BLOCK 2
VARIOUS AREAS OF APPLIED ANTHROPOLOGY I

Unit 4
Applied Anthropology and Development

Unit 5
Applied Anthropology and Market

Unit 6
Applied Anthropology and Health

Unit 7
Applied Anthropology and Evaluation of the Body

UNIT 4 APPLIED ANTHROPOLOGY AND DEVELOPMENT[*]

Contents

Learning Outcomes

After reading this unit the students will learn to:

➤ Define the conceptual progression in the idea of development;

➤ Explain anthropological engagement with developments;

➤ Discuss the continuity between Development Anthropology and Anthropology of Development; and

➤ Construct a discourse on sustainable development goals.

4.0 INTRODUCTION

"Relations between anthropologists and the world of development ideas and practices date from the early days of the discipline during the colonial period and have continued, in various forms, up to the present. Such relationships have encompassed the spheres of research and action, from positions of sympathetic involvement as well as the stances of disengaged critique or even outright hostility. Whatever point of view anthropologists may take about development, the concept of development, itself a diverse and highly contested term, remains one of the central organising and defining systems of our age and will therefore continue to demand anthropological attention" (Lewis, 2005: 2). Keeping this in perspective one has to realise that development is a concept that is a key driving force in society today however, it needs to be continuously debated and contested in terms of contextual realities in order to optimise its utility.These contestations give rise to two specific areas of focus within anthropology one that takes a critical outlook towards the very idea of development and constantly challenges the concept and parameter of understanding development and the gaps therein. This critical analysis of development in a multidisciplinary perspective to include

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the entire policy chain is studied under anthropology of development. The second area of focus is that of development anthropology which is grounded in applied anthropology. According to American Anthropological Association (as defined in Training Manual in Development Anthropology): Development anthropology is scientific research with significant applications within the development project cycle. Its objective is to enhance benefits and mitigate negative consequences for the human communities involved in and affected by development efforts. Development anthropologists are involved in development projects in a variety of ways, the specific roles being determined in part by the particular stage in the life cycle of the project (Partridge 1984:1). The anthropologists in this case have a direct relationship with the implementational aspects of a development programme, but it restricts the researchers' scope as the programme is controlled through various other parameters which include an externality of development aid primarily consisting of transfer of resources (capital and technical knowledge), but also norms or what Foucault (1994:237)refers to as 'conduct of conduct'. Thus, at different stages of the programme cycle the development programme itself is controlled or influenced by the agency providing aid/support and their code of how things should be managed and thus anthropologists often find themselves on a balance which is tilted against them due to the unequvocality based on power politics. A part solution to this issue can be found in the area of anthropology of development which talks about ethnographic research of global policies involving the challenge of focusing on the entire policy chain - from the production of development policy models in the context of the development agencies, to the different translation points (for example, state ministries in the recipient countries and large international NGOs) and local intervention points. Here, development policy emerges as one of the contemporary forms of producing the world (knowledge production at global and transnational level).

One has to recognise at this point that both anthropology of development and development anthropology are areas of anthropology which complement each other and form a continuity. It is through critical deliberations on development that one can contribute to effectiveness of the concept while implementation of development agenda in ethnographic settings have themselves been responsible for critical reflections and critiquing of the development agenda. Some argue that it is imperative for anthropologists to be involved in development discourse to work with local people to help them assess their needs and ideas for change or to even advocate for localised, community-specific initiatives. Some anthropologists suggest that we should not be involved with international development agencies, but only with indigenous rights movements. Still others suggest that anthropologists study both small and large development institutions in order to better understand the development system. Anthropological data can help development projects maximise social and economic benefits by ensuring projects are a cultural fit,

respond to local needs, involve the appropriate local social actors and organisations in the project, and are flexible (Gezen and Kottak, 2014).

After looking at this generic space of anthropological engagement with development let us look at how the concept of development gained popularity and built anthropological engagement with development overtime.

4.1 HISTORICAL UNDERPINNINGS OF DEVELOPMENT

"'Development' in its modern sense first came to official prominence when it was used by United States' President Truman in 1949 as part of the rationale for post-War reconstruction in 'underdeveloped' areas of the world, based on provision of international financial assistance and modern technology transfer. Development has subsequently been strongly associated primarily with economic growth" (Lewis, 2005:2).

Excerpt from Inaugural address as president of the United States Harry Truman on January 20, 1949 "More than half the people of the world are living in conditions approaching misery. Their food is inadequate, they are victims of disease. Their economic life is primitive and stagnant. Their poverty is a handicap and a threat both to them and to more prosperous areas. For the first time in history humanity possesses the knowledge and the skill to relieve the suffering of these people. . . . I believe that we should make available to peace-loving peoples the benefits of our store of technical knowledge in order to help them realize their aspirations for a better life. . . . What we envisage is a program of development based on the concepts of democratic fair dealing. . . . Greater production is the key to prosperity and peace. And the key to greater production is a wider and more vigorous application of modern scientific and technical knowledge"[†].

The idea of development which was being proposed was well reflected in United Nations, Department of Social and Economic Affairs commentary at that point of time, which documents that "There is a sense in which rapid economic progress is impossible without painful adjustments. Ancient philosophies have to be scrapped; old social institutions have to disintegrate; bonds of caste, creed and race have to burst; and large numbers of persons who cannot keep up with progress have to have their expectations of a comfortable life frustrated. Very few communities are willing to pay the full price of economic progress". (United Nations, Department of Social and Economic Affairs, 1951: 15).

It must already be evident to you from these two dialogues (ie. President Truman's call for reaching out to the underdeveloped countries and United

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[†]https://avalon.law.yale.edu/20th_century/truman.asp (visited on 24.6.2020 at 10.53)

Nations, Department of Social and Economic Affairs' understanding of need for sacrifice for the sake of economic development) that the post second world war victors placed themselves in an ethnocentric position of superiority where they felt the need to help the countries which they believed were very much in need of their assistance. This put various countries in a scheme of developmental stages through the popular demarcation of 'First World' (Western capitalist), 'Second World' (Soviet, Eastern Bloc and other socialist areas) and 'Third World' (the rest). This is pointed out by Lewis in his paper were he writes that "As an adjective, 'development' implies a standard against which different rates of progress may be compared, and it therefore takes on a subjective, judgmental element in which societies or communities are sometimes compared and then positioned at different 'stages' of an evolutionary development schema. Indeed, development is often understood in Darwinian terms as a biological metaphor for organic growth and evolution, while in a Durkheimian sense it can be associated with ideas about the increasing social, economic and political complexity in transitions from 'traditional' to 'modern' societies"(Lewis 2005:3).

The post second world war conception of development coincided with US economist W.W. Rostow Modernisation theory. This proposed that economic growth would 'trickle down' to the poor, while the transfer of new technology would bring material benefits. He argued that there were a series of stages of development through which traditional, low-income societies moved, ultimately reaching a point of 'take off', based on financial investment, improved governance and modern technologies, which would eventually set them on a course of self-sustaining growth. Part of this idea has continued to occupy the central theme of development, however the theory in itself was recognised as being too unilinear, as other geo-political aspects came to be recognised as time progressed, it located development within the reform of international trade regulations and the free movement of capital between wealthy developed 'North' and a poor, less developed 'South' had its origins in the UN sponsored Brandt Commission report of 1980. A stronger emphasis on historical and political factors was found in the 'dependency' school of development theorists, which brought together radical scholars. It rejected the modernisation paradigm and focused instead on the unequal relationship between North and South in relation to terms of trade, arguing that an active process of 'underdevelopment' had taken place as peripheral economies were integrated into the capitalist system on unequal terms, primarily as providers of cheap raw materials for export to rich industrialised countries. The dependency theory was also critiqued for its over simplification. This shifted the approach of development to the world system perspective. The world systems theory, developed by sociologist Immanuel Wallerstein, is an approach to world history and social change that suggests there is a world economic system in which some countries benefit while others are exploited, however this approach opened up room for possibility of shift/change in economic power making the approach more

dynamic in nature. While there were deliberations on development based on economic relations between the world economic systems, there was also realisation for inclusion of social dimension within development. An international committee recommended the following items to constitute the indicators of development: health, including demographic conditions; food and nutrition; education, including literacy and skills; condition of work; employment situation; aggregate consumption and savings; transportation; housing, including household facilities; clothing; recreation and entertainment; social security; and human freedoms (UNRISD, 1972). Thus, while the significance of economic and technological advancement remained integral parameters of development, there began a recognition for the significance of the social and subsequently cultural dimensions as well, bringing to the forefront the necessity of anthropological engagement in development.

Check Your Progress

1) What is the relationship between development anthropology and anthropology of development?

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2) How are anthropologists' engaged with development?

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3) How was development first conceived/constructed in its modern sense?

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4.2 ANTHROPOLOGICAL ENGAGEMENT IN DEVELOPMENT

Anthropologists have engaged with the applied aspects of social change since pre-colonial times, where they were seen as representatives of the colonisers, helping in the colonising process and came with the related privileges. However, there were also exceptions to this rule with anthropologists like Boas combating racism for the major part of his life. He spoke out against World War I, and the resulting xenophobia and jingoism the war had triggered in America, and staunchly championed for the rights of immigrants and African Americans. Similarly, anthropologists had different positions with respect to social change and development. Bronislaw Malinowski in his book *The Dynamics of Culture Change: An Inquiry into Race Relations in Africa*, 1976 points out that "Unfortunately, there is still a strong but erroneous opinion in some circles that practical anthropology is fundamentally different from theoretical or academic anthropology. The truth is that science begins with application. What is application in science and when does "theory" become practical? When it first allows us a definite grip on empirical reality". Similar thoughts are echoed by Margaret Mead who was a founder member of the Society for Applied Anthropology and spent much of her career addressing important domestic issues in America. During World War II, Mead supported the war effort by working on several applied projects, including national character studies and, later, the study of culture at a distance. However, Mead also believed that "anthropology, as the science of man, has a responsibility which ….we cannot evade" (1964: 12). In her book *Cultural Patterns and Technical Change* (1955), Mead asked how technical change could be introduced "with such regard for the culture pattern that human values are preserved" (1955: v). To think about such things she said was necessary "to protect the mental health of a world population in transition" (1955: v).This builds into the overall idea of development as Lewis points out that "'development' has also come to be associated with 'planned social change' and the idea of an external intervention by one group in the affairs of another. Often this is in the form of a project, as part of conscious efforts by outsiders to intervene in a less developed community or country in order to produce positive change" (Lewis, 2005:3).While on one hand, development is reflected upon as positive change according to the "radical critiques, development is viewed in terms of an organised system of power and practice which has formed part of the colonial and neo-colonial domination of poorer countries by the West" (Lewis, 2005:3).

Anthropological engagement with development puts forth similar conundrum where Grillo points out that "The relationship between anthropology and development has long been one fraught with difficulty, ever since Bronislaw Malinowski advocated a role for anthropologists as policy advisers to African colonial administrators and Evans-Pritchard urged them instead to do precisely the opposite and distance themselves from the tainted worlds of

policy and 'applied' involvement" (Grillo 2002,in Lewis, 2005:1). For Evans-Pritchard, there was nothing wrong per se with the application of anthropological knowledge to practical affairs; but if it were so applied, the anthropologist had to realise that he was "no longer acting within the anthropological field but in the non-scientific field of administration" (Evans-Pritchard 1946:93 in Escobar, 1991). While some anthropologists took to opposed stances yet others like Lucy Mairpoint towards larger positional dilemmas, she says that "We made ourselves the defenders of African cultures against its critics, and against policies aimed at radical change………we used to say that people should learn from the industrial revolution in Europe and so spare Africa its worst horrors. I am not sure what we meant by this……..this is not how people study social change today…………….I think it is true that we look differently at the changes taking place in independent Africa, and this fact is not unconnected with the impatience of Africa's new leaders for ever more rapid change……….are we such timeservers that we change views when power changes hands"(Mair. 1965).

