BLOCK 3
VARIOUS AREAS OF APPLIED ANTHROPOLOGY-II

Unit 8
Applied Anthropology and Forensic Anthropology

Unit 9
Applied Anthropology and Multimedia

Unit 10

Applied Anthropology and Disaster Management

UNIT 8 APPLIED ANTHROPOLOGY AND FORENSIC ANTHROPOLOGY[*]

Contents

Learning Outcomes:

After reading this unit the students will learn to:

➢ Define and understand the discipline of forensic anthropology;

➢ Describe the roles and functions of a forensic anthropologist;

➢ Identify the methods used by forensic anthropologists; and

➢ Grasp the profile of forensic anthropology in India.

8.0   INTRODUCTION

Since the inception of the anthropology as a discipline, it has had an applied aspect wherein the researchers and practitioners employed their anthropological approaches to solve practical problems. This aspect of anthropology was consequently termed as applied anthropology. Applied anthropology is defined as the application of anthropological theories, methods and knowledge to address the social, economic and health issues of a society and community. The scope of applied anthropology is divergent and interdisciplinary in nature and is mainly integrated within the four major branches of anthropology i.e. socio-cultural, physical/biological, archaeological and linguistic anthropology.

Anthropological practitioners employ their skills in a variety of settings or domains as policy researcher, ethnographer, health practitioner, project evaluator and as an expert witness to solve legal cases. Forensic anthropology is one such applied field of anthropology that employs the principles of anthropology to analyse legal problems involving human osteological remains. Experts in this field, because of their understanding of skeletal

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biology and associated subjects, examine human bones with the goal of extracting as much information as possible about persons represented by skeletal remains and about the circumstances surrounding their deaths (Byers, 2016).

This unit discusses the application of applied anthropology in the field of forensics and explores the establishment of forensic anthropology as an important subfield of anthropology. The unit also describes the historical background, roles and methods of forensic anthropology. Status and development of forensic anthropology in India has also been delineated in this unit.

8.1 FORENSIC ANTHROPOLOGY

Forensic anthropology is an applied sub-discipline of physical or biological anthropology. Forensic anthropologists use their knowledge of modern human skeletal variation to help law enforcement identify unknown decedents and, if possible, provide information about the circumstances surrounding that person's death. The American Board of Forensic Anthropology defines forensic anthropology as "the application of the science of physical or biological anthropology to the legal process," adding that "physical or biological anthropologists who specialise in forensics primarily focus their studies on the human skeleton". Forensic anthropology is a relatively young field within biological anthropology. The development of forensic anthropology is divided into three periods that are divided by events that arguably changed the path of the field: the formative period (early 1800-1938), the consolidation period (1939-1971), and the modern period (1972-present) (Tersigni-Tarrant and Shirley, 2012).

Check Your Progress

1)   What is forensic anthropology?

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8.1.1   Historical Background

The history of forensic anthropology can be categorised into three periods that are marked by the particular events or sequential development of the discipline. These three periods are: the formative period (early 1800 to 1938), the consolidation period (1939 to 1971) and the modern period (1972 to present). During the initial days, the practice of forensic anthropology was confined to anatomists, physicians, and some physical anthropologists who worked primarily as University professors or museum curators. There was lack of formal methods or instructions in the forensic aspects of physical

anthropology and practitioners were occasionally consulted on the cases of skeletonised remains for law enforcement.

Formative Period: The origin of the science of forensic anthropology can be traced to the twisted murder of Dr. George Parkman in 1849. He was murdered by Harvard chemistry professor, John Webster who put parts of his body in the anatomy laboratory and burned the head in the furnace. Harvard anatomy professors Oliver Wendell Holmes and Jeffries Wyman investigated Dr. Parkman's death and suggested that the skeleton belonged to George Parkman. After matching the dentures found in the furnace with a mold of Parkman's teeth, Webster was eventually convicted of the murder.

During formative period, Thomas Dwight (1843-1911), a professor of anatomy from Harvard, extensively published on the topic of human skeletal identification, which laid the foundation of the discipline of forensic anthropology. In 1878, he was also credited as the "Father of Forensic Anthropology in the United States" for his pioneering essay, *The Identification of the Human Skeleton: A Medico-legal Study* and other publications concerning the estimation of sex, age and stature from the skeleton. His articles and essays were the first of their kind that applied knowledge of the human skeleton to forensic situations.
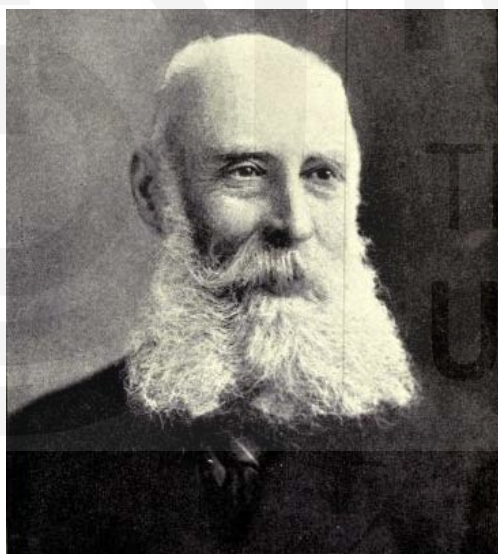
Fig. 8.1: Thomas Dwight, the father of American Forensic Anthropology
Source: https://upload.wikimedia.org/wikipedia/commons/c/c9/Dr._Thomas_Dwight.jpg

Check Your Progress

2) Who laid the foundation of forensic anthropology and in which year was he named the father of forensic anthropology?

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Other practitioners who made notable contribution to forensic anthropology were Harris H. Wilder (1864-1928), Paul Stevenson (1890-1971) and Ales Hrdlicka (1869-1943). Wilder was a European trained zoologist who worked on dermatoglyphics and facial reconstruction using skulls. Stevenson wrote two important articles on age determination based on epiphyseal union and stature estimation using long bones in a Chinese population. Ales Hrdlicka was a giant in the field of physical anthropology and W. M. Krogman in 1976 considered him as "founding father of American Physical Anthropology". Hrdlicka made two contributions for which he is often remembered:

Earnest A. Hooton (1887-1954) was another physical anthropologist whose work on human variation laid the foundations of biological and forensic anthropology. His research was mainly focused on human variation with respect to human origins and adaptations. During the latter part of the formative period, T. Wingate Todd (1885-1938), an anatomist, influenced the field of forensic anthropology. Todd was specifically interested in skeletal aging methods and growth and development. His contributions to anthropology are numerous which include documenting differences in limb proportions between American Blacks and Whites, establishing the usefulness of endo and ectocranial suture closure for age estimation, developing a method of age estimation based on age-related changes in the pubic symphysis, establishing principles of epiphyseal union, and extensively documenting various aspects of human postcranial and craniofacial growth, development, and maturation (Tersigni-Tarrant and Shirley, 2012).

Consolidation Period: Wilton Marion Krogman's (1903-1987) landmark publication *Guide to the Identification of Human Skeletal Material* is considered the end of formative period and beginning of the consolidation period. This noteworthy work, written as a pamphlet for the Federal Bureau of Investigation (FBI) in 1939 summarised all the knowledge about the skeletal remains that had been discovered up until that time. For the first time, this remarkable publication highlighted the forensic aspect of physical anthropology, as opposed to anatomy or the general discipline of physical anthropology.

Fig. 8.2: Wilton Marion Krogman

Source: https://alchetron.com/Wilton-M-Krogman

The extended version of Krogman's article was produced as first text book in forensic anthropology entitled *The Human Skeleton in Forensic Medicine.* This textbook focused on the practical application of human osteology to forensics. The overall emphasis of the book was on human variation which became the primary reference for physical anthropologists doing forensic anthropology at that time. Krogman mentioned that the methods presented in his book were only meant to be guidelines for assessing remains and should not be taken as hard and fast rules. Krogman's dedication to research helped to push forensic anthropology forward. He imparted a great deal of his wisdom upon his graduated students. One of these students, William M. Bass, had the greatest impact on the modern era of forensic anthropology (Tersigni-Tarrant and Shirley, 2012) which will be discussed in detail in the following section.

Modern Period: The founding of the Physical Anthropology Section of the American Academy of Forensic Sciences (AAFS) in 1972 is often regarded as the beginning of the modern period of forensic anthropology. This section was founded by Ellis R. Kerley (1924-1998) and Clyde Collins Snow (1928-2014), who had strong interest in expanding the practices of AAFS. After five years, the American Board of Forensic Anthropology was created in order to ensure the competence of practitioners who practice forensic anthropology in different areas of United States and Canada.

Fig. 8.3:(a) Ellis R. Kerley
Source: https://anth.umd.edu/feature/dr.-ellis-kerleys-legacy

Fig. 8.4: (b) Clyde Collins Snow
Source: https://www.nmmi.edu/alumni/hall-of-fame-eminence/dr-clyde-collins-snow-1947-jc/

As mentioned earlier, William M. Bass had a significant impact on forensic anthropology. In the 1960s, Bass started a graduate program in physical anthropology at the University of Kanas and produced some of the leading forensic anthropologists such as Douglas Ubelaker, Walter Birkby, Linda Klepinger, and Richard Jantz (Tersigni-Tarrant and Shirley, 2012).

Two noteworthy events of modern period are the founding of the Forensic Anthropology Data Bank at the University of Tennessee, Knoxville, and the Scientific Working Group for Forensic Anthropology (SWGANTH). The Forensic Data Bank which started in 1986, is continuing today to gather information on documented forensic cases in order to update new standards for the determination of demographic and other characteristics from the human skeleton. SWGANTH was established in 2008 by the Federal Bureau of Investigation and Department of Defense Central Identification Lab (DOD

CIL) to recommend "best practices" in the discipline. The primary aim of this scientific group is to identify the existing standards, develop new standards and issue methodical guidelines for all the practicing forensic anthropologists (Byers, 2016).

8.1.2 Roles and Functions of Forensic Anthropologists

Forensic anthropology is considered as the applied sub-field of physical/biological anthropology wherein a forensic anthropologist applies anthropological theory and methods to the matters of legal concern. The five main functions of forensic anthropologists are:

- Forensic anthropologists try to determine the biological profile (race/ethnicity, sex, age, stature) of a deceased person whose soft tissue has deteriorated to the extent that these bodily characteristics cannot be ascertained by visual inspection;

- In case of traumatic injury (e.g., bullet holes, stab wounds, fractures) to human bone, forensic anthropologists study the nature and causative agent(s) of trauma in order to identify the cause and manner of death;

- Forensic anthropologists can determine the postmortem interval (the amount of time that has passed since persons have died) as they have thoroughly studied the amount of deterioration that occurs in cadavers over time.

- Since forensic anthropologists have the knowledge of archaeological methods, they help in locating and recovering buried or surface remains relevant to the forensic investigation.

- Forensic anthropologists are also specialised in positive identification of a deceased person which is done through the unique identifying features present in virtually all skeletons.

