cent. respectively, of the global total in 2019. They are followed by the USA, with 239 million in 2019, and Indonesia, with 271 million, the 2019 report said. The report also highlighted that around 40% of the world's population lives in intermediate–fertility countries, where women have an average between 2.1 and four birth over a lifetime. This intermediate - fertility countries are found in many regions, with the largest being India, Indonesia, Pakistan, Mexico, the Philippines and Egypts.

Historically there are also striking variations in the population composition of the developing and the developed world. In the developed countries, only 22% of the population is in the under 15 age group and 11% in the over 65 age group, while in the developing countries 37 per cent of the population is under the age of 15 and only 4 per cent is aged over 65 years. Thus, improving health care, coupled with high fertility rates and a large proportion of people entering their reproductive years provide an inbuilt momentum for future high population growth even if fertility rates decline.

The spatial distribution of world population is not only uneven but also there are wide regional variations in the degree of population concentration. In the last census data of 20th century according to 1991 population data published by the United Nations, the average density of the world population is thirty-eight persons per sq. km. Asia with a density of 108 persons per sq. km. is the most densely populated continent of the world. Europe got the second rank with a population of 101 persons per sq. km. The continent of Latin America with a density of twenty-one persons per sq. km. has the third rank, which is followed by Africa, North America and Oceania, having a density of twenty, fourteen, and three persons per sq. km. respectively at the end of 20th century.

Moreover, the population distribution has continuously changed in space and time, with migration and varying rates of population growth. In reality, nearly half of the world population is clustered on just 5 per cent of the land, while about 33 per cent of the total land area is virtually uninhabited.

Before the dawn of 21st century there are four areas in the world where the average density of population is more than 100 persons per sq. km. These are :

1. East Asia (For east including China and Japan).
2. South Asia (Indian Subcontiant).
3. North-west Europe (Industrial, pro-capital countries like UK, Germancy, Italy etc).
4. Eastern North America (Capitalist USA and Canada, lands of migrants). All these areas of dense population lie in northen hemisphere and are so placed that more than 75% of the world's population is now concentrated between the tropic of cancer of 70° north.

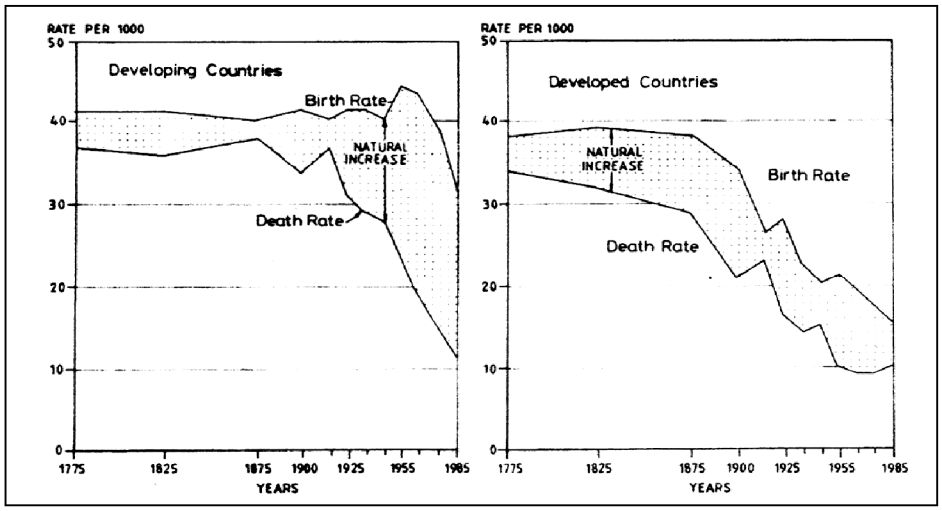

Figure 3.3 : World Birth and Death Rates

Further life expectancy at birth for the world which increased from 64.2 years in 1990 to 72.6 years in 2019 is expected to increase further to 77.1 years in 2050. The report also confirmed that the world population is growing older due to increasing life expectancy and falling festility levels and that the number of countries experiencing a reduction in population size is growing. By 2050 one in sin people in the world will be over age 65(16%), up from one in 11 in 2019 (9%). The number of persons aged 80 years or over is projected to triple, from 143 million in 2019 to 426 million on 2050.

UN Under Secretary General for Economic and Social Affairs Liu Zhenmin said about the World Population Prospectous Report 2019—"Many of the fastest growing populations are in the poorest countries, where population growth brings additional challenges in the effort to eradicate poverty, achieve greater equality, combat hunger and malnutrition and strengthen the coverage and quality of health and education systems to ensure that no one is left behind."

3.2 Population Composition : Age and Sex Structure

Difinitions of Some Population Terms

1. ***Birth Rate***	Number of live births per year per 1,000 of the population.
2. ***Death Rate***	Number of deaths per year per 1,000 of the population.
3. ***Infant Mortality Rate***	Numebr of deaths of children below one year of age per 1,000 o the population.
4. ***Life Expectancy***	The average age at which people die. It in important to realize, however, that it is not the age at which most people die, i.e., in India the figure in 54 years of age, where as in New Zealand and Britain it is 74 and 75 respectively; this is because more young children die in India and thus bring down the average expectancy.
5. ***Natural Increase***	Excess of births over deaths per 1,000 of population. This does not include increase in population due to immigration.

One of the important aspects of population study is the age composition. The age composition strongly influences the rates of growth and have profound effects on the

social and economic conditions under which a population lives. There are three basic determinants of age composition. These are : (i) natality, (ii) mortality, (iii) mobility, These factors are interdependent, and any change in one of these may influence the other two. It is through these variables that the socio-economic conditions influence the age structure.

The composition of population according to age and/or sex is known as the age and sex structure. Age composition may be summarized in terms of age-groups (e.g., 0-15 years, 15-59 years and 60 or above). The sex ratio is most commonly expressed as the number of females per 1,000 of males.

A growing number of countries are experiencing a reduction in population size. Since 2010, 27 countries or areas have experienced a reduction of 1% or more in the size of their populations, caused by sustained low revels of fertility.

Global fertility are which fell from 3.2 birth per woman in 1990 to 2.5 in 2019, is projected to decline further to 2.2 in 2050. A fertility level of 2.1 birth per women is needed to ensure replacement of generations and avoid populations decline over the long run in the absence of immigration.

Consequently, most of the countries of Europe, Anglo-America, Australia and New Zealand, which have completd their demographic transition, have an age composition in which the proportion of young population is low and that of the old population is high.

The age composition is also affected by the rate of mortality. If the mortality is low both among younger adn older age-groups as in the case with developed countries like Sweden, Netherlands and Denmark, the share of the working population will be larger and the dependency ratio will be low. In contrast to this, if the decline in mortality is sharper in lower age-group than that in the older age group, it resuls in the swelling up of numbers in younger age group as is the case with most of the populations of developing countries.