Anthropologists over time have taken different stands in their engagement with change and development. However, there active engagement with the discourse of development started when the apparent failure of economically oriented approaches to development prompted a re-evaluation of development's "social" aspects and goals like health housing education etc.,from early 1970s onwards. There was also subsequent recognition of cultural aspects which until the 1970s was considered purely a residual category, since "traditional" societies were thought to be in the process of becoming "modern". However cultural resistance became inherently problematic in development. And there was growing recognition of the need to take cultural aspects into consideration in order to understand the impact of development projects on local communities and the importance of local knowledge systems for programs. The emphasis on the social and cultural aspects in development opened up unprecedented opportunities for anthropologists. Development experts and agencies, having become discontent with the poor results of technology and capital intensive top- down interventions, developed a new sensitivity toward the social and cultural factors in their programs; however, the development enterprise did not change. The new policies still sought modernisation, anchored their faith on material progress through technology and the exploitation of nature.

Robins (1987:273) writing about USAID in 1970s points out that "earlier assessments of development having revealed that measures of growth in terms of GNP (Gross National Product) and per capita income were illusory for what they disguised about what was happening to the poor, AID took the bold step of declaring its intention to aim assistance more explicitly at disadvantaged populations, the weakest segments of less developed societies". This shift in focus social aspects of inequality, led to the introduction of development projects centered on the poor, where the

program focus was "concerned with the modernisation and monetisation of rural society, and with its transition from traditional isolation to integration with the national economy" (World Bank, 1974). "Poverty-oriented" programs, especially in the areas of rural development, urban poor, health, nutrition, and family planning, thus became the order of the day.

Anthropologists were also incorporated into the development initiatives with the popularisation of the participatory paradigms in development practices, which drew extensively on/from anthropological methodology. Thus, it was proposed that developmental projects had to be socially relevant, culturally appropriate, and should involve their direct beneficiaries in a significant fashion. "Development" was seen to represent an increase in the capacities of a society to organise for its own objectives and carry out its programmes more effectively. (Belshaw, 1974). Further, the 'New Directions' mandate, U.S. AID, around the latter half of 1970s, began to require a "social soundness analysis" (SSA), an assessment of the feasibility, compatibility, and potential impact of a project in terms of the socio-cultural environment in which it was to be carried out. "The social soundness analysis cites the relevance of local values, beliefs, and social structures to the technological package under consideration; promotes cultural integration by fitting innovations into existing social patterns; solicits the impressions villagers and others have of their own circumstances; and evaluates the impact of programs upon people and the way they live" (Robins 1986:19). The social soundness analysis and "knowledge, attitude, and practices" (KAP) studies opened the doors of U.S. AID to anthropologists. While the engagement of anthropologists continued, Robins in his 1987 paper admits that "The introduction of the social soundness component into the AID program was an important and necessary step in the direction of promoting development at the grass roots level. Yet our self-perceived need still to direct programs ourselves has made us reluctant to hand over the reins of project management to host country personnel. Our system of technical accountability encourages us to do more and teach less in our effort to achieve the goals which have been set before us. As a result we are not following a program which is sound; we are not decreasing the dependency upon us of those very nations we are assisting" (1987:277).

The initial rapport between anthropologists and developers started to wane in the 1980s, due to the return to orthodoxy in development thinking with Ronald Reagan, the president of America. This was a period of "rising discontent" (1980-85), which was succeeded by a "quest for alternatives" to (1985-90) during the late 1980s, characterised by a more realistic and pragmatic mood among both anthropologists and developers. There was a shift from project-based approach focusing on capital transfers to global structural policy.

"Frustration with the scale of global poverty, exploitation and inequality led some academics and activists to usher in an era of 'post-development' thinking in the 1990s, which advocated a radical rethinking of the

assumptions and the goals of development, characterised in this critique as a Western cultural mind-set which imposed homogenising materialist values, idealised rational-scientific power and created unprecedented levels of environmental destruction" (Lewis, 2005:4). This led to some scholars advocating a completely hostile stance and resistance to the onslaught of development. The discussion shifted to "development alternatives" and subsequently to "alternatives to development", human rights and sustainable development. After 1990s the development-policy approaches expanded, and the keywords associated with this expansion included sectoral approaches, budgetary aid, structural policy, good governance, new public management, to combat some of the discontentment felt towards the implementation of development.

The beginning of the 21st century was marked by a 15 year plan of Millennium Development Goals (2000-2015), etc. The MDGs were largely determined by OECD countries (**Organisation for Economic Co-operation and Development)** and international donor agencies, and was governed by aid flow. Lewis (2005: 2) writes that "The 'development industry' remains a powerful and complex constellation of public and private agencies channelling large amounts of international development assistance, including inter-governmental organisations of the United Nations, multilateral and bilateral donors such as the World Bank or the United States Agency for International Development (USAID), and a vast array of non-governmental organisations (NGOs) ranging from small specialised, grassroots concerns to large transnational organisations such as Oxfam or the Bangladesh Rural Advancement Committee (BRAC)".

The Eight Millennium Development Goals were:

1) to eradicate extreme poverty and hunger;

2) to achieve universal primary education;

3) to promote gender equality and empower women;

4) to reduce child mortality;

5) to improve maternal health;

6) to combat HIV/AIDS, malaria, and other diseases;

7) to ensure environmental sustainability; and

8) to develop a global partnership for development.

Among other things, the recognition for partnerships, lead to the realisation of significance of Non-government organisations in community level participation and involvement in developmental programs. This again, resulted in the involvement of anthropologists with development because of their association with the civil society. The restructuring of developmental policies allowed for a greater flexibility for grass-root accommodation of developmental programs. The policy framework still remained top down in nature and the challenges of financial power politics remained, however

channels of communication from bottom up opened up with NGOs being able to represent themselves and what they believed to be their community's challenges, on common platforms and international forums. This brought forth greater representation and voices into the discourse of development which was a key in the formulation of Global Development Plan to be achieved by 2030 with the Sustainable Development Goals (SGDs).

4.3 SUSTAINABLE DEVELOPMENT GOALS (SGDs)

The term sustainable development appeared in the late 1970s and was definitely consolidated in 1987 by UN Brundtland Commission. This commission prepared the most broadly accepted definition of sustainable development: "Sustainable development is a transformation process in which the exploitation of resources, direction of investments, orientation of technological development and institutional change are reconciled and reinforces present and future potential, in order to attend to needs and future aspirations (...) it is that which attends to present needs without compromising the possibility of future generations attending their own needs." Due to the increase of world political interest in environmental questions and incitement of social environmental conflicts, there has been increased motivation for debate on the theme in the last few decades. As Sachs (2004) argues, it is in this context that the proposal of Sustainable Development appears as a desirable and possible alternative to promote social inclusion, economic well-being and preservation of natural resources (Soares and Quintella, 2008). Thus a concept which was already a part of the development discourse got re-emphasised in the Sustainable Development Goals.

On September 25-27, during the 70th session of the United Nations General Assembly, UN member states convened a special summit for the adoption of the post 2015 development agenda. This special summit concluded with the adoption of the declaration "Transforming Our World- the 2030 agenda for Sustainable Development" a universal call to action for the betterment of people, planet, prosperity, peace, and partnership which is unprecedented in both scope and ambition. To catalyse cooperative, transformative action at the international scale, the 2030 Agenda includes a set of 17 universally applicable, integrated objectives for sustainable development, which are accompanied by a total of 169 concrete targets and indicators. These objectives are officially referred to as the Sustainable Development Goals (SDGs). The SDGs have significantly expanded on the scale and content of the MDGs. The SDGs are focused on a global development with and-for sustainability, and demonstrate an understanding that the environment is not an add-on or in opposition to sustainable development, but rather the base that underpins all other goals. The following is an overview of the 17 SGDs:

Let us explore some of the reasons why SGDs are more inclusive in nature than the MDGs.

1) Globally collaborative- SDGs where conceived through an inclusive participatory processes. A UN Open Working Group (OWG) made up of 70 countries sharing 30 seats was established in 2013 to draft the SDGs. It was tasked with incorporating a range of stakeholders into their negotiation process. As a result, developing countries, local and sub-national governments, and prominent actors from civil society and the private sector have been able to provide significant input into the content.

2) Universality- In sharp contrast to the MDGs, the Sustainable Development Goals (SDGs) are uniformly applicable to all countries of the world, removing the "developing" versus "developed" dichotomy that left the MDGs open to criticism. The issues in focus apply to rich and poor countries alike. Thus, the SDGs will apply universally to all UN member states.

3) Funding- The MDGs were largely envisioned to be funded by aid flows. The SDGs put sustainable, inclusive economic development at the core of the strategy, and address the ability of countries to address social challenges largely through improving their own revenue generating capabilities.

4) Decentralisation- Decentralised cooperation and vertically integrated action, which leverage and enable the capacities of local government actors, civil societies and private organisations. The local governments and actors can prioritise their focus on issues of concern however, there is a vertical integration as all issues have cross association and an underlying continuity as well as align to a vertical global agenda.

5) Data Revolution**:** The MDGs said nothing about monitoring, evaluation and accountability – the SDGs target by 2020 to "increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.[‡]"

6) Expansion of scope-"Focus Areas" that go beyond the symptoms of poverty, to issues of peace, stability, human rights and good governance, women's empowerment etc.

7) Re-evaluation of qualitative issues- Hunger and Poverty were seen as co-existing in MDG ie. Solving one was seen as a solution to the other. So much has been learned about nutrition since that time, and the SDGs treat the issue of poverty separately from Food and Nutrition Security. Similarly**,** MDGs focused on quantity (eg, high enrollment rates) of education. The SDGs speak of quality of education – of learning – and the role of education in achieving a more humane world: education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development.

The UN hopes the goals will form a framework of rules and ideals that can influence development plans and actions around the world.While a 'culture' has become an integral part of the SGD dialogues, 'culture' is difficult to reduce to a handful of indicators, which still remain an assessment tool for measurement of goals. Moreover, the world needs to be moulded towards a sustainability culture. Both these aspects are crucial areas of anthropological engagement. Anthropologists have a significant role to play in the directioning of the development discourse in terms of critiquing, dialogue on discrimination and social inclusion, human rights, social negotiations and synergies, policy and programme planning (through the entire policy chain), program implementation, creating monitoring evaluation and feedback loops so on and so forth. Anthropology itself being a composite discipline with a holistic perspective has the ability to contribute to a multidisciplinary cross-sectional approach looking at how various SDGs can complement and support eachother. Anthropology also has the methodological know how of bringing 'emic' perspectives into the discourses and can thus contribute towards mobilising people's participation and voices in deciding their own journey on Development.

Check Your Progress

4) Reflect on some reasons that led to active engagement of anthropologists in development in the 1970s?

[‡]https://advocacy.thp.org/2014/08/mdgs-to-sdgs/. Viewed on 28.6.2020. 11.39 pm

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5)   Give at least two salient differences between SGDs and MGDs?