Box 8.1

Forensic anthropological knowledge has been used in disaster victim identification (DVI) for over a century but it was not until 1970 that the American anthropologist Thomas Dale Stewart emphasised the value of including forensic anthropology in the identification process. Since this time, there have been a number of disaster events which have seen an increasing role for the forensic anthropologist in DVI. This increasing role has been augmented by feedback given after the 2004 Boxing Day Tsunami (Indian Ocean Earthquake and Tsunami 2004) in which it was recognised that the presence of a forensic anthropologist could have been useful in many occasions (de Boer, 2018)

In addition to the above-described work, forensic anthropologists fulfill a number of other roles in modern society. First, these specialists are consulted in the identification of victims of mass disasters. Airplane crashes, wars, acts of nature, or any phenomenon in which a large number of people perish and their remains are dismembered or disfigured are events that may need the

skills of forensic anthropologists. Another area in which forensic anthropologists work is the study of atrocities committed during warfare and civil unrest. Forensic anthropologists have also become involved in the study of persons of historical interest but of no medico legal significance (Byers, 2016).

7.1.3 Methods of Forensic Anthropology

Like any other sciences, methods of forensic anthropology can be divided into two types: (a) Data gathering methods and (b) Data analysis methods. Data gathering methods include all those techniques that are used to gather information from human skeleton remains and their surrounding circumstances. These techniques vary from simple visual examination of skeletal and soft tissue traits to complex methods, such as age determination from dental records. On the other hand, data analysis methods involve techniques used to analyse the data which was collected to solve a forensic problem. For example: To determine the living height of a person from a skeleton, first data are gathered and then stature estimation methods are employed. Each of these two methods consists of a set of methods which are regularly used by the forensic anthropologists.

Data Gathering Methods: In forensic anthropological cases, data are gathered both from field and the laboratory. In the field, data are generally obtained by observing and mapping the area around the human skeletal remains whereas laboratory methods involve gathering of skeletal data by specific techniques. These techniques can be divided into four major types: anthroposcopic, osteometric, chemical, and histologic. All of these techniques measure the data in one of the four scales i.e. nominal, ordinal, interval, and ratio.

Nominal scale measures the data into discrete or non-overlapping categories. Example: Sex (Male/Female), Ethnicity (White/Black/Hispanic) etc. Ordinal scale also measure discrete non-overlapping categories but unlike nominal scale, these categories can be ordered, such as low, medium and high. Interval scales are numeric scales and are comparatively rare. These levels of measurements are generally used for measuring time and temperature. These scales have fixed units of measurements; thus, the difference between 20 and 40 minutes is the same as between 60 and 80 minutes. A peculiar feature of interval scale is that there is no zero point; zero does not mean the absence of a measured trait. On the contrary, ratio level scales have an absolute zero value which means the absence of a measured trait. This true zero value provides multiple possibilities for statistical analysis. Classic examples of ratio variables include height and weight.

a) **Anthroposcopy** involves visual examination of human body with the help of a lens or x-rays. Since anthroposcopy does not require any special instrument, it is considered as the most accessible and common method of data gathering. For example, visual comparison of the human

skulls as presented in figure 5 would indicate that skull (a) is larger and heavier than skull (b). This examination helps to make an opinion that skull (a) is of male and skull (b) is of female, because female skulls, on average, are smaller and less heavily built than male skulls.
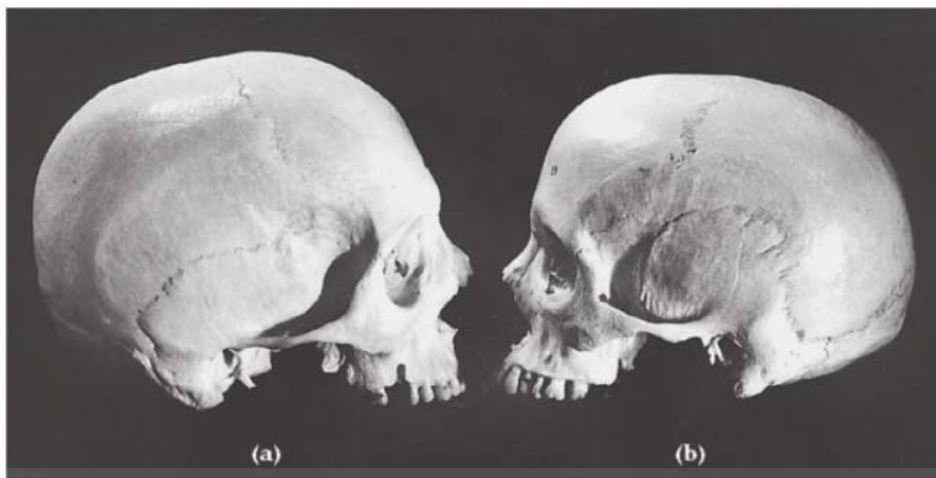

Fig. 8.5: Visual examination of human skulls

Source: Introduction to Forensic Anthropology (Byers, 2016)

b) **Osteometry** is the study and measurement of human bones using calipers and an osteometric board. Osteometric methods quantify many of the anthroposcopic characteristics in ratio scales to determine sex, age, ethnicity and stature from human skeleton.
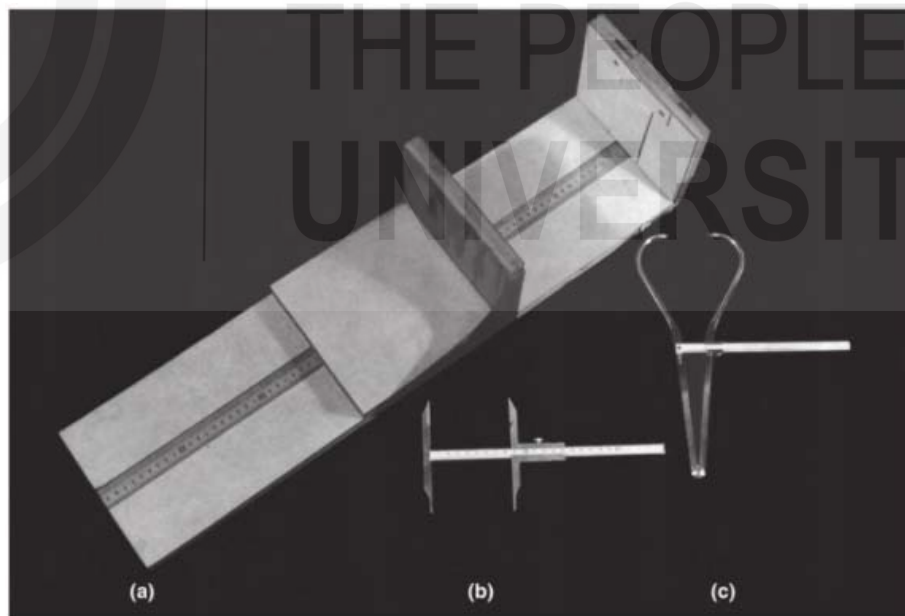

Fig. 8.6: (a) Osteometric Board (b) Sliding Caliper (c) Spreading Caliper

Source: Introduction to Forensic Anthropology (Byers, 2016)

For example, simple measurement of humerus with a caliper and multiplying the obtained length by five will give an estimate of the height of the living person from whom the humerus was attained.

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c) **Chemical methods** analyse the chemical composition of human skeleton along with its associated structures (matter beneath a decomposing body).These methods try to identify and ascertain the nature of the sampling matter by applying special techniques.

d) **Histology** is the microscopic study of tissues. Forensic anthropologists mainly focus upon the tissues of bones and teeth to determine the demographic characteristics of a person. Generally, histological study involves viewing the thin stained slices of a tissue under a microscope. Since both the chemical and histological methods require special instrumentation, forensic anthropologists make more use of anthroposcopic and osteometric methods to gather data from human skeleton.

Check Your Progress

3) Write down the major functions of a forensic anthropologist.

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4) What are Anthroposcopy and Osteometry?

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Data Analysis Methods: In forensic anthropology five methods are most commonly employed to analyse the data derived from skeleton.These are: (a) Decision tables (b) Range charts (c) Indexes (d) Discriminant functions and (e) Regression equations. A brief description of each method is given below.

a) **Decision tables** assist forensic anthropologists to make a unified judgement on ambiguous data. For example, a skeleton may show both male and female characteristics. In this case, decision table helps the researcher to make a single determination about the sex of the skeleton. A decision table has a list of various decision options along with the characteristics that determines a particular feature. The researcher marks those characteristics in the table which are in alignment with the gathered remains; and the option which has maximum marks represents the decision.

Table 8.1: Decision table for determining a contemporary or non-contemporary skeleton

	Noncontemporary	Contempora~
Color	Dark	Light
Texture	Rough	Smooth
Hydration	Dry	Wet
Weight	Light	Heavy
Condition	Broken	Solid
Fragility	Fragile	Tough
Soft tissue	Absent	Present

Source: Introduction to Forensic Anthropology (Byers, 2016)

b) **Range charts** help to determine the central tendency of multiple ranges of estimates through visual representations. They combine the information of various characteristics that have been derived from different skeletal structures to arrive at a single decision. For example, range charts are used to ascertain the age at death of a decomposed body from skeletal data. These charts provide the most probable estimate of a skeletal feature by depicting the maximum areas of overlap between various ranges.
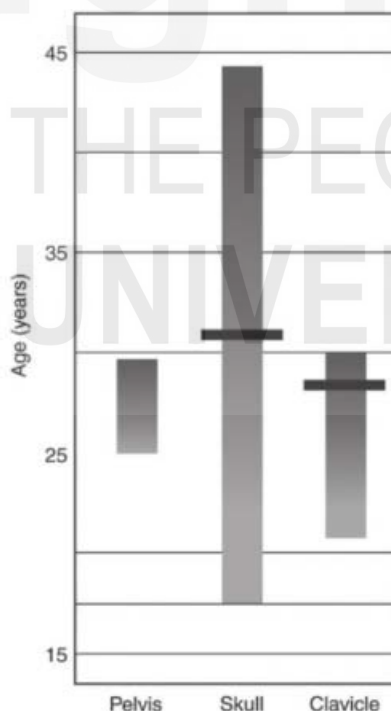
Fig. 8.7: Range chart for determining skeletal age

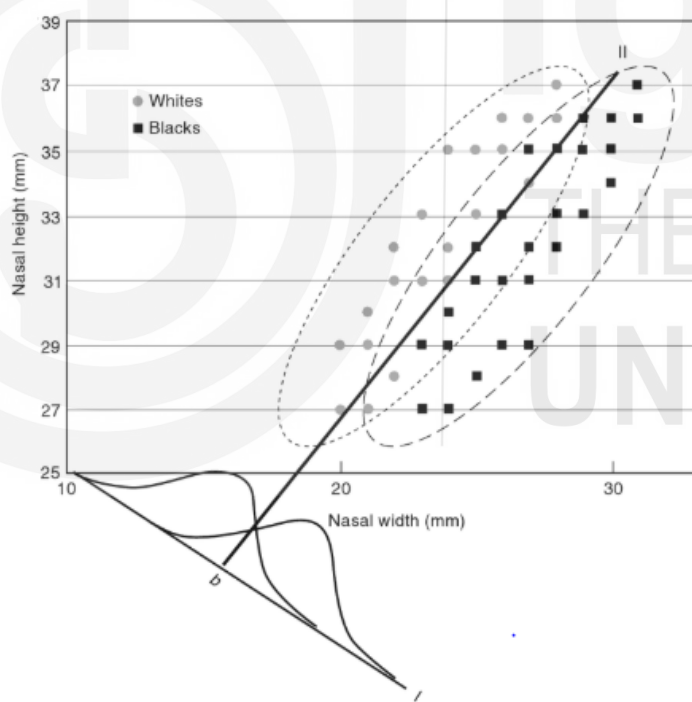**Source:** Introduction to Forensic Anthropology (Byers, 2016)

c) **Indexes** are considered simple yet powerful estimates for measuring anthroposcopic characteristics. Indexes are obtained by dividing two measurements (measurement of two visually identifiable characteristics) and multiplying the result by 100. The value of indexes varies among different groups which help to determine the group membership of an

unrecognised skeleton. For example, nasal index is calculated by dividing the nasal width of a skull with the nasal height and multiplying by 100.

