CHAPTER - I

INTRODUCTION

“The world today is experiencing a profound and rapid socio-cultural transformation. But the changes do not occur at a uniform pace, and the discrepancies in the change process have differentiated the various countries and regions of our planet”.

Gustavo Gutierrez

1.1 Introduction

As Gutterrez remarks, the socio-cultural transformation is a great happening and a reality that is necessary and inevitable part of urban transformation. This happening only varies in degrees depending on the pace of change. Change is an unchangeable phenomenon of society. Any change in the socio-cultural issues and development, naturally accounts to the change in every factor that matters to the changing process of a society. No habitat evolved in isolation, instead always evolved through networking and interlinking process with the habitats\(^1\). Thus, while cities occupy only two percent of the earth’s landmass they contain fifty percent of the world population (Fornos, 2003:1-1-1). This growth led to various issues and concerns to the growing city, especially in terms of infrastructure, law and order, political and socio-cultural factors. One such major concern is traffic congestion in all the major cities of India. The only way to address this concern is to introduce the concept of Mass Rapid Transit existing in developed cities of the world.

This research deals with the socio-cultural impact on streets of Bengaluru. Webster Dictionary explains, “socio-cultural - relating to, or involving a combination of social and cultural factors”. Encyclopaedia of Social Sciences\(^2\) defines socio-cultural as ‘Social science is an academic discipline concerned with society and the relationships among individuals within a society. It includes anthropology, economics, political science, psychology and sociology’. Sociologists define sociology as a scientific study of human society and social behaviour which can be taken at two levels:

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1. Keynote Presentation by Dr. Choodamani Nandagopal on 28th June 2013 at Hofstra University, USA, Changing Dynamics of the Suburban Culture
2. [http://en.wikipedia.org/wiki/Social_science](http://en.wikipedia.org/wiki/Social_science) 01.03.14
macrosociology and microsociology. Macrosociology is the study of social institutions and large social groups and it studies social process and patterns that characterise society. Microsociology examines processes and patterns of smaller groups. It studies the daily issues and concerns. Sociology is a scientific study. This study focuses on one of the micro-sociological issues; that is streets of the city.

Alfred Louis Kroeber considers ‘Culture is super organic’, further, he has given three forms of culture namely Social Culture (Status and Role), Value Culture (Philosophy, Morals) and Reality Culture (Science and Technology, etc). Robert Redfield said culture is a totality of traditions and civilization is a totality of great and little traditions. Sociologists view of culture: Culture includes religion, art, philosophy, literature, music, dance, etc. which brings satisfaction and pleasure to many. It is the expression of final aspects of life. Culture has no standard of measurement because it is an end in itself and it absolve to internal thoughts, feelings, ideals, values, etc. It is like the soul of an individual. According to Swami Śmaranananda Maharaj ‘culture’ refers to the inner man. One may be poor and wearing cheap apparel he or she may still be the most cultured person. This is because ‘culture’ concerns itself with the inner refinement of a person and it includes arts and sciences, music and dance and various higher pursuits of human life. Cultures are inherently predisposed to change and these changes may be influenced by: forces at work within a society, contact between societies and/or changes in the natural environment. The processes leading to change that occur as a result of contact between societies are: diffusion, acculturation and transculturation. Diffusion is the movement of things and ideas from one culture to another. When diffusion occurs, the form of a trait may move from one society to another but not its original cultural meaning. For example when Jeans was first brought to Bengaluru it was accepted as a change of modernity but today everyone wears it. Acculturation is diffusion on a large scale leading to substantial replacement of traditional cultural patterns for example in Bengaluru, Kannada is the native language but speaking in English became a prestige issue and in some case a job mandate, today many of the new generation children do not know their native language and they are emulating American English with the accent owing to BPO and MNC jobs and celebrating Halloween festival unknown to India. Transculturation
happens to an individual when he or she moves to another society and adopts its culture and learns the language. The Medieval Culture during the feudal system was organized as pyramid structure. The clergy and nobles were at the top with peasants at the bottom. Peasants worked on the land and lived in huts made of natural material like mud and thatch, which they often shared with their animals. This period became the contributing factor to the later generations like Great cathedrals and universities, Painting and literature developed and Attitudes towards women changed. There are two types of modern culture: common culture and high culture as described by Matthew Arnold. The third conception of culture was formed by Ramond Williams is the popular culture and is more relevant to sociologists. Folk culture is losing its inherited identity and is becoming acquired culture.

An alternate part of society is Cultural assimilation which is a socio-political reaction to demographic multi-ethnicity that backs or advances the absorption of ethnic minorities into the prevailing society. The term assimilation is frequently utilized to foreigners and different ethnic clusters who have settled in an area which is new to them and they are not the native of it. New traditions and mentality are procured through contact and correspondence and the exchange of traditions is not just a restricted methodology. Each gathering of migrants brings some of its own social attributes to its new society and an amalgamation of thought processes and exchange of ideas and cultures bring in a new cultural mix. Assimilation typically includes a continuous change and it happens in differing degrees; full acclimatization happens when new affiliates of a general public get to be undefined from more veteran associates.

The modern culture of India has evolved over the years owing to its vibrant history. India has been invaded several times and this brought in a mix of cultures apart from its secularism and unique geography. The current modern Indian culture is a cultural assimilation due to migration to cities and is a mix of evolved ancient cultures brought through village immigrants and profound influence of the west through multinational exposure. This has been well talked about by sociologists like MSA Rao and MN Srinivas. The culture of a place can be seen in its architecture, performing arts, food,

3  http://anthro.palomar.edu/change/change_2.htm  29.02.12
clothing, and festivals. Post-independence, two schools of architecture came in India: Revivalist and Modernist.

The Revivalists continued the colonial legacy in their architecture and the Modernists were inspired by the European and American form of architecture. The contemporary Indian architecture could be seen in the designing of Chandigarh city which revolutionized the change. The modern Indian music has been highly influenced by the western form of music: Remixes, Fusion, Instrumental Film music and Indi pop. Modern Indian theatres portray the picture of the practical society amalgamating multi-religious and multi-lingual aspects in step with modern techniques and concepts. Indian cuisines are influenced by westernization and food items like breads, pastas, noodles, cakes, pizzas and others such foods are a delicacy.

Another interesting influence is the newer cooking methods. Vegetables like broccoli and bell pepper and fruits like cherries and strawberries which were unheard of in the ancient Indian kitchens are very much used today in Indian preparations. The festivals of India feature on the modern Indian festivals calendar like Diwali, Holi, Vijayadashami, Thai Pongal, Onam, Durga Puja, Bakr-Id, Eid ul-Fitr, Buddha Jayanti, Vaisakhi and Christmas. The sci-fi age and the supersonic age due to paucity of time have seen shortcut versions of the festivals. People no longer prepare sweets at home but the sweet houses cater to them. The modern Indian clothing reflects an Indo-Western blend in ensemble. Dhotis and Kurtas have been replaced with jeans and trousers for men and women prefer kurtis with jeans or western formals.

However the scenario on the streets today is changing due to a cultural assimilation of people from all caste community and creed. Bengaluru has specially seen this as people of all religions and castes live in the same community/ neighbourhood.

This study would encompass Socio-cultural aspects and urban transformation with respect to city dynamics, retail evolution and changing economy in suburbs of Bengaluru and the opinions of the citizens in the city planning. The second phase of this study is to explore to offer a socially viable design model which would be a sustainable model, which is people participatory, it can also be “a neighbourhood community” where social issues like, cleaning of lakes in neighbourhood, organized
waste disposal, parks for children to play, outing for elderly and youth for walks are of greater significance.