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6)   What are the difficulties faced by anthropologists in the development
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4.4   SUMMARY

We began this chapter with the realisation that anthropologists are engaged
with development in different phases of policy and programme cycles from
different positionalities which range from critical bystander, to active
engagement, to activist stances. Applied anthropologists have played several
different types of roles, including mediation between communities and
outsiders, helping to influence public opinion through journalism or advocacy
work, helping to provide assistance directly during a crisis, or working as
consultants to development organisations (Lewis,2005). These positions are
not static and often change as a result of the ethical dialogue that the
anthropologist has with himself/herself. One of the dilemmas of development
remains that "The other" is only recognised to the extent that it can be
integrated into the 'own'.

Anthropologists find themselves uncomfortable in the movement back and
forth between micro field studies and macro interpretations that are
increasingly necessary. More than any other social scientist they are aware of
the gap between general theory and broad interpretations on the one hand,
and empirical, down to earth interpretations on the other (Belshaw, 1974). In
their own studies, and in spite of themselves, development anthropologists
impose upon local realities social and political analyses that have travelled
well-known terrains. These types of analyses originate in theoretical
traditions in both anthropology and development that are the product of
accumulated scholarly and political action, not merely neutral frameworks
through which "local knowledge" innocently shows itself (Escobar,1991).

The concept of development has travelled a long way from being a top-down monopoly of the developed countries to a more inclusive idea. However, development discourse is dominated by economists, and/or political scientists or geographers who do not generally perceive anthropology as an interesting dialogue partner. The development anthropologists have to often present and "market" themselves, consciously or unconsciously designing their accounts of past experiences to convince current and prospective practitioners of the utility and marketability of their anthropological knowledge to government and industry (Escobar,1991). However, anthropology's contribution to development can neither be neglected nor overlooked, and as anthropologists continue their negotiation with the development discourse avenues of engagement continue to widen.

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4.6   ANSWERS TO CHECK YOUR PROGRESS

1)   Refer to paragraph 3 of section 4.0

2)   Refer to INTRODUCTION and section 4.1

3)   Refer to section 4.1

4)   Refer to paragraph 3, 4 and 5 of section 4.2

5)   Refer to paragraph 13, 14, 15, 16, 17, 18 and 19 of section 4.3

6)   Development discourse is dominated by economists, and/or political scientists or geographers who do not generally perceive anthropology as an interesting dialogue partner. The development anthropologists have to often present and "market" themselves, consciously or unconsciously designing their accounts of past experiences "to convince current and prospective practitioners of the utility and marketability of their anthropological knowledge to government and industry (Escobar,1991).

UNIT 5 APPLIED ANTHROPOLOGY AND MARKET[*]

Contents

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5.1 Anthropological Engagement with Market

5.2 Methodological Contribution of Anthropology in Understanding Markets

5.3 Ethical Discourse in Anthropology of Market

5.4 Summary

5.5 References

5.6 Answers to Check your Progress

Learning Outcomes

After reading this unit the students will learn to:

➤ Define different types of markets and their varied nuances;

➤ Describe the manner in which anthropologists approach the idea of markets;

➤ Identify how anthropological methodology has been utilised effectively to cross-pollinate the field of economics; and

➤ Explain the ethical discourse in using anthropology in mainstream economics.

5.0 INTRODUCTION

"Markets are networks of economic processes and transactions which may occur without specific locations or spatial boundaries for the transactional universe. Markets are also social institutions, often located in geographically distinct places, which encompass specific social, legal, and political processes that enable economic transactions, but also extend far beyond them"(Bestor, 2001:9227). A market is one of the many systems, institutions, procedures, social relations and infrastructures through which parties engage in exchange.

With this in mind, let us begin this lesson by visualising various scenarios of marketplaces that we might have experienced or have seen and heard about.

Think of a supermarket (Figure 5.2) which provides an array of products from fresh food, to groceries, toys, clothes, cosmetics, household utility items, electronic goods and so on. All these products are labelled with price clearly mentioned (usually along with a product description). In case there is

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a discount or a free item to be provided with the purchase it is pre-planned
and mentioned from beforehand for the clarity and choice of the customers.

Figure 5.1:Tribal Market

Figure 5.2: Isle of a super Market

Figure 5.3: Street Vendor

Though there are often attendants to help you find your way through the
supermarket as well as various items displayed on different isles, their key
task is to usually help you in locating things and the relation is formal in
nature. The items you purchase are charged for as advertised and you cannot
bargain on their price and more often than not you end up buying more items
than you require as you are spoilt for choices. Now think of a local
neighbourhood mom and pop store. This store is usually manned by a few
people. You do not necessarily have access to the thing that you need to buy.
You ask for the list of items that you want and they are produced for your
perusal. If you are looking for a particular brand of item and it is not
available then an alternate may be provided. The shopkeeper is usually
efficient at selling this item, he/she might use interpersonal information for
example, if you are a young student looking for a pen, the shopkeeper might
tell you how the product is very popular among people of your age, or how
the product is sought after by the more popular/studious people in this area,
how the product might enhance your image (brand, colour etc.), how the
product might suit your particular requirement (leak proof, smooth writing),
the shopkeeper might even allow you to try the product for the grip of the
pen, smoothness of writing and so on. Your relationship with this shopkeeper
is a quasi-informal one. The shopkeeper and you engage in a conversation.
This conversation might proceed beyond the purchases to include the

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weather, social happenings and injustices, politics, health, neighbourhood gossip, personal details etc. The shopkeeper usually remembers these details and can continue with the conversation during your next visit. You become a regular at this shop where you often engage with the shopkeeper in terms of relational categories like uncle/ aunty or *bhaiya*(elder brother). As, the shopkeeper usually maintains a cordial relation with his customers, it often gives rise to a congenial space for thought exchanges where customers themselves might engage in conversation with each other, making it a social space for engaging in discussions and promoting a comparatively leisurely pace of life. You feel looked after by the shopkeeper. The shopkeeper often remembers your regular purchases and might even produce them before you ask for them, remind you if you are forgetting something, or question you if you have decided to leave out something from your regular list. You buy the branded items at labelled price, however loose items which are not pre-packed can be bargained for. If you want a specific item you might request the shopkeeper to procure it for you and the shopkeeper might do so. You become a patron of the shop and your relationship with the shopkeeper is so strong that the shopkeeper might take an affront or portray displeasure or sorrow if you visit the competition.

Now, think of a weekly farmers/vegetable market or an apparel/common goods market like Palika bazaar or Sarojini Nagar market in Delhi. These markets are often visited in the hope of a good bargain. Negotiations are not only expected every day, but are enjoyed by both the parties (ie. the buyer and the seller) involved. Raised voices and walking away only to come back or to be brought back by the shopkeeper are common phenomena. Though negotiations might involve informal coaxing from both parties the interaction is simply for the purpose of the purchase. In a farmers/vegetable market one not only bargains for a lower price but also expects to procure certain side items for free. There might be similar negotiations with a roadside fruit/vegetable vendor. Contrast to this might be a wholesale market were costs might be cut down drastically based on the bulk of the order, however negotiation in this case is more formal and interpersonal.

Now a tribal market, usually isa vibrant and colourful place which brings together locally produced or procured items along with some items from neighbouring areas as well as the mainstream markets. It uses locally recognised measures for the items sold. These measures may or may not be formal in nature. If you look at Figure 5.1, you will find that vegetables have been arranged in small mounds, each mound is sold for an expected price determined by the seller. The price might be negotiable based on what the buyer has to offer and is at times based on barter of items.

In today's globalised world standardised products exist across marketplaces. Imagine a McDonald outlet in America, England, Thailand and India. the brand is such that it is easily recognisable in different geographies, and while

the food often adopts to the local interests, it also manages to maintain a
distinct identity.

**Applied
Anthropology and
Market**

Many markets are permanent while some are spontaneous, some markets are
periodic, held at regular or irregular intervals, along regional circuits with
peddlers who visit specific sites on a fixed cycle. With the expansion of
information technology, its accessibility and e-commerce, markets have now
become virtual in nature. We can buy and sell goods sitting in our home with
door to door facilities and courier. Internet-based stores and auction sites
such as Amazon and eBay are examples of markets where transactions can
take place entirely online and the parties involved never connect physically.

Each market regulates itself by its own rules, if you go into a supermarket
and try to bargain on the price, or barter goods in lieu of your purchases you
will be shown the door. Similarly if you expect labelled goods with product
description and expiry date in a tribal market you will be left disappointed.
Each market has its own structure and presentation, rules of operation, its
expected socio-cultural behaviour. Further, each market is influenced by the
local and global politics. These markets flourish in spite and in relation with
each other; they co-exist, coincide, network, influence as well as compete
with each other. They exist in continua between informal sectors of society
and highly regulated paces, large-scale business to small-scale family firms,
legal sections as well as illegal spaces (black market), rural markets and
urban markets, physical spaces with physical commodities and virtual spaces
that include intangible financial assets. "Many small-scale markets are
socially embedded in communities, where producers and consumers deal
face-to-face over the vegetables, chickens, or bolts of cloth that are the stuff
of daily life, whether in a peasant community, an urban bazaar, or a farmer's
market in a middle-class suburb. Local markets, as well as much more
specialised ones such as urban wholesale markets of professional traders, are
often organised around complex, multi-stranded relationships that intertwine
gender, ethnicity, class, and kinship, as well as economic role. Other very
different kinds of markets embody diffuse, impersonal (and perhaps
anonymous) ties among trade partners, such as in 'spot markets' where
economic actors interact only through a one-time transaction, as in many real
estate markets, labour markets, and global commodity markets for things
such as sugar, coffee, or rubber. Long-distance trade, both in exotic products
and mundane commodities, may pass through highly specialised
marketplaces that coordinate a regional or a global industry" (Bestor,
2001:9228).

A market is the process by which the tradable item like goods, services,
information etc. are evaluated and priced to facilitate subsequent transfer of
rights and ownership between trading entities. Exchanges may or may not
include transaction of money. Markets can differ by products (goods,
services) or factors (labour and capital) sold, product differentiation, place in
which exchanges are carried, buyers targeted, duration, selling process,

geographic boundaries etc. Markets are influenced by a number of factors including demand and supply, the cost of production, technology and source of product, minimum wages, price ceilings, number of buyers and sellers in the market and competitive pricing, government regulations, taxes, fees and subsidies, income of the population, expectations, rules and customs, legality of exchange, intensity of speculation, size, concentration, exchange asymmetry, volatility and region's openness to foreign trade, and so on. "Whether informal or formal, the frameworks of regulation that encompass the smooth functioning of any market usually mix self-regulating mechanisms created by market participants themselves with those imposed by political or legal authorities. The social, institutional construction of trade and markets is evident in the widely varied price mechanisms, like bartering, bidding, haggling, setting posted prices, or negotiating contracts, as well as discounts, rebates, or kickback, that are established in various markets, reflecting and shaping very different balances of market power among buyers and sellers" (Bestor, 2001).Anthropologists engage in various permutation and combinations of understanding these social phenomena, market places, networks and relationships, structures and organisation, customs and norms etc. which is elucidated further in the next section.