The impact of migration upon age structure is largely because of the fact that migration tends to be age-selective. Generally, people in the age-group of 15-30 years are more mobile than the people in teh younger and older age-groups. Consequently, the population of the juvenile and sanile age-groups increases.

The 2019 Population Prospectons Report also added that migration has become a major component of population change in some countries. Between 2010 and 2020, 14 countries or areas with see a net inflow of more than one million migrants, while 10 countries will see a net outflow of similar magnitude.

The report said that after the reording proposed for the world countries between 2019 to 2050, the ranking of the five largest countries is projected to be preserved through the end of the century, when India could remain the world's most populous

country with nearly 1.5 billion inhabitants, followed by China with just under 1.1 billion, Nigeria with 733 million, the USA with 434 million and Pakistan with 403 million inhabitants.

The age structure of given country or region may be analyzed on the basis age-groups. On the basis of physiological and economic activities, the population is generally classified into three groups; (i) the young, (ii) the adults, and (iii) the old. The social, economic and political implications of these age-groups and the geographical variation in their distribution are worthy of serious consideration.

The Young

All over the world, the young age-group includes the population below fifteen years of age. The proportion of population in ths age group in any country is determined by the stage of demographic transition through which it is passing.

It is interesting to note that while in the world as a whole about 36 per cent population is below the age of fifteen years, the corresponding figures for the more developed region and the developing region are 23 per cent and 40 per cent respectively. Thus, there are wide regional variations in the proportion of young population ranging from less than 25 per cent in Europe to nearly 50 per cent in Africal and about 40 per cent in Asia and Latin America. These regional variations are related with the fertility patterns of different countries. This age-group is economically unproductive and the most expensive as it is to be provided with food, clothing, education and medical facilities.

The Adults

The group of adults consists of fifteen to fifty-nine years. Depending upon the life expectancy, the upper limit in the developing countries is sixty and that in the developed countries is sixty-five.

The developed countries have relatively high proportion of adult population. This adult age-group is sometimes divided further into two sub-groups : (i) 16 to 34, and (ii) 35 to 59/64. The first sub-group of young adults is considered economically more active than the second age-group of older adults.

The Old

The old age-group consists of the people who have achieved the age of sixty years or above. In the United States, such people are called as the senior citizens.

The males belonging to this age-group usually remain productive and biologically less reproductive. This age-group is largely an economic burden upon the adult age-group as it is to be provided with food, clothing and adequate health care.

3.3 The Demographic Transition Model

One of the most important population observations in the history of demographic study is the demographic transition theory. It was put forward by **W. S. Thompson** (1929) and **Frank W. Notestein** (1945). These peoples based their statements and arguments on the trends in fertility and mortality, being experienced in Europe, America and Australia.

The theory postualates a particular pattern of demographic change from a high fertility and high mortality to a low fertility and low mortality when a society progresses from a largely rural agrarian and illiterate society to a dominantly urban, industrial, literate and modern society. The three very clearly stated hypotheses involved in the process are :

(i) that the decline in mortality comes before the decline in fertility;

(ii) that the fertility eventually declines to match mortaliy; and

(iii) that socio-economic transformation of a society takes place simultaneously with its demographic transformation.

In the present-day world, as would be true of any point in time, different countries of the world are at different stages of the demographic transition. In the opinion of Trewartha, this is largely due to the dual nature of man. According to him, biologically, man is same everywhere and is engaged in teh process of reproduction but culturally man differs from one part of the world to another. It is the cultural diversity of man that gives rise to varying fertility patterns in different areas resulting in different stages of demographic transition.

The demographic transition theory is characterized by conspicuous transition stages. the transition from high birth and death rates to low rates can be divided into folowing five stages :

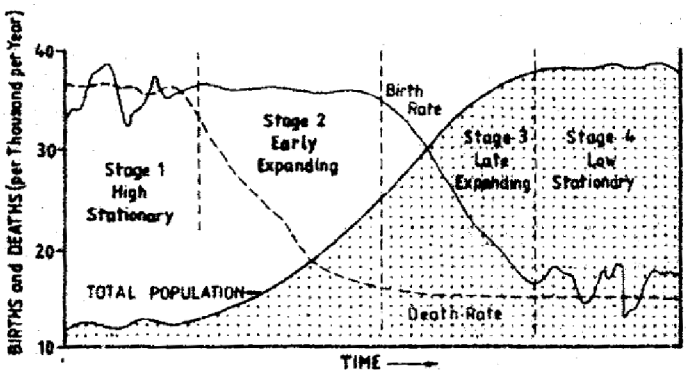

Figure 3.4 : Demographic Transition (Haggett, 1975)

Stage I *High and fluctuating birth and death rates, and slow population growth :*

In the first stage, the fertility is over thirty-five per thousand and the mortality is also high being more than thirty-five per thousand. The behaviour of mortality is, however, erratic due to epidemics and variable food supply. This stage, thus, postulates a stable and slowly growing population where the people are engaged in wasteful process of production. this stage mainly occurs in agrarian socicties where the population densities are low or moderate, generally productivity level is low, large sized families are an asset, life expectancy in low, the development of agricultural sector is at its infancy stage, masses are illiterate, technological know-how is lacking and urban development is limited. About two hundred years ago, all the countries of the world were at this stage of demographic transition. At present, it may be difficult to ascertain whether any country in the world would still be at this initial stage of demographic transition because the data pertaining to fertility and mortality for such areas would either eb lacking or would not eb reliable. Moreover, the diffusion of modern technology has also been so fast particularly in the field of medicine, that it is very difficult to find a solitary example of a country which may still be unaffected by the mortality declines taking place all over the world. It i in this context that the first stage has been called as the pre-industrial and the pre-modern stage.

Stage II *High birth rates and declining death rates and rapid population growth :*

The second stage of demographic transition is characterized by a high and gradual declining fertility of over thirty per thousand and a sharply reduced mortality rate of over fifteen per thousand. In this expanding stage of demographic transition, while the improvements in health and sanitation conditions result in a sharp declines in the mortality rates, the fertility maintains a high level, at least in the early second stage. As the second stage prolongs, the fertility also shows signs of gradual decline. A distinction has often been made between the early second stage with high fertility and declining mortality and the late second stage with slowly declining fertility and sharply declining mortality.

Stage III *Declining birth rates and low death rates, and declining rate of population growth :*

In the third stage, as a whole, the population expands, firstly, at a gradual increasing rate and afterwards at a gradual subsiding rate. In the wake of

population explosion associated with the widening gap between the two vital rates, the population of resource mobilization becomes significant. The life expectancy starts improving. The processes of industrialization, urbanization, and modernization become prominent. The large families are no longer an asset. Consequently, the fertility undergoes a gradual decline leading to a gradual squeeze of rate of natural increase at the tail end of the second stage. Most of the less developed cuntries of the world are passing through this explosive stage of demographic transition because of widespread penetration of modern medicines and sanitation measures have drastically reduced their mortality rates whereas their fertility rates are high. The countries like India, Pakistan, Bangladesh, Nepal and Indonesia belong to the late second stage where the fertility rates have started declining gradually but since the decline in mortality rates has been sharper there is tremendous growth of population.