The socio-cultural conditions portray the cultural and social situation of a particular country.

As urban communities increase in size, the quantity of vehicular excursions on street framework goes up. This requires a logical arrangement. A movement to dampen private modes and energize open transport, once the level of activity along any travel passageway, in one bearing, surpasses 20,000 persons for every hour, presentation of a rail based (MRTS) Mass Rapid Transit System is called for. Mass Rapid Transit Systems are capital serious and have long growth period. It has been watched that in created nations, anticipating mass travel framework begins when city populace size surpasses 1 million; the framework is in position when the city populace is 2 to 3 million and once the populace surpasses 4 million or thereabouts, arranged expansions to the Mass Rapid Transit Systems is overwhelmingly taken up. In creating nations including India, on account of lack of trusts arranging and usage of rail based Mass Rapid Transit Systems has been lingering a long ways behind the necessities.

The city of Bengaluru with a populace of around 10 million ought to have had a MRTS system of no less than 100 KM by now, in reality it is still (18 kms) at the take-off stage. Bengaluru has all the perfect spruce up for an amazing Mass Rapid Transit System to be gotten with the exception of its streets being tight in few zones. Execution will likewise not include destruction of expansive scale of the private properties. A large portion of the area which is needed is under the Government control and subsequently can be effortlessly procured. Bengaluru has encountered remarkable development in populace in the last few decades. For the need of an effective mass transport framework, the quantity of motorised vehicles has augmented immensely. The result is disastrous like, great blockage on Bengaluru streets, regularly moderating paces, increment in street misfortunes, fuel wastage and ecological contamination with mechanized vehicles alone helping around two thirds of the air contamination. Owing to the rapid increase in population of Bengaluru in the last three decades and also due to the traffic congestion and noise pollution there is a dire need of mass rapid transport system in Bengaluru.
This chapter discusses the need for Metro in Bengaluru citing Delhi as a model and using comparisons from London Metro, which is not only the first metro in the world but also similar to Bengaluru’s condition in terms of area and population. A major difference between the two is, the first is underground and the latter is above ground. A major question is “Is it spoiling the cityscape?”

At this juncture, the topic of the thesis “Socio-cultural impact on street scenario of Bengaluru with the emergence of Metro- A proposal for a socially viable design model—peoples perspective” has to be thought of clearly. Herskovits has written,” Culture is the learned portion of human behaviour”. It controls individual’s behaviour and moulds it. It includes customs and traditions, social organizations, procedures of activities, moral fabric, system of values, science, art, religion, literature and all that man has developed through experience of ages. In brief, it is the total way of living. (Kumar 2012:3) This thesis is trying to study socio-culture of Bengaluru city. In this context, Beals and Hoijer write that “It is concerned with culture per se, whether it belongs to the primitive men of the Stone Age or the European city-dwellers of today”. (Kumar 2012:5) Thus, Sociology studies human behaviour in groups and behaviour in social surroundings. Thus sociological approach is most suitable to study the socio-cultural issues of a given society.

The population explosion on roads in the cities and the need for urban planning with new infrastructure solutions are other crucial issues that need to be explored which mainly depend on urban planned designing. Urban Planning can be defined as the design and planning of space focusing on the physical form, economic functions, and social impacts of the urban environment and on the location of different activities within it. One may also address it as a designed space. Indian History is characterised by great accomplishments especially in its variety in Town planning experiments, owing to the diversity and umpteen numbers of variables in this area. From prehistoric Mohenjo Daro, to the imperial city of New Delhi, to Corbusier's Chandigarh, India has pioneered in Town Planning. The technique of diagnostic survey, commonplace in planning practice today, is the somewhat belated result of Patrick Geddes' work in India four decades ago: the City Improvement Trusts in existence since the 1800’s are models of their kind. Sources of information regarding the historical aspects of urbanization are varied, mostly as traveller’s accounts. However social workers have addressed issues like prostitution, beggary, juvenile delinquency and
slums. Town planning Organizations have also studied neighbourhood, housing and urban-community development. One of the major causes of Urban Transformation is population.

- Population for the year 2001\(^4\) is:

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengaluru</td>
<td>8,400,526</td>
</tr>
<tr>
<td>Chandigarh</td>
<td>900,914</td>
</tr>
<tr>
<td>Delhi</td>
<td>13,782,976</td>
</tr>
<tr>
<td>Mumbai</td>
<td>11,914,398</td>
</tr>
</tbody>
</table>

- Population for the year 2011\(^5\) is:

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengaluru</td>
<td>9,588,910</td>
</tr>
<tr>
<td>Chandigarh</td>
<td>1,054,686</td>
</tr>
<tr>
<td>Delhi</td>
<td>16,753,235</td>
</tr>
<tr>
<td>Mumbai</td>
<td>12,478,447</td>
</tr>
</tbody>
</table>

The substantial increment in populace is the aftereffect of the absence of sufficient vocation opportunities in the villages and the fascination of moderately high wages and courtesies in the towns, unemployment and especially underemployment in horticulture. Arranging and advancement have not and maybe couldn't keep pace therefore most towns in India have become aimlessly dissimilar to the arranged urban areas of New Delhi and Chandigarh. They have a huge extent of substandard houses and shacks of feeble development, inadequately ventilated, over-congested and regularly needing in the crucial courtesies. Sir Patrick Geddes, an imaginative scholar in the fields of urban planning and education, was in charge of presenting the idea of "zone" to architecture planning. In India, Geddes expanded his thoughts regarding

\(^4\) [http://www.educationforallinindia.com/page163.html](http://www.educationforallinindia.com/page163.html) 04.03.12

\(^5\) [http://www.indiaonlinepages.com/population/india-current-population.html](http://www.indiaonlinepages.com/population/india-current-population.html) 04.03.12
local learning, collaboration between man and the nature, blend of information, verifiable conventions, and association of the individuals in their own particular wellbeing and the rediscovery of past customs of city building. This is the concept that would be employed in this design for socio-cultural space.

One of the means of infrastructure development or progress of a city is through transport systems. The means adopted to ease out the traffic congestion in a city is by making transportation people and environment friendly which is Mass Rapid Transit System (MRTS). First MRT in India was seen at Kolkata which as on date had adopted an obsolete technology, followed by Delhi, latest being Mumbai. Bengaluru started the construction on the lines of Delhi metro, in fact it was largely the same team working for Bengaluru metro. This was followed by metro in many more cities like Chennai, Hyderabad, etc.

The concept of a mass rapid transit for New Delhi first emerged from a traffic and travel characteristics study which was carried out in the city in 1969. Once the seed was laid owing to the traffic congestion and pollution reaching heights it had become imperative for the Delhi Government to introduce the mass rapid transit system. The feasibility study for routes and technology were considered. In 1984, the Delhi Development Authority and the Urban Arts Commission came up with a proposal for developing a multi-modal transport system, which would consist of constructing three underground mass rapid transit corridors as well augmenting the city’s existing suburban railway and road transport networks.

By the time these details were procured, the city had expanded significantly resulting in a twofold rise in population and a fivefold rise in the number of vehicles between 1981 and 1998. The introduction of privatising the bus transport system in 1992 merely compounded the problem, due to ill maintained, noisy and polluting buses and reckless driving. To rectify the situation, the Government of India and the Government of Delhi jointly set up a company called the Delhi Metro Rail Corporation (DMRC) on 3 May 1995, with E. Sreedharan as the Managing director. Dr. E. Sreedharan handed over the charge as MD, DMRC to Shri Mangu Singh on 31 December 2011. The snapshot of this study has been captured in this chapter which

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6 Urban Planning in India SOC 477 Project 2008:5-7 28.02.14
7 http://www.delhimetrail.com/needformetro/history.aspx 28.02.14
gives the focus of this study. Before going in-depth of the study it is imperative to define and understand the terminology.