5.1 ANTHROPOLOGICAL ENGAGEMENT WITH MARKET

Anthropological interest lies in both market and marketplaces. Plattner (1989) makes this useful distinction where he specifies "market is the social institution of exchanges where prices or exchange equivalencies exist. 'Marketplace' refers to these interactions in a customary time and place governing exchange… A market can exist without being localised in a marketplace, but it is hard to imagine a market place without some sort of institutions" (p.171). Thus "market places embody a localised set of social institutions, social actors, property rights, products, transactional relationships, trade practices, and cultural meanings framed by a wide variety of factors including, but not limited to, 'purely economic' or 'market' forces" (Bestor, 2001:9227).John F. Sherry, Jr. (1989) points out that *"m*arketplace exchange most typically studied by anthropologists can be characterised by several interdependent processual dimensions and institutional forms. At the level of process, analyses have been locational, interactional and allocational. Locational analysis tracks the spatial flow of goods from production to exchange, or from sale to consumption. Interactional analysis has probed the social relations of transactors, with special attention to features such as bargaining dynamics, trading partnerships and ceremonial gift giving. Allocational analysis describes the outcome of transactions in quantitative economic values" (p.556). Further, transitional society studies are critical to the understanding of articulation and linkage issues, as economies of numerous kinds and scales combine to create a world system or systems (Choate and Linger 1988). "Markets are so routinely regarded as

fundamentally economic institutions that long-standing and quite varied anthropological perspectives on them are often overlooked. Anthropological attention focuses on patterns of individual and small-group exchange relationships within specific markets, on institutional structures that organise markets, and on the social, political, and spatial hierarchies through which markets link social classes, ethnic groups, or regional societies into larger systems. Anthropological studies of markets analyse them as nodes of complex social processes and generators of cultural activity as well as realms for economic exchange. Anthropologists' interests in markets, therefore, are partially distinct from—although certain overlapping with—the concerns of economists" (Bestor,2001:9227). Markets in both tangible goods and intangible intellectual property have expanded to the point where economic transactions have created relationships of exchange between far-flung peoples and led to subsequent transformations in the meaning of money under global capitalism influences, which becomes a fertile ground for anthropological exploration (Gudeman, 2001).

Relationships of exchange in context of a market was first explored in the path-breaking work of Polish-British anthropologist Bronisław Malinowski in the Trobriand Islands recorded in his book the *Argonauts of the Western Pacific* (1922). The Trobriand islanders travelled across islands for trade. This travel undertaken by canoe for at times hundreds of miles was through the unpredictable ocean and was often dangerous and life threatening. What propelled the islanders were a series of simultaneous ceremonial exchanges of trinkets, known as *Kula*, which took place during these trading visits. Malinowski was intrigued by the question that "why would men risk life and limb to travel across huge expanses of dangerous ocean to give away what appear to be worthless trinkets"?He carefully traced the network of exchanges of these trinkets (bracelets and necklaces) across the Trobriand Islands. He found that all *Kula* valuables are non-use items traded purely for purposes of enhancing one's social status and prestige. Carefully prescribed customs and traditions surround the ceremonies that accompany the exchanges. The right of participation in Kula exchange is not automatic. One has to "buy" one's way into it through participating in various lower spheres of exchange. The relationship between giver-receiver is always asymmetrical: the former is higher in status. Kula valuables are ranked according to value and age, as are the relationships that are created through their exchange. Participants will often strive to obtain particularly valuable and renowned Kula objects whose owner's fame will spread quickly through the archipelago. Such a competition unfolds through different persons offering *pokala* (offerings) and *kaributu* (solicitory gifts) to the owner, thus seeking to induce him to engage in a gift exchange relationship involving the desired object. Kula exchange therefore involves a complex system of gifts and countergifts whose rules are laid down by custom. The system is based on trust as obligations are not legally enforceable, however they establish strong, ideally lifelong relationships between the exchange parties (*karayta'u*,

"partners"). Kula was exchanged in a ring like pattern among the various islands, giving rise to the term Kula ring, valuables consisted of red shell-disc necklaces (*veigun* or *soulava*) that were traded to the north (circling the ring in clockwise direction) and white shell armbands (*mwali*) that were traded in the southern direction (circling counterclockwise).The exchange of Kula valuables was accompanied by the trade in other items known as *gimwali* (barter).Marcel Mauss, the author of the book *The Gift* (1925) both debated and expanded on Malinowski's work where he emphasised that the gifts were not between individuals, but between representatives of larger collectivities. He argued these gifts were a 'total presentation' as they were not simple, alienable commodities to be bought and sold, but like the 'crown jewels'which embodied the reputation, history and sense of identity of a 'corporate kin group'. This brought to the forefront a system of relationship that though accompanied by trade, represented a much larger process of customary network.

In today's world of globalisation the capitalist economy is increasingly taking over or influencing all kinds of markets, however one can still find parallel references similar to the revelations by Malinowski. Economic and social costs of exchange include those of establishing trust and reliability among trade partners, soliciting or extending credit, guaranteeing stable sources of supply, enforcing compliance with agreements, recruiting labour, distributing profits, monitoring employees, obtaining information on market conditions, creating or enforcing property rights, managing risk, and so forth (Geertz, 1978). "Various patterns of social structure that enable markets to form and economic transactions to occur are often conceptualised—by anthropologists influenced by institutional economics and sociology—in terms of 'governance structures,' the institutional structures that organise, constrain, and coordinate economic activities, that sanction some behaviours and provide incentives for others. Deferent governance structures—deferent forms of market relationships, deferent forms of business organisation—provide deferent solutions to the challenges of achieving social and economic integration over the 'transaction costs' that all economic institutions must bear. Governance structures are, therefore, social institutions and systems of norms familiar to anthropologists in many other contexts and subject to similar kinds of social and cultural analyses. Governance structures range along a theoretical continuum, from 'market governance' to 'governance by hierarchy'" (Bestor, 2001:9228).

Check Your Progress

1) What is a market? Write down some of its properties.

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2) What is the difference between a market and a market place?

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3) What do anthropologists study under locational, interactional and allocational analysis of a market place*?*

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4) Write some specifics of an anthropological perspective of market.

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Anthropologists focus ethnographically on the social structure of markets as institutional systems, the transactional behaviour of market participants, and networks among trade partners or among markets (Plattner 1985). They emphasise how economic activity is embedded in social institutions and relationships which structure solutions to economic problems (Acheson 1994). Anthropological insight brings to the forefront the way in which various communities and people have their own systems of belief. Equipped with this knowledge and understanding of people and communities anthropologist can provide a cross cultural perspective and contribute significantly to building synergies between different marketing practices. As we dwell further into applied aspects of anthropology let us look at how research methodology and methods of anthropology are used for understanding markets.

5.2 METHODOLOGICAL CONTRIBUTION OF ANTHROPOLOGY IN UNDERSTANDING MARKETS

"Anthropological analyses of markets are often ethnographically focused on market places while anthropological approaches to markets sometimes focus on the formal properties of exchange systems as frameworks for organising

behaviour, relying on quantitative analyses of exchange relationships. However, anthropologists generally place such analyses within wider ethnographic contexts that see market places as specific locations and social frameworks, characterised not only by economic exchanges in and among them, but also by their equally vital roles as arenas for cultural activity and political expression, nodes in flows of information, landmarks of historical and ritual significance, and centres of civic participation where diverse social, economic, ethnic, and cultural groups combine, collide, cooperate, collude, compete, and clash" (Bestor, 2001:9227). An anthropological study of markets is often ethno specific but with a holistic approach. Anthropological and sociological analyses emphasise this 'embeddedness' of markets in on-going patterns of social organisation and cultural meaning (Polanyi et al., 1957; Granovetter, 1985); that is, "economic behaviour is not analysed as an autonomous sphere of human activity, but as inseparably intertwined with a wide variety of social, political, ritual, and other cultural behaviours, institutions, and beliefs" (Bestor, 2001:9227).

Central place theory analyses the spatial distribution of markets within hierarchies of settlements ('centralplaces'), and within anthropology has been applied to peasant marketing systems and to interrelationships among urban markets. Alignments of trading patterns within market systems have been shown to be important indicators of a wide variety of other social, political, administrative, and ritual aspects of local, regional, and national organisation. Also known as 'regional analysis,' this approach was developed in anthropology by Skinner's ethnographic and historical research on China (Skinner 1977), and by extensive studies in Meso-America and elsewhere (Smith 1976).

Further, in the space of research methods, Bronislaw Malinowski (mentioned in the previous section), contributed (through his study of Trobriand Islands) to anthropology and to the understanding of markets through his methodological contribution to fieldwork, participant observation and the significance of ethnography which subsequently led to its establishment as a professional field. Anthropology has constantly engaged with market through its various subfield i.e. 'economic anthropology','industrial anthropology', 'anthropology of work', or 'applied anthropology in industry'in 1980s through 'business anthropology' in niches related to consumer behaviour and marketing which became a critical space for engagement in applied anthropology and mainstream economics. JohnF. Sherry, Jr. (1989) writes that "familiarity with the work of economic anthropologists could greatly assist marketers and consumer researchers in understanding marketing related behaviours in all types of societies, and facilitate practical, humane, culturally appropriate intervention in each type of society by local or foreign, private or governmental entrepreneurs and "developers." Conversely, familiarity with the work of marketers and consumer researchers could greatly assist anthropologists in understanding and interpreting the range of economic behaviour in complex society".A number of economic anthropologists have

used Bourdieu's perspectives on 'taste,' 'distinction,' and 'cultural capital' as points of departure for examining the cultural force of markets in shaping contemporary urban life. The call for an anthropology of consumption was formally issued by Douglas (1976), who forcefully argued that a systematic account of consumers' objectives had not yet been rendered, and that any proposed account should be consistent with a communications theory of the use of goods. Believing that consumption is ultimately about power, Douglas and Isherwood (1979) view the individual overriding objective of a consumer as being the acquisition and control of information about the changing cultural scene, to assure inclusion in "shared civilities." This focus on the exchange of information to the exclusion or slighting of other dimensions of consumption have provided other researchers with a point of departure for additional investigation, and a contextual framework in which to embed their own studies. Anthropologists such as Amould (Wallendorf and Amould 1988), McCracken (1986, 1988) and Sherry (1986) have used a cultural perspective to explore structural and processual dimensions of consumption phenomena, while Appadurai (1986) and his colleagues have launched an inquiry into the "social life" of consumption objects.

A comparative research at the culture level is also suggested (Mooij, 2004). McCracken (1990) demonstrates how the consumption process has meanings that resonate from culture. For McCracken, consumption is broadly defined to include the processes by which consumer goods and services are created, bought, and used. According to McCracken, the relationship between culture and consumption is profoundly interrelated within three contexts: history, theory, and practice. As such, anthropology and especially its ethnographic methods have been becoming increasingly popular sources from which to borrow tools to investigate marketing and consumer behaviour since the late 20th century (Olsen 1995).

Businesses and other organisations are increasingly hiring anthropologists and other ethnographically-oriented social scientists as employees, consultants, and advisors working as suppliers of consumer-insight for product design and marketing or as researchers of corporate ethnography looking at organisational practice, work design or business/marketing and organisational strategies and rethinking the nature of ethnographic praxis in the process.

As ethnography is a time intensive process and consumer research stipulates quick information in order to remain up-to-date in a highly competitive market, marketers have successfully employed many aspects of an anthropological perspective in marketing, in a shorter time frame. What results cannot be called an ethnography (nor are they designed to be), however, is usually complete enough to help the marketers understand the driving forces that shape consumers' belief and behaviours in a particular market (Tian, 1998). It is claimed that there is no better way to get close to the consumer or any other marketplace stakeholder for that matter, than by using ethnography as a bridge.

