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3.1 INTRODUCTION:

A.R. Desai: Among the Institutions that compose society, the family is the most important. It has been its very foundation. It plays a decisive role in the material and cultural life of the aggregate and in molding the psychological characteristics of the individual as well as the collectivity. In fact, according to some thinkers, family and familism impress their stamp on the entire family structure. Families permeate it from top to bottom. A systematic study of family of its structure, functions, evolution, and interrelations with sociologist and social scientist. The Indian society provides a classic field for the study of the institution of family. Within it are found many types and patterns of family organization which humanity has evolved. Four types of institutions which have been designated by the term family, viz, the clan, the matrilocal joint family, the patrilocal joint family and the individual family.

According to one group of sociologists, these four types reveal four main stages of the evolution of the family form corresponding to four stages in the evolution of society. The first type corresponds to the hunting and food gathering stage of social evolution; the second to the phase of hoe agriculture and beginnings of domestication of animals; the third-a classic type-to the phase of agricultural economy based on the plough and domestication of animals and finally the fourth type to the modern industrial capitalist phase of human existence. As a result of the growth of market economy in the agrarian area and of the impact of urban socio-economic forces on the society, the last type is increasingly becoming predominant today.

The Indian society provides a great laboratory to test this view, since it includes within its fold the relics of the clan as well as matrilocal and patrilocal family types and the recent individual family group also. A methodological study of the structure and functions of these various family types and their correlation with the stages of civilization to which they correspond will throw a floodlight on the history of Indian humanity and will enable Indian Historians and social workers to evolve a correct sequence of the change as well as developmental phases of the Indian Society.
3.2 NEED OF THE STUDY

Change is a process. Change denotes any alternation, difference or modification that takes place in a situation or in any object through time. It is the universal law of nature. It refers to the difference that exists between the past and the present situation. Change is an “on-going” process. No society remains completely static. Society is subject to constant changes. The term social change refers to changes taking place in human society. Basically the changes in human inter-actions indicate social change. Society is the net-work of social relationship. Hence, social change obviously implies a change in the system of social relationship. So any difference or any modification or transformation in the established pattern of human interaction and standards of conduct amounts to change. Abolition of child marriage, inter-caste marriage, and high status to Indian women is some of the importance of social change. The meaning of the term “social change” can be better understood if we will discuss few definitions, meaning and analytical terminology formulated by the researcher some of the important conceptual definitions are stated and discussed in the forth coming chapters.

**Dr. Mahesh. C. (2011):** The system of family has undergone qualitative changes because of Industrialization, Urbanization, migration, revolution in the field of transport and communication, increasing influence of the state and the influence of the individualization philosophy of life. The changes have been so fast in some parts of the world. With the advent of industrial civilization with modern technology the structure and functions of the family fatedly changed. Today most of the traditional activities the family was transferred the o outside agencies; this further weakening the bonds that in the past kept the family together. There occurred a reduction in the educational, recreational, religious and protective functions of the family which have been more or less taken over by various institutions and agencies created for that purpose. The school, the commercial and communal, recreational facilities, church, hospitals, are performing many tasks earlier performed by the family. Eventually, the need of the day is to study the family change in a rapidly changing world because, basically the Indian community being an orthodox and rigid in its nature, it will be interesting to know about the Indian families’ perception towards family changing relationships and its related components. Hence, the present research exercise was under taken in a form of Ph.D. thesis based on primary data investigation, in an in depth way.
3.3 OBJECTIVES OF THE STUDY

- To study the societal characteristics of the Twenty first Century’s Indian families.
- To find out the changing attitude of Indian Families.
- To analyses the behavioral aspects of Twenty first century’s Indian families.
- To find out the changing relationship of Indian families.
- To identify the basic structural, functional changes in Indian Families.

3.4 HYPOTHESIS OF THE STUDY

In order to attain the above mentioned objectives of the present study few important Hypotheses were developed to test the existing concept of Social change related to family which provide sequences and safety to, human beings on this earth.

**Caste:** Time and again it has been proved that Caste has a strong barrier on family culture eventually it has been hypothesized in the present study that the families which were belong to backward caste including SC/ST tend to change a lot than that of the those families which were belong to forward caste in India.