Nasal Index = Nasal Width/Nasal Height X 100

d) **Discriminant functions** are advanced statistical form of indexes that uses more than two measurements to differentiate between different groups. The most famous application of this method in biological (and forensic) anthropology was by Eugene Giles and Orville Elliot (1962), who used a number of measurements of the skull to distinguish ancestral groups from each other. Discriminant functions figure prominently in forensic anthropology. From cranial measurements, these functions are used to distinguish males from females, as well as members from different ancestral groups (e.g., Whites, Blacks, Asians). Similarly, measurements of the lower jaw, as well as dimensions of the limb bones and other postcranial structures, can be entered into discriminant functions to determine both of these demographic categories. In short, this method is used whenever there are discrete categories that can be distinguished using metric measurements (Byers, 2016).

**Fig. 8.8: Graphical representation of discriminant function (line l) for separating
Whites from Blacks using nasal width and height. The point b is the sectioning point.**

Source: Introduction to Forensic Anthropology (Byers, 2016)

e) **Regression equations** are used to predict one characteristic from other characteristics. Sir Thomas Galton first used regression method to study inheritance pattern. In this method, a line that best shows the association between two variables is computed through mathematical calculations. For example, regression equation can be used to determine the height of an individual from the length of his metatarsal.
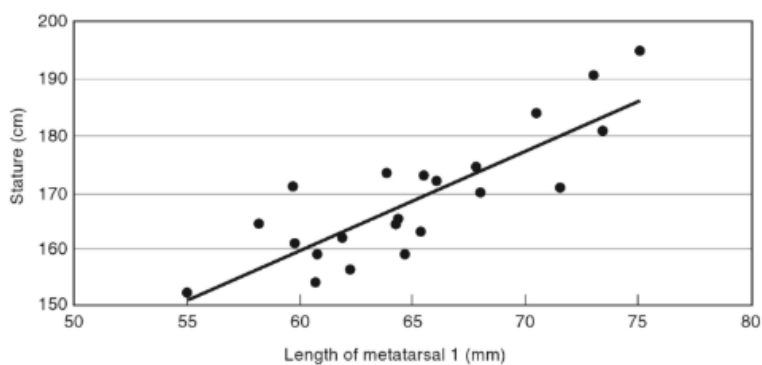
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Fig. 8.9: Regression line for determining stature from the length of metatarsal

Source: Introduction to Forensic Anthropology (Byers, 2016)

8.2 FORENSIC ANTHROPOLOGY IN INDIA

The scope of forensic anthropology varies from the examination of human skeletal remains to the identification of living or deceased persons. In the last few decades, the discipline has made enormous progress in many contemporary areas including facial reconstruction, gait pattern analysis, photographic superimposition etc. Despite the multi-faceted relevance of forensic anthropology, its status and development in India is not recognised as a specialty of significance.

In India, medico-legal cases pertaining to forensic anthropology are mostly examined by the doctors of the Forensic Medicine department or the Forensic Science laboratory where such cases are referred. However, over the last few years, with growing awareness of the role and expertise of forensic anthropologist a need is felt to employ their services. India being a multiracial country, the need is greater as anthropologists have the training, skill and familiarity of subtle racial variation in human skeleton which a medical man lacks. Moreover unlike in the past when identification from skeletal parts was based on examination of morphological traits, with time this mode of assessment has given way to more precise and definite anthropometric measurements which when processed through modern statistical techniques (Discriminant function analysis) make identification more objective. An anthropologist, through years of training in anthropometry has an advantage over a medical person (Purkait, 2006).

A limited number of academic institutions in India teach forensic anthropology as a part of the anthropology degree and forensic science programs. However, with the increasing popularity and practical utility of the discipline, forensic anthropology has steadily recognised as a full-fledged discipline, separate from the parent subjects of anthropology and forensic science.

Check Your Progress

5) What are indexes? How are they calculated?

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6) Describe the status of the discipline of forensic anthropology in India.

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8.3   SUMMARY

Forensic anthropology is a sub-field of physical anthropology that uses the knowledge of human skeletal variation to analyse the medico-legally significant cases. Although the practice of forensic anthropology began in the United States in the early 1800 with the pioneering works of Thomas Dwight and others but it developed as a separate field in the mid-1900. A forensic anthropologist's functions ranges from determining the demographic characteristics (sex, age, stature and ethnicity) to the positive identification of a person. Estimation of time since death, determining the cause of death and recovering the buried or surface remains are another major provinces of a forensic anthropologist. Several methods and techniques are used by forensic anthropologists to collect and analyse the human skeletal data. Significant data gathering methods include anthroposcopy, osteometry, histoscopy and chemical methods whereas decision tables, range charts, indexes, discriminant functions and regression equations are used to analyse the collected data. Although with the development of technologies the discipline has made enormous progress in many contemporary areas but despite its practical utility the status and development of forensic anthropology in India is still in infancy stage.

8.4   REFERENCES

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8.5 ANSWERS TO CHECK YOUR PROGRESS

1) Forensic anthropology is an applied sub-field of physical or biological anthropology that uses the knowledge of modern human skeletal variation to help law enforcement identify unknown decedents. For more details refer section 8.1.

2) Thomas Dwight (1843-1911), a professor of anatomy from Harvard, laid the foundation of the discipline of forensic anthropology. In 1878, he was also credited as the "Father of Forensic Anthropology in the United States" for his pioneering essay, *The Identification of the Human Skeleton: A Medico-legal Study* and other publications concerning the estimation of sex, age and stature from the skeleton. For more details refer section 8.1.1.

3) The five main functions of a forensic anthropologist(s) are: (a) determination of the biological profile (race/ethnicity, sex, age, stature) of a deceased person; (b) identification of the cause and manner of death; (c) estimation of the postmortem interval (d) locating and recovering buried or surface remains relevant to the forensic investigation (e) positive identification of a deceased person. For more details refer section 8.1.2.

4) Anthroposcopy and osteometry are data gathering methods of forensic anthropology. Anthroposcopy involves visual examination of human body with the help of a lens or x-rays and Osteometry is the study and measurement of human bones using calipers and an osteometric board. For more details refer section 8.1.3.

5) Indexes are simple and powerful estimates for measuring anthroposcopic characteristics. Indexes are computed by dividing two measurements (measurement of two visually identifiable characteristics) and multiplying the result by 100. For more details refer section 8.1.3.

6) In India, medico-legal cases pertaining to forensic anthropology are mostly examined by the doctors of the Forensic Medicine department or the Forensic Science laboratory. Despite the multi-faceted relevance of forensic anthropology, its status and development in India is not recognised as a specialty of significance. For more details refer section 8.2.

UNIT 9   APPLIED ANTHROPOLOGY AND MULTIMEDIA*

Contents

Learning Outcomes:

After reading this unit the students will learn to:

➢ Define basic terminologies like medium, media, media-scape, mass media and multimedia, in the context of anthropology

➢ Explore broad areas of multimedia research in anthropology and

➢ Gain perspective on intersectional and applied areas of research between anthropology and specific socially relevant areas of concern.

9.0   INTRODUCTION

"According to Merriam-Webster's Dictionary, a medium is a channel or an intervening agency by means of which something is conveyed or accomplished (the plural of medium is media). By this definition, languages and rituals are probably the examples of the earliest forms of media because ideas of belonging are conveyed and contested through words, rites, ceremonies, and practices. Also, just as all other kinds of media, rituals, as Victor Turner (1974) noted, have a sensory aspect, that is, they engage our senses of sight and sound and have an ideological aspect. They convey important messages. Thus, the study of human society cannot proceed without looking at the media, and both the language and the ritual have been

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concerns of the anthropologists for a long time" (Majumder, 2010:287). Further, there have been a number of folk forms of communications which have often successfully integrated different mediums in the form of dance, music, painting, puppetry to communicate culture across the community and generations, and can be easily visualised as an effective use of multimedia which is defined as "using, involving, or encompassing several media" a technique (such as the combining of sound, video, and text) for expressing ideas (as in communication, entertainment, or art) in which several media are employed. Some such examples from within India are the Pattachitra or Patachitra (of Odisha and West Bengal) a general term for traditional, cloth-based scroll painting originally serving as a visual device during the performance of a song, thus simultaneously using two different mediums to visual art and lyrics communicate cultural information. Or Kathputli the puppet-playing tradition in Rajasthan, based on popular legends and performed by skilled puppeteers. Same remains true for the myriad folk dances of India. Yet, an integral part of what anthropologists have always studied did not get recognised as 'media' research until the study of mass medium "a medium of communication (such as newspapers, radio, or television) that is designed to reach the mass of the people", emerged as a separate sub-discipline in anthropology. Thus the recognition of media in anthropological research actually came from its association with technology. This was especially true in the post–World War II era, which saw an improvement and spread of technologies of mass communication and mediation on an unprecedented scale. Scholars like Ruth Benedict, Clifford Geertz, Ernest Gellner, and Anthony Smith produced a body of knowledge in mass communication studies by shifting the focus of their studies from mass society to anthropology and provided space for mass communication to appear on the board. The studies conducted by these scholars addressed the issue of television's effect on national identity. (Benedict, 1946; Geertz, 1963; Gellner, 1983; Smith, 1994)