Stage IV *Low birth and death rates, and slow population growth :* Birth and death rates approximately equal, which in time will result in zero population growth :

In the last stage of demographictransition, both birth and death rates decline appreciably. The population is either stable or grows only slowly. In this stage, the population is highly industrialized and urbanized. The technical know-how is abundant, the deliberate controls of family size are common, the literacy and education levels are high, and the degree of labour specialization is also very high. Anglo-America, West European countries, Australia, New Zealand, South Africa, and Japan are supposed to have reached this stage of demographic transition.

Although the theory of demographic transition has been appreciated widely by the demographers, it has been criticized on many counts. This theory is based upon empirical observations in Europe, America, and Australia. Loschky and Wildcose asserted that the theory is neither predictive nor its stages are sequential and inevitable. The role of man's technical innovations cannot be underrated, particularly in the field of medicine which can arrest the rate of mortality.

In spite of these shortcomings, the theory does provide an effective portarayal of the world's demographic history at macro level of generalization.

Unit - 4 ❑ Population-Resource Regions (Ackerman)

Structure

4.1 Edward Angustus Ackerman (1911–1973)

E. A. Ackerman was a noted American geographer and famous for his contribution on population-resource region. According to him, "the objective of geography is to understand the great system that encompasses the humanity and its environment on Earth's Surface". He was actually an authority in the management of hydric resources in USA. Through his career he placed emphasis on the need of a sustainable management of the natural resources.

During his studentship at Harvard University his talent was noted by Deswent Whittlesey, Professor of human geography in the Department of Geography and Geology. Prof Whittlesey supervised Ackerman's Ph.D. thesis (1939) and inspired him to be a teacher at Harvard University. After second world war Ackerman was engaged to develop proper planning for rebuilding of occupied Japan and associated civilization of resources as member of National Resources Section (1946–1948) of United States. After working in Tennessee Valley Anthority for couple of years he finally joined in Carnegie Institute in 1958 and engaged in research until his death (1973).

4.2 Population-Resource Region

(Source of Topic : Population, Natural Resources and Technology, First published in The ANNALS of the American Academy of Political and Social Science, January, 1967, Research Article)

- Populatio-Resource Region is a concept of complex relationship between man, resource potentiality and technological utility.
- Ackerman (1970) grouped population– resource region in to five broad category.

- In this theory whole World can be divided into different population resource region which have some advantages and disadvantages over others.
- Among these three variables used in this theory the most critical is the magnitude and quality of the available technology. Ackerman while using the three factors of population, resource and technology, emphasized more on technology.
- Ackerman suggested a five fold classification o the World into population resource region on the basis of population resources nation and the availability of technology.

1. United State Type : About one sixth of the world's population live in technology source areas with low population/resource ratios as in much of North America, Austrulia and Newzealand and the esstwhile Soviet Union.

- Original inhabitants of these lands were low in numbers, technically very backword and so they gave up quickly agaist migrants from Europe for the growth of colonialism. These lands were full of natural resources and these technology support gave them very high growth and prosperity.
- The areas are the most developed areas of the world with very high standard of living because they witnessed rapid development in last hundred or two hundred years with teh outsourcing of technology from very developed Eureopean society. Truly at that time most them belong to Brazilian type.
- In the countries like USA, Canada, Australia, Newzealand, and parts of Rusia use resource of not only of their own land but also in international arena to deal social, economic and political terms in their favour.

2. European Type : On sixth live in technology source areas with high population and resource nations, where industrialisation and technology have permitted expansion of resources through international trade. Most of the Europe and Japan fall in this category.

High living standard is mainted by constant technological upgradation, resource conservation along with the export of technology, capitalism and educational knowhow.

- This region is the source area of massive out migration to near lands which developed in United State type region.
- Most of the countries of Western, Southern Europe and Soviet Central Asian countries belongs to this group where technology is very advance but high population and limited physical resources has created high population pressure.

3. Brasilian Type : One sixth live in technology deficient areas with low population/resource region Latin America and many parts of Asia (South-East) where resources sometimes remain unused because of difficult cultural environments.

- These areas of the world is practically in transition stage where the pressure of population to physical resources in low but their technology is poor and so their prosperity are average.
- If only population expand and not technology and quality of population then such region may decline to the inferior category with may challenges and suffering.
- Latin American Countries like Brasil, Venzuela, Bolivia, some parts of Argentina, Peru, central American Republics including Cuba are parts of these region.

4. Egyption Type : Roughly one half live in areas which are technology deficient with high population/resource rations as in India, Pakistan and China. This type epitomizes some of the most sevese demographic problems.

- Rapid population growth and increasing density of population are the major problems here which if controlled then only this region has chance of moving towards European type of prosperity.
- Historically due to colonial rule, industrialization is poor, economic growth is not healthy, agricultural dependency is still very high in this region; excessive population has caused very high stress on physical resources.
- Indian Subcontinent and Northen Aftica (Egypt, Morocco, Algeria etc) are representing the area which is the least promising of all categories.

5. Artic-Desert Type : The largely uninhabited ice-caps, tundra's and desert are mostly technology decefuery and offer little food-producing potential because of environmental compulsions.

Some experts commented that this is the land of future with many unexplored resources due to the lack of technology as well as population. Technological advancement and administrative initiatives may invite more human intervention but this will turn hostile for physical environment in future.

Unit - 5 ❑ Human population and environment with special reference to development environment conflict

Structure

5.1 Introduction

'There are grave misgivings that the discussion on ecology may be designed to distract attention from the problems of was and poverty....we have to prove to the disinherited majority of the world that ecology and conservation will not work against their interest but will bring on improvement in their lives. Are not poverty and need the greatest polluters ? The environmental problems of developing countries are not the side effect of excessive industrialisation but reflect the inadequaly of development.'

—Mrs. Indira Gandhi, Prime Minister of India, First Global Conference on the Human Environment (UNCHE), Stockholm, Sweeden, June, 1972.

5.2 Development Environmental Conflict

The debate of development environmental conflict in modern context of human population and environmental issues are the product of second world war and its mass destructive consequences. The most illustritors work on development environment conflict, perhaps the begining of the modern debate on the conflict is the work of Rachel Carson's Silent Spring (1962) which had successfully popularised the idea that poisoning nature world damage humanity. The Club of Rome (1968) had published its Limits of Growth thesis emphasising the finite nature of the world resources, and drought was raraging the many past of the world, causing sturvation among some of the world's poorest people. This was the background of world's first Global Conference on Environment where the discussion was dominated by pollution, deforestation and whaling. "Developing countries were considering boycotting the conference. They thought this [world's] new concern ENVIRONMENT was one for the rich and world distract from there main concerns, which were the relief of poverty and contining development"— Maurice Strong, UN Diplomat who chaired the Stockholm Environmental Summit in June, 1972.