As stated in the previous paragraph there is a need for MRTS in Bengaluru. But for any city to plan for a MRT tremendous research goes behind. The planners need to work in tandem with several agencies understanding the urban planning and design of the city including the road network and congestion areas and feasible areas, which would help them to identify the suitable locations to plan for laying the line. It’s not only necessary to look for vacant places to lay the line it is equally important to understand the areas through which the line would pass and would connect. An advent of such a line can change the total socio-economic and socio-cultural dynamism of the society. One of the important questions to ask would be. “Who would it benefit?”

There has to be a perceived notion of the change that the MRT would bring to the zone it would cater to. They also need to understand the growth pattern of the city and the growth of the suburbs to plan for future lines. An ideal condition would be to understand the existing urban design planned for the city and go in sync with it.

A need assessment has been done as stated here. Owing to the rapid increase in population of Bengaluru in the last 3 decades and also due to the traffic congestion and noise pollution there is a dire need of mass rapid transport system in Bengaluru.

Population of Bengaluru City (in Lakhs):

The population in Bengaluru as per the 1971-2001 Census rose from 16.7 lakhs to 56.2 lakhs. As per the draft CDP it is estimated to be 105 lakh in 2021.

Fig.1: 1971-2001: Census; 2005 extrapolated & 2011-2021 as per draft CDP
**Vehicles:** There are about 8.5lakh cars, 29 lakhs two wheelers, 1.5 lakh autos and about 2lakh of busses, cabs all included. About 1250 new vehicles are being registered in Bengaluru every day. (Source: Transport Department).

![Fig.2: Quantity of vehicles on road](image1)

**Congestion and Air-Pollution:** Increase in private vehicles has resulted in severe congestion & pollution, not just air pollution but also traffic pollution. If a person is exposed to the noise pollution at the cities major junctions daily he may go deaf very soon.

![Fig.3: Quantity of vehicles on road](image2)

A car occupies over 38 times more road space in comparison to a bus. The corresponding figures for two and three wheelers are 54 and 15 respectively.

![Fig.4: Congestion Road captured by Deccan Herald](image3)
Fig.5: A comparison of people carrying capacity per vehicle

As one can see from the above data that a car can carry 5-6 members whereas a bus can carry 50 passengers, therefore a bus can replace 10 cars on road. A carriage of Metro networking can carry 150 passengers and each Metro network has 3 such carriages. Therefore, they can replace about 9 buses on road or 90 cars on road.

The objectives of this research are: (1) To study the Social transformation due to physical change of the space like infrastructure, city skyline, business structure and environmental, (2) To study the Social transformation due to socio-psychological change of the space like socio-cultural life, social structure due to urban physical development, (3) To develop socially viable modern urban space with special reference to Bengaluru city planning and (4) To study the feasibility for the implementation. This study would benefit the Government and urban planning authorities in future planning of the city. It would also be beneficial to researchers and academicians.

The approach of this study is particularly significant because Bengaluru metro would create an impact on the streets of Bengaluru after it is fully functional. Today Kengeri in the West is a suburb with hardly any fashion awareness and very few malls, whereas, Whitefield in the East, a suburb developed due to IT industry, in contrast to Kengeri, has one of the finest malls of the city. But once the metro becomes functional it would bridge the gap between Kengeri and Whitefield in all the aspects discussed here. There might be an exchange of ideas and also more people from Kengeri might get into the IT industry, thereby exposing and bringing about a change in the currently laid back state of Kengeri suburb. This would be similar to the change seen in Dwarka which was once not so known suburb of Delhi.

8 http://www.bctransit.com/transitfuture/rapidtransittech.cfm, 04.03.12
However, when Delhi Metro extended its blue line to this suburb at the last quarter of 2005, all hell broke loose. Suddenly, the centre of Delhi (Connaught Place) was brought within 45 minutes of air-conditioned travel from Dwarka! Thus, it is no exaggeration to say that metro connectivity with rest of the city has been a key factor in Dwarka’s development. To its residents, Dwarka offers the right mix of planned development- aesthetic housing, green spaces, wide roads, local markets and recreational facilities. For the middle class in Delhi, Dwarka has already become an address to be proud of.

These different types of data prove that a Metro networking definitely eases out the traffic and pollution on the street of Bengaluru and also reduces the time of travel. In this context, this study would focus on the major benefits of Metro networking transit system of Bengaluru city and try to explore the possibilities of the street scenario not only from the perspective of infrastructure facilities, but also of the socio-cultural perspective.

1.2 Objectives of Research

1.2.1. To study the Social transformation due to physical change of the space like infrastructure, city skyline, business structure and environmental

1.2.2. To study the Social transformation due to socio-psychological change of the space like socio-cultural life, social structure due to urban physical development.

1.2.3. To develop socially viable modern urban space with special reference to Bengaluru city planning

1.2.4. To study the feasibility for the implementation

1.3 Key concepts of social transformation

Social transformation in this framework entails a shift in aggregate awareness of a general public which includes nearby state, national or worldwide society, so that the truth is experienced by harmony. This frequently happens by outer boost and some of the time purposefully. Urban areas which have amended themselves serve of illustrations of cognisant transformations of a social sort, bringing about revived and
strengthened populaces, financially thriving to restore civic pride\(^9\). A few nations have accomplished social changes and one such illustration is South Africa in 1994, when it finished politically-sanctioned racial segregation. Social changes or transformations maintain about state of mind and qualities that are held in a totally new perspective based upon diverse presumptions and convictions.

**Socio-culture:** According to Meriam Webster, socio-cultural is relating to, or involving a combination of social and cultural factors. Sociocultural theory grew from the work of seminal psychologist Lev Vygotsky, who believed that parents, caregivers, peers and the culture at large were responsible for the development of higher order functions. According to Vygotsky, "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals\(^10\)."

**Psychological change of space** may in this research be referred to **Social Psychology**. Social psychology may include various areas of research like: Social Cognition (processing, storage and application of social information, how things are and how things work, thought process and social behaviour); Attitudes and Attitude Change; Violence and Aggression and its causes; Pro-social Behaviour or the bystander effect where people sometimes help others and sometimes refuse; Prejudice and Discrimination; Self and Social Identity (Example: Self-awareness, self-esteem and self-expression); Group Behaviour which includes group dynamics, leadership, group decision-making, conflicts, cooperation and group influence; Social Influence on behaviour and decision-making (Example: peer-pressure) and Interpersonal Relationships: in shaping behaviour, attitudes, feelings and thoughts. (Example: attachment, liking, love and attraction)\(^11\). These would be some of the aspects that would be studied through observation, interviews and surveys to find out the changes brought about in these aspects with the advent of Namma Metro.

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10 [http://psychology.about.com/od/developmentecourse/f/sociocultural-theory.htm](http://psychology.about.com/od/developmentecourse/f/sociocultural-theory.htm) 20.02.14
11 [http://psychology.about.com/od/socialpsychology/p/socialresearch.htm](http://psychology.about.com/od/socialpsychology/p/socialresearch.htm) 20.02.14
**Street scenario:** There are two main interpretations of Streets for Life: (1) Streets those residents find easy and enjoyable to use as they grow older in their neighbourhoods, allowing them to continue living at home if they want to and (2) Streets that are inclusive- they are easy and enjoyable to use by all members of society, including older people with dementia (Burton 2006:4). People’s neighbourhood include various elements as a part of the street like: Street network, shape and type; Open spaces; Junctions; Materials and kerbs; Street/ footway widths and Street furniture, including seating and signage.