**Education:** Whenever we turn the pages of history we come to know that education brought the huge social change in human beings life, in this context it was hypothesized that the families with less educational background will be unchangeable compared to their counterparts’ families who had higher level of educational background.

**Types of family:** From the sociological point of view each and every thing has the advantages and disadvantages, this way family too had its two face nature, i.e. attacking and defending, but till now world has seen only positive face of it. With the change of time the present study try to hypothesized that the respondents who were staying in nuclear family tend to experience more family changes and enjoy more freedom in comparison to the respondents who were staying in joint family setup.

**Awareness of social change:** It is every Indians right to know the law of the nature because it helps every individual to be a good human being. But unfortunately due to high illiteracy and traditionalism among Indian people that kept them away from acquiring awareness and knowledge on any basic concept. Hence many of the women in India still believe that social
change at individual or family level is naturally a part of and parcel of every once life. But the families of twenty first century who got early exposure with outer world they feel in other way round.

**Families’ incomes:** A family with more economic independence gets an opportunity and freedom of decision making. With reference to this point it has been hypothesized that the families who were unable to cope up with their increasing family expenditure most probably marginalized and lag behind in family matters in comparison to those families who were economically independent.

**Occupation:** working status or professionalism not only brings the family members out of home and kitchen but also at the same time exposes them to the outer world, and from there they come across with the realities of modern society. To be specific those who were employed try to protest old traditions and support themselves whenever they land up in a situation like family social change compared to their counterparts who remained unemployed and prefer to be in house only.

**Religion:** Religion is considered to be key component in upbringing or socializing the child especially in Indian context which is known for its unity in diversity culture. Hence, it was hypothesized that the families who have a strong faith in religion tend to be worst sufferer than that of their counterparts who had weak faith in religion i.e. (Nasthik)

### 3.5 VARIABLES STUDIED

Further, keeping in mind the objectives of this study, it was decided to have vast information on various background characteristics like, (social, economic, demographic, and cultural which includes attitudinal and Behavioral aspects of the respondents. However, the variables which have been taken into account in this study are based on relevant theoretical (logical) grounds. Moreover, for a clear understanding of the nature of these variables further classification was done into different group. To give a justification for the selection of the determinants (variables) and their Hypothesized relationship is well presented. In order to test the above mentioned hypotheses quite a few societal variables were listed for the uni-variate and Bi-variatecross verification analysis and these variables are as follows.
3.5. a Dependent Variables

**Demographic variables:** The major demographic characteristics of the respondents included in the present study are age of the respondents, duration of married life marital status, number of children alive, Sex preference. These characteristics were considered to be important to evaluate the qualitative aspects of the present research.

**Economic characteristics:** The significant economic characteristics of the respondent were undertaken for the present study purpose was. Occupation of the spouse, Income of the spouse, source of family income and family debt and other related information.

**Social characteristics:** The major social characteristics of the respondent studied here are; place of residence, religion, caste, type of family, education of the respondent, education of spouse and the other relevant information was also gathered.

**Attitudinal variables:** The major attitudinal characteristics of the respondents considered for the present study treating all the children equally, freedom of expression, younger family member’s suggestion mate selection, and providing level of education to the girls these characteristics are important from the point of understanding the concept of familial changes.

**Behavioral Variable:** The important behavioral characteristics of the respondents considered to be like Hippocratic nature, diplomatic nature, student teacher relation, parents children relations, younger ones relation with elders and the relationship between mother in law and daughter in law and its impact on family

3.5. b Independent Variables

Analysis Chapter No 5 extent of respondents agreed on their attitudinal change

Analysis Chapter No 6 extent of respondents agreed on their Behaviourable change

Analysis Chapter No 7 extent of respondents agreed on their Relationships change

Analysis Chapter No 8 extent of respondents agreed on their Structural and Functional change
3.6 STUDY AREA

One of the ways of understanding the concepts of Social Change and its related issues is by studying the characteristics of the study respondents. In this study, an attempt is made to study the background characteristics of the respondents in order to understand the factors which involve in the ongoing process of social change at a family level. In order to attain the objectives of the study, it was felt that primary data collection was required and hence a city of Gulbarga was selected. Logically Gulbarga district has been selected as the study area because it is one of the backward districts in the Hyderabad Karnataka (Kalyan Karnataka) region in terms of development. Moreover, this district had the credit of having more diversified and heterogeneous population belong to backward castes, tribes and minorities which suits accurately to undertake the present kind of research. Further, researcher being forms this area only actively participated in data collection in order to again first hand field experience and enhance the quality of research.