Environmental changes during the modern historic period, especially after the Britain's Industrial Revolution in 1780 when the fossil fuel was started being used for industrial and domestic purposes and large scale ineneral extraction have been examined. A synoptic view of the impact of agricultural development in developed countries and green revolution (1960's to 1980's) in the developing countries has also been made. In 1980's much of the climate debate revolves around how the developing world with new phase of industrialization can lift itself from poverty without pusting the World into global warming. The people of developing world look at the historical emissions of the rich and say the burden of carbon reductions should be with the main offenders like UK and USA. Rich countries, on the other hand worry that the rise of middle class in China, India and Brazil will create an impossible growth in carbon emissions.

Year	Total world population	Ten-year growth rate (%)
1950	255 crores	18.9%
1960	305 crores	22%
1970	370 crores	20.2%
1980	445 crores	18.5%
1990	530 crores	15.2%
2000	610 crores	12.6%
2010	695 crores	12%
2020	775 crores (estimated)	—
2050	970 crores	—

Of the world's population, 35%, 1.8 billion lived in exptrene poverty in 1990. Half were in East Asia and pacific region where in 2015, 736 million people still lived on less than 1.90 US doller a day. Another interesting fact is that 60% of the global population lives in Asia and 16% in Africa and they are representing both economically and ecologically vulerability.

But the problem is not only poverty, unequal growth or pollution because during the last one hundred years or so, we have come equal to or perhaps exceeded, the powerful natural forces that for billion of years have shaped the face of our earth and the nature of life and biosphere on it. Consequently, there are the problems of global warming, sea level change, salinization, land erosion, ozone depletion, reduction of biodiversity and interruption in bio-geochemical cycles in ecosystems endangering the very survival of human being.

Development has different meaning for different people. The only thing on which every one agrees is that development is necessary; and everyone wants it,

although in his/her own in age and perhaps in his/her own way. The three basic understanding of development are, the development is a process, not a state, secondly the process ultimately refers to values and finally the values referred to are those of the people involved, not the values of economic super powers of so called first world dictation. Welbern (1988) indicates that the concentration in late 20th century of nitrous oxide was 0.30 ppm and predicts that by the year 2050 this will rise to 0.35 ppm due to extensive use of nitrate fertilizers and denitifying effects of bacteria in soil. In addition to increase in the concentrations of green house gases and acidification or desertification which have initiated the process of environmental change, human activities have caused changes in the ozone layer in the stratosphere and increasing concentrations of atmospheric lead. These are all closely related with modern agricultural growth and the use of chemical fertilizers, salinization and massive waste disposal from urban-industrial complexes associated with contemporary development pattern.

Here Mahatma's words is now still relevant "There is enough on earth for everybody's need, but not enough for everybody's greed."

Unit - 6 ❑ Social Morphology and Rural House Types in India

Structure

6.0 Introduction

Morphology is the 'study of shape'. Social morphology refers to the structural relationship between people. It is the foundation of Durkheim's entire approach to the study of society.

Eavid Emile Durkheim (1858–1917) was a French Sociologists. In 1895, he published the Rules of Sociological Method and set up the first European Department of Sociology, becoming France's first Professor of Sociology. In his view, social science should be purely holistic, that is sociology should study phenomena attributed to society at large, rather than being limited to the specific actions of individuals. Durkheim was a major proponent of structural functionalism, a foundational perspective of social morphology. Durkheim, the collective consciousness reaches all parts of society, has a distinct reality and is in dependent of individual conditions, and is passed on from one generation to the next. This structure or social morphology is the foundation for Duskheim's entire approach to the study of society. There are number of striking parallels are found between Durkheim's 'morphological' thinking and the structural concepts and analytical approaches in use within human ecology throughout its development.

6.1 Social Morphology in rural house types in India

Settlements are both the storage centres of the world's cultural heritage and the point of origin for the dissemination of innovative economic, social and political

patterns. It is because of cultural functions that the study of settlements is most basic to human geography.

In an old settled country like India it assumes considerable importance, for it helps in understanding the socio-cultural structure of the villages, their economic and sanitary conditions as well as their response to new innovations (Tivari, R. C. 1984). Besides physical characteristics, social conditions specially the caste system play dominant role in affecting the internal social morphological structure fo the Indian villages. Generally the economic prosperity social status and functional attributes are very much linked with the centuries old caste hierarchy which gives a distinct size, shape and layout of the rural dwelling.

The nucleus of the village is usually occupaied by high castes, while subordinate castes have peripherical locations. Untochables in Hindu conservative soceity build their houses far away from the high castes on the periphery interpread by water bodies, village grave, users land etc. These caste based hamlets together with their inhabitants are closely linked with the main site under the Jajmani system act like a single functional unit. These two concepts of social morphology and functional integration have much relevance in understanding the socio spatical structure of the Indian villages.

Continue.....

6.2 Rural House Type in India

North India

Wall and Roof of the houses	Impact of climatic conditions	Role of Economy in house-bulding	Socio-cultural characteristics of houses
In the mountain state like J & K, Uttarakhand, Himachal people consider mostly stable and less pore to natural hazards like landslide and cloud burst. They use mostly wood for wall with small window for seismic response and prefer traingle roof to avoid snowfall and rain.	Traditionally settlements are mostly located on Southern slopes to have sufficient solar exposure through out the day and protection from northern cold waves or snow rain. Housing pattern are separate in cold desart region. chimney is common most houses for room-heating.	At present peoples are interested to developed housing with modern materials like cities. Some prefers gardening at gentle slope side. Good stone made anti-seismic housing is very common.	Transhumance village are quiet different from parmanent villages. Religion practices are very dominant factors for the ordering and orintation of villages. Muslims, Hindu and Buddist villages are culturally different.
In the Gangetic plain States like Uttarpradesh, Bihar, Punjab, Delhi people live in nucleated villages. Most village houses are small, simple one-story mud (Kacha) structures, housing both people and livestrock in one or just a few rooms. Roofs typically are flat and made of mud in dry regions, but in areas with considerable precipitation they generally are sloped and made of nice straw or clay, tiles.	In some wet regions particularly in some tribal areas, bamboo walls are more common that those of mud and houses often stand on piles above ground level. Many parts of north India is still valnerable with flood due to heavy rain and severly affected by arsenic. Shifting of houses are also common for these problems.	In most of the rural housing of north India electricity, internet, running water and proper toilet facilities are absent. These are available in high castes or rich peoples house with separate drawing room, store room for rice and livestocks and gardens.	Hamlets, each containing only one or a few castes, commonly surround villages in eastern Gangatic plain, SC and herding castes, are likely occupy such hamlets. Agriculture base semi feudal system and unhelthy regions practices still control the social morphology and cultural orientation of north Indian villages. Untone hability is still a would in the housing pattern of this plain.