**Urban morphology** is the investigation of the manifestation of human settlements and the procedure of their framing and change. The study tries to comprehend the spatial structure and character of a metropolitan territory, city, town or village by analysing the examples of its constituent parts and the methodology of its improvement. This can include the exploration of physical structures at distinctive scales and additionally examples of development, land-use, proprietorship or control and occupation. Commonly, investigation of physical structure concentrates on street configuration, plot arrangement and building form, frequently alluded to, by and large as urban grain. Investigation of particular settlements is typically embraced utilizing cartographic sources and the methodology of advancement is reasoned from correlation of noteworthy historic maps.

Unique consideration is given to the progressions in the physical growth of a city with time and the examination of diverse urban communities to one another. An alternate noteworthy piece of this subfield manages the investigation of the social structures which are communicated in the physical format of a city, and, then again the generation or propagation of different physical structure and social structures. The quintessence of the thought of morphology was at first communicated in the compositions of the extraordinary writer and rationalist Goethe in 1790. In American topography, urban morphology as a specific field of study owes its sources to Lewis Mumford, James Vance and Sam Bass Warner. Dwindle Hall of the UK is additionally a focal figure for the same.
Urban morphology is considered as the investigation of urban tissue, or fabric, as a method for recognizing the underlying structure of the built landscape. This methodology challenges the basic view of unplanned situations as clamorous or dubiously natural through understanding the structures and methodologies implanted in urbanization. The instruments for investigation of Urban Morphology have a few concepts like: Space syntax, Figure and Ground in urban communities. Three Theories of Urban Spatial Design are: Figure and Ground, Linkage theory and Place Theory (Trancik, 1986:97).

The British school revolves around the work of M.R.G. Conzen, who established a strategy called 'town-plan analysis.' The key perspectives for segmentation as per Conzen are: The town plan, The Pattern of building forms and The Pattern of land use. The town plan sequentially contains three edifices of arrangement component: Streets and their plan into a road framework, Plots and their accumulation into street-blocks and Buildings, as the block-plans.

**Urbanisation:** ‘Urbanization’ covers the movement of people permanently or temporarily from village to city. (Rao MSA 1974:19) The simplest definition of urbanism or an urban area might be the confederation or union of neighbouring clans resorting to a centre used as a common meeting place for worship, protection, and the like; hence, the political or sovereign body gets formed by such a community. Such a social structure is very predominant to the Indian villages. As referred by modern day sociologists Indian urbanization borrows the philosophy from Indian villages. An urban area can also be defined as a composite of cells, neighbourhoods, or communities where people work together for the common good. A third definition says that urban areas are those locations where there is opportunity for a diversified living environment and diverse life-styles (Gallion and Eisner 1986:3). Urbanization is characterised through different sub-heads like urban planning, town planning, growth of cities, understanding cities, suburbs and streets, these have been discussed, analysed and understood in detail here. A further step has been taken later to understand them in Indian context.
**Retail:** In order to understand retail we need to understand how business happens. According to Gibson in his book Retail Management, the word retail is derived from the French word ‘retailier’ meaning ‘to cut a piece off’ or ‘to break bulk’. Retailing involves a direct interface with the customer and the coordination of business activities from end to end. Retail stores get their supply from manufacturers/wholesalers but they are the end that coordinates with the consumer.

**Aesthetics and functionality:** Anindya Kundu states that, “When analysing the importance of functionality and aesthetics in design, we notice that it is the context that determines which of the two takes a dominant role in a particular instance. But in the larger picture both need to compliment and balance each other”. We discern beauty in concrete objects and abstract ideas, in works of nature and works of art, in things, animals and people, in objects, qualities and actions (Scruton 2011:1). Masayuki Fuchigami in his article titled “A Comparison of Tokyo’s Oedo line and London’s Jubilee Line extension” states that the design of a station from underground to ground must be a fusion of architecture and engineering, giving birth to austere elegance combined with high technology and hard-edged functionality.

**Signages/Information Design and wayfinding:** A signage system is significantly more than simply a set of signposts and symbols. And in addition its functional application, it serves to construct a character for a space and can add enhancing feel to any built environment. Andreas Uebele in his book titled, 'Signage Systems & Information Graphics', approaches his own abundance of configuration experience to investigate signage as a point where graphic design and architecture converge. Kevin Lynch in his book, 'The Image of the City', expresses the consequence of a five-year ponders on how clients see and sort out spatial data as they explore through urban communities. Lynch reports that client comprehend their surroundings in dependable and probable ways, framing mental maps with unique components like paths, edges, districts, nodes and landmarks. In this book Lynch authored the words "imageability" and "wayfinding".
1.4 Research Questions

1. How the advent of Metro networking transit system has an impact on the Socio-cultural changes on the street scenario of Bengaluru city?
2. How the factors of urban sociology like attitude change, migration, and global exposure have occurred in Bengaluru for the last 30 years and also how the urban developmental factors like climate, demography, urban land use and transportation have brought changes in the last 30 years in the city of Bengaluru?
3. How the people of Bengaluru city are affected through the International socio-cultural changes due to the Global exposure?
4. What are the expectations of people in the neighbourhood for a socially viable sustenance?

1.5 Hypothesis

1. The advent of Metro Networking Transit system has a significant and tangible impact on the physical change of space. It has tremendous impact on the factors like economic factors, education, demographic and socio-cultural changes on account of global exposure on the street scenario of Bengaluru city. These changes are seen and felt in factors associated with city skyline, environmental, infrastructural, retail and fashion.
2. Due to the physical, socio-psychological, economical and socio-cultural changes several social issues emerged in relation to street scenario, to face these challenges a socially viable design model keeping in view of the peoples perspective is proposed based on the survey conducted.

1.6. Work done in the area of research

Ravi Kalia in his book ‘Chandigarh: the making of an Indian City’ talks about the city planning for Chandigarh and how it has impacted the city as it was designed by a French Architect Le Corbusier. Chandigarh and New Delhi are the two planned cities of India, and this book helps in understanding the conceptualization of a planned city.

There has been no documented study on the impact of New Delhi Metro on the suburb Dwarka, its growth in retail and surrounding. However, for the purpose of this research, data has been collected through a few personal interviews of people living in
Delhi, for more than 20 years, closer to Dwarka and also through the DDA website. They have given an account of the growth of an unknown place to a happening hub Dwarka with the advent of Metro network.

Christian Wolmar in his book titled ‘The Subterranean Railway: How the London Underground Was Built and How it Changed the City Forever’ reveals London's hidden wonder in all its glory and shows that the railway beneath the streets helped create the city of today. It also talks about the housing that developed along the lines close to stations that brought a new social era to London and the surrounding area, especially north-west of the city.

A study of the Report: ‘Rehabilitation of Tehri Dam and Lessons Learnt’ by S.C. Sharma, Former General Manager THDC Ltd. Tehri dam social impact, has helped to understand the displacement plan for the people and the compensatory package plan.

Newspaper articles and researches on the aftereffects of the killer Earthquake/Tsunami in Japan and its impact on society and the Japanese attitude to bounce back is an interesting study. Similarly newspaper articles and researches on America’s Sears tower, 9/11 and the fear that grip America showed the impact of an attack on its society.

Apart from these, some of the writers have dealt with impacts on India and Bengaluru culture is: Bangalore’s Twentieth Century – The Promise of the Metropolis’ by Janaki Nair, Global citizens and globalized spaces is the aspect being referred from this book, how it impacted the socio-cultural scenario in Bengaluru in the twentieth century.