Observation is a principal method in anthropological marketing research. This skill is not just used in the conventional method of ethnography but also in more high tech modes like videotaping consumers in their natural habitats. The anthropological approach encompasses both a way of viewing consumer behaviours and techniques for understanding those behaviours (Sherry, 1995). Interview, is another method that is effectively used by anthropologists in understanding consumers. By recording in great detail how people live and how products fit into their lives, anthropologists often gain useful information that could not be easily gained from a formal interview. Griffith (1998) using semi-structured interview technique conducted research among both buyers and sellers in Jordan's central marketplace and illustrated a few of the many ways culture may influence one aspect of a retail structure in tradition-based societies. In a similar study, Rossiter and Chan (1998) found out that ethnicity plays a significant role in doing business and consumption. "Anthropological approach employs more subjective and qualitative methods that are invaluable within a number of contexts. Abrams (2000) indicates that in some cases quantitative analysis might not help decision makers to truly understand consumers, while "descriptive anthropology" (qualitative and observational) research often provides revealing insights. In recent years, anthropologically-inspired research tactics have become increasingly prominent within consumer research. For example, Thompson and Hirschman (1995) applied classic anthropology theories to study the consumers' self-conception of body images and self-care practices in the modern urban society to help the marketers understand the relationship between consumer "socialised body" and consumption behaviour. McFarlane (2001) observes that when consumer reaction to a new product needs to be determined, companies traditionally turn to the qualitative focus group (another qualitative method)"(Tian,2005:37).

Anthropology has also helped international businesses understand diverse cultures in order to operate effectively within different contexts. Effective use of anthropological methods has made a significant mark on consumer and marketing research, however it remains a space that anthropologists need to tread carefully with ethical consciousness.

5.3 ETHICAL DISCOURSE OF ANTHROPOLOGY IN MARKET

The applied aspect of anthropology has to engage in an ethical commentary as it has tremendous potential to influence people. Anthropologists need to traverse a delicate line in determining the direction that this influence takes. The mainstreaming of anthropological usage in the economic sphere of marketing and consumerism lends hand to global capitalism thus stream rolling over domestic and indigenous constituencies. Social science techniques in service of market research stand accused of promoting alienation and dependence among contemporary consumers in a fashion

similar to the mafias among Sicilian peasants (Gait and Smith, 1976). Whether the so-called globalisation of markets which are being witnessing are a desirable, irreversible trend resulting in the improvement of the life chances of all participants, and which should be catalysed and managed by standardised marketing interventions (Levitt, 1983), or an undesirable, reversible manifestation of ethnocentric conceptions of progress which disrupts the ecological, social and psychological balance of its unwilling conscripts, and which should be arrested or redirected by enlightened social policy (Bamet and Muller 1974; Bodley 1982) is a topic in urgent need of exploration (Sherry 1987).

The chasm of ethics and social responsibility needs to be bridged by studying the consequences of marketing decisions supported by social scientific research. Marketing requires "a greater commitment to theory-driven programmatic research, aimed at solving cognitive and socially significant problems" (Anderson, 1983). There is need for informed consumer consent in research, a clear understanding of common objectives and a stimulated exercise in comparative ethics to assess accurately consumer demand and provide feedback on the long term consequences at individual and systemic levels. "Research into consumption and marketing factors contributing to commerciogenic disease (Gerlach, 1980), dietary degradation (Whiteford, 1983), social disruption (including forced emigration, de-skilling, household decomposition, etc.) attendant upon the new international division of labour (Barkin 1983, Femandez-Kelly 1983, Safa 1983), and waste and inefficient use of resources (Sprague and Shimkin 1981) might be undertaken, and the findings used to frame marketing oriented solutions to these problems" (Sherry, Jr.,1989:559).

There is indeed significant anthropological contribution to this as well. Sherry (1983), points out that "to the extent that the spread of industrial capitalism may be held responsible for the "marginalisation and immiseration of the world's poor" (Hoben, 1982), we have been critical of corporate enterprises that fuel the processes of disenfranchisement at home and abroad. When governments have been destabilised (as in Chile), when the health of consumers has been jeopardised (as in the marketing of infant formula and various pharmaceuticals in the Third World), when products become a threat to healthy socialisation (as in the marketing of such video games as Cluster's Revenge), when culture change itself becomes dysfunctional (as in Harris' account of the aborted "American dream"), anthropologists have taken corporations to task. "This tradition of critically appraising and assessing culpability, of gauging the social impact of business activities, has culminated in Taussig's (1980) eloquent discussion of the shqing by commodity fetishism of epistemology and praxis" (p.25). He says that "anthropology needs to "transcend the narrow, reactive advocacy role of championing the alienated worker and to assume a more proactive, advisory role in drafting and implementing humane strategic plans at the corporate organisation level" (Sherry, Jr., 1989:558). Towards this Sherry, Jr. (1989)

writes that *"the quickest and most productive tack to pursue in forming an alliance of disciplines would be to alert marketers and consumer researchers to the predisposition of anthropologists toward advocacy, and to apprise anthropologists of the existence not only of social, macro and non-profit marketing, as well as consumer research, but also of the variety of regulatory bodies interested in applied consumer research"* (p.559).

Check Your Progress

5) What are the two key contributions of Bronisław Malinowski to the study of markets in anthropology?

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6) What was Mary Douglas' key argument when she called for an anthropology of consumption?

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7) Why do business houses hire anthropologists?

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8) How can anthropologists abide by an ethical and socially responsible behaviour in consumer research?

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5.4 SUMMARY

We have looked at a number of anthropological insights into the study of markets, the use of anthropological methodology and the advantage of anthropological methods in an in-depth holistic understanding of markets and some ethical dilemma and discourse of the applied aspects of anthropology. We have actively looked at consumer behaviour and marketing as a space for cross pollination between anthropology and economics. Worth mentioning in this space is the virtual space which is ever expanding and needs active involvement of people and communities in this globally networked space. The variety of marketing apps ranges from consumer goods, to food, to investment, to health and so on. Further, there is a glancing mention of corporate ethnographies, which is an equally crucial area of exploration as multinational and transnational organisation operating in multiple geographical locales need constant support including the assistance of how employees that transit between these geographies can conduct as well as assimilate themselves in the new environment. Another, fertile and significant area of exploration is that of (CSR) Corporate Social Responsibility where corporates engage with communities for socially relevant purposes. Anthropologists can contribute significantly in this area by initiating a discussion between financial values and socio-cultural values.

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5.6   ANSWERS TO CHECK YOUR PROGRESS

1)   Refer to section 5.0

2)   Refer to section 5.0

3)   Refer to paragraph 1 of section 5.1

4)   Refer to section 5.1

5)   Refer to paragraph 3 of section 5.2

6)   Refer to paragraph 3 of section 5.2

7)   Refer to paragraph 5 and 6 of section 5.2

8)   Refer to paragraph 2 and 3 of section 5.3

UNIT 6 APPLIED ANTHROPOLOGY AND HEALTH[*]

Contents

Learning Outcomes:

After reading this unit the students will learn to:

➢ Define the anthropological notion about health;

➢ Develop insight about the role of applied anthropology in health promotion and management with an emphasis on allied domains; and

➢ Capture the application of applied anthropology to health research in Indian context

6.0 INTRODUCTION

We know that anthropology is primarily holistic and empirical, centering on field based research. Anthropologists have perpetually utilised their knowledge to holistically explore and unravel issues faced by communities or population across the world. They always attempt to bridge the gap between the policymakers (and government officials) and the target communities and aid to formulate effective policies for betterment and development of communities.

Owing to its holistic vision, anthropological research domain frequently overlaps with history, public administration, psychology, sociology and increasingly health sciences. Professionals from health sciences often consult anthropologists in public health management and promotion. This paves way for the development of applied anthropology.

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They employ anthropological knowledge and methods (fieldwork, participant observation, qualitative research tools: focused group discussion, in-depth and key informant interviews, semi-structured interviews and many more) to solve health related issues at hand in institutional or public domain thereby ensuring survival and wellbeing of at-risk groups.

They are devoted to holistic understanding of health unraveling all aspects associated to health, disease and illness. They also seek to understand attitudes, beliefs and ideas related to health behaviour and promotion and illness and the connections between social stratification (gender, social class and ethnic construct) and access to healthcare services. This aids the healthcare professionals to develop intervention strategies suited to socio-cultural context of communities across the world.

It is quintessential to understand the anthropological notion about health so as to develop insight about the scope of applied anthropology in health research and services. Henceforth in the following section we will learn: what is the anthropological view about health? What is the role and scope of applied anthropology in health promotion and management? We will also capture the application of applied anthropology to health in Indian context.

Check Your Progress

1) What role does applied anthropologists play in field of health research?

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6.1 ANTHROPOLOGICAL VIEW OF HEALTH

The concept of health is simpler to understand but difficult to express and define. Many of us view health as absence of disease (or infirmity). An anatomist may associate health with normal anatomical structures. But does this completely define health? The concept of health is much more complex and deep-rooted. If an individual is physically and mentally active and healthy, but if her/his social condition is not good and deprived, she/he cannot achieve complete or 'holistic' health. Thus the basic essence of health is perceived as complete physical, mental and social wellbeing. The right to health is our fundamental human right with health being our most basic and essential asset irrespective of our age, gender, socio-economic or ethnic identity (WHO, 2006).

Here let us differentiate between illness and health. Illness is the experience of disease within socio-cultural context. It is futile and unproductive to a society as it inhibits effective performance of social roles. Health, on the other hand, is vested in functional necessities of society.

Box.6.1: Definition of health

World Health Organisation, in 1948, defined health as "a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity" (WHO, 2006). The above definition puts forward the concept of complete wellbeing highlighting that in addition to physical and mental health, social welfare is also a vital component of the complete health. The concept of physical health is linked with 'allostasis' i.e. the maintenance of physiological homeostasis through changing circumstances (Schulkin, 2004). The defining criterion for mental health was 'a sense of coherence' which allows an individual to successfully cope and convalesce from strong psychological stress and prevent post-traumatic stress disorders (Antonovsky, 1979: 1984). Social health includes the ability of people to accomplish their potentials and obligations, manage their life and involve in social activities including work (*Brüssow,* 2013).

Health is a major paradigm under anthropology research domain. The theoretical approaches, offering conceptual insight about understanding of human health, are as follows: (a) epidemiological or ecological (and bio-cultural) approach – this approach views and assesses health as an outcome of interaction between culture and the natural environment; (b) critical medical anthropology – this approach assesses how economics and politics influence human health focusing upon social class and social relations (c) interpretive approach – this approach gives importance to meaning and interpretation and examines the way culture utilises symbolic meaning to illustrate and understand health phenomena (Hill, 1985; Grønseth, 2009).

Anthropologists often use a bio-cultural perspective to study the health profile of a community. Under bio-cultural approach, human beings are perceived as biological and cultural beings in association to the environment (McElroy, 1990). Human beings are bio-culturally integrated entities and their health is an outcome of the interaction between biological and cultural attributes. Extrapolating further, the interaction between socio-culture and socio-biological nuances, the genetic characteristics and the environmental parameters defines the health of a community (Regmi, 2001).