East and North East India			
Wall and Roof of the houses	**Impact of climatic conditions**	**Role of Economy in house-bulding**	**Socio-cultural characteristics of houses**
Housing of Gangetic plain area in eastern part of our country is as same as northen plain. But West Bengal is quite different. Except some part of Himalayan and Sub-Himalyan region most of the rural housing in West Bengal is quite different from other parts of the India. Mud and straw are still common in most of the roofs but cemented modern housing, well protected concret is now very commonly seen due to several Govt. supported financial and housing project.	Flood and very heavy to heavy rainfall are very common climatic as well environmental scenario in east and north-east part of India. Seasonal migration is very common due to flood. Most of houses are east facing. Tribal peoples are also aware of drainage system and the free movement of water in slope area.	Two-thirds of population and 70% of the work force residing in rural areas. There are several govt sponsored rural development schemes for housing in rural areas like Gitanjali prakalpo, Nijo jami-Nijo griha prakalpo, Swacha Bharat prakalpo and construction of Sanitary system in rural housing etc.	Historically para, mahalla and other localities of villages had marked with the caste or religious identity like muslim para, purohit para, bamun para etc. This practices are very common in almost all the corners of eastern Gangetic West Bengal.
Tribals villages of North-east are completely separate. They uses local materials like bamboo, bet, kanchi and other plant materials for the construction of houses conditing rainfall conditions Rural houses of Assam is well prepared for flood of Brahmaputra.	In areas of rugged terrain where relatively level spaces for settlements are limited settlements often conform in shape to ridge lines and for grow to be larger than Hamlets. Arunachal Pradesh rural housing is well aware of landslides and snow storm. Asia's cleanest village located at Meghalaya.	From the introduction of Zamindari system of 1793 rural housing in eastern part of India was dependent of agricultural productivity and monsoon landlords maintained palanees, court, gardens, and many more land holding in village area in british period; panchayet now democratise the practice.	But Tribal villages of north east India and Jharkhand has separate cultural orintation for rural morphology. Many morth-India tribal villages are influed by Barmise culture where hilly villages of West Bengal and Arunachal Pradesh are partly influenced by Nepali or Chinease culture.

South India			
Wall and Roof of the houses	**Impact of climatic conditions**	**Role of Economy in house-bulding**	**Socio-cultural characteristics of houses**
There are two types or house, one is straw or clay, tiles roofed house or another is comented house with courtyard. Many Tribal groups use plants leaf or bamboo to build house wall. Many people uses local stones and systematic window to save the house from warm wind. Coastal fishing villages are unique in nature.	Coastal village are quiet separate from plateau areas. Kerala uses wood and plant materials for their rural housing where their lease of the house is quiet high to avoid the flooding due to monsoonal or cyclonic rain. Tribal villages are very much aware of summer temperature and prefers housing at the side of water bodies.	To use the inner coustyard as a private yet outdoor space secluded from unwanted eyes. Pickle making, drying papads, oil bathing children would all happen here in the private patch of sunshine. There are swing for adults in rich rural houses to sit and pass time thinking about important matters.	In most of house, a corner to remember this ansestors to whom they owe everything is present. South India has very strong caste base social morphology in rural housing. There are many planned and clear village in Mysore region because of their historical supports from kingdom.
West India			
Western part of India is very much drought prone and many parts of the region is covered by desest or semi-desertic environment. Temorary rural houses of Rajasthan are made of stones and wood. It is that and mostly temparature protected. There windows and doors are typical in shape to avoid loo or sand storm. Maharastra villages are used bamboo and mud. Village arround Tarapur Nuclear power used special temparature protected material at their houses.	A great part of the area is drought prone and most of villages are developed on the availability of water sources like river or water bodies. People are very much aware of rain water harvesting. Seasonal migration is common due to lack of water in villages. Madhy Pradesh is mostly coverd with forest; most of the tribal villages of forest are aware of drainage and storage of water.	May of the villages are developed on the basis of economic food products like sugar cane or cotton or oil seeds etc. Most of the Rajasthan desert villages are scattered and M.P./ Chattisgarh Tribal villages are partly isolated and practice food gathering and subsistance farming. Irrigational support and dairy farming are two major support systems for rural villages of western India.	Religions and caste base division in social morphology of villages are very common. SC and ST people are living in the peripherial or end part of villages in Gujrat, parts of Maharastra. Most of the big villages has a prayer place according to their religion dominancy. Border village cultural procties are partly influenced by BSF personnal.

Unit - 7 ❑ Types and Pattens of Rural Settlements

Structure

7.1 Introduction

Any settlement in which most of the people are engaged in agriculture, forestry, mining and fishery is known as rural settlement. Although there is no agreed quantitatwe, identification of 'rural', the term is used to describe those parts of a country which show unmistrakable signs of domination by extensive uses of land. In most countries the pattern of rural settlements that we see today is the result of a series of adjustments to the environment which have been going on for centuries. In some countries, however, either as part of a land reform scheme or because the pressure of population in the existing settled areas is becoming too great, new villages, and rural settlements are being established today. Some of these many grow up spontaneously because migrants or squatters settle or hitherto unsed land, or they may be the result of government policy and be carefully planned. (Long and Morgan).

7.2 Developing factors of Rural Settlements

1. ***Availibility of water :*** Usually, settlements over founded near river, lakes and spring where water could be lasily obtained. Besides providing water for drinking, cooking and washing, rivers and lakes can be used to irrigate farms and transport also.
2. ***Land quality :*** Farmers or food gatherers will not choose to settle at points where the land is unsuitable for production of traditional crops or availablity of food items.

3. ***Landscape :*** A land which is flood-prone or low laying area or not suitable for defence purpose is not acceptable for the people for settlements. In many areas villages were also built near monasteries or centres of powerful nobles which offered some form of protection at the time of unrest.

Special Planned Settlement : Site for settlements may not be naturally chosen by the farmers or others for village purposes; providing that water, food and shelter can be obtained planners or landlords or local administration can arrange new settlements in a variety of pattern.

7.3 Types of Rural Settlements

Most of the world settlements are rural and they are parmanent in nature. They are three types (a) Compact Settlements (b) Semi-compact Settlements (c) Dispersed Settlement.

Compact or Nucleated Settlement :

A compact or nucleated rural settlement, based on farming, comprises houses, farm structures, and other buildings such as religious centres, with fields for grazing animals and growing crops surrounding the village buildings.

In the productive alluvial regions like Indo-Gangetic plains, the Hawang Ho valley, the velley of Nile, etc., compact settlements got established during pre-historic period. These areas are world's most densely population region till today.

Compact settlements are mostly found in the highly productive alluvial plains. The agricultural communities in these productive plains have settled firmly on the soil. about 8,000 years before present (BP) when man started domesticating plants and animals, that was the beginning of permanent and stabel settlements.

In the forests and valleys of Siwaliks, and in the states of Meghalaya, Manipur, Nagaland, Tripura and Mizoram, many compact settlements came into existence because to defend against wild animals and enemies.

Apart from agriculturists, big villages are still numerous along the Brahmaputra and Hoogly rivers, where fishing requires co-iperative management of the weirs and traps on the rivers.