3.7 SAMPLING DESIGN

Whenever the information is required to study a particular research problem decision may be taken to use either primary or secondary data by using the census or sample surveys. Keeping in mind the money and time required it was decided to use sampling method which helps to know the characteristics of the population by examining only a small part of it. The sampling design adopted was a two stage stratified sampling. The localities in the Gulbarga city were listed i.e. is fifty five municipal wards existing and the total population from those wards was 2,566,326 as per the 2011 census report. In order to overcome from the technical problem of not having proper representative sample. The P.P.S technique was used to select the desired number of localities in the city, the steps involved in this procedure are as follows.

1. All the localities (wards) have been arranged in a descending order according to their population size.
2. The cumulative population ward by ward was then computed.
3. Sampling interval ‘K’ was then computed by dividing ‘N’ by the number of wards to be surveyed ‘n’ which was 29 in the present case.
4. A random number ‘R’ between 1 and K was selected and the ward corresponding to ‘R’ was the first sample locality.

5. The other wards have been selected corresponding to the figures. Ten families’ households were selected systematically from each selected ward. This method was used because of its simplicity and convenience in the selection of the sample, particularly where sampling was done by the field staff (researcher) It offers control over field work and gives an evenly spaced sample (Cochrane 1977). S6) Corresponding to last ward in equal to the total population ‘N’ of the Gulbarga city.

3.8 STUDY SAMPLE SIZE

Different opinions have been expressed by the experts on the selection of sample size which indicates that bigger size does not ensure representativeness in a sample. A smaller well selected sample may be superior to a larger but badly selected sample. Hence, keeping in view the research topic and the objectives of the study and considering the monetary constraints and time required it was decided to collect the needful detail information. Pertain to 550 families from Gulbarga City i.e. the north part of Karnataka State. Further this representative sample size belong to total 55 existing wards further, Ten(10) families were selected from each sample ward in order to fulfill the requirements of efficiency representativeness and reliability.

3.9 PREPARATION OF FIELD WORK

In order to understand clearly the concept of social change among 21st centuries Indian families a well-structured questionnaire was prepared in two languages (English and Kannada) keeping in view that the spoken language of the study population was Kannada. The standardized questionnaire consists of five main sections.

1. Personal background of the families’ information.
Section one; deals with the basic characteristics related with the sample respondents families, section two deals with the changing attitude of the Indian families. Section three gives the knowledge about changing behavior of the Indian families Section four presents the changing relationships of the Indian families, Section five deals with structural and functional changes of Indian families.

3.10 PREPARATION OF SCALE

This questionnaire is designed to judge whether the Indian families’ relationship is getting changed in 21st century? If it is so. There are different levels of changes, because not every family experiences all the changes. There are various questions about the type of relationship they share between the family members. Each possible answer has points assigned to it. By answering each question and then totaling the points as directed, one can compare optimum score with this changing relationship index. Further, one can use the scale to answer the following question to best describe the changing relationship.

**Directions:**

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<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
<th>strongly Agree</th>
<th>Strongly Disagree</th>
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<td></td>
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Scoring your Answers:

- 0-1 Non-changeable relationships
- 1-2 moderately changeable relationships
- 2-3 highly changeable relationships
- 3-4 or above totally changeable relationships

If your score was 0 - 1, you live in a Non-changeable relationship. The sorts of strains you experience are not unusual, and you and your partner deal with them non-violently. If your score was 0-2, you definitely live in a family where you have experienced some change at least once in a while. It may be that this is a relationship where the change is just beginning, or perhaps for some reason, it has stopped at this level of severity. But in a new relationship, there is good reason to expect it will eventually escalate into more serious forms.
and may occur more frequently. If your score was 0-3, you are in a highly changing situation that can, be from outside, or within the family. If your score was 0-4, you need to consider even more seriously that is the option of leaving the relationship, at least temporarily (and for your own safety). Moreover, the change will not happen of itself or miraculously disappear. Over time, the chances are very good that your life will literally be in jeopardy more than once. Counseling and support groups are available in most of the areas through which families gets out of such a changeable relationship, since it is often hard to live without change or with a drastic change too.