Today, with the ever encompassing spread of ICT (information and communication technology), it is becoming increasingly difficult to talk about cultural practices without acknowledging the ubiquity of global media. Traditionally anthropological "disciplinary emphasis was on non-western, the so called "primitive" or isolated communities lacking the ostensible features of modernity, including electronic forms of mass mediation" (Pardo, Erken Brack, and Jackson, 2012). However in today's day and age, electronic technology has reached far and beyond and the above mentioned folk forms of cultural expression have found their space within electronic and digital media, which is in equal parts influencing changes in communication and expression for an international platform. Philip C. Salzman distinguished the traditional forms of mass media, the print media and the electronic media. He discussed in his study titled 'The Elephant Trojan Horse: Television in the Globalization of Para-modern Cultures' in 1996 that the electronic media has changed the whole nature of mass communication across the globe. Nair and

Sharma, 2015, while discussing on the power of influence that television has as a communication medium, he argued that the electronic forms of communication is coded through the same human skills of speech and body movements that are characteristics of face-to-face communication. In his study, he tried to convince that television broadcasting is highly diverse in nature and it can transmit and broadcast messages across social and cultural boundaries and has the potential to bring immense social and cultural changes in societies not possible by any other communication medium (Salzman, 1996). From print to electronic and to the digital age, mass media has changed and are changing the ways people work, think about themselves and interact with each other. The new media, especially internet, mobile communication and high definition broadcasting are infiltrating every aspect of social and cultural life in many cultures and societies. The flow of images, sound and textual information over multiple delivery platforms is a complex process and has a strong influence on the contemporary societies. Louisa Schein (2002) stated that "the way the people understand who they are and how they belong is never anterior to, indeed is inseparable from, the kinds of media they use or consume" (p. 231). "In other words, self-understanding and identity are not given to one in their authentic form, but are produced, of course, within relationships of power and domination and are constituted within a system of representation. Representation and systems of representation are key concepts in the anthropology of mass media" (Majumder, 2010:288). Stuart Hall one of the founding figures of the school of thought known as the Birmingham School of Cultural StReprudies maintained that "the meaning is produced, communicated, and understood within systems of representation. The systems of representations work like languages, not because they are spoken or written but because they all use some element to stand for, or represent, what we want to say and to express. They communicate a thought, concept, idea, or feeling. Sounds, musical notes, words, items of clothing, facial expressions, gestures, body movements, and digitally produced dots on the screen do not have any clear meaning in themselves, but they signify. They operate as symbols and carry meanings as vehicles or media. In short, they function as signs. It is in these webs of signification that we make sense of ourselves" (Majumder, 2010:288).

Anthropology has broken the bonds of compartmentalisation in terms of its subject matter of study and is effectively utilising its methodological foundation to explore different avenues of research. "Anthropologists have begun to develop productive ways of including mass mediation into their ethnographic accounts" (Pardo, Erken Brack, and Jackson, 2012). A subfield of anthropology which has contributed significantly to the use of multimedia within anthropology is 'visual anthropology', which uses images to enhance the communication of anthropological observations and insights through the use of photography, film, and video. Visual anthropology also looks at the significance of visual aspect of life (what a visual image represent?) for a

particular society/culture/civilisation. Its methods thus include photographic elicitation or the use of images to stimulate culturally relevant reflections from informants. The end results are narratives (film, video, photo essays) which communicate typical events of a cultural scene. "This ubiquity of mass media worldwide made it increasingly difficult for anthropologists to study rituals and interactions without looking at how they take place in settings saturated with information, images, sounds, and ideas dished out by different kinds of media, such as television, photography, film, radio, and the Internet" (Majumder, 2010:287). This is further enriched by the term "mediascape", coined by Arjun Appadurai (1991), envisaging media in "global cultural flows". In this, "media is a word that can be used to describe a set of technologies that connect multiple people at one time to shared content" (Pardo, Erken Brack, and Jackson, 2012). It dwells on the images of the world created by media. These imagery might come from books, magazines, television, cinema, and advertising that can influence, how people perceive reality. It is also used as a generic term to describe a digital media artifact. These bring the mode of multimedia transmission like the television/smart phones into the folds of enquiry into media.

The disciplinary focus of 'media' in anthropology found its genesis in the nexus of information, communication and technology. Recognition of the role that the mass media plays and the methodological nuances of visual anthropology have brought the mediated quality of culture to the foreground. It is thus evident that any discourse on multimedia has to be closely related to 'mass media/media anthropology' as well as 'visual anthropology' for its relevance in 'multi-media' as an area of interest within anthropology. Further, it is imperative to explore this space through disciplines that are in conversation with anthropologists on this subject, including media studies, communications studies, and cultural studies. In today's day and age all mass media usually uses a mix of different mediums including text, visuals, sound, animation/caricatures and films combining them with technology and can thus be understood as multimedia. The newspapers that we read today are not only a combination of text and visuals, but can also be found easily on line in the digital platform, the same remains true for other media material. Thus, in today's contexts almost all media is used in combination with one or the other and can be recognised as multimedia.

9.1 BROAD AREAS OF MULTIMEDIA RESEARCH IN ANTHROPOLOGY

"Media anthropology is an awareness of the interaction (both real and potential) between the various academic and applied aspects of anthropology and the multitude of media" (Eiselein, Topper, 1976:114). Further, Debra Spitulnik who has focused on visual anthropology and ethnographic films, indigenous and alternative media, national media, and interpretative practices at both ends of the mass communication process believes, "Given the various

modalities and spheres of operation, there are numerous angles of approaching mass media anthropologically: as institutions, as workplaces, as communicative practices, as cultural products, as social activities, as aesthetic forms, as historical developments" (Spitulnik, 1993:293). K. Askew, who uses both the terms media anthropology and anthropology of media, speaks of an "ethnographically informed, historically grounded, and context-sensitive analysis of the ways in which people use and make sense of media technologies" (Askew, 2003:3). An anthropological perspective on media can thus consist of varied interests and concerns. They might look at:

a) Content analysis.

b) Ethnographic studies of production, transmission and reception of multi-media.

c) Reflect on cultural contexts of production, consumption, and interpretation, looking at how media are designed or adapted for use by specific communities or cultural groups.

d) Focus on particular sites of production looking at both the institutional structures and circumstances of cultural producers.

e) Examine the role that multi-media plays in the lives of individuals and communities.

f) The measuring and identifying of media's social effects and influence.

g) "People's engagement with media and how that shapes their ideas of themselves and of the intimate and the distant, the places and peoples, and economic, political, religious, and cultural actions and their practices" (Majumder, 2010:288).

h) The meaning behind mediated images, sounds, and ideas and their subsequent interpretation.

i) Methodological exploration of how anthropology might best address digital media and online communities.

j) "How do media technologies enable new forms of social interaction? And how media technologies mediate between people rather than simply looking at the effects of media on individuals" (Majumder, 2010:288)?

k) How does engagement with media transform the conceptions of space and time?

l) How public relations coordinators negotiate state and corporate hierarchiesas well as how marginalised groups effectively use media as their voice?

m) How media is used to negotiate ideas, practices of domination, power, and stereotyping embedded?

n) Influence of media in social formations, such as the nation, the state, and ethnic groups?

o) How different "indigenous" groups use media in order to disseminate their culture and to affirm a specific identity?

p) How media influences social transformation?

q) The significance of media for and of diasporic communities or cultural communities dispersed from their original homelands

r) Sensory approach to media, in terms of how media is experienced by people.

And so on……

There are multiple ways in which anthropologists have engaged with "the media" both as a tool of representation and an object of study. For the purpose of clarity and simplicity with respect to various aspects of multimedia and anthropology, let us first divide it into two sections:

i) Multimedia as a tool for facilitating research within anthropology.

ii) Multimedia as a subject or object of research for anthropology.

Just because we created two sections within our interest in multimedia let us keep in mind that they are not mutually exclusive. As is often pointed out, anthropology attempts a holistic study, thus just because we have created sections for better understanding of the topic in question, it does not mean that they cannot overlap in research and in practice. This is extremely important to keep in mind when one is trying to understand the applied aspect of anthropology. Eg. One can use an ethnographic film to explore the television watching experience within a family or a community television in a village. Or have a textual write-up along with extensive photographs combining text with visuals. Thus the use of multimedia as a research tool can be effectively integrated in the research of multimedia as a subject of anthropology.

9.1.1 Multimedia as A Research Tool

As we find improvement in technology anthropology has also reached out to use the available technological innovations in effective documentation and representation of ethnographic data, and the use of multimedia as a research tool. The advent of smartphones has made the accessibility to technology and equipment even easier. Further, this kind of equipment is of double advantage as it is non-conspicuous in nature and does not make the research participants conscious while the recorded information can be easily played back for receiving informed consent of the participants. However, this journey has been a long one and not necessarily easy.

One of the key anthropological works involving effective use of photography as a part of scientific ethnographic analysis is attributed to Gregory Bateson and Margaret Mead's work *Balinese Character: A Photographic Analysis (*1942), where the said anthropologists captured the nuances of their field in 25,000 photos, while conducting research in Bali. 759 of these photographs

were used to support and develop their ethnographic observations. These photographs were arranged in a sequential pattern like stop-motion movie clips and illustrated how the Balinese research subjects performed social rituals or engaged in routine everyday behaviour. It is not to say that the use of photographs did not exist before this, "In the mid-nineteenth century, academic anthropologists began collecting and making photographs of the people they studied. So-called "collecting clubs" included the British anthropologists Edward Burnett Tylor, Alfred Cort Haddon, and Henry Balfour, who exchanged and shared photographs as part of an attempt to document and classify ethnographic "races.""(Hirst, 2019) These photographs however carried the burden of a racist bias in usually recording the colonised 'other'.

Anthropological fore, however, into ethnographic films began with the work of Robert Flaherty in the film *Nanook of the North (*1922), with silent recording of activities of an Inuit band in the Canadian Arctic, however this work was later criticised as being deceptive and staged. This brought to the forefront the need for ethical screening of ethnographic material, it also brings to the forth questions like whether or not a photograph can be truly spontaneous or un-staged, issues of informed consent and anonymity, and people's right to representation of self, etc. In today's world where almost everyone is equipped with a smart phone and thus the access to videography, an anthropologist's role and knowledge of a culture and community becomes especially important and relevant in ethical screening and contextualisation of data. It also renders the task of ethnographic filmmaking an extremely relevant recording tool along with a relevant discourse on ethical consideration and an expression of people's thoughts and voices.

Check Your Progress

1) When did the study of 'media' gain relevance in anthropology? Which are the two sub-fields of anthropology which bring out the relevance of multimedia in anthropology?

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2) What is multimedia? And what can be studied under multimedia?

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3) According to Debra Spitulnik what are the different angles of approaching mass media anthropologically?

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4) What does the term,"collecting clubs" refer to?