The health status of a community indicates how well the community is adapted to their environment (including physical, biological, and cultural) (Meera, 2007). Bio-cultural studies device various demographic, phenotypic and genetic attributes such as fertility, morbidity, mortality, genetic traits and markers, anthropometric measurements and indices, blood pressure, hemoglobin and so forth to serve as indicators of the health and survival of human populations in varied environmental settings (Khongsdier, 2007).

Every culture, regardless of its level of complexity, possesses its own perception and beliefs regarding healthcare and health seeking behaviour. This is often termed as "*Health Culture*" (Regmi, 2001). This health seeking behaviour is a vital component of the overall cultural complex of the
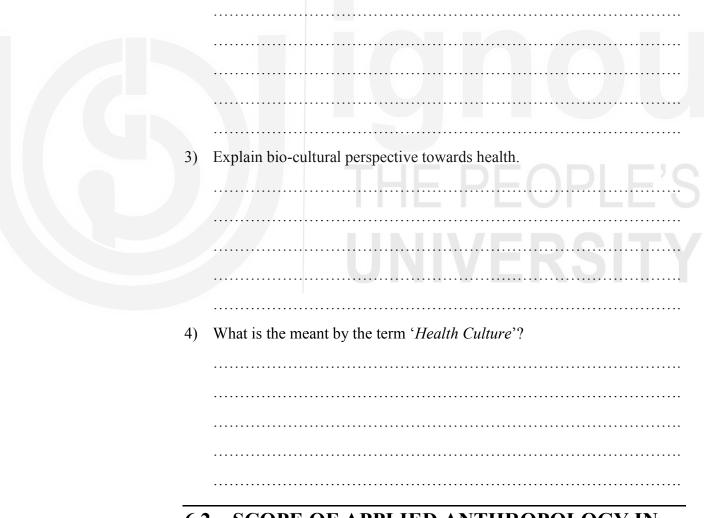
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community. Langdon and Wiik (2010) suggested that the "*cultural system of health*" lays emphasis upon the symbolic aspect of health and covers the knowledge, beliefs, perceptions and cognitions used to view, interpret, classify and explain disease. The prevalent indigenous healthcare practices, use of indigenous medicines, taboos, beliefs and superstitions define the health seeking behaviour and health profile of the different ethnic groups and communities across the world.

Further social scientists and social epidemiologists, in recent years, have focused upon an array of social and cultural variables such as socio-economic status, gender roles, acculturation, psycho-social work environment, social network and support, poverty and deprivation as antecedents of health (Blazer and Hernandez, 2006).

Check Your Progress

2)   What is the essence of physical and social component of health?

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3)   Explain bio-cultural perspective towards health.

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4)   What is the meant by the term '*Health Culture*'?

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6.2   SCOPE OF APPLIED ANTHROPOLOGY IN HEALTH PROMOTION AND MANAGEMENT

We have by now understood the anthropological notion of health. Now it is important to develop insight about the role of applied anthropology in health promotion and management.

6.2.1 Anthropology in Medicine

Medical anthropology or "anthropology in medicine" is an important domain in applied anthropology focusing upon health related events. In the simplest sense, medical anthropology applies anthropological and social science knowledge, theories and methods to understand health, illness, disease and healing among the range of human societies and cultures. Medical anthropology studies socio-cultural facets of human healthcare system, health and disease and bio-cultural adaptation (Mc Elroy, 1996). Medical anthropologists focus upon the strategies and practices formulated by different human communities in order to counter disease and illness. It assesses the relationships between cultural and social institutions governing people's beliefs and perception about etiology of disease and their health behaviour.

Medical anthropologists view and illustrate health, illness and healing from socio-cultural, magico-religious and politico-ecological constructs. They study ethno-medical practices prevalent in socities across the world. Bhasin (2007) stated that medical anthropology aims at the "evaluation of health, illness and cure from both an emic and etic point of view; naturalistic and personalistic explanation, evil eye, magic and sorcery; biocultural and political study of health ecology; types of medical systems; development of systems of medical knowledge and health care and patient-practitioner relationships; political economic studies of health ideologies and integrating alternative medical systems in culturally diverse environments". Medical anthropologists work in diverse settings such as rural villages, clinics, health centres and urban hospitals.

Ethnomedicine is an important dimension in medical anthropology field. It is synonymous with folk or primitive medicine. It simply caters to oral tradition of indigenous healthcare practices prevalent in rural and tribal regions. Ethnomedicine also relates to cultural context of illness and healing. Medical anthropologists make a distinction between bio-medicine and ethno-medicine where the former is linked with the "western" medical system and later is associated with the local system of traditional and indigenous beliefs, customs and practices associated with health and illness (Sikkink, 2009). Ethnomedical studies takes into account association between medical and religious institutions, effectiveness of traditional health care system; diagnosis and treatment methods, study of traditional healers, the knowledge and prevalence of illness and medical pluralism (Bhasin, 2007).

Humans adapt to different environmental regimes not only through genetic and physiological mechanism but also through cultural knowledge and individual coping mechanisms. Medical anthropologists often lay emphasis upon the dynamic interactions among human biological (or phenotypic), socio-cultural and psychological attributes in response to the environment to understand health related events. This paves the way to the development of bio-cultural medical anthropology. It is a subfield of medical anthropology,

which emphasises that humans are bio-cultural beings and their health is shaped from the interaction between biological and cultural processes. The critical bio-cultural approaches in medical anthropology have led to the development of social epidemiology in the domain of public health surveillance.

Medical anthropology lays emphasis upon interdisciplinary research. It initiated as collaborative research efforts among human biologists, ethnologists, and linguists; eventually anthropological research was allied to sociology, economics, medical sciences, public health and nursing (McElroy, 1996). The research domain of medical anthropologists is not limited to epidemiology, human evolution and anatomy, characterisation of health and disease, mental health and public health but also cover patient-healer relationship, paediatrics, drug abuse, training and functioning of medical personnel and medical bureaucracies and integration of traditional medicine with biomedicine (Gartaulla, 2008 and Freidson, 1976)**.**

Check Your Progress

5) Elucidate the concept of ethnomedicine.

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6) What is the research domain of medical anthropology?

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6.2.2   Public Health Management

Public health simply aims towards promotion and restoration of health and disease prevention through planned and systematic efforts made at individual, community and even societal level. Winslow (1920) defined public health as "the science and art of preventing disease, prolonging life and promoting health through the organised efforts and informed choices of society, organisations, public and private, communities and individuals". Community participation is a critical component in the field of public health as it aids to promote and prevent health using concerted and organised efforts.

Both public health and anthropology primarily focus on community based research wherein the former seeks to develop suitable intervention strategies to boost and strengthen community health and improve quality of life and the latter assesses the socio-cultural institutions of community or group of people. Applied anthropologists have made pivotal contributions to the field of public health. These contributions are not limited to methodological refinement and data interpretation but also extend to development of suitable intervention strategies and effective policy making in the field of public health.

The use of ethnography for systematic data collection; combination of qualitative and quantitative tools (for instance use of focus group discussions, in-depth interviews, and participant observations along with physiological, anthropometric and serological examination) for the collection of descriptive and formative data have aided in methodological refinement and offer more concrete interpretation of result related to health data.

The *medical-ecological* perspective relates bio-medicine to bio-cultural aspect of anthropology. This provides comprehensive understanding of health related events as adaptive, dynamic and population-based phenomena. Medical anthropology also plays a crucial role in public health management and promotion. It assesses the relation between biological and cultural context of disease, effect of disease on human evolution, resistance to disease susceptibility in context of different genetic framework and suggests ways to link modern medical healthcare practices with traditional communities or societies. In addition applied anthropologist also play critical role in examining the effectiveness of existing public health programs and activities of public health organisations.

Check Your Progress

7) What is the meaning of 'public health'?

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8) Describe the role of medical anthropologists in the field of public health.

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6.2.3 Epidemiology

Now we know that anthropological subfields offer significant contribution to the field of public health. But does anthropology play a crucial role in understanding disease susceptibility and genetic make-up of humankind? Yes, it does as it has application in the field of epidemiology and human genetics.

Epidemiology is the scientific and systematic study of health related events in specified population using data-driven methods. Olsen et al (2000) comprehensively defined epidemiology as "the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems".

Over the last 30 years, applied medical anthropology has developed into a more essential discipline in the field of public health. Although both epidemiology and medical anthropology initiated with a common aim to describe human population health using observational techniques but over the years the cross-disciplinary collaboration between epidemiology and anthropology has been highly debated (Trostle, 2005). This was owed to the stereotyped and unhelpful dichotomies – including deductive-inductive, quantitative-qualitative; specific-generalisable; natural-artificial factors between the two disciplines.

Epidemiologists are cognisant about the analytical and interpretive limitations of epidemiological research (Black, 2001). Classical epidemiologists focus upon 'why and how' a particular disease occurs in a geographic domain. But it is also important to know 'why and how' the above disease fails to manifest and occur in different geographic domains even if the ample opportunities for disease transmission are available. In the above context, the use of ethnographic information can play a crucial role in the interpretive enhancement of epidemiological results. The ethnographic data throws light upon cultural context of any particular health related event and thereby offers broader and more concrete understanding of the event.

In addition to religion, kinship, subsistence and marriage pattern, ethnographic data also takes into account emic perspectives of the community about health, illness and disease and traditional healthcare system. This will not only aid an epidemiologist in interpretive enrichment of a health related event but also improve acceptability in doing epidemiological surveys (socially suited questionnaire design) (Béhague et al, 2008) thereby strengthening public health surveillance and policy development.

This has provided platform for epidemiological and anthropological collaboration leading to development of epidemiological anthropology. Epidemiological anthropology not only focuses upon distribution and determinants of disease in varied communities or societies but also delineates cultural and biological parameters, which either restricts or allow a disease to manifest in a population.

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Check Your Progress

9) Define epidemiological anthropology.

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6.2.4   Molecular Genetics

Molecular anthropology and anthropological genetics are two prominent research domains of anthropology dwelling into molecular genetic research. The term "molecular anthropology" was coined by biologist Emil Zuckerkandl to illustrate primate phylogeny and human evolution through analysis of the genetic information encoded by proteins and polynucleotides (Sommer, 2008). Molecular anthropology utilises molecular genetics tools and techniques to answer questions posed by anthropologists concerning aspects of human and nonhuman phylogenetic relationships, variation and peopling process, gene-environment interactions and genetic predisposition to common and complex diseases.

It focuses upon human genetic polymorphisms utilising DNA analysis with an aim to reconstruct human population structure, histories and evolution (Mastana, 2007). The examination of genetic polymorphisms can help us to understand how the past demographic incidents and selection have carved variation in the human genomic make-up. Molecular anthropology has vital applications in the field of forensic science evolutionary biology and disease analysis.

Anthropological genetics devices concepts, knowledge and methods of genetics to address anthropological inquest concerning the course of human evolution, human migration and spread out of Africa, human variation and bio-cultural contribution to complex diseases (Crawford, 2007). Here, let us make a distinction between anthropological genetics and human genetics.

The Table 6.1 depicts that the difference between anthropological genetics and human genetics lay in the fact that the former gives emphasis on smaller, reproductively isolated, non-Western populations while the latter focuses upon large urban clinical samples. The former also endeavours to quantify environmental effects using co-variates of quantitative phenotypes while the latter lays less emphasis to quantify the environmental influence so as to examine the influence of environmental-genetic interactions (Crawford, 2007). Anthropological genetics thus devices bio-cultural approach on human evolution and etiology, and transmission of complex diseases.