3.11 DATA COLLECTION

The data were collected by using the direct interview method, with the help of a structured interview schedule. The schedule consisted of pages pertaining to conceptual information on various important concepts. The actual schedule administered is provided in Appendix I.

The actual data for the study was planned in stage wise. During the first stage all the wards in the study area were listed in order to collect basic data such as, name of the ward location and house hold address. In the course of listing care was taken to identify all eligible married women. The second stage of data collection involved visits to respective households where there were eligible families available for conducting detailed interviews about the present Doctoral research purpose. The data was collected during the months of April and May in the year 2015. Throughout the period of data collection, the researcher further spend full day in the ward by visiting, and re-visiting family by family and had the opportunity to have a first-hand experience of living and working with the respondents.

The hospitality given by the concerned community people and respondents was overwhelming, though during the first few days, the researcher had to explain to almost each and every one the purpose of her visit, the way in which the respondent would benefit from this research. The researcher took a few days to establish rapport with the community people as well as respondents. However, in few of the localities, the researcher was not very much welcome and later she found that the residence of those localities had always been non-cooperative with previous research investigation too. This was due to very low educational
levels and partly to a sense of basic mistrust amongst the researcher. It took little more time for the researcher to develop rapport with the community people and more importantly with the currently eligible families who were respondents to the present study.

Once proper rapport was established with the respondents, the interviews went on smoothly. However, it was observed that in some cases, especially among local Muslim families the respondents initially hesitated to answer the individual schedule and many a time in-laws other than the respondent women volunteered to answer the questions. The researcher had to make at least three visits to such sample households families to get the information.

3.12 FIELD EXPERIENCE

Gulbarga being the divisional head quarter, where the researcher stayed and the interviews could be conducted during the evening when the respondents were relatively free. However, in some of the Households, the researcher had to adjust the timing of the interview in such a way that whoever was free from their house work was first interviewed and later on the other women were interviewed whenever they got free. Further, it also needs to be mentioned that, except in a few cases, the researcher had no difficulty in collecting information from female respondents. There were also instance where both the eligible respondents were jointly interviewed and this enhanced the reliability of the data collected. Since the researcher herself collected the data, care was taken to get all questions answered. The interviews were conducted in Kannada, Urdu and English which were the languages spoken in the study area and with which the researcher was also very familiar.

3.13 DATA PROCESSING

The data collected were coded, verified and processed on a personal computer. Two separate files were prepared, one was data file and the other was an SPSS (statistical package for social sciences) file. However, the single frequency distribution of each variable was generated to validate the data.

3.14 ANALYSIS OF THE DATA

The data collected were coded, verified and processed on the personal Computer. A single frequency distribution of each variable was generated to validate the data. The
analytical statistical techniques were applied to the dependent and independent variables as they are influenced by educational and occupational levels and other socio-economic variables such as religion, reasons behind social change and the type of family. Further, the dependent variable was cross-tabulated with each of the social and economic variables. In order to understand the effect of each independent variable, on the dependent variables, an analysis of covariance (chi square X² text) was used which will be discussed in detail in the analytical chapters.

3.15 FUNCTIONAL DEFINITION OF THE CONCEPTS USED.

The present study is focused on the changing relationships of Indian families and its determinants. Thus, it was felt that, the term family and changing relationships has to be studied in a more comprehensive manner rather than seeing it in terms of ‘yes’ or ‘no’ which gives a very general meaning reflecting only awareness. However, it was assumed that, the better and sustained change is more or less the outcome of attitudinal behavioral rather than simply of moderate. Hence, an attempt has been made to define family or changing relationships in terms of minimum basic understanding of its lgerity, extent and change full situation a today’s 21st Centuries families living in a contemporary society. Kingsley Davis, “By Social change is meant only such alterations as occur in social organizations, that is, structure and functions of society.”