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9.1.2 Multimedia As A Subject or Object of Research for Anthropology

In this section we look at how anthropologists have engaged in the study and the understanding of multimedia. Looking at some research conducted as well as other scopes of work, through three different headings.

a) Multimedia Infrastructure

b) Multimedia Creation and its influence

c) Multimedia and related social behaviour

9.1.2.1 Multimedia Infrastructure

There are two types of media infrastructure: mechanical infrastructure and cultural infrastructure. Mechanical infrastructure includes the apparatuses that bring networks of technology into existence and include the material technological networks that allow for the exchange of goods, ideas, waste, people, power and finance over space. For example, Brian Larkin (2008), a media anthropologist working in Nigeria, noted that the geographical location of cinemas in the city of Kano was based on the colonial requirement that there be a 440 yard buffer zone between white and black populations. This requirement controlled the ways that electrical grids and transportation routes were developed. In this way, various entangled infrastructures are implicated in the forms of taboo, desire, and fantasy shared by members of a society in locations like the movie theatre. Similarly, media infrastructure would consist of all other media related infrastructure, like the placement of mobile network and television towers, laying of internet cable etc. for information transmission. However, just because an infrastructure exists does not mean

that its usage is always available, it is often controlled by the cultural infrastructure.

Cultural infrastructure exists at different levels of society including the broad geopolitical levels to the smallest social unit in that of a family/household. *Cultural Infrastructure* refers to the values and beliefs of communities, states, and/or societies that make the imagining of a particular type of network possible. Say for instance, the cultural infrastructure is dependent on the political agenda and policies of a country which might enable or hinder the use of a particular media by creating or blocking the mechanical infrastructure. In case of India mobile and internet transmission in a particular geographical area might be (needed to be) blocked or hazed out due to socio-political or criminal uprising. There was a blocking of communication in Kashmir after the repealing of Section 377 in an attempt to control probable unrest, while during the Mumbai 26/11 terrorist attack in 2008 the lack of protocol for media screening and blockage lead to information being inadvertently passed on to the terrorists. Similarly at the household level cultural infrastructure will decide whether or not individuals will have access to technology or communication related gadgets, or the screening of the media material being consumed, or the time being allotted for the same etc. The sections that follow speak further about the cultural infrastructure and its influences.

9.1.2.2 Multimedia Creation and its Influence

Looking at cultural infrastructure, the very creation of media itself has often become a source of an ethnographic study. The initial studies in the production of media were under the aegis of sociology by M. Schudson in "sociology of the newsroom", and by P. Schlessinger"the empirical study of news production", which used ethnographic methods to research newsrooms and interpret the "media culture". They included studies of the processes through which these cultural products are institutionally created and distributed by specialists in the mass media industry. Recent evaluations elucidate that, "though relatively few in number, ethnographic studies proved to be highly influential. Collectively they demonstrated how the in-depth study of the news producers, their cultural milieu and professional domains could help to explain the dynamics and determinants of news output" (Cottle 2000:19).

The ethnography of multimedia production and creation can consist of various aspects that include the institutional ideology, social structure, infrastructure, technology of the media creating unit, and their interaction with each other. It can seek to address power centres within the infrastructure, leadership and the role of key media personalities as the king of multimedia being created and projected. Say for example, what is the first thought that comes to your mind when you think of the news anchor Arnab Goswami and the phrase 'Nation wants to know'?, the media personality who has started a particular trend of presentation. Media and information

production is also controlled by broader socio-cultural and political power centres outside of the media production units, these power centres might influence the media production units both positively or negatively in terms of advertising, social movements and protests or anti-campaigns, which are all a part of anthropological concerns.

In the mid 1900s when mass studies took focus in America, it was believed that mass media can be successfully used as a tool to control the mind of audiences, visualising it as a single system of flow of information and its recipient as mute absorbers. Hall (1997) pointed out that representational strategies prevalent in media practice try to fix the meanings of images, sound-bytes, and visuals. Hall argued that power works through such representational strategies, such as those that try to fix the meanings and thereby invoke an ideal viewer/listener. However, he framed the study of mass media in terms of production and reception or encoding and decoding of meanings within systems of representations. This encoding/ decoding formulation allowed for multiple interpretations of media texts during the process of production and reception. Hall emphasised on the active participation of the audience and actors involved in the production of media. Audiences interpret and read the media in ways other than what has been intentioned in the strategies of who control the production of the media. Thus, he pointed out that the meaning of mass mediated images and sounds are slippery. Hall brought to media studies a perspective that went beyond the model of mass media as simply a tool in the hands of the authorities to propagate their images and views of the world. Hall's model provided anthropologists with a theoretical framework to study production, dissemination, and reception of media ethnographically.

In her book *Dramas of Nationhood (2005),* Lila Abu-Lughod looks at how nationally televised Egyptian soap operas were interpreted by those who watched them. Her research revealed that the communities of watchers of the soap opera did not necessarily interpret the shows to mean what the directors and writers had originally *intended* for it to convey.Thus the producers did not wholly control meaning or the value(s) that were identified by the audience. Further, different media gave different messages or meanings. If the same message is broadcast on radio and television, the histories and cultural associations of these two technologies affects the meaning of the message being conveyed. Televised soap operas were interpreted quite differently, for instance, than the spoken poetry. Similarly, Debra Spitulnik (1993) turned attention to technological forms of mediation and social contexts in which such technologies are appropriated. While Hall's encoding/decoding model helps us to imagine an active audience, an attention to technologies of mediation helps us to realise how a medium shapes the social relations and the audience's perception.

Media production and circulation today is commonplace with the use of cell phones and Whatsapp memes and graphics, and software like 'tiktok' not

only are sources of both information and mis-information but are also sources of both positive networked communication as well as creation of fake news and social upheavals. Anthropological insights to communities and enquiry become critical to understanding these phenomena as well as in expanding research and methodological boundaries.

9.1.2.3 Multimedia and Related Social Behaviour

Abu-Lughod (2005) demonstrated that *there is no universal way of consuming media; media consumption is bound to culture.* How Egyptian women participate in listening to or watching soap operas together, the practices of who sits where, of what can or cannot be eaten during a show, or of when a show might be aired, is all bound to the norms and values of the community. J. Lull (1988) points towards this discourse in terms of the "practical social arrangements" to cover: a) the location of objects and people inside the room with the TV set, the relations between family members and mass media supports, rhythms of consumption, forms of control distribution, etc.; b) concrete acts of reception - ways of utilising supports and content, relations with the messages, interactions between people during reception, values and attitudes towards mass media or towards precise media content, etc.; and c) the discourse referring to the received messages.

Similarly, if you have a discussion with your parents or grandparents, they would regale you with stories when television had first come into India. Not only was buying of a television set a prestigious and eventful occasion, it was often a source of families and community spending time together. Programmes were few and far between, with Doordarshan being the only transmitter during that time. Neighbours would often come together to watch television at the appointed time of a show, who was included and who was not, who sat where, who controlled the television as well as the hospitality that the host provided, were all important statements of power, social status and acceptance.The country was still young and social messages often consisted of ideas of oneness and solidarity, and the imprint of this medium and messages were so significant that the old jingles, advertisement and serials still find extensive visualisation and representation in the memory scape of the older generations. Multimedia thus played important role in socialising and social life of people. Compared to this the present day has seen a paradigm shift in entertainment and communication, which has become extremely personalised. Almost everyone can be found with their heads bent over their cell phones, choosing the kind of movies, videos clips, memes they want to watch including humour, music, news and so on. Socialising with family and friends has shifted from real world to the virtual world where communication has moved to the realm of Facebook, Whatsapp, Instagram etc. Research related to changes in family and community structure, people's interaction, changing cultural ideologies, power structure, media influence and meaning in both local and global spaces all become a part of anthropological enquiry.

We have looked at anthropological enquiry in multimedia in terms of multimedia being an area of research as well as a tool for research, we continue this quest in the next section looking at how multimedia research can focus on specific social and political issues exploring some intersectional areas of research as examples and foreground of how anthropological quest can seek greater applied and action oriented combinations.

9.2 INTERSECTIONAL AREAS OF RESEARCH

In this section on intersectional areas of research between multimedia and other issues of relevance, we are looking at just three interconnected issues as examples for exploration of other such concerns.

9.2.1 Multimedia and Power

Media circulation, production, and reception occur within political, economic contexts that define access to cultural and material resources and occur within the constant gaze of the state trying to control its representations to the citizens. One such study was by Purnima Mankekar (1999) who argued that the televised Indian epic Ramayan "might have participated in reconfigurations of nation, culture, and community that overlapped with and reinforced Hindu nationalism" (Majumder, 2010:289) in the early 1990s. The televised epic, Mankekar notes, was part of a socio-historical conjuncture in which inclusion and exclusion within the Indian national community was constructed in terms of being a Hindu. She also pointed out that media may transform nationalistic feelings for the purposes of specific commercial imperatives of selling commodities to a particular group. Yet new subjectivities and sensibilities and networks that surpass the national and state borders emerge to form a transnational public sphere that span geo-linguistic regions and beyond. Ethnographic studies enable subtle understanding of operation of power and actions of individuals and groups by looking at influences of state ideologies, histories of migration, and trans-border connections on reception and appropriation of images, sounds, and ideas represented by various kinds of media.

9.2.2 Multimedia and Gender

Multimedia is well recognised for its gender representations both in terms of propagating stereotypes as well as for forming suitable grounds for expression, claims and change. Unfortunately the former has been more prevalent than the latter. Objectification of women in media has been an area of active discourse. Beginning from scantily clad bodily representations of women with enhanced physical assets from comic animations to video games, stereotypes are permeated directly and indirectly, verbally and nonverbally not only through visual but also subtly by commenting on women's appearance in a humorous way, making jokes and gags, and using

double meanings, by highlighting an archetype of beauty based on skin colour and size zero.

Representation of men is equally stereotypical with masculine ideas of how men and boys should behave often representing them as superior, virile, leader, competitive, aggressive and entitled. Most societies socialise men and boys to assume that they can assert their (supposed) superiority over women and consolidate their general position of dominance over them (physically, intellectually, and sexually)*(Messner, 2000)* and the same is often mirrored by media. This remains true for the third gender as well who often find stereotypical queer representations in multimedia, leading to reaffirmation of ostracism.

Media is however also being effectively used to break stereotypes and raise awareness. The "Me too" movement is one such campaign where multimedia has played a significant role in providing space for awareness, expression and strength, by allowing both anonymity as well as faces and platform as per individual requirement.

This also brings to the forefront the issues of casting couch and exploitation within media industry itself, which is plagued by issues of unequal gender diversification at the higher rugs of the structure, disparity in emoluments as well as reduced career choices for women as age progresses. Academic studies focused on gender, its representations in modern society and culture in the film, advertisement and media production industries, the digital space etc. can be accentuated immensely through an anthropological lens.