Social Change in Modern India by M. N. Srinivas, book talks about the social trends in society especially Sanskritization and Westernization and it also talks about the problems of changing values in Indian society today.

Urbanization and social change; a study of a rural community on a metropolitan fringe by Rao, M. S. A. (1970) talks about how the urban fringes have developed due to urbanization,
It was important to understand the identification of need and nitty-gritties involved in the planning process of the advent of Namma-metro, for which similar studies in this area need to be referred to, to help in planning and execution. A few studies have been done, like: the planning of Chandigarh city by a French architect and its impact on the city: political, physical, economic or socio-cultural impacts and also the new planning process brought to India. Also the influence of urban development like metros/flyovers over social impact through case studies of Delhi and London metro have been cited as case studies to state the importance and need of metro. Tehri dam and the rehabilitation process have been studied to understand the nuances of displacement and rehabilitation.

1.7 Methodology

Three types of Research Design: Exploratory, Descriptive and Causal have been employed. Since the research has to adopt the multi-disciplinary approach, several research methods were employed for an effective analysis. The first phase included the **Exploratory Research Method**. Exploratory Method has been the most useful in the early stages of research, as there has no such study done in the past. The aim of this research method is to uncover any variable that may be relevant to the research (Easey, 2002: 74). Here it has identified and explored the meanings of suburbs, their growth and the impacts and changes in the area due to various factors, one of them being the Metro networking.

**Descriptive Research Method** provides an accurate description of the variables uncovered in the exploratory stage. Data here are usually obtained from ordinary data sources or from surveys. It includes Qualitative Research Method and Quantitative Research Method. **Qualitative Research Method** helps in understanding of human behaviour and their responses to the environment in which they live and what are the changes that have influenced them with a socio-cultural outlook. This data has been collected through interviews of people.

**Quantitative Research Method** has been carried out by questionnaire survey method of people using the Metro, people living in the vicinity of Metro line and shop owners in vicinity of Metro line. **Causal research Method** is being used to determine the relationship between variables. **Case study** of the cities like Delhi and London is referred, to identify the socio-cultural impact of Metro on the streets/suburbs along its
line in these cities. The two areas/suburbs of study initially identified for pilot study were Bypanahalli-Indranagar in East and Jayanagar in West connected with the city centre/CBD, the MG Road. But later the two functional lines Bypanahalli- MG Road and Peenya-Yeshwantpur line were considered as data collection was possible only in these areas as metro users were largely only in these areas.

The Sample Design used is Non-probability Sampling Method using the Convenience Sampling Method. The sample size is 100 Metro commuters, 50 owners/ workers in the vicinity and 50 residents in the vicinity. The data has been analysed in different methods. The open ended questions from Questionnaire and Interviews have been analysed separately to understand the social- psychology of people living in these suburbs along the metro line. The quantitative questions in the questionnaire have been analysed using the statistical Method of analysis (SPSS software). The Independent variable Metro networking has been cross-tabbed with the Dependent variables like mixed demography and culture due to migration; BPO culture; concept of nuclear families, living on credits/EMI’s and eating out on weekends; Global exposure and awareness; impact on retail and fashion buying and awareness in the streets/ new suburbs; Safety of women on streets and neighbourhood and impact on physical structure like traffic, air and noise pollution; cutting of trees; concrete and glass structures of apartments and office buildings; change in urban land-use from agriculture to suburb; concept of community living. A pilot study has been conducted.

There could be various factors that could be part of socio-cultural study. Due to limitation of time and feasibility the scope of this study has been defined. The study revolves around the two variables: dependent variable and independent variable. The Independent variable considered is the Metro networking. The Dependent variables considered are mixed demography and culture due to migration; BPO culture; concept of nuclear families, living on credits/EMI’s and eating out on weekends; Global exposure and awareness; impact on retail and fashion buying and awareness in the streets/ new suburbs; safety of women on streets and neighbourhood and impact on physical structure like traffic, air and noise pollution; cutting of trees; concrete and glass structures of apartments and office buildings and aesthetics of Bengaluru city.
The limitations of this study are:

1. There has been no such direct reference of study.
2. The sample size has been restricted to 100 commuters, 50 owners/ workers and 50 displaced people.
3. The suburbs studied are only Byapanahalli/Indranagar and Jayanagar and the two functional lines.
4. The Phase I of Metro network was expected to be completed by 2013, but the project has been delayed, therefore the usefulness of the project is difficult to be justified.

Analysing the above factors and stating the findings in terms of fashion awareness and changes in the streets. The other aspects of study would include the socio-psychological findings of cultural changes in the neighbourhood and the physical changes in the skyline of the area. Before going in-depth of the study it is imperative to define and understand the past knowledge of the sociologist, urban planners, retail analysts and information designers in this field of research through various sources like books, journals, newspapers, e-publications and so on.

1.8 Literature Review

**Primary Sources:** The primary information has been collected from fieldwork through questionnaire, Bengaluru Archives, Gazetteer Office, Bengaluru, Interviews with sociologists, Government officials in charge of Metro project and appropriate experts to gather more information about the topic. Original records have been checked from BMRCL website and also information obtained from BMRC office have been checked and found useful for the purpose of study. The data has also been collected through personal observations on site and interviewing few locals on site.

**Secondary Sources:** The secondary information, the first stage of study, has been conducted from various existing literature and the sources like libraries, books and similar case studies for instance- London Metro & Delhi Metro project. Further, research papers, journals, periodicals, articles, catalogues and brochures, booklets, etc. have also been taken into account. Major Libraries consulted are- ISSEC Library, Bengaluru, IIHS Library, Bengaluru, Government Public Library, Bengaluru, Mythic Society, Bengaluru, and British Council Library, Bengaluru. The secondary data has also been collected through Metro official website and newspaper reports and surveys.
A scrap book of newspaper cuttings has been maintained to evaluate the progress of work and record the major milestones.

Books referred to at the initial study:

1. **Srinivas, M.N. 1966. Social Change in Modern India. New Delhi: Orient Black Swan.** The book talks about the social trends in society especially the Sanskritization and Westernization. This book is my primary source as it talks about the problems of changing values in Indian society today.

2. **Rao, M.S.A. 1974. Urban Sociology in India. New Delhi: Orient Longman Limited.** The book talks about how the urban fringes have developed due to urbanization, be it political, physical, economic or socio cultural impacts. Therefore it is another primary source of reference.


4. **Nair, Janaki. 2005. The Promise of the Metropolis- Bangalore’s Twentieth Century. New Delhi: Oxford University Press.** Global citizens and globalized spaces is the aspect I would be referring from this book, how it impacted the socio-cultural scenario in Bengaluru in the twentieth century.

5. **Grava, Sigurd. 2003. Urban Transportation Systems. USA: McGraw-Hill Professional Publishing.** The book offers discussion on all options of transportation and helps analyse the one which is most useful to the community. “It provides viable transportation solutions based on real world elements” by understanding the consumer travel behaviour and preferences. It tackles complex, issues such as sprawl, traffic flow and accessibility. The book discusses right from bicycle to Mass Rapid Transit System.

6. **Dillon, Susan. 2011. The Fundamentals of Fashion Management. SA: AVA Publishing.** The book is an introduction to the basics of fashion management and the fashion industry. Each chapter explores in turn the concepts of trend prediction, fashion communication and technology, fashion buying, sourcing and supply chain, marketing and entrepreneurship. The book is offering a
complete overview of the fashion cycle and the practical issues relevant to the business and thereby determining ways of visual displays to augment business.