Table 6.1 delineates conceptual differences between two disciplines.

Table 6.1: Anthropological genetics and human genetics: conceptual differences

S. No.	Anthropological genetics	Human genetics
1	Broader bio-cultural perspective on genetic/environmental interactions	Mechanisms and processes – particularly in disease
2	Population focus, pedigrees utilised to measure familial resemblance	Families of proband, twins and twin families
3	Small reproductively isolated population – often non-western.	Larger, urban, and clinical samples
4	Culturally homogeneous populations	Populations may be heterogeneous by race, socio-economic factors, occupation, and lifestyle
5	Sampling representative of normal variation in population	Sampling based on clinical ascertainment
6	Attempts made to characterise and measure the environment	Environmental variation rarely assessed. It is assumed that: $e^2 = 1 - h^2$
7	Study of normal variation in complex traits	Dichotomy of disease vs. normality – usually observed

c.f.: Crawford, 2000

Check Your Progress

10) How is anthropological genetics different from human genetics?

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6.3 SCENARIO IN INDIA

We know now that applied anthropology has made critical contribution to health management and promotion. Several researches have been conducted in the India highlighting the use of applied anthropology in the field of health research.

In India, people living in tribal and rural domains associate illness with natural and supernatural causes. The supernatural causes of illness include evil-spirit invasion, evil-eye effect, wrath of deities and failure to perform a

ritual and bad deeds of the past (Kapoor, 2006, Bhasin, 2007). It has been opined that tribal people have immense faith in four main spirits - protective deities: worshipped at community level and associated with the village welfare; benevolent spirits: worshipped at family and community level; ancestral spirits: very benevolent spirits that protect family members and malevolent (or evil) spirits: controlling disease such as small pox, abortion, fever etc., (Sahu and Mukherjee, 2008). Bhasin (2007) stated that in Rajasthan (in North India), pox diseases are attributed to three mother goddesses or deities- chicken pox (Acparo); small pox (Bari Mata) and measles (Choti Mata).

Five principle types of disease treatment methods exist- traditional medicine alone; spiritual healing alone; traditional medicine alongwith spiritual healing; other variants of alternative medicine and bio-medicine (Bhasin, 2007). Each tribal society has its own assemblage of traditional healers. These traditional healers use indigenous healthcare strategies, herbal medicines, religio-magic approach to cure ailment and diseases. These traditional healers lack basic scientific knowledge of disease etiology and treatment and primarily focus on socio-cultural context of health and illness.

Tribal and rural communities, even today, lay more emphasis on the traditional health care system rather than biomedicine system. But it is important to state that Indian medical policy is comprehensively pluralist. It does not solely rely upon traditional medicine alone and also uses the benefits of bio-medicine.

6.4 SUMMARY

We have now developed an insight about the role of applied anthropology in health research areas. The concept of health is mutlifaceted. It takes into account physical, mental and social wellbeing. Applied anthropologists lay emphasis upon holistic understanding of health. They are skilled to ascertain effectiveness of research designs, tools of data collection, and intervention strategies and ensure that these are culturally modified to suit the needs of specific communities or population groups.

They play a critical role in addressing health related phenomena and assess health, disease and illness from the focal point of medical anthropology, epidemiological and molecular genetics aspects. They assess and explore health, disease and illness from various virtues ranging from traditional healthcare system, indigenous health care practices, emic and etic perception about health related events, patient-healer dynamics to bio-cultural and genetic aspects of health and disease, impact of disease on human evolution and bio-cultural resistance to disease susceptibility in context of different genetic constitution.

Collaborative and multidisciplinary researches of applied anthropology with other disciplines such as epidemiology, public health and social sciences will

offer more support, credibility and recognition to anthropological research in the field of health sciences. At the same time such collaborations will also resolve the methodological limitations faced by classical health disciplines with which applied anthropology collaborates. Therefore applied anthropologists should receive more acceptability within the anthropological discipline, increased collaborative research efforts and improved community involvement in the near future.

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https://www.who.int/governance/eb/who_constitution_en.pdf.

6.6 ANSWERS TO CHECK YOUR PROGRESS

1) Applied anthropologists devise anthropological methods and techniques
to decipher health related issues and ensure survival and wellbeing of at-
risk groups. They lay emphasis upon 'all-inclusive' understanding of
health and seek to understand attitudes, beliefs and ideas related to health
behaviour and illness and the connections between social stratification
and access to healthcare services.

2) The concept of physical health is linked with 'allostasis'. Social health
on the other hand refers to the ability of people to effectively carry out
their potentials and responsibilities and engage in social activities. Refer
to Box. 6.1

3) Under bio-cultural approach, the health of individual or a population is
assessed by an outcome of the interaction between biological and
cultural attributes in association to the environment.

4) Every culture, regardless of its level of complexity, possesses its own
perception and beliefs regarding healthcare and health seeking behavior.
This is often termed as *"Health Culture"*.

5) Ethnomedicine is an important subject domain in medical anthropology.
It is, synonymous with folk or primitive medicine, widely prevalent in
rural and tribal regions. It caters to oral tradition of indigenous healthcare
practices and study of traditional healers, the knowledge and percpetion
towards illness in socio-cultural context. Refer to section 6.3.1

6) The research domain of medical anthropologists covers indigenous
health culture, human evolution and anatomy, characterisation of health
and disease, epidemiology, mental heath and public health, patient-healer
relationship and integration of traditional medicine with biomedicine
system**.**

7) Public health simply aims towards promotion and restoration of health
and disease prevention through planned and systematic efforts made at
individual, community and even societal level. Community participation
is a critical component in the field of public health as it aids to promote
and prevent health using concerted and organised efforts. Refer to
section 6.3.2

8) Medical anthropology also plays a crucial role in public health
management and promotion. It assess relation between biological and
cultural context of disease, effect of disease on human evolution,
resistance to disease susceptibility in context of different genetic

framework and suggests ways to link modern medical healthcare practices with traditional communities or societies. In addition applied anthropologists also play a critical role in examining the effectiveness of existing public health programs and activities of public health organisations.

9) Epidemiological anthropology not only focuses upon distribution and determinants of disease in varied communities or societies but also delineates cultural and biological parameters which either restrict or allow a disease to manifest in a population.

10) Anthropological genetics and human genetics lay in the fact that former gives emphasis on smaller, reproductively isolated, non-Western populations while the latter focuses upon large urban clinical samples. Refer to section 6.3.4

UNIT 7 APPLIED ANTHROPOLOGY AND EVALUATION OF BODY[*]

Contents

Learning Outcomes

After reading this unit the students will learn to:

➢ Define the concept of anthropometry and design anthropometry;

➢ Describe the applications of anthropometry in various fields of designing;

➢ Identify physiological anthropology

➢ Explain about kinanthropometry and its applications

7.0 INTRODUCTION

First of all, you need to understand the basic knowledge of anthropometry before we start discussing in detail about design anthropometry and the applications of anthropometric measurements in designing. We have already known that anthropology is the holistic study of human beings and anthropometry is a small unit of this broad discipline. However, anthropometry plays an important role in our day to day life. Physiological anthropology and kinanthropometry are also the sub branches of physical anthropology which play a crucial role in the day to day life of human beings. Let us discuss in brief about all these sub branches one by one in this unit.

7.1 ANTHROPOMETRY AND DESIGN ANTHROPOMETRY

Anthropometry is the study of the measurement of the human body. It provides scientific methods and techniques for taking various measurements

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and observations on the living man and the skeleton (Singh & Bhasin, 1968). Anthropometry represents the characteristic and conventional tool of physical anthropology. In the present context, physical anthropologists become gradually more concerned with the dimensions, proportions and shape of human beings' instant physical environment. This concern has made significant contribution in terms of formulating standard sizes for various equipment used in defence forces as well as in the production of industrial goods. An effort has also been made to design furniture, aircraft, cockpits, clothes, spaceships etc., to fulfil different human body sizes by using the knowledge of anthropometry in designing. This can also be referred as design anthropometry.

7.2 APPLICATIONS OF ANTHROPOMETRY IN DESIGNING

Let us discuss the applications of anthropometry in various fields of designing.

Design is mainly meant for human attraction and ease, so designers have to keep in mind that the products they design are whether the right size and comfortable for the user. Designers used data and drawings according to their purpose, which include measurements of human beings in all age groups, sizes etc. It is a requirement for the designers to keep in mind that how users will interact with the product or service. Use and misuse is an important concern.

There may be significant variations in the anthropometric data sets among different populations. The variance in these data sets impacts the size range of clothes for demanding markets in fashion industry as a whole.

Check Your Progress

1) What is anthropometry?

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2) What do you understand by design anthropometry?

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Undesired incidents could have resulted with those designs that are incompatible with normal anthropometric measurements of a workforce. Workers cannot be provided adequate protection from health and injury with the use of inadequate fit of personal protective equipment (Qutubuddin et al, 2012). Researchers who are working on safety for the general worker population make use of data drawn from studies of military personnel due to the lack of anthropometric data (Qutubuddin et al, 2012). On the other hand, considerable anthropometric inconsistency exists among the diverse workforce populations, and they are somewhat different from the standard military population. The knowledge of ergonomics and other work environment is not well known among the production engineers who are working in the manufacturing industry. The available information to be used by designers is also often weakly presented sometimes. Therefore, the designers often encounter difficulty in integrating ergonomics information about the human operator into their designs while completing the tasks of designing work systems (Feyen et al, 2000).

Check Your Progress

3) Do you think the difficulty faced by designers can be coped up? Explain.

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7.2.1 Workstation Design

Now, we know that, ergonomics deal with the engineering of machines for human use and with the engineering of human tasks for operating machines (Qutubuddin et al, 2012). This aspect of anthropology is mainly concerned with the ways of designing equipment or machines, facilities and work environment in order to go with human potential and restrictions. There are some objectives of ergonomics which are very advantageous to human beings. They are (i) to increase the competence and efficacy with which work is performed and (ii) to maintain and promote worker health, safety and satisfaction (Das, 1987). The workstation in industry is more or less designed in an uninformed manner by giving less importance to the anthropometric measurements of the anticipated user. Production effectiveness and operator physical and mental well-being can be gained through proper estimation of the physical dimension of workers in the design of an industrial workstation. A considerable impact on workers' productivity, and occupational health and safety can be achieved by small changes in workstation dimension. Many health hazards can be encountered if workstation is designed improperly with inadequate posture. It may cause inactive muscle pain which will ultimately

result in severe localised muscle exhaustion, and therefore result in decreased performance and output (Das and Sengupta 1996).

Variations in human size and capability are major hindrances in the implementation of the ergonomic approvals in a valid world design circumstances. This has become a challenge to the designers to solve the problems of different populations to fit in maximum the diverse anthropometry of the users and assure their task demands (Das and Sengupta 1996). In determining the workstation dimensions structural anthropometry approach has been used. The anthropometry of the users is important to design the workstation because there are different and diversified labour force in different parts of the world (Fernandez, 1995). The four necessary design dimensions for the bodily design of industrial workstations are: (a) work height, (b) normal and maximum reaches, (c) lateral clearance and (d) angle of vision and eye height (Das and Sengupta 1996).

Check Your Progress

4) Define Ergonomics.

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5) What are the objectives of ergonomics to designing a workstation?