9.2.3 Digital Media

When one visualises the virtual world, one often imagines it away from reality and segregated from the everyday. Daniel Miller and Don Slater (2000), in laying out an ethnographic approach to the study of the Internet, avoid treating the Internet as global technology that has appropriated a locale or society. Their study of Internet practices in Trinidad shows that, contrary to the expectations, uses of the Internet are not opposed to "traditional" or "real" forms of relationship, especially kinship. The Internet, Miller and Slater find, is strongly continuous with those values that were developed first in kinship and later through the experience of mass consumption. Thus, they conclude that online and offline worlds penetrate each other deeply and in complex ways. People use the Internet to realise older concepts of identity or to pursue new modes of sociality. This will be apparent to you if you look at your cell phones and recognise the Whatsapp groups that you are a part of. These groups are a representation of your social inclusions and exclusions and often an extension of your identity and the things that you identify with.

Similarly, Mary Gray (2009) argued about the Internet's more closely controlled access points. She pointed out that it "allowed queer youth to carve out online spaces for their emerging identities. The importance of these

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online spaces for developing personal identity also meant that it was difficult to distinguish between "online" and "offline" personas. Gray took a meaning-focused approach to understand the ways in which rural LGBT youth create identities and feelings of belongingness in concealed online worlds."

The use of anthropology in the digital medium certainly expands the scope of the discipline to explore and consider methodological combinations and innovations in order to understand phenomena which is highly complex and expansive yet grounded in socio-cultural realities. It is indeed a discourse that is contemporary and exciting.

Anthropology can contribute to other applied and intersectional topics including multimedia and changing lifestyle, looking at lifestyle related medical problems, say for instance how constant viewing of a screen is effecting one's eyesight (and beyond); multimedia and social awareness/ developmental programmes -population studies to understand how messages and videos can be made effective so that audiences are more receptive to the information being propagated. And multimedia and state's control/ propaganda/ violence/activism. For example. Jeffrey Juris (2008) has argued that the Internet interactions allowed anti-corporate, anti-globalisation activists in Spain, Indonesia, and the United States to feel and express the threat represented by the Group of Eight summit (a meeting of eight of the largest world economies). These feelings generated a sense of solidarity that was not reducible to language and strengthened the relationship between meanings and feeling that is a part of media and communication.

These studies (in the section digital media) speak of not just the digital space but also the confluence between multimedia, digital/ virtual space and kinship, gender and marginalised (or advocacy) groups respectively. Similarly, one can pursue multifaceted multidisciplinary research in the area of multimedia with the anthropological perspective and methodology adding to a holistic and interconnected approach.

Check Your Progress

5) What are the two types of media infrastructure?

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6) What was the theoretical framework suggested by Stuart Hall to study production, dissemination, and reception of media ethnographically?

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7) What are the key findings of Lila Abu-Lughod's research?

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8) What did Daniel Miller and Don Slater's ethnographic study of the Internet reveal?

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9.3 SUMMARY

We have learnt through this discourse that media is an inherent part of existence. Communication even at the individual level is through various mediums which might include facial expressions, bodily gestures, speech etc. which are culturally patterned and understood. However, in anthropology the recognition of media studies have come into prominence with mass media, and in today's age a combination of multiple medium of communication through the use of a combination of digital and multiple mediums has become commonplace and everyday. We have looked at the use of multimedia as an anthropological tool in strengthening research methodology as well as anthropological exploration of multimedia, realising that they can work as a continuum as well as without each other. We have explored the various areas of interest that an anthropologist working in the area of multimedia can peruse and reflected on this using some known anthropological works and the intersectional areas of concerns and query. Present discussion is just a foray into the myriad of possibilities waiting to be explored.

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9.5   ANSWERS TO CHECK YOUR PROGRESS

1) The study of media in anthropology gained prominence in the post-World War II era. The two sub-fields of anthropology which bring out the relevance of multimedia in anthropology are 'mass media/media anthropology' and 'visual anthropology'.

2) See section 9.0

3) See section 9.1

4) See 2nd paragraph of section 9.1.1

5) See 1st paragraph of section 9.1.2.1

6) See 2nd paragraph of section 9.1.2.2

7) See 4th paragraph of section 9.1.2.2 and 1st paragraph of section 9.1.2.3

8) See 1st paragraph of section 9.2.3

UNIT10   APPLIED ANTHROPOLOGY AND DISASTER MANAGEMENT [*]

Contents

Learning Outcomes:

After reading this unit the students will learn to:

➢ Define how anthropological knowledge is important for disaster management;

➢ Describe how anthropologists define disasters and compare it with how other stake holders define the term;

➢ Identify the application of anthropology to disaster studies; and

➢ Appreciate how anthropologists could help in managing disasters

10.0 INTRODUCTION

If one lesson you want to take back home with your reading of the subject called anthropology and you want to boast that in front of others in your family and friends then it would be that- 'anthropology is a discipline of alternatives.' These alternatives could be the ways of organising the society, ways of knowing about the world, ways of power sharing, controlling and ways of thinking about events and phenomena. Anthropologists, from the very inception of the discipline, were concerned about the 'other.' This 'other' in the mid nineteenth century was the various colonies of the

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European conquerors. Anthropologists were either busy in understanding and writing about the origin and evolution of society or during the mid-twentieth century they were busy in documenting different ways in which societies organised themselves. Anthropological studies have led to the belief that there is no singular or universal way in which people think or have been organising their lives. This lesson is really important to learn as it prevents us from thinking in singular ways. It also helps us in including various alternative ways and methods of doing things and thinking about the world and the cosmos in which we live. It teaches us to value of heterogeneity. Society is a heterogeneous entity with various groups having their own interests and aspirations. It is the application of this knowledge besides many others that is most valued in policy making and applied fields of anthropology. Disaster is one such field. When disasters occur for example a flood or a cyclone or a gas tragedy, then different groups are affected differently based on their vulnerability. These vulnerabilities are in-built in the structure of the society in the form of class, caste, gender, ethnicity etc. Not only are these, but the meanings people give to the events also varied. There may be technical meanings accorded to the cause of the disaster or there may be more religious meanings given to the event. This leads to different kinds of response from different agencies and the community themselves. There is also a variation found in the expectations of the people from the administration at the time of the disaster and the expectation of administration from the people. This mismatch leads to lower levels of satisfaction from the governmental responses and may trigger issues of heightened anxiety and depression with the people affected by the disasters.

Check Your Progress

1) How can disaster affect different people differently?

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Disaster Management is not a process that starts only after the event is over, but includes the phase of preparation before an event strikes a population. In this phase, disaster management is associated with the issue of reduction of vulnerabilities. Vulnerability as a concept can be understood in terms of those in-built structural issues that render some groups or people more prone to the effects of the disaster. Anthropological studies can be used in order to map these vulnerable groups and the kind of issues that are making these groups vulnerable at the first place. Issues of gender, caste, class, race, ethnicity becomes important when it comes to the impacts of disasters. It has also been observed that during the phase of relief distribution, social categories emerge as a major player in deciding who gets the relief material and who does not. Although relief should be based on the criterion of equality but the events of

disasters become events of reproduction of inequalities. The inequalities and cracks that form part of the everyday interactions between people come to the fore in a more prominent way during the disasters.

Anthropological knowledge that may be used for disaster management actually comes from two sources- a) from the anthropological studies conducted during the 'normal' times and at places that were traditionally part of the anthropological 'object' of study and b) from the anthropological studies conducted at places that were and are affected by disasters. Both kinds of studies generate knowledge that can be applied for disaster management. However, anthropologists working in the field of disaster studies are of the view that disasters cannot be managed only by 'applying' anthropological knowledge. The nature of anthropological knowledge may also contain the revelation of the existing power relations in the society. It may also reveal the state action and inaction during the times of crisis. Besides this anthropological studies are not devoid of political orientations. Within the post-colonial context anthropological studies have invariably advocated for the rights of the subaltern. In other words, victims of development and of disasters are at the focus of anthropological knowledge generation and anthropologists try to understand reality from the point of view of the people most affected by tragedies. Such an understanding takes anthropologists a step further from just being an application oriented problem solver to the one who actively takes part in advocacy for the rights of the people. In fact this dimension of practicing and advocating for the rights of people becomes even more important than just suggesting the ways out of the crisis. Disaster management in this sense becomes a very political activity. There are different stake holders that are involved during the time of crisis. Both state and non-state actors claim that they have helped the community but still people remain dissatisfied with what they receive. Writing about the people's perspective then is highly contested by different stakeholders. This gives the field of disasters a very unique identity.

Check Your Progress

2) Discuss vulnerability in the context of disaster management.

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3) How can anthropological knowledge be applied in disaster management?

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10.1 APPLYING ANTHROPOLOGY TO DISASTER STUDIES

Anthropology as a discipline teaches us about 'culture.' Simply put cultures can be understood as values that are cherished and held by people at a particular place and time. This suggests that cultures are place and time specific and have the tendency to change. Disasters create situations when these long held and cherished values are questioned. Most important cultural value that is challenged during the times of disaster is the value attached with human security. The entire idea about human social, physical, economic and political security comes under attack during disasters. State that is considered to be the provider of human physical, cultural, political security itself becomes vulnerable. Disasters are times when many organisational changes may take place in the state apparatus as people may demand from the state what they think has been most affected- the sense of security. Also during the time of disasters people may experience a suspension of their most cherished activities that form part of their everyday lives like going to places of worship like temple, mosque or a church. Similarly, human relationships, another consistent and major theme in anthropological inquiry may undergo changes. Disasters have the potential to generate conflict and schism between people. These conflicts may arise at a larger network of human social and economic relation or they may arise at a more domestic level of family and kinship networks (Torry, 1979).

Symbolism and understanding the meanings which society give to various symbols is another major theme in anthropology. Disasters give ample opportunity to create new symbols and demolish the older ones. Especially disasters like earthquakes and cyclones that alter the architecture and landscape of the place gives sufficient space for different political views to be reflected in the new architecture that is re-built. New icons and symbols may get created in the name of disaster re-construction. Similarly epidemics and pandemics may give opportunities to create new symbols and metaphors. For example pandemics and epidemics are seen as times of war. The metaphor of war is used to understand the situation. This gives a sense of urgency and importance to the event but at the same time can be used by the state to bring-in many different kinds of restrictions on the citizens. State in the times of wars can get transformed into the surveillance state and this may to a very large extent compromise the freedom of the citizens (Simpson, 2014).

Anthropologists are also interested in understanding human behaviour. Behaviour is one thing that gets altered to a very large extent during the times of disasters. Disasters put various demands on the people and they need to adjust to the ever changing conditions. This calls for a change in the behaviour. Behaviour can be studied during the disaster and post-disaster phase. Besides this, archaeological and historical studies, that also form an important part of anthropological understanding give us information about the past disaster events. It also gives us information about the extent of

damage due to these events and how societies collectively handled the situation (Oliver-Smith and Hoffman, 1999).

Disaster management needs a thorough understanding of the field of disaster and the various factors that play while people suffer from disaster events. Since social life is a complex network of human relations and varying frames of circumstances that interact with each other and with the disaster event itself to provide a multi-dimensional field of study therefore it calls for an approach that is holistic. Disasters give an opportunity to understand the perils of poverty during the time of crisis. Class becomes an important factor that plays important role at various stages of the progression and recession of the disaster event. Similarly illiteracy, starvation, deformity, conflict, genocide, climate change, slavery, exploitation, migration and displacement of people from their original place of habitation are some of the themes that need to be explored in the disaster context (Hoffman, 2013).