Definition of social change: Social change occupies a dominant place in the consciousness of humanity Man and society has evolved through the times immemorial. In this course, both men and their social institution have undergone changes that generate contradictory feelings of hope as well as anxiety. Even a casual student of history must admit that social change occupies an important place in the human Chronicle. Whether this can be proved or not in the case of extinct societies is a matter for anthropological research, but what is evident to the current observer is the reality of change in all living societies. The subject of social change in modern India is vast and complex and an understanding of it require the collaboration of a number of scholars in such diverse field as economics, history, law, politics, religion, demography and sociology. It will have to take into account also of regional, linguistic and other differences. Social change may be defined as the process which is disc enable in the
alteration of the structure and function in go of a particular social system. It is a term used to
describe variation in, a modification of, any aspect of social processes, social patterns, and
social interaction with in a social organization. Social changes and variation from the
accepted modes of life, whether due to geographical conditions, in cultural equipment,
composition of the population or ideologies and whether brought about by diffusions or
inventions within the group. Few definitions formulated by the eminent sociologists.
Maclver and Page, “Social change refers to a process responsive to many types of changes, to
changes in man-made conditions of life” to changes in the attitude and beliefs of men and to
changes that go beyond the human control to the biological and physical nature of things.
Lundberg, “Social change refers to any modifications in the established patterns of inter-
human relationship and standard of conduct.”

**Definition of Attitude:** Attitude has always been a subject of interest to many researchers as
well as psychologist. It is considered as exciting and mysterious to some researcher. It can
function as a shield to someone or it can even function as a weapon to someone. Having a
certain attitude in life is crucial to people so as to help them live in harmony and towards
better understanding of things around them. Attitudes play a major part in determining a
person’s personality. This is because attitude affects the way people perceive and act towards
people, objects or events that they encounter. Besides that, attitudes can also have an effect
on one’s social interactions. That is why it is important to know what attitude is, how it is
developed and its impact on people.

Vaughan & Hogg (1995) defined attitude as, ‘A relatively enduring organization of beliefs,
feelings and behavioral tendencies towards socially significant objects, groups, events or
symbols or A general feeling or evaluation (positive/ negative) about some person, object or
issue.’ From this definition we could see that, attitudes are only relevant to socially
significant objects. In brief, it could be said that, attitude is a positive or negative evaluations
or feelings that people have towards other people, objects, issues or events. Attitudes include
the general way people feel towards socially significant objects and most attitudes are lasting.
For example, if you were once bitten by a cat and you dislike the feeling at that moment, that
emotional response is regarded as just a feeling. However, if your experience of getting bitten
by a cat made you hate all cats, then your hatred for cats is considered an attitude that you have towards cats.

**Definition of behavior:** Psychology, although describing itself as “the science of behavior, “has not to date arrived at any consensus in the matter of what the concept of “behavior” means. It has not, in Angier’s (2009) terms, conceptually formulated the precise meaning of a term that is clearly “at the heart of (its) discipline. As review of 26 psychology dictionaries (both standard and online) and textbook glossaries by this author revealed that only seven of them offered definitions of “behavior” at all, reflecting a wide spread tendency in the field to ignore the question entirely. Of those sources that did include definitions of the term, the most prevalent formulation is typified by the following: behavior is” any observable overt movement of the organism generally took to include verbal behavior as well as physical movements” (webref.org/ psychology/b/behavior.htm. According to this definition, behavior is essentially observable physical activity: a pigeon pecks a disk, woman says “hello,” a student raises his hand, and so forth. Comparable definitions may be found in The Oxford Dictionary of Psychology (Colman, 2006), and in King (2008) and Levitis, Lidicker, and Freunda (2009).