Intensive cultivation, which clearly represents the most scientific use fo soil, has given rise to the greatest number of very large compact settlements.

This process can be seen throughout the Sutlej-Ganga plains. Many of the *Purvas* and *Majras* in the Ganga plain are the examples of settlements which are results fo intensification of agriculture.

Semi-Compact or Semi-Nucleated Settlements

Semi-compact semi-nucleated settlement is a transitional phase in teh growth of a settlement. For the growth of semi-compact settlement no simple environmental explanation is acceptable. The reasons for the emergence of semi-compact settlements in the semi-arid areas differ from that of the humid regions, and in the marginal productive lands to that o the highly fertile intensively cultivated lands.

These houses start occupying the open spaces and leads to semi-compact settlement which ultimately acquires the shape of a nucleated or compact settlement.

In the east of Aravallis in teh State of Rajasthan, in the hilly tracts of Madhya Pradesh, in the Siwaliks and in the valley of Brahmaputra, one may observe numerous semi-compact settlements.

Dispersed Settlements

Dispersed settlements are generally found in the areas of exterme climates, hilly tracts, thick forests, grasslands, poor agricultural lands, areas of extensive cultivation and the areas where it is essential that the farmer should live on his agricultural land rather than in a distant village/settlement.

The dispersed settlements in the Prairies of U.S.A. and Canada, the Pampas of Argentina, the Velds of South Africa, and the Downs (grasslands) of Autralia developed mostly around two hundred years ago. In the desert and semi-desert regions of Rajasthan, in the forest lands of North-East India, the Siwaliks, the side valleys of Jammu and Kashmir, the higher altitudes of Himalayas and parts of the peninsular India, dispersed settlements started developing during the medieval period.

7.4 Patterns of Rural Settlements

Pettern of settlements is defined as the relationship between one house or building to another.

In fact, the pattern of rural settlement is the result of a series of adjustments to the environment which have been going on for centuries. Moreover, socio-cultural

factors like caste structure of the people living in a village and the functional needs of the people also have a close bearing on its shape and size.

The rural settlements may be broadly classified under the following patterns :

1. Rectangular pattern
2. Linear pattern
3. Cricular and semi-circular pattern
4. Star-like pattern
5. Triangular pattern
6. Nebular pattern

1. Rectangular Pattern

Over 60 per cent of the world population lives in rural settlements, and most of peopel inhabit in settlemnts of rectangular pattern. Rectangular settlements mainly develop in productive alluvial plains and wide intermontane valleys.

The well-planned settlements of Germany, Malaysia, Israel and France also fall under this category.

2. Linear Pattern

In the linear settlements, houses are aranged along either side of a road, railway line, river or canal. Such settlements also evolve along the edge of a valley, especially in the mountainous areas, above flood level or along the coast.

Such settlements are numerous in the Middle Himalayas, in the Siwaliks and along the roads in the plains of Ganga-Yamuna.

3. Circular and Semi-Circular Pattern

The fishermen and salt producers develop their settlements along the sea coasts and salt lakes respectively.

Such settlements acquire the circular or semi-circular shapes. The main occupation of the people of circular settlements is to err their livelihood from the water either by catching fish or by providing services to the recreators, picnic goers and aesthetic beauty lovers.

4. Star-Like Pattern

The star-like settlements develop on the sites and places where several metalled or unmetalled roads converge. In the star-shaped settlements, houses spread out

along the sides of roads in all direction. This type of settlements is the characteristic of the countrysides of North-West Europe, plains of Yangtzekiang, Punjab province of Pakistan and the Sutlej-Yamuna plains.

5. Triangular Pattern

Traingular patterns of rural settlement generally develop at the confluence of rivers. The lateral expansion of houses at the confluence of rivers is constrained by the rivers. Consequently, the settlement acquires a triangular shape.

6. Nebular Pattern

When the shape fo a settlement resembles to nebula, it is known as a nebular settlement. The arrangement of roads is almost circular which ends at the central location or the nucleus of the settlement. There are several villages of this type in the Ganga-Yamuna *doad*.

Unit - 8 ❑ Types and Patterns of Urban Settlement

Structure

8.1 Urban Settlements

The settlements in which most of the people are engaged in secondary, lertiary and quaternary activities are known as urban places. In other words, urban relates to cities and towns. If urbanization is regarded as a demographic process only, then urban places are those which exceed a population size and/or density theshold.

8.2 Census definition of Towns

In India, in the Census of 1991, the urban settlements have been defined on the basis of the following criteria :

(a) All places with a municipality, corporation, containment board or notified town area committee, etc.

(b) All other places which satisfy the following criteria :

(i) a minimum population of 5,000;

(ii) at least 75 per cent of male working population engaged in nonagricultural pursuits; and

(iii) a density of population of at least 400 persons per sq. km.

In addition, the marginal cases such as project colonies, areas of intensive industrial development, railway colonies, important tourist centres, etc. come in the category of urban. Apart from these, the outgrowths (OGs) of cities and towns have also been treated as urban.

It may be noticed from the above, that in India, there are two distinct types of urban units :

(i) The places which have come into existence by virtue of statutory notifications and are referred to be the nomenclature adopted in the relevant notifications as municipal corporation, municipal board, cantonment board, notified area committee, etc.

(ii) The places which are defined as urban because they satisfy criterion (b) above and are referred to as census towns or nonmunicipal towns.

Thus, the definition of an urban centre is highly variable from country to country. In order to make the international data comparable, the United Nations (1958) suggested that teh data on urban population should also be presented according to a standardized scale. Consequently, many of the countries have further classified their urban settlements into a number of categories on the basis of population size. In accordance with this recommendation of the U.N.O., the Census of India also classifies the urban places into the following six categories :

Class I, those having a population of 100,000 or more;

Class II, those having a population between 50,000 and 99,999;

Class III, those having a population between 20,000 and 49,999;

Class IV, those having a population between 10,000 and 19,999;

Class V, those having a population between 5,000 and 9,999; and

Class VI, those having a population below 5,000.

8.3 The Origin of Town

Towns, like villages, must possess the basic requirements which make settlement possible. These are water and food supplies, shelter and building materials, and some protection against natural hazards, such as floods and human enemies. But this does not mean that any village can grow into a town.

The process of urbanization has a long history. It was originated during the pre-historic period when man started domestication of plants and animals around 10,000 years before present (BP). he cultivation of plants enabled men to change their economy, to produce food and to live in permanent settlements. There are evidences that show the development of permanent settleemnts in Egypt, Mesopotamia, Indus Valley, China, and Central America.

The causes for the development of towns are mainly historical, socio-cultural and economic. Which one of the factors is more important in the origin of town is difficult to say, but the experts of urban geography and town planning are of the opinion that *traffic* is the most important and the oldest factor responsible for the growth of towns.

1. ***Trade Routes :*** The geographers, historians and economists are of the opinion that towns are the creation of the routes. There is not even a single town in the world without roads leading to it. Some of the social scientists opine that towns are the work of traders.