These were few of the initial books referred. Several other books were referred to at a later date which has been mentioned in the bibliography.

**Several Paper Presentation/Reports were also referred to:**


2. Socioeconomic Assessment for Central Secretariat Badarpur Corridor of Delhi MRTS- Report by Delhi Merto officials

3. Brief note on Environmental Impact Assessment (EIA) on Revised Alignment from Green Park to Qutub on Central Secretariat – Qutub Minar Corridor of Phase–II

4. Rehabilitation and Resettlement Statement - Green Park to Qutub

5. City planning and realities - A case study of Chandigarh Prepared by Bipin Kumar Malik for International Conference On “City futures” University of Illinois, Chicago, United States of America 8-10 July, 2004 “
7. "Urban planning and culture; conditions for osmoses" by Anna Arvanitaki—Program of ECCM Symposium in 2007

Important issues and concerns through research papers and reports and their methods of tackling the issues have become case study in this research.

1.8.1. Chandigarh: City Planning and its impact on the city

Chandigarh, the dream city of India's first Prime Minister, Sh. Jawahar Lal Nehru, was designed by the renowned French engineer Le Corbusier. Pleasantly positioned at the foothills of Shivaliks, it is known as one of the best experiments in urban planning and cutting edge structural engineering in the twentieth century in India. Chandigarh befitted representation of the autonomous Indian. The establishment stone of the city was laid in 1952. The city is well known for its design and architecture by architects, like, Le Corbusier, Pierre Jeanneret, Jane Drew, and Maxwell Fry.

In the 50's Le Corbusier was approached to create the Master Plan for Chandigarh which a few years prior to this was initiated by Albert Mayer. The contractor for the same was Matthew Novicki, who passed on in a plane crash 1950. The legislature officers of Punjab seized this as a prospect to discover another group of architects and town planners. Le Corbusier was engaged for the Master Plan and the Capital structures and he worked from 1951 until his passing in 1965 on the development of the city. Pierre Jeanneret, his cousin and accomplice was contracted as the site architect. Maxwell Fry and Jane B. Drew worked for around three years on the task and afterward left because of their engagements somewhere else. In 1965 M.N. Sharma assumed control from Pierre Jeanneret as the first Indian Chief Architect of the Project and after the redesign of the State of Punjab in 1966 and the foundation of Union Territory, Chandigarh, he was named as Administrative Secretary of the Department of Architecture in the Chandigarh Administration.

The Master Plan by Le Corbusier was analogous to the one prepared by Albert Mayer and Mathew Novicki, with the exception of that the shape of the city arrangement was altered from bending street system to rectangular shape with a grid iron pattern for the fast moving traffic streets. This also diminished the area and was economically
beneficial. The city plan was apprehended as post war 'Garden City' wherein vertical and tall structures were precluded, keeping in view the financial conditions and living propensities of the individuals. All the fundamental streets were straightened out, the measurements and association of the superblocks were reformatted, a complete order of dissemination was made, the nomenclature was changed, and the Capital "head" was solidly set up. The similitude of a person was being utilized in the arrangement. The "head" contained the capital complex, the "heart" the business focus, and the 'arms', which were perpendicular to the principle pivot, had the scholastic and vacation amenities. The plan integrated Le Corbusier’s ideologies of light, space and greenery.

![Plan of Chandigarh](http://www.masterplansindia.com/maps/chandigarh/acquisition-plan-chandigarh.jpg)

**Fig 6: Plan of Chandigarh- Grid layout**

Le Corbusier alienated the city into diverse Sectors and every Sector or the neighboured unit was analogous to the conventional Indian 'mohalla', and measured 800 meters by 1200 meters, covering 250 acres of the area. The segment emphasized a green strip running north to south, divided by a business street running east to west. The streets were ordered in a reducing grading and were marked V1 through V8: V1: blood vessel streets that unite one city to an alternate, V2: urban, city streets, V3:

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vehicular street encompassing a sector, V 4: shopping road of a segment, V5: circulation street winding through an area, V6 private street, V7: pedestrian pathway, V8: cycle track. Every Sector is encompassed by V2 or V3 streets, with no structures opening on to them and they are intended to be self-sufficient, with shopping and group offices inside a rational strolling expanse\(^\text{13}\).

The instructive, social and recuperative amenities are spread all over city. The modern region including 2.35 sq kms, was situated aside in the Master Plan for non-contaminating, light industry on the great south-eastern side of the city close to the line, as far from the Educational Sectors and Capitol Complex as could reasonably be expected. The downtown area, the Sector 17 is the heart of Chandigarh's activities. It comprises the Inter-State Bus Terminus, Parade Ground, District Courts, etc. on one hand, and vast business and shopping centre on the other as stated in the book ‘The Making of an Indian City’ by Ravi Kalia. The whole planning of Chandigarh city appears to be based on Vaastu Shastra which is the underlying scientific planning principle applied in India owing to its geography and climate.

\[\text{Fig.7: Layout plan of a sector}^{14}\]

\(^{13}\) \url{http://architectuul.com/architecture/city-of-chandigarh}

\(^{14}\) \url{http://www.ietechandigarh.org/ietechandigarh/userfiles/image/1.jpg}
The roads were designed and oriented in such a way that most of the time during the day, they are under shadow, similar concept of Rajasthan’s town planning to keep the heat at bay. There are huge parking areas for the commercial zones so that the Parking problems don’t create havoc on the main roads. Le Corbusier called it Les Sept Voies de Circulation, or 7Vs. The rationale of his planning was the motor car. "From his early studies in urbanism, Le Corbusier had identified the motor car as the central factor of modern town planning. His initial, primarily aesthetic, quasi-Futurist response to the motor car and to rapid movement in the cities had, by 1950, metamorphosed into a theoretical solution to the problems of modern traffic -- a graded system of circulation, from crossing continents to walking to the front door. The 7 Vs act in the town plan as the bloodstream, the lymph system and the respiratory system act in biology. These systems are quite rational, they are different from each other, there is no confusion between them, yet they are in harmony ... It is for us to learn from them when we are organising the ground that lies beneath our feet. The 7Vs are no longer the sinister instruments of death, but become an organised hierarchy of roads which can bring modern traffic circulation under control'.” [Prasad Sunand, 1987].

Le Corbusier believed in creating harmony by using the Design principle of Symmetry. He designed clusters of bungalows. With each unit consisting of a simple arrangement of a veranda, two bedrooms, a kitchen, an open-air water closet, and an “Indian-style” toilet, each unit had open-air space in front and back as extensions of the house and was surmounted by a secondary parasol roof to keep it cool.

“The plan for Chandigarh was not free of deficiencies. Hierarchical zoning, lifeless streets and less inclusive spaces all needed correction. However, the leap of imagination and value of design that Le Corbusier conveyed stirred the imagination of Indian architects and pushed many cities to aspire to better planning. Sadly, Indian planners have lost their way in the 50 years or so since Chandigarh was completed. Cities today are looked upon only as sites of economic growth, missing the importance of holistic planning and aesthetics. Chandigarh today stands neglected for
example the furniture and manhole covers designed for the city found their way to auction houses\textsuperscript{15}.

### 1.8.2. Urban development like metros/flyovers have impacted/ influenced the social scene.

With a specific end goal to straightforwardness of transportation issues, numerous urban commanding voices and authorities in India have taken up the action for development of flyovers at significant and strategic crossing points. However, in the vast majority of the cases a comprehensive planning approach has not been embraced, either because of absence of trust or lack of awareness about the planning perception of such recommendations. The areas for flyovers have been chosen focused around present day working conditions of traffic movement and effects such flyovers would cause at nearby convergences have not been evaluated.