**Definition of Relationship:** According to Berscheid and Ammazzalorso (2004), the concept of a relationship refers to two people whose behaviour is interdependent in that a change in behaviour in one is likely to produce a change in behaviour of the other A ‘close’ relationship denotes an interaction pattern that takes place over a long period of time; the partners’ influence on each other is strong and frequent, and many different types of behaviour are affected (Kelley et al., 1983). In common with other close relationships, romantic relationships involve interdependence, strong feelings, committed intent and overlapping self-concept. But unique to romantic relationships are passion and exclusive commitment (Fiske, 2004). Voluntary/involuntary relationships According to Moghaddamet al. (1993), interpersonal relationships in western cultures tend to be individualistic, voluntary and temporary; those in non-western cultures are more collectivist, involuntary and permanent.
**Definition of Family:** “Family is a group of two or more persons related by blood, marriage or adoption and residing together”. Some of other important definitions of family are as follows. According to MacIver and Page, “Family is a group defined by a sex relationship, sufficiently precise and enduring to provide for the procreation and upbringing of children”.

According to Burgess and Locke, “Family is a group of persons united by the ties of marriage, blood or adoption; consisting a single household, interacting and intercommunicating with each other in their social roles of husband and wife, mother and father, son and daughter, brother and sister creating a common culture”. Family is basic unit of social structure, the exact definition of which can vary greatly from time to time and from culture to culture. How a society defines family as a primary group, and the functions it asks families to perform, are by no means constant. There has been much recent discussion of the nuclear family, which consists only of parents and children, but the nuclear family is by no means universal. Finally, the family is also an agent of socialization. All these aspects make this institution different from all other units of social structure. As Mack and Young say, “The family is the basic primary group and the natural matrix of personality”. According to the bureau of Census (U.S.A.).

**Definition of Indian Family:** Indian families are capable of fulfilling the physical, spiritual and emotional needs of its members; initiate and maintain growth, and be a source of support, security and encouragement to the patient. These fundamental characteristics of the Indian family remain valid even now despite the changes in the social scenario. In a country, where the deficit in mental health professionals amounts to greater than 90% in most parts of the country, the family is an invaluable resource in mental health treatment. From a psychotherapeutic viewpoint, in collectivistic societies like ours, the family may be a source of the trouble as well as a support during trouble. It is therefore, plausible that the family might also provide solutions of the trouble and indeed, interventions focusing on the whole family rather that the individual often results in more gratifying and lasting outcome. The Indian family, which often feels bewildered in these times of changed values, changed roles, changed morality and changed expectations is in need of support and is ready for family therapy. If developed enthusiastically, family therapy might be the right tool to not only help the
families in need but also to develop a huge resource in community-centered treatment of mental-health problems.

**Definition of Twenty First Century:** 21st century is the current century of the Anno Domini era or the Common Era, in accordance with the Gregorian calendar. It began on January 1, 2001, and will end on December 31, 2100. It is the first century of the 3rd millennium. It is distinct from the century known as the 2000s, which began on January 1, 2000 and will end December 31, 2099. The first years of the 21st century have thus far been marked by the rise of a global economy and Third World consumerism, mistrust in government, deepening global concern over terrorism and an increase in the power of private enterprise. The long-term effects of increased globalization are not known, but there are many who are concerned about its implications. The Arab Spring of the early 2010s led to mixed outcomes in the Arab world. The Digital Revolution which began around the 1980s also continues into the present. The Millennial (born c. 1981-2000) has been born before the turn of the century give way to the rise of Generation Y & Generation Z in Western countries. In contemporary history, the 21st century began with the United States as the sole superpower in the absence of the Soviet Union, while China began its rise to becoming a superpower and the BRIC countries aim to create more balance in the global political and economic spectrum.

**Definition of Structure:** From an etymological and historical point of view: "Structure" as a theoretical model in natural languages. Every concept is dependent on a certain model which the speaker forms of reality. This point is important because the regular extension of a term indicates the success of that particular model of reality which the term denotes. So we want to see what kind of model "structure" indicated originally, in order to determine from the semantic extensions of the term what characteristics remained valuable in its significance throughout the transformations. Those constant characteristics indicate the way in which the speaker saw an increasing part of reality. The word "structure" derives from Latin "structura", from the root "struo" and indicated the result of a building activity. This original meaning has been dominant for a long time.
Definition of Function: An action performed by a device, department, or person that produces a result. Function remains more or less fixed whereas the purpose (which indicates intention or objective) generally changes. For example, the function of a hammer is to strike something nearby whereas its purpose (what to strike and why) could be anything the hammer-wielder has in mind.