Disasters not only lead to loss of life and property of the people but it also brings to the fore various ruptures or fault lines that already exist in the society. People not only undergo loss but they also undergo marginalisation, displacement, stereotyping and ghettoisation. If we take for example epidemics as disasters then we can realise that epidemics that spread due to human contacts like viral and bacterial diseases not only lead to loss of life but they also lead to labeling some bodies as impure and untouchable. Long held stereotypes in the society may crop up in the context of a contagious disease and people could suffer not only because they are carriers of a particular virus or bacteria but they may suffer also because they belong to a particular social group that is supposed to be 'unclean' (Trostle, 2005). Similarly, people from a particular community or a religious group may be victimised and forced to live separately in different colonies away from the dominant section of the society in a post-earthquake rehabilitation plan. Sometimes disasters like earthquake give opportunity to the dominant section of the society to rearrange the pattern of habitation in the recovery and re-settlement phase of the disasters (Simpson, 2014). It is also documented that the post-disaster phase of rehabilitation and resettlement create conflict within the society as it is also the phase of getting relief from various government and non-government organisations. People may feel that they had been deliberately left out of the relief plan. Neighbours who happened to be good friends in the normal times may start doubting the others of getting undue advantage from various relief agencies. Anthropological understanding of disaster management may include these issues in order to plan the various phases of the disaster cycle.

Disasters also create situations where people from 'outside' may come at the site where disaster struck and grab all the emergent opportunities. Situations like this have happened and it has been documented by anthropologists. Actually disasters like earthquake also give opportunity for rebuilding things from scratch. Many things need to be rebuilt like damaged houses, public and

private buildings, and public spaces. It also gives opportunity to build and set-up new businesses and industries in order to create new jobs. Such a situation has been called as the 'Disaster Capitalism' by Naomi Klein. It has been documented that during the 2001 Gujarat earthquake where maximum damage took place in the Western Gujarat that is the Kutch area, people from outside that is from the East Gujarat- that is more affluent than its Western counterpart- came to the Western part and grabbed most of the opportunities associated with re-building and rehabilitation. This left people from the West Gujarat with fewer opportunities.

Disasters are also the times when domestic violence is on the rise. This happens because disasters are stressful times and the emerging disaster situations put a lot of demands on the people to which they need to adjust. Majority of the domestic violence is linked with the division of labor at the household level. Diminishing economic resources and livelihood opportunities also makes life uncertain and the future unpredictable. This also leads to people migrating to urban centers in want of jobs. There they are bound to work in adverse circumstances. Issues of honor and suitability linked to various occupations also emerge due to disaster induced out-migration. People are forced to do jobs that they would never had done during normal circumstances. Therefore disasters call for totally new ways of living and getting attached to the immediate environment and people.

Disasters bring-in big money with them as various governmental, non-governmental and international organisations come to the rescue of people and offer monetary packages that can take care of medicines, clothes, food and other essential items. With such big money involved it has been observed the world over that disaster is also a time when corruptions happen. Political mud-slinging, pushing neo-liberal economic agendas in the name bailing out the economy from a slow-down, power struggle, contestations between various groups, sexual abuse and exploitation and ever increasing media influence in the way information are disseminated globally form some of other major and important themes to be understood and studied during disasters.

Check Your Progress

4) How are symbolism and human behaviour associated with disasters?

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10.2 DEFINING DISASTERS FOR BETTER MANAGEMENT

It would be now interesting to see that how anthropologists have defined the term disaster. This is another aspect of applying anthropological knowledge into defining and understanding terms like disasters. Definitions also lead to and direct the course of action that may be taken to tackle and manage disasters. However, anthropologists are not the only group of scholars who have attempted a definition of the term. People had been defining this term and the loss associated with it since they experienced the events. The most commonly held definition or understanding of the term is located in its supernatural occurrence. It is widely believed that disasters occur when Gods become furious. The occurrence of disaster events is also linked with the theory of Karma, where catastrophic events are seen as punishments for human's sins. The word 'disaster' originates from the French word 'Desastre' that means 'bad stars.' There is a sense of supernaturalism in the origin of the word itself. It also suggests that such events are beyond human control and can only be controlled through some kind of divine intervention. Even after advances in science and knowing the reasons for the occurrence of earthquakes, cyclones and floods, people do believe in the divine intervention when it comes to a loss of life at a scale as big as caused by a disaster event. If anthropology is interested in knowing the world-view of people then it very well comes into the purview of anthropology to not only define what anthropologists think disasters are but to also understand that what people think about these events that cause pain and suffering at a very large scale. Here again comes the central anthropological position of understanding the alternative ways in which people and scholars define 'reality.'

Check Your Progress

5) What is the French word from which the term disaster has originated? What is its meaning and how is it connected to the supernatural notions towards disaster?

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10.2.1 People Define Disasters

Other than defining it for themselves, anthropologists are interested in knowing how people define events. The 'people-centric' definitions that are actually based on their experiences of suffering are philosophical in nature. People tend to argue and question about the situations with which they are

affected. The religious philosophies that are directed towards understanding the suffering caused due to disasters actually deal with "not how to avoid suffering, but how to suffer, how to make the physical pain, personal loss, physical defeat something as we say sufferable (Das, 1995 pp-138)." This question is dealt with in different ways in various religious philosophies. Anu Kapur (2010) while dealing with this issue in the context of Hinduism says that it is the notion of Karma that is used to define and understand the cause of suffering. She writes that "Karma is an absorbent that is not only a motivator but it also soaks pain and misery (Kapur, 2010;pp-96)."Besides this she also talks about a folk model of understanding that is not based on 'absorption' but are based on 'appeal.' By this she means that the folk model is based on appeal to various local deities that are supposed to bring misery on to their people.

Ethnographic studies on disasters like floods have revealed that people-centric definition and understanding of the event is very different from the bureaucratic or administrative definitions of the events. In one such study it has been pointed out that people see disasters like floods as *pareshani* that means a problem. They talk about lots of hardships that they and their community had to go through during floods. In contrast to this the local administration see floods as natural events that need to be tackled following pre-determined protocols for the same. This led to the emergence of two different sets of norms- a) the administrative or bureaucratic norm and b) the emergent or field norm. It has been contended that due to emergence of separate norms disaster management efforts do not match the expectations of the people who are actually facing the problems. This lead to stress and frustration with the administrative arrangements and has the potential to convert the situation into a violent clash between the state apparatus and the people. It is for this reason that who defines disaster in what way is a very important step towards managing disasters (Khattri, 2011).

Check Your Progress

6) What is meant by people-centric definition and understanding of disaster?

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10.2.2 State Defines Disaster

Before looking at how anthropologists define the term, it would be good to see how the state defines it. This will give us an important comparative frame to locate anthropological definition and understanding. The definition of

disaster by the state can be located in the Disaster Management Act, 2005. According to this act disasters have been defined as- "a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes or by accident or negligence which results in substantial loss of life or human suffering or damage to and destruction of property or damage to and degradation of environment and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area." There are two important issues that need to be highlighted in this definition:

1) A disaster is given four causes viz- natural, human-made, accident and negligence that leads to substantial losses that includes besides loss to life and property, degradation to the environment and

2) The magnitude of disasters is beyond the coping capacity of the community. This means that the community requires external help and support to cope with the situation.

Check Your Progress

7) What are the four causes of disaster?

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10.2.3 Anthropologists Define Disasters

In contrast to the above mentioned event-oriented definition of disasters, anthropological understanding of disasters is processual in nature. This means that disasters are not discrete events in time and space rather they are embedded in the social-cultural and structural matrix of the society. In order to understand this anthropologists have differentiated between hazard and disasters. Where hazards are seen as physical events that have a capacity to harm people and surroundings, disasters only happen when hazards meet vulnerable groups of people. This suggests that hazards on their own do not lead to disasters. When hazards interact with vulnerable people, disasters happen.

This processual approach to disasters as described above is more interested in seeing what happens at the ground rather than focusing on the big numbers related to damage due to disasters. In anthropology especially in political anthropology the processual approach deals with the politics at the ground level. They are least concerned about the state as the unit of analysis and focus on how conflicts emerge at the ground level between various groups of people. Similarly in disaster studies the processual approach is concerned with micro-level issues and their role in emergence of disaster. According to

this approach it is believed that there are pre-existing conditions that gets a trigger from some event or hazard that lead to a disaster. To take an example, the Bhopal Gas Tragedy of 1984 happened not just because of the leakage of the methyl isocyanate (MIC) from the Union Carbide factory in Bhopal, Madhya Pradesh but the underlying reasons were the lack of safety arrangements, negligence on the part of the company, lack of disaster management plan, and above all the haste in which developmental activities are implemented without assessing the impact of such activities in case of disaster events (Das, 1995). Similarly, natural events like seasonal floods in foothills of Himalayas are actually not natural as it has been argued in other regional contexts in India that the colonial and capitalist mentalities altered the ecological balance of the region that transformed seasonal floods from being a source of irrigation to the one that causes large scale hardships to the people (D'Souza, 2006). Disasters through processual approach therefore are seen as created rather than something that happens on its own. Another example to understand this point is to say that increased floods and droughts are happening around the world because of the climate change that is linked to human activity. Climate change led to alteration in precipitation frequency and magnitude.

Therefore it can be said that disasters happen when hazards strike a vulnerable population. This can be shown with the help of a simple equation- Disasters = Hazard x Vulnerability.Disasters as defined in terms of process are based on the concept of vulnerability. There are pre-existing situations of the community and the relationship between the community and its environment and technology that are crucial in unfolding of disasters. From this perspective disasters are understood to be emerging from an interaction or an interface between human, environment and the technology.

10.3 ANTHROPOLOGY AND DISASTER MANAGEMENT

What do we mean by the term 'disaster management?' There is actually a break or a shift in the meaning of this term as it is envisaged in the Disaster Management Act, 2005. The meaning shifted from a more relief oriented process to a one that is more holistic in nature and covers various stages of disaster cycle. This new approach is more pro-active and includes capacity building, reduction of vulnerability, and preparedness even before an event happens. Disaster management can actually be understood in terms of two distinct phases- pre-disaster phase of capacity building and vulnerability reduction and post-disaster phase of relief, recovery and rehabilitation. This framework is important to bear in mind in order to understand the role of anthropology in it.

Anthropological knowledge can be effectively put to use for better management of disasters. The central focus in any anthropological approach in managing disaster is to put people at the centre of the management plan.