Through the case study presented in the paper, it has been demonstrated that an ill planned flyover only shifts the location of the problem without bringing any benefit to traffic. The flyovers in Cairo have scarred the city and destroyed the urban fabric. Through the research endeavour displayed in the paper, it has been exhibited that a not well arranged flyover just moves the area of the issue without bringing any profit to activity.

### 1.8.3. Case study: Delhi metro and its impact on the retailing & surrounding

As per the 1981 census, The Union Territory of Delhi had an area of 148,639 hectares of which 44,777 hectares had been included in urbanisable limits with a population of 54.5 lakh and a few more in 17 settlements to make a total of about 82 lakhs. But the actual population of Delhi was 122 lakhs, therefore the balance 40 lakh population needed to be accommodated\textsuperscript{16}, hence an ‘Urban Explosion Plan’ was undertaken and under this plan three sub-cities Rohini, Dwarka and Narela were developed.

Dwarka is the subject of case-study as it is the suburb that grew because of the metro. It is a suburb located on South West of Delhi and has been developed by the Delhi Development Authority (DDA). On its completion, Dwarka was proposed to house

\textsuperscript{15} \url{http://www.thehindu.com/opinion/editorial/le-corbusiers-concrete-visions/article3969410.ece}

\textsuperscript{16} \url{http://dda.org.in/planning/urban_extension_projects.htm}
one million people with all essential infrastructural facilities. It was planned to be one of the largest residential areas in Asia with Zero Tolerance policy to raws misuse of land and encroachments. All transport networks was provided for this area. Yet the 400-odd co-operative societies and 3-4 storeyed flats built by DDA remained inhabitable due to lack of connectivity. It was only when metro connected its blue line in 2005 that all hell broke loose. Dwaraka suburb got connected to Connaught Place Delhi with an air conditioned, pollution free ride of just 45 minutes. This connectivity was the key factor in the development of Dwaraka.

To its residents, Dwarka offered the right mix of planned development- aesthetic housing, green spaces, wide roads, local markets and recreational facilities and for the middle class in Delhi, Dwarka has already become an address to be proud of.

1.8.4. Citation of London Metro, the pioneer in Mass Rapid Transit

They might be at opposite ends of the development spectrum, but London and Bengaluru share a common developmental concern where infrastructure is concerned. Underlining this shared experience at a press conference organised by NGO Janaagraha, which has partnered with the British Deputy High Commission in Bengaluru, Ian Felton, the British Deputy High Commissioner, said, “While Bengaluru has been grappling with the Metro project, London has also seen its fair share of rail-related construction work; London's crossrail project, which runs right across the middle of the city, is currently in construction, and will go on till 2018.” The partnership seeks to initiate a sort of peer-learning system between the two cities, where governance is concerned. In light of this partnership, Sir Edward Lister, Deputy Mayor of London, Policy and Planning, will be in Bengaluru on Friday, April 12, to discuss these issues of governance, with respect to transport and mobility, with Biocon MD and Chairperson Kiran Mazumdar Shaw, and N Sivasailam, MD of Bengaluru Metro Rail Corporation Ltd

1.8.5. Tehri dam’s social impact on displacement and rehabilitation of the people

The rehabilitation plan and displacement strategies and compensation criteria for Tehri dam have been studied here to understand if it was similar to the displacement strategies and compensation to the people affected by metro.

Two lakes structured by 260.5m high Tehri Dam and 103 m high Koteshwar Dam will have a range of 42 sq. km. and 2.65 sq. km. individually at most extreme full supply levels. Because of the submergence brought about by these dams, the Tehri Town and 24 villages were to be completely influenced, while an alternate 88 villages would just be in part influenced. Moreover, 13 more villages were completely influenced because of securing of the area, for this venture which lives up to expectations of the state. It was envisioned that, subsequently the Tehri Complex would influence a sum of 37 villages completely and 88 villages moderately, furthermore the Tehri Town which was additionally to be completely submerged. The individuals from these influenced villages and Towns were to be suitably assimilated in the fresh location.

Rehabilitation Plan: The Rehabilitation here had two zones: Rural Rehabilitation and Urban Rehabilitation. Rural Rehabilitation was classified as the families whose half or more than half land was obtained were dealt with as “Fully Affected” and those families whose less than half land went under submergence were characterised as "Partially Affected". Of Urban populace of Tehri Town, each of the 5291 families living in the Town as on the cut-off date of 06.06.1985, were dealt with as completely influenced or fully affected. There were a couple of essential doctrines that had guided the establishment of the Rehabilitation Policy which were adjusted on interest by subjected individuals.

Rural: The policy followed in the rural segment was as enhancement of money in lieu of plot from Rs. 2 lakh to Rs. 5 lakh and house development support to completely influenced house holders is given @ Rs. 1 lakh. The other compensation was, increment in cash grants for moving and buying of seeds and manures and money awards extending from Rs. 80,000 to Rs. 1,20,000 for provincial shop holders relying on this area for their livelihood. Liberalization of qualification criteria for plot
allocation stated that, those land owners in rural area who sold their part land after 1978, but before issue of Section 4(1) warning under Land Acquisition Act would be eligible. Government has additionally permitted (i) remaking and migration of public properties situated below EL 835 m in moderately submerged villages, at larger amount for populace dwelling above submergence level; (ii) plan for Ferry boat and cable car for cut-off ranges; and (iii) Heavy engine vehicle connect crossway over Bhagirathi river close to Dobra village.

**Urban:** The policy followed in the urban segment was that the amount of house development help was modified, differing from Rs.2.5 lacs to Rs.4.5 lacs relying on plot size; expense of flats and shops apportioned to the entitled. State government permitted in July'01 instalment of cash grants to shopkeepers of old Tehri Town going from Rs.1 lakh to Rs.3 lakh relying upon class of shop, subject to the giving over of ownership18.

In brief this chapter talks of the need for Metro in Bengaluru citing Delhi as a model and using comparisons from London Metro, which is not only the first metro in the world but also similar to Bengaluru’s condition in terms of area and population. A major difference between the two is, the first is underground and the latter is above ground. A major question is “Is it spoiling the cityscape?” The chapter also deals with city growth and resettled cities due to natural or man-made problems. The chapter also deals with urbanization and urban theories by Hippodamus of Miletus, ‘Father of urban planning’, who is often credited with the modular grid in urban planning, which was brought to India by Le Corbusier in Chandigarh city planning. Filarete, an architect of the early Renaissance, planned an ideal city to be called Sforzinda, based upon the pattern of an eight-pointed star. Ebenezer Howard, Robert Owen and Charles Fourier believed that communities could be designed to improve the lot of the common person. Howard’s garden city is a landmark in urban planning. Fredrick Law Olmsted’s urbanism was more in keeping with what we would call ‘green infrastructure’ today (Ref: Wall & Waterman, 2010:24-30). However, there have been cities which have grown organically around industrial belt or due to sheer terrain. There is also an attempt to understand the growth pattern of Bengaluru and the development of suburbs, the need of the day; the rising traffic congestion and Metro.

18 Report: REHABILITATION OF TEHRI DAM AND LESSONS LEARNT By S.C.Sharma, Former General Manager THDC Ltd.
as a boon to the city woos. Citing Delhi as an example where life comes to a standstill with Metro lines not working on a particular day.

After a thorough literature study was done the chapters outline was prepared and the research process was planned.