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6) Do industrial workplaces need bodily design of human beings? Explain.

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The most essential thing for designing an industrial workstation is to collect related information on job performance, equipment, working posture and environment. It will be beneficial to acquire such kind of information from a similar task/ equipment situation in the case of designing a new work station

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(Das and Sengupta 1996). For this purpose a number of methods, such as direct observation, one-to-one interview with experienced operators, video-taping and questionnaires can be used. Worker survey should be carried out prior to the redesigning of a workstation in industry using standard and appropriate questionnaires so that it will help to establish the consequence of the existing equipment or system design on employee comfort, health and ease of use. This type of survey would be helpful in documenting or recording the general operator evaluation of various equipment/system design and environmental factors such as noise, temperature, light and workspace; the present level of physical, mental and visual tiredness induced by the job to the operators are changing in postural discomfort in specific anatomical regions, during the course of the day (Qutubuddin et al, 2012).

Check Your Progress

7) What kind of information is needed to design a work station? Elucidate briefly.

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7.2.2   Garments Designing

Both static and dynamic positions of human body are studied in anthropometry. Data drawn from body measurement by using anthropometric techniques are used in various areas. Among those areas, designing of garment is also one of them. Anthropometric data plays an important role in garment production because the data is needed for designing garments with comfortable and right fit (Spahiu et al, 2015). In general, anthropometric data taken by using traditional method of measurement (one dimensional measurement) are used by designers. An improvement in life style has played a most significant role in size and shape of the body. Variations in body size and shape in all are of great importance in ergonomic design and in improving the comfort and fit in clothing (Dekker et al, 1999). Garment fit is often used as an assessment method of the quality of garment by the consumers (Strydom, 2006). Size charts in the industry which are standard of body measurement based on anthropometric data are used throughout the process of attire design and production (Gupta and Zakaria, 2014). Taking accurate anthropometric data and designing garments with the right fit is very much related. Ill fitted garment is the result of the lack of updated anthropometric data which has become a major issue. Validation and updating of anthropometric measurements through surveys or systems are done in many developed countries for every 15 to 20 years (Ujevic, 2009). Innovation of the 3D acquisition system for digitising 3D body models in this

modern world has improved the impact of this knowledge for anthropometric studies. Fast development and spread of computer related technologies during these years have persuaded many retailers and designers that the future of the whole industry depends on its successful operation in clothing design (Gupta and Zakaria, 2014).

7.2.3   Shoe Designing

The human foot consists of 26 bones and is a flexible structure of our body. Shoes are essential things which are used for the important purpose of covering feet and protecting them from injury. Shoes are also designed based on the anthropometric measurements of foot such as foot length, foot breadth etc. Sizes of shoes which are not based on foot anthropometry measurement will hurt feet and even cause injury. Improper shoe sizes may also cause severe problems like strain in foot muscle and tendons (Luximon et al, 2005). In order to protect foot from injury, people use shoes and stockings. So, it is important to keep in mind that footwear is significant in daily life. That is why standardisation of size has become an important concern in the manufacturing of shoes and stocking. Development of standard size is necessary in order to meet the need of people by providing them the facilities of choosing different sizes that are comfortable and fit on them. This will satisfy the consumers in a wide range (Ujevic and Herzanjak, 2004). Foot anthropometric measurements which are applied to design shoes and stockings should represent a sample of specific population which includes children, youth, and elderly (Bari et al, 2010). For example, sizes of shoes, garments etc. are all affected by age, sex, race, region, countries etc., so sizing will be different for different places because of many variations.

Check Your Progress

8)   Mention some factors which influence the size of footwear and garments.

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7.3   PHYSIOLOGICAL ANTHROPOLOGY

Physiological anthropology is a sub branch of physical anthropology. Till the end of 1960s, this discipline of anthropology had always been developed in a mosaic-like structure. Important elements of the theoretical concepts of this science were then started to create with some pieces of this variety. The process of individual biology and the process of population biology are concerned in the research of physiological anthropology. The significance of individual thinking and lack of essentialist notion such as the ideal man and

in present understand that all populations are polytypic have become conscious by the physiological anthropologist through the use of these processes. Physiological anthropologists composed a set of keywords characterising it with the development of the conceptual framework of their science. Those keywords are technological adaptability, environmental adaptability, functional potentiality, whole body coordination, and physiological polytypism.

7.3.1 Explanation of Keywords

We choose science and technology as our survival strategies which now requires that we make further adaptations to it (Baker, 1984; Iwanaga et al., 2005). This type of ability is known as technological adaptability by physiological anthropologists. It is a factor that may have a significant impact on the future life environment of human beings. This adaptability covers an extensive area of our artificial environment. Some of the examples may include cities, housing, computers, transportation, telecommunications, sophisticated information systems, etc., which are requisite for modern life. In the near future, human beings may even have to adapt to life in a space station (Iwanga, 2005).

Functional potentiality is defined as the superficially non-apparent or latent, component of utmost functional ability. Homeostasis against certain stresses is maintained by a coordinated response which is considered to involve the body's functional adjustment system (Yasukouchi, 2012). A distinctive phenotype of the manifest component which represents a specific diversity manifested by an individual is known as physiological polytypism (Yasukouchi, 2012). The effect of environmental factors is of a more plasticising nature even though physiological polytypism is influenced by gene and environmental factors (Yasukouchi, 2012). The alteration system is constructed and affected by the extent of the manifested function and the output distribution of diverse sub-system or element functions. These collectively mould the definite pattern of synchronised responses, and where the coordination system is universal, it is known as whole body coordination (Yasukouchi, 2012). We can use these three concepts of physiological polytypism, functional potentiality and whole-body coordination to discuss environmental adaptability and techno-adaptability from the viewpoint of the adaptability of groups, thereby allowing us to consider the nature of human diversity and its meaning (Yasukouchi, 2012).

Physiological anthropology is a gradually developing science. It aims to make clear of human physiological characteristics in a broad sense. It has been seen in this context that physiological anthropology fits to the fundamental natural sciences. However, the primary results of investigations are looked for valuable information on human features from many other fields, including the applied sciences and manufacturing industries. This tendency can be understood as a reflection of social needs for knowledge about human abilities to improve the quality of life. It would have been

totally unbelievable to our ancestors that most human beings now live in a contemporary technological civilisation. Physiological anthropology is being looked as a vital source of information on human capacities in a world which is unlike anything seen in history (Sato, 2005).

Scientists are engaged in conducting research on human beings in a different range of fields which are engaged in conducting human research and aims to improve quality of life. Among those, the various practical research carried out in physiological anthropology seems to be exclusive because its approach makes use of human physiological characteristics. It can be said that the rate of development in physiological anthropology is growing not only because of social requirements but also because of recent advances in the idea and methodology of this science (Sato, 2005).

Check Your Progress

9) What is technological adaptation?

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7.4 KINANTHROPOMETRY AND ITS APPLICATIONS

Kinanthropometry is a specialised sub-discipline in physical anthropology which deals with the study of sports. This branch of physical anthropology discusses the physical structure of individual in relation to gross motor functions or functioning capacity, taking into account maturation, nutrition and body composition. Bill Ross coined the term kinanthropometry in 1972. There are various factors that are accountable for the performance of an individual in different sports events. All these factors in turn are dependent on both genetic constitution and environment. On the other hand, it is unquestionable that genetics has a greater role to play in the development of observable characters creating out of interaction between gene and environment in an individual which is also known as phenotype. The main factors responsible behind a sportsman's achievement are the phenotypic variations in size, physique, body composition, metabolic rate, strength, speed and skill, cardio-vascular adaptations etc. Some environmental factors such as training and motivation can shape a genotype of the sportsperson to some extent.

Kinanthropometric investigations have the basic importance in establishing the prerequisite characteristics of athletes for their maximum performance. In modern sports, detailed information regarding kinanthropometric qualities of

athletes is certainly important. That most of kinanthropometric characteristics are almost exclusively genetically determined has been a well-known fact, as a result, changing of length and breadth measurements cannot be done with training (Norton & Olds, 2001). Therefore, the athletes in a particular sport must possess such unambiguous features which are of advantage to them during the game (Sodhi & Sidhu, 1984). Selection of healthy genotypes which will help individuals in achieving their fullest capabilities is the main focus and goal of Kinanthropometry. Kinanthropologists select those individuals who have the genetic constitution which is ideal for a particular sport. Muscular strength is not the only thing which is required for coordinating body movements. Selecting the players who have better potentialities in a particular sport than others has become a major duty of physical anthropologists because training and other external influence can change one's morphological status only within the narrow limits set by genotype. Physical anthropologists can also help in financial restrains by cutting down to minimal expenditure on individuals just because of their poor anthropometric standards and who are less fit for a particular sport.

Physical anthropologists would put into effect the judgment to select an individual perfect for a particular sporting event. It is rather unfeasible to modify the capability of the genotype so as to maintain enviable levels of dissimilar bio-chemical determinants. Thus, it is very important to set more importance on the genetically determined morpho-physiological status of the individual to yield good results. Hence we come to know that the techniques of Kinanthropometry enabled the anthropologists to classify humans into different somatotype and recommend the right sport for them. Important morphological characteristics which are essential for sports are played by the composition of the body. Some of the body composition which are dependent on the environmental influence, like sex, socio-economic conditions, occupations, genetic make-up, nutrition and exercise include muscular, skeletal, fatty tissues. Studies on body composition of sportsman are very significant. It has been deduced that athletes with less fat but heavy muscles perform better in certain competitive sports, while those with considerable quantity of fat tissues necessitate amplified energy due to still weight, consequence in stamina in activities like jumping, running, etc. Moderate quantity of fat helps performance by providing extra buoyancy and applied dimensions reduction of heat loss in water sports. Apart from physique and body composition, somatotype also plays a decisive factor for different sports. This in turn is dependent on flexibility of training, motivation factors and psyche. Physical anthropologists play a beneficial role in designing sports equipment using anthropometric techniques appropriate for a particular somatotype.

Check Your Progress

10) Who coined the term Kinanthropometry?

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7.5   SUMMARY

In this unit, you have learnt the basic concept of anthropometry first. We have also discussed how anthropometry is important in our day to day life. The importance and significance of design anthropometry in various field of designing has also been explained as to how they are useful and for what purposes they have been given an important place in anthropometric measurements. Reliability of anthropometric measurements in designing of workstations, garments, shoes etc., have also been discussed in brief. Occupational hazards and disadvantages of improper or unfit size garments and others are also made aware in this module. We have also learnt the need of understanding physiological anthropology and kinanthropometry in the present context for our daily purpose.

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7.7   ANSWERS TO CHECK YOUR PROGRESS

1)   Refer to section 7.1

2)   Refer to the first and second paragraph of section 7.2

3) Refer to the second paragraph of section 7.2

4) Ergonomics deal with the engineering of machines for human use and with the engineering of human tasks for operating machines. This aspect of anthropology is mainly concerned with the ways of designing equipment or machines, facilities and work environment in order to go with human potential and restrictions.

5) The objectives of ergonomics in designing a workstation are: (i) to increase the competence and efficacy with which work is performed and (ii) to maintain and promote worker health, safety and satisfaction.

6) Refer to the first and second paragraphs of section 7.2.1

7) Refer to the third paragraph of section 7.2.1

8) Refer to section 7.2.3

9) Refer to the first paragraph of section 7.3.1

10) It was Bill Ross who coined the term Kinanthropometry in the year 1972.