More than suggesting and implementing technological solutions, anthropologists act as bridge between the people and various relief and rehabilitation agencies. Anthropologists can acquire the role of interceders for people's rights and cultures. Keeping people at the center is however the goal of everyone who is in some way related to the task of disaster management, however without applying anthropological tools and methods, this goal cannot be reached. It has been observed generally that people are never satisfied with the relief and rehabilitation packages that they receive from the agencies. The reason behind this lies in catering to the perceptions about disasters and its impact that relief agencies have instead of what is needed at the ground level. It is at this point that anthropological knowledge is of great value. Various areas where anthropologists can and had been contributing includes- Community Based Disaster Preparedness (CBDP), Information, Education and Communication (IEC), Indigenous Knowledge and Policy and Advocacy.

Check Your Progress

8) Name a few areas in which anthropologists have been contributing in the management of disaster.

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10.3.1 Community Based Disaster Preparedness (CBDP)

It has been observed that it is community that is the first point of contact of any disaster event. It is also true that before any relief can come, community members also the first relief providers during the emergency. It therefore becomes imperative that any plan for disaster preparedness must have the involvement of the community. The local situations and aspirations of people must form part of any management plan. The CBDP approach precisely ensures this. It involves people into the stage of planning. This is done through many participatory methods like vulnerability mapping, resource mapping and safe route mapping.

Vulnerability mapping tries to understand with the help of the community that which are the areas that are vulnerable in a particular region in the form of their distance to the nearest hospital and their accessibility during emergencies. Besides this, important areas like schools, places of worship, houses, wells, hand-pumps etc. are clearly mapped. Also areas that are first and worst affected by for example floods are marked.In addition to vulnerability mapping, safe-route mapping is done in order to know what are the places and routes that can be used in case of an emergency. Besides this,

through resource mapping one can locate places that are safe for storage of resources during and before disasters and to know and map places before-hand where one can look for resources during the disaster event. The CBDP plan may also include the mapping of vulnerable groups in the region that may include pregnant women, children, elderly, people with some kind of pre-existing illness, people having meager or no source of income etc. This mapping exercise helps in planning before a disaster strikes and enhances the capacity of people and they can be made ready for any emergency event.

There are other components of CBDP that include making local teams of volunteers that can help during the time of emergency. The CBDP plan also incorporates understanding the history of disaster in a particular area and the amount and extent of damage caused by previous disasters. This will help in better preparedness for future events. Thus the anthropological work and knowledge starts right from the preparedness phase of disaster management.

10.3.2 Information, Education and Communication (The IEC Model)

Information is a very important dimension in any emergency situation. People need to be informed for example about the impending floods, cyclone or a tsunami. People can really plan for an impending disaster before-hand if they have proper information about its emergence and progression. They should also have information about various arrangements made by various agencies for relief during disasters for example availability of medicines, hospitals, edibles etc. There is an important link between compliance and the credibility of the source of information. The more the source is seen as credible and reliable, the more will be the compliance. This should be seen in the context of situations where people need to be evacuated from a coastal area due to an impending cyclone for example. If on earlier occasions people experienced that the information regarding the cyclone was not accurate then they might not comply with the evacuation message. The author while working in the flood prone districts of Eastern Uttar Pradesh experienced that people refused to comply with the information provided by the district administration on the upcoming floods because on earlier occasions, the information was found to be false. Also non-reliable and fake information can wreak havoc on the status of mental health of people going through a crisis. This unit is being penned-down at a time when there is an ongoing pandemic of COVID-19. Several provisions of the Disaster Management (DM) act and the epidemic act have been invoked in order to contain the spread of the virus. There are two sections of the DM act that are specifically linked to the issue of communicating warning and other information related to the disasters. In chapter X of the DM act section 54 deals with punishment in case of communicating false warning. Section 67 of the same act, deals with the power of the government to issue directions to the media and other communication platforms for communication of warnings.

It is also documented that information, education and communication during the pre-disaster phase is important for vulnerability reduction. The local administration is mandated to educate people on how to prepare themselves for the emergency situation. They do this by preparing messages for the community and communicating these messages using several ways. The author has documented one such way in the flood affected regions of Eastern Uttar Pradesh where the administration used the *Aapda Prabandhan Rath* (Disaster Management Chariot) where loudspeakers mounted on a four-wheeler vehicle move in the interiors of the villages and a person designated with the task of communicating the message speaks to the people through the loudspeaker. It was observed that this way of communication was not very effective as people were not interested in what was being communicated as they were busy with their daily works. One of the reasons accorded to the disinterest of the people was the one way process of communication.It could have given better results if this method was negotiated at both the ends (sender and receiver), people could have shared their previous experience with similar methods (Khattri, 2011).

10.3.3 Indigenous Knowledge

We have already seen in the beginning of this unit that anthropology is the science of alternatives. Anthropologists are therefore interested in alternative forms of knowledge. Besides universal scientific laws and knowledge, there are various other forms of local knowledge based on traditional wisdom. This form of knowledge is not formally written down but is transmitted from one generation to another by the word of mouth. This traditional wisdom is regarding coping with and living in relation to one's immediate environment. This kind of knowledge may include various ways in which people interpret the signs in the environment for the impending disaster. This may also include the various coping mechanisms that people employ in order to tackle the disaster situation. However, people still believe that disaster risk reduction is a global priority and needs global solutions. It is believed that it is the responsibility of the governments and various international agencies to address the issue of disaster risk reduction. Owing to the global nature of disaster impact it leads us to believe that a global macro-solution should be discovered. This renders the local knowledge of the indigenous communities to the back-seat. This also undermines the effectiveness of the local knowledge in dealing with disaster risk reduction.

However it has been realised now that incorporating indigenous knowledge in disaster risk reduction can be of great help. Communities have been living in close proximity with hazardous situations like flood and cyclones and therefore have devised their indigenous ways to deal with it. Now, it has been fully realised that the indigenous knowledge system can become an important tool in disaster management. It is of such an importance that the national policy on disaster management approved by the union cabinet on October 22, 2009 has devoted a separate section on knowledge management for better

disaster management and in this section it also talks about the importance of indigenous knowledge "which is handed down right from ancient times by way of tried and tested practices in facing disasters in different parts of India." There can be indigenous knowledge pertaining to the technological, economic and environmental dimensions. The technological dimension deals with the local understanding and know-how of building flood-proof, make-shift huts that can be carried on a bullock-cart in case of floods inundating the entire area. The economic dimension suggests that people are not dependent upon a single source of income and are engaged in multiple economic activities, so that they can fall back on the alternatives in case of floods destroying their fields. The environmental dimension is the most interesting which comprises their knowledge of identifying environmental signal of an approaching flood (Khattri, 2011).

Check Your Progress

9) Can indigenous knowledge be of help during disasters?

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10.3.4 Managing Disasters in the Urban Context

Anthropologists are known for working within the tribal areas and among the rural folks of the population. However this is not the complete picture of what anthropologists do and are capable of doing. Urban areas and urban problems also form part of anthropological research. More recently it is observed that owing to the haphazard and unruly development in the urban areas, disasters like seasonal and monsoon floods have become a common phenomena and cause large scale damage to life, property and overall economy of the urban areas. It is in this context that these areas and issues call for in-depth enquiry by anthropologists. William I. Torry (1979) believed that anthropological knowledge and methods can be used to study organisations that deal with urban disasters. Anthropologists can undertake in-depth ethnographic study of various governmental and non-governmental organisations. Studying the organisational structure, decision-making process, the process of giving meaning to the events and labelling those as disasters and studying the bureaucratic behaviour during the crisis would be of great importance. An organisation can also be understood in terms of its expected role in a disaster situation and its actual achievements. An in-depth anthropological understanding can bring out the cause of any discrepancy, if it exists, between the expected role and actual achievements of an organisation. This in turn will help the organisations to think over their

limitations and shortcomings that will eventually lead to better disaster management.

Also, in the wake of increased disaster world over, urban centres are even more vulnerable than the rural ones. The increased vulnerability is due to the fact that population density is more in urban areas, this means packed spaces with concrete buildings, which, if destroyed by an extreme event can cause more collateral damage. This scenario asks for a better understanding of disaster impact in urban centres. Anthropologists can understand the social and economic risks of an extreme event in the urban area as they had been doing it for the tribal areas.

10.4 OPPORTUNITIES FOR ANTHROPOLOGISTS IN THE FIELD OF DISASTER MANAGEMENT

As discussed above, anthropologists have a lot to contribute to the field of disaster management. Their knowledge and method of doing research is something that is most important for a people-centric approach to disaster management. Anthropological way of knowing through in-depth ethnographic research is an asset for planning and better management of disasters. It is for this reason that anthropologists specialising in the field of disasters have opportunities in the humanitarian sector. International institutions like the United Nations deal with disasters and its consequences. They are involved right from the immediate relief to long-term reconstructions. The World Health Organization (WHO) and the International Monetary Fund (IMF) have branches dealing with catastrophe. Developed countries like the USA and the UK have their international arms for disaster relief and rehabilitation in different countries in the forms of USAID, Disaster Aid UK, SPA from Italy and SIDA from Scandinavia. There are also several international NGOs like the Red Cross, Red Crescent, CARE, Doctors without Borders, World Vision, Oxfam, Save the Children, PACs etc., that deal with issues of disaster relief and recovery (Hoffman, 2013).

There are also institutes like the National Institute of Disaster Management (NIDM), Tata Institute of Social Sciences (TISS), and many Indian universities teaching courses on disaster management which opens up immense opportunities for people trained in this special field. There are some international projects that are totally devoted to the study of disasters like the European Union 6th framework project entitled- "Integrated Health Social and Economic Impacts of Extreme Events: Evidence, Methods and Tools" which had anthropologists as their research team members and co-ordinators. Thus, the field of disaster management offers a unique opportunity for cutting edge, path breaking research and social service where you can contribute towards making this earth a better place to live in.

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Check Your Progress

10) Name some organisations working in the area of disaster management to which anthropologists are associated with.

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10.5 SUMMARY

In this unit we have seen that how anthropology as a discipline is important to the field of disaster management. Disasters are increasing in frequency the world over and the damage caused due to these events is also increasing both in terms of loss to lives and property. Disasters are holistic events in that they affect various dimensions of human existence and consciousness. It is realised that only technological solutions will not help in the long run from saving humanity from disasters and its consequences. A more inter-disciplinary approach is required to deal with and also to understand disasters in their entirety. This unit helps you in understanding and appreciating the anthropological contribution to the field of disaster management. Anthropologists have applied their knowledge gained from working on different sites throughout the world to understand this challenging field of disaster management.

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10.7 ANSWERS TO CHECK YOUR PROGRESS

1) See section 10.0

2) Refer to the second paragraph in section 10.0

3) Refer to the third paragraph in section 10.0

4) See section 10.1

5) See section 10.2

6) See section 10.2.1

7) The four causes of disaster are natural, human-made, accident and negligence.

8) Some of the areas where anthropologists have been contributing are Community Based Disaster Preparedness (CBDP), Information, Education and Communication (IEC), Indigenous Knowledge and Policy and Advocacy.

9) See section 10.3.3

10) See section 10.4