1.9 Significance of study

This study would benefit the Government and urban planning authorities in future planning of the city. It would also be beneficial to researchers and academicians. Urban transformation is a conglomerate of built-up and open spaces with urban growth or decline. Urban Planning can be defined as the design and regulation of the uses of space that focus on the physical form, economic functions, and social impacts of the urban environment and on the location of different activities within it. These are the two main key concepts that form the basis of this thesis. The other important key concepts are Social transformation, Psychological change of space here referred to Social Psychology, Urban morphology, Suburb, Mass Transit System- Metro and Theories of Urban Spatial Design: The three Theories of Urban Spatial Design are: Figure and Ground, Linkage theory and Place Theory (Trancik. 1986:97). The approach of this study is particularly significant because Bengaluru metro would create an impact on the streets of Bengaluru after it is fully functional.

1.10 Plan of Research

In recent times there are number of Studies and Research Projects that are undertaken on the developmental aspects of growing cities all over. Similarly Bengaluru as a growing city is receiving the attention of researchers. This thesis has a special focus on the socio-culture of Bengaluru City, which is divided into 6 chapters. Each chapters dwells into a structured study, focussing from global norms to country norms and finally to the norms for the city under study viz. Bengaluru, in regards to urban design, urban growth and transformation; socio-cultural changes globally to its influences in the city; changes in economy, values, culture, belief and government policies and their impact on retail and fashion of the city and also the issues and concerns with the advent of metro and the proposed solutions considering the opinion of the people.
Chapter 1: Introduction

This chapter talks of the need for Metro in Bengaluru citing Delhi as a model and using comparisons from London Metro. It also deals with a brief outline of the research including the objectives, research questions and hypothesis along with the research design and the research method followed, in brief it incorporates the plan of research.

Chapter 2: Urban Transformation and Urban Design:

This section deals with urbanization and urban theories by eminent urban planners, urban designers and urban sociologists. Few theories are mentioned here: Hippodamus of Miletus, ‘Father of urban planning’, who coined the modular grid in urban planning, which was brought to India by Le Corbusier in Chandigarh city planning (Ref: Wall & Waterman, 2010:24-30). Another eminent sociologist MSA Rao in his book Urban Sociology in India, states that,” The process of urbanization occurred, as we have noted, on different axes- administrative, political, commercial, religious and educational” (Rao, 1991:35). G S Ghurye another eminent sociologist in his paper ‘Cities of India’ considers the fluctuations in the progress of different cities, showing how the growth of great cities is related to industrialization, administrative changes and planned development. There is also an attempt to understand the growth pattern of Bengaluru. According to Shiv Visvanathan in his article “An ode to the Planning Commission”, he talks about the vison of Bengaluru’s growth. Sir M Visvesvaraya has contributed immensely to Bengaluru through his vision in planning of the city. Today the city has expanded due to migration and there has been development of suburbs. The need of the day is to tide over these distances through urban commutes; the rising traffic congestion and advent of Metro as a boon to the city woos. Citing Delhi, which is similar to Bengaluru as an example, where life comes to a standstill with Metro lines not working on a particular day.

Chapter 3: Socio-cultural Growth of Bengaluru city and Impact of Metro on the street scenario of Bengaluru:

This segment deals with the understanding the social theories and socio-urban transformations due to migration. It also deals with an understanding of urban sociology by various eminent Indian sociologists and social demographers. It begins
with the understanding of two terms: Sanskritization (caste system) and Westernization (above caste) by the eminent sociologist MS Srinivas. This chapter has also covered the aspects, like the background of socio-cultural life in context of Metro networking in the city, citing the example of London and Delhi which has been the role model for Namma Metro; trying to understand the demography, climate, urban land-use and transportation. It also talks of culture, migration and settlement, education and infrastructure changes with the advent of BPO and IT culture, which was a landmark social change endured by the city. This resulted in the changes that have been brought to the city as a global exposure, socio-economic advancement and the dawn of International retail brands to Bengaluru being called a silicon valley due to the IT sector.

Chapter 4: Changing scenario of the Retail Sector along the Metro Line:

India and more so Bengaluru in particular has come a long way in retail sector from the *kirana* stores to the Hypercity and in apparel from a tailor made garment to the luxury brands. The latest gap being bridged between the consumer and brand is the luxury of on-line shopping, which is though at a very nascent stage in India. This chapter has also dealt with the types of retail formats available to map the formats available in the area studied. It has also focused on an understanding of the retail trends in terms of fashion, trying to understand the fashion awareness of the people living in these suburbs; understanding the factors that affect consumer behaviour and their retail practices; the brands that they are aware of and the formats they shop at, pertaining to fashion apparel.

Chapter 5: Problems and Issues with the emergence of Metro in Bengaluru:

The problems the city has faced due to urban influx, the changes brought about in the urban environment due to the population explosion, gender concerns and safety of women and changes in the socio-cultural and economic outlook due to the BPO culture and IT sector are the key concerns dealt with in this chapter. Heterogeneity with its parade of styles obscured the tradition of city building, concealing the fact that urban forms in all great periods of culture were the contemporary expression of creative workers in their day. Cultures grew, expanded, evolved; just so did the forms of their cities.
Changes from natives to migrants; change in environment; growth of city through planning or lack of planning; transportation policies impacted due to traffic and congestion have been the critical issues of study. Globalization brought by the BPO’s and raise in salaries skewed the socio-economic status of Bengaluru. IT industries and growth in retail sector with international brands opening their stores- Tommy Hilfiger, Jimmy Choo, Burberry to the latest is Zara have impacted the lifestyle of the city. This chapter covers these impacts on Bengaluru.

**Chapter 6: Methodology, Analysis, Inferences and a Solution as a Viable Design**  
**People’s Perception:**

This chapter covers the analysis of information collected from primary and secondary sources and inferences/results deduced and collated. The analysis on the Socio-Culture of Bengaluru and the reasons for the changing trends is brought with greater details here. Three separate surveys have been shepherded by administering a questionnaire to three different groups of people: people using the metro, people living in the vicinity of metro line and shop owners in vicinity of metro line. The outcome of this survey has accounted the vicissitudes that have taken place on the streets of Bengaluru through the last 30 years. Observations, interviews and newspaper cuttings have also been a significant source of evidence. After reviewing the results through survey, observations, interviews and newspaper reports an attempt is made to define a viable solution which keeps in mind the people’s perception and outlook.

The research would conclude with people’s perspective, opinions, doubts and questions of city life before and after Namma Metro…

“Metro is coming at the price of livelihoods and green cover. Is it worth the price? Will city and its residents be adequately compensated for what they lost?”

“This road had some great joints for people of all ages to meet up and spend some time together. Bookstores like Gangaram’s, Higgin Bothams, movie hall like the Plaza, Cauvery emporium and Central Cottage Industries for handicrafts, Lakeview cafe for those who loved ice-creams and pastries dotted the road and saw crowds of shoppers spending hours here.
But along came the metro rail project and soon M G Road became a sorry sight. Soon the road was dug up at places for the huge pillars to be constructed and it became tough for people to drive along this road. Pedestrians had no place to walk anymore.”

After having studied the research plan the next chapter begins with urbanization and urban design theories and it leads to an understanding of how urban cities are planned, relevance of urban infrastructure and then the street scenario followed by the types of transit systems and the need for Mass Rapid Transit (MRT).

19 Article by: Trupti Godbole, 08 Jun 2011, Citizen Matters , Trupti Godbole is a resident of LB Shastri Nagar. (Source: http://bangalore.citizenmatters.in/articles/view/3074-life-before-Namma-metro-Bengaluru-that-was 07.03.12)