The towns to Timbuktu (Mali, Africa), Sokoto (Nigeria), Lanchow (China), Jarecho (Palestine), Jodhpur, Bikaner, Jaisalmer (India) are some of the examples of towns which developed along the cross roads in deserts.

The railway junctions of Mughalasari, Siliguri (West Bengal), Itarsi, Bina (Madhya Pradesh) and Tundla (U.P.) are the examples of such towns.

2. ***Navigable Rivers :*** The navigable rivers also helped in the origin and development of towns. In teh past, rivers had been the important routes of trade andmany of them like Rhine, Volga, Danube, etc. are still the most busy nevigable rivers.

In India, the cities of Allahabad, Patna, Monghyr and Bhagalpur are also the examples of towns which developed because of navigation and trade through the Ganga river.

3. ***Seaways :*** Seaways also afford sites favourable to town growth. The ships converge at certain places along the sea coasts. The straits, in this connection, offer the most ideal positions for the development of towns.

The cities of Singapore, Colombo and Hong Kong also developed because of their location on international trade routes.

4. ***Places of Transshipment :*** Along the sea coasts and river banks, towns develop where transshipment takes place. Many a times the geographical conditions of place impose a change in the means of transpot.

For example, London, Paris, Singapore, Vienna, Budapest, Orleans, Frankfurt, Narora, Srinagar, Hoshingabad, Surat and Howrah are bridge towns.

5. ***Mountain crossing :*** Mountain crossing by traders and travellers has also helped in teh development of towns and cities. At the foothills and near the mountain passes the mode of transporation used to be changed. Peshawar, Kabul, Pathankot, Jammu, Kalka, are few of the many examples of such towns

In some oasis towns in the deserts have similar reason for growth because they are necessary stages on a desert journey; traders and travellers must pass through them to obtain fresh supplies of water and food. The oasis of Samarkand Bukhara, are examples of such towns.

The cities of Buffalo and Cleaveland in U.S.A., Lyo in France, and Haridwar, Sadiya, Dum Duma and Tezpur in India are the good examples of such towns.

6. ***River Estuary :*** Another site for commercial towns is found where ocean shipping stop on an estuary and cargoes are transferred from the ship to an overland route.

London, Bordeaus, Hamburg, Baltimore and Philadelphia ar ethe good examples of estuary towns.

7. ***Harburs :*** The position fo harbours where seaways meet overland routes to the interior of the country favours the creation of towns. Tokyo is the examples of harbour towns.

8. ***Resource Site :*** The availability and utilization of resources also help in the development of towns. The most obvious examples of resource based towns are the *mining towns* and *fishing ports*.

9. ***Religious and Cultural Factors :*** Throughout the history man has been attracted towards the holy and religious places and had a strong desire to visit the places fo his cultural groups.

Educational centres like universities and colleges may also lead to the development of towns and cities. The cities of Oxford and Cambridge in England, Harvard in U. S. A., Akademgorod (the science town) in Siberia, and Aligarh, Pilani, Roorkee, and Kharagpur (India) are some of the such examples.

10. ***Defensive Sites :*** Defence is one of the most important factors responsible for the development of towns. The trader, businessmen and craftsmen need protection against the hostiles.

Edinburgh, Athens, Ibadan (Nigeria), Chittorgarh, Gwalior, and Jhansi (India) are the examples of hill top towns.

There are some micro-geographical features which provide shelter from the tides and waves and help in the development of natural harbours, fishing towns, and urban settlements.

The cities of Calcutta, Rangoon, Stockhome, Oslo, Riga, and Rio de Janeiro are the examples of such towns.

8.4 Functional Classification of Towns

The definition of function varies across the disciplines. In political science it refers to duties, in mathematics it means the relationship between two variables, and in geography it is synonymous to occupation. Functional classification of towns attempts to categorize towns and cities according to their economic functions, thereby identifying their roles within urban systems.

A common characteristic of all the towns and cities is that they are trading and business centres. But most cities and towns perform additional functions also which give then distinctive characteristics. Towns are therefore classified according to their dominant function. This dominant function may be trade, administration, defence or entertainment.

The functional classification of towns has been illustrated in the following paras:

1. ***Administrative Towns :*** The main functions of administrative cities and towns is to administer the country/state or a specific territory. It includes not only the capital cities of countries, but all the centres of provinces, states, districts and other administrative divisions of the country.

After the partition of the sub-continent of India, Chandigarh was planned as the capital fo East Pubjab (India) and later on it became the capital of Punjab, Haryana and the union territory of Chandigarh.

The basic function fo the administrative towns is the public administration. consequently, all the administrative cities contain government offices, public buildings, royal palaces, residences of president, prime minister, ministers, bureaucrats, and other officers.

2. ***Defensive Towns :*** During the medieval period, most of the towns and cities used to be developed on the defensive sites. Forts and garrisons used to be constructed at strategic sites. The defensive towns have barracks, cantonments, training facilities for the armed forces, airfields, and harbours for warships.

The city of Meerut and its cantonment, the city of Roorkee and its cantonment and similarly numerous other military and defensive towns have the civil and military compoennts adjacent to each other.

3. ***Cultural Centres :*** There are numerous towns and cities in the world, almost in each of the countries, which perform cultural functions. The cities of Oxford and Cambridge in England are the most suitable examples of educational towns. In these towns, one may find colleges, libraries, hostels, churches, playgrounds, parks and shopping centres. The environmental pollution in these towns is almost insignificant.

Towns where religion is important have many religious buildings, shops selling religious books, and shops selling flower, joss sticks, etc. They also provide accommodation for pilgrims and often have subsidiary functions as tourist centres.

Moreover, there are many towns which perform entertainment functions. Stratford-on-Avon (birth place of William Shakespear (England), Hollywood (California) and Cannes (France) are some of the examples of such towns.

4. ***Collection Centres :*** The mining towns, fishing ports, and lumbering centres fall under the category of collection centres/towns. There are numberous metallic, non-metalic, precious stones and energy resources which are obtained from mines.

They may be large in size like Raniganj, Hazarbagh (Bihar), Ipoh in the tin rich Kinta Valley of Malaysia, or Kuwait and Ibadan in the oil producing regions of Kuwait and Tehran respectively.

Fishing ports are the base for small boats hich got to sea every day or may eb used by large vessels which stay at sea for days or weeks, but they have many features in common. In many fishing ports, other related activities such as boat building, net making or repairing and fishing equipment are also found.

The main functions of lumbering towns are to collect and partly process the wood and they often have saw mills and joinery.

Sabah (Malaysia), New Foundland, and Grand Falls (Canada) are the examples of lumbering towns. Apart from the saw and paper mills, the lumbering towns have tree nurseries and research centres.

5. ***Production Centres :*** Urban places, town and cities in which some kind of manufacturing industry is the major function is known as a production centre.