Mathematics: A mathematical relationship in which a quantity (dependent variable) depends on or is determined by another quantity (independent variable) or quantities. The dependent variable is said to be a function of the independent variable(s). If something is done, or something happens, to the independent variable(s), it is reflected in the dependent variable. For example, expenditure is a function of income and, for a wage earner; income is a function of two variables: per hour wage rate and number of hours worked.

Definition of Modern Era: A period beginning in the last quarter of the 20th century when information became easily accessible through publications and through the manipulation of information by computers and computer networks. The development and growth of the United States during this era was influenced by helping Europe recover from World War II and U.S. involvement in other wars--mainly the Cold War with the Soviet Union and the Vietnam and Korean Wars. (The Cold War was not a real war with the Soviet Union; this term refers to the chilly relations the U.S. had with the formerly communist nation, which, since its breakup, is called Russia). An era is a span of time marked by character, events, changes on earth, etc. When used in science, for example geology, an era denotes a clearly defined period of time of arbitrary but well-defined length, such as for example the Mesozoic Era frozen m 252 Ma–66 Ma, delimited by a start event and an end event. When used in social history, eras may for example denote a period of some monarch's reign. In colloquial language, eras denote longer spans of time, before and after which the practices or fashions change to a significant degree. When era is extended to a calendar system, it is known as a calendar era. In Sanskrit or Indian culture eras are known as Yugas. In chronology, an era is the highest level for the organization of the measurement of time. A calendar era indicates a span of many years which are numbered beginning at a specific reference date (epoch), which often marks the origin of a political state or cosmology, dynasty, ruler, the birth of a leader,
or another significant historical or mythological event; it is generally called after its focus accordingly as in Victorian era.

**Definition of Ecological Scale:** Recognition of the concept of scale occurred rapidly in the 1980s, but the concept itself is far older. The last quarter of the 20th century witnessed major changes in the science of ecology, including increases in skill and rigor in the design of field experiments, the growth of mathematically based theory, computer-mediated advances in analytical capacity, and the accelerating capacity to acquire and retrieve data. These changes were accompanied by growing recognition of the problem of scale (Wiens 1989, Steele 1991, Levin 1992). The problem has three components. First, pressing problems in ecology often exist at the scale of decades and large ecosystems. Second, most variables can only be measured directly in small areas, over short periods of time. Relatively few variables, such as ocean color, can be measured at fine resolution over large areas via remote sensing. Most variables, and in particular most rates, can be measured only on site. Third, patterns measured at small scales do not necessarily hold at larger scales; nor do processes prevailing at small scales necessarily prevail at large scales. Consequently, pressing problems in ecology cannot be automatically addressed by scaling locally measured variables directly to larger areas and longer times. The classic example of the problem of scale is loss of bio-diversity. The causes of species extinction occur at the scale of ecosystems, whereas measurements are of necessity confined to smaller areas. Yet no biologist would try to address the problem by direct extrapolation from local samples, because it is well known that species number does not scale directly with area.

**Definition of Mathematical scale:** The word scale has multiple meanings, contributing to its ambiguous usage in the ecological literature. The Oxford English Dictionary (Simpson and Weiner 1989) distinguishes 15 different meanings arising from two different roots. The Old Norse root in skal (bowl) gives rise to fish scales, the scales of justice, and hence, by extension, measurement by means of pairwise comparison of objects. Using an old-fashioned scale, one can assign a mass of 1 g to a beetle that balances a 1-g standard mass. The Latin root in scala (ladder) gives rise to musical scales, scaling a wall, and, by extension, measuring a length by counting steps or subdivisions. Using a ladder known to be 2 m in height, one can
assign a height of half a ladder (1 m) to a bush. In ecology, the word scale has acquired several common technical meanings. This diversity in acquired technical definition, added to the diversity in origin of the word, works against attempts at standard definition.

Powell (1989) defined scale as the distance before some quantity of interest changes. ‘Scale’ can be defined in both absolute and relative terms. ‘Absolute scale’ represents the actual distance, direction, shape, and geometry of the pattern under investigation; ‘relative scale’ represents a transformation of absolute scale to a scale that describes the relative distance, direction, shape, or geometry based on some functional relationship to the organism or process under investigation.