For example, Jamshedpur, Rourkela, Bhilai, Durgapur, Dhanbad, and Bhadravati in India, Pittsburgh in U.S.A., Magnitogorsk in Russia, and Birmingham in U.K. are dominated by large steel plants.

In manufacturing towns, there is segregation of houses and establishments; the officers quarters may be grouped at one place and that of the labourers at the other. Birmingham (iron and steel) in England, Rocheste and Detroit (iron and car manufacturing) in U.S.A., and Ahmedabad and Surat (textile manufacturing) in India are some of the examples of manufacturing towns.

6. ***Transfer and Distribution Centres :*** The main functions perfomed at transfer centres are the trade, commerce and services. Towns which are concerned with the transfer and distribution of goods, however, have trade as their major function. They include several types of towns. For example, market towns, sea ports, and financial towns.

The most important trading and distribution centres are generally the ports. Moreover, most of the largest cities of the world are sea ports. Tokyo, Sao Paulo, New York, Shanghai, Bombay, Los Angeles, Buenos Aires, Calcutta and Rio-de-Janeiro are all important sea ports and have more than five million population each.

There is a high degree of diversity in the functions performed by different ports. For example, there are *general ports* (Hamburg, Marseilles, Bandar Abbas, Karachi, Colombo, Malacca, Lobito, etc.); *passenger ports* like Kingston (Jamaica) and Jeddah (Saudi Arabia); *outports* (Hamburg Avon, London); and *enterport ports* (Rotterdam, Aden, Singapore).

7. ***Resorts :*** The urban places which cater the recreatin needs of people are known as resorts or recreation towns. These urban places may be based on helthgiving water (hot springs), seaside recration, mountain climbing, cultural attractions, historical monuments, sports facilities, national parks and attractive scenery.

Dehra Dun is also known as the town of retired officers. Srinagar, Gulmarg, Pahalgam, Sonmarg (Kashmir), Shimla, Dalhousie, Kulu, Manali (Himachal Pradesh), Mussoorie, Nainital, Ranikhet (Uttar Pradesh), Mt. Abu (Rajasthan), Darjeeling (West. Bengal) are some of the examples of such towns in India.

8. ***Residential Towns :*** In some towns the chief function is simply to house a concentration of population. In such areas most of the land is devoted to houses, parks, and hospitals.

Shahdara, Sahibabad, Ghaziabad, Shakarpur, Ghazipur, Khichripur, Bahadurgarh, Gurgaon, Sohna, and Badarpur are such towns situated around Delhi.

9. ***Towns of Diversified Functions :*** As stated at the outset, towns are classified according to their major functions. So, it is put all those towns (such ad Bombay, Calcutta, Madras, etc.) into a definite category in which a large number of activities are conducted. Such towns are referred as diversified in functions.

8.5 The Urban Hierarchy

Cities can be divided into size classes on the basis of their functional compleity and importance. One can measure the numbers and kinds of functions each city or metropolitan area performs. The hierarchy is then like a pyramid; the few large and complex cities are at the top, and the many smaller simpler ones are at the bottom. There are always more smaller cities than larger ones. One can envisage, say, seven-level hierarchy where the complexity of cities increases as one rises in teh pyramid.

The few high level metropolitan complexes provided specialized functions for larger regions, while the smaller cities serve smaller districts. It may be pertinent to mention that the cities interact with the area around them, but since cities of the same level provide roughly the same services, they tend not to serve each other unless each provides some very specialized activity, such as housing the political capital of a region or a major university.

Together, all cities at all levels in the hierarchy constitute an urban system.

8.6 Rank-Size and Primacy

The observation that there are many more small than large cities within an urban system ("the larger the fewer") is a statement about hierarchy. For many large countries of great regional diversity and advanced economy, the city size hierarchy is summarized by the rank-size rule. It tells us that the nth largest city of a national system of cities will be 1/n the size of the largest city. That is, the second-largest settlement will be half the size of the largest, and the tenth-biggest city will be one-tenth the size of the largest.

In some countries, the urban system is dominated by a primate city, one that is far more than twice the size (and therefore functional complexity) of the second-

ranked city. In fact, there may be no clearly recognized "second city" at all, for a characteristic of a primate city hierarchy is on very large city, few or no intermediate-sized cities, and many subordinate smller settlements. The capital cities of many developing countries display that kind of overwhelming primacy. In part, their primate city pattern is heritage of their colonial past when economic development, colonial administration, and trade activities were concentrated at a single point. The city of Srinagar in the valley of Kashmir, and Shillong in Meghalaya are the typeical examples of primate cities.

8.7 Conclusion

Society, Demography and Ekistics unit has been written mainly to cater for the students taking the evolution of human societies and the associated adaptation to environment. Most countries are now changing from the economic approach of resources to environmntal approach. New developments, new population dynamicism, new techniques, habitational orientation all affect the world's production and distribution of human resources and therefore help to change the human geography of various developed, developing and under developing countries. The last two decades of 21st century have seen tremendous changes in the world of demography and ekisties. More case studies have been included, especially in the part of evolution of human societies and habitation.

8.8 Summary

- Evolution of a society includes development and progress not only on material ground but more importantly in respect of human ralues.
- The objective of geography is to understand the great system that encompasses the humanity and its environment on earth surface.
- Demographic Transition is a general model describing evolution of levels of fertility and mortality over time. It has been derived with particular reference to the experience of developed countries.
- Morphology of settlement is the systematic study of the form, shape and plan of an area, in terms of it origin, growth and functions.

8.9 Model Questions

Long Questions (10 marks)

1. Trace the use and evolution of economy in human society. (10)
2. Explain the practice of subsistence agriculture. What is shifting cultivation. (10 + 5)
3. Compare the livlihood of tribes of eastern and western parts of India. (10)
4. Compare environmental adapation of Eskimo and Masai people.
5. What do you mean by population growth. Explain different phases of Demographic Transition Model. (5 + 10)
6. Highlight Environment – Development debate in recent perspective. (10)
7. Highlight any one model of rural settlement pattern. Compare the rural house types of northern and southern part of India. (5 + 10)
8. Briefly compare the urban patterns of India and rest of the world. (10)

Short Questions (5 marks)

1. Explain pastoral nomadism.
2. Explain subsistence farming.
3. How Eskimo adapt themselves to harsh environment ?
4. State in brief the masai society.
5. What is meant by population resource region ? How many population–resource regions are noted ? Name them.
6. What is meant by social morphology ?
7. How social morphology affect rural house types in India ?
8. State the impact of climatic condition on rural house types.
9. How arable land affect population distributions ?
10. Descuss the characteristics of dispersed settlement. State the conditions which lead to the dispersed settlement.

11. Explain urban settlement.
12. Explain how trade routes help to the growth of urban settlement.
13. What is meant by rank-size rule ?

8.10 Keywords

Primitive and Secondary economy, Tribal world, Migration, Fertility and Mortality, Poulation Resource Regions, Environmentalism, Morphology of settlements, Urbanization.

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