**Definition of Psychological Scale:** The words ‘test’ and ‘measurement’, as used in psychology, are misleading because of the implied similarity to scientific measurements and medical tests. Conventional psychological testing is quite different from scientific measurements in natural sciences. What is accomplished by the application of psychological measurement is an estimation of a psychological construct. Psychological tests and measurements of personality, intelligence, attitude and motivation are fundamentally different from quantitative measurements in physical sciences such as height, weight and blood urea. Paul Kline, one of the foremost exponents of psychometric theory clarifies the issue as follows: ‘There are no units of [psychological] measurement and no true zeros. Whatever psychological measurement is, it is not scientific measurement as defined in natural sciences If we consider what is meant by intelligence or extraversion, just for example, it is by no means clear what units of measurement might be used or what the true zero may mean. This problem applies to the majority of psychological concepts and variables’ (Kline, 2000).

Besides, it is often mistakenly believed that psychological tests are ‘objective’, meaning that their findings and scores reflect an outside existence (as opposed to being subjective) and are real or at least approximate something close to it, as in laboratory tests, for example.

The term objectivity has an entirely different meaning when applied to psychological tests or measurements. It refers to the standard ways in which they are administered, recorded and interpreted. This semantic difference has to be kept in mind when using the results of
psychological tests. The definition of a psychological test provided by Anastasia (1982) cannot be bettered: A psychological test is essentially an objective and standardized measure of a sample of behavior. Objectivity and standardization in this context means that the administration, scoring, and interpretation are carried out in a uniform and standard manner. For example, in the use of IQ tests, the same test is administered in the same way to all subjects using the same material. It is scored and interpreted according to the strict rules set out in the manual so that the procedure is always consistent. The application of the test and its interpretation do not involve the examiner’s subjective judgment. What is measured by tests ultimately is behavior. It is to be noted that behavior, as described here, sometimes involves feelings, motives, interests, and other aspects of mental functioning. The tests are designed to capture a representative sample of behavior that is of interest.

**Definition of Role:** The behavior expected of an individual who occupies a given social position or status. A role is a comprehensive pattern of behavior that is socially recognized, providing a means of identifying and placing an individual in a society (Encyclopedia Britannica). “The expected behavior of an individual in a society”. A character assigned or assumed had to take on the role of both father and mother; a socially expected behavior pattern usually determined by an individual's status in a particular society. An abstraction of the behavior of an object that consists of a subset of the interactions of that object together with a set of constraints on when they may occur. A role always belongs to a specific larger behavior that involves other roles, called a collaborative behavior.

A role is fully identified by the object that performs it, and by a set of interactions (the intersection of the object behavior and a collaborative behavior). It is possible for one role instance to belong to multiple collaborative behaviors. A role constitutes the part of an object behavior that is obtained by considering only the interactions of that role and by hiding all other interactions. A role may contain internal actions. An action occurrence of a role may also belong to other roles. Role being a specification concept, objects may be defined partially or completely without making use of roles. Therefore, the interactions of an object need not belong to any defined role. A role maps to at most one object within the model where it is defined. However, an object may have a decomposition relation with a
configuration of objects in a model at a lower level of abstraction. In this indirect way, a role may map to a set of objects.

**Definition of Social Work:**

**According to Stroup (1960):** “social work is the art of bringing various resources bear on individual, group and community needs by the application of a scientific method of helping people to help themselves.”

**According to Mirza R. Ahmed (1969):** “social work is a professional service based on knowledge of human relations skill in relationships and concerned with problems of intra-personal and or inters personal adjustments resulting from unmet individual, group or community need.”

**According to Moorthy and Rao (1970):** social work is “ help rendered to any person or group, who or which is suffering from any disability, mental, physical, emotional or moral, so that the individual or group so helped is enabled to help himself or itself.”

**According to Pincus and Minahan (1978):** “social work is concerned with the interaction between people and their social environment which affects the ability of people to accomplish their life tasks, alleviate distress, and realize their aspirations and values.”

**As per Prof. K.S Malipatil:** “Social work is nothing but is a method, a Science, a Art and skill working with individuals, groups and communities to help them in order to help themselves.”