CHAPTER-VII

CONCLUSION

Every social process has cause and effect relationship with geographical space. Social processes and events took place in space and a geographer’s role is to read, analyse and interpret the complex nature of two-way interrelationship between society and space. Spaces are created, modified and even destroyed by society while individuals are being conditioned and influenced in various ways by the spaces in which they live.

Residential pattern and spatial variation in quality of life are the products of socio-spatial interaction. To understand the underlying process and the nature of interaction between nature and culture on a particular urban space is an important task in the production and enhancement of knowledge. The complexity and dynamics of their interaction often resulted in differentiation of urban space but organized in a more or less regular fashion to produce patterns. The present study is also an attempt to observe the processes and patterns of urban differentiation and spatial variation in quality of life in a rapidly growing hill city.

Aizawl city was selected as the site of study as the fast growing hill city in the eastern Himalayan region has not received any kind of study like this before. Hill cities across the world have been usually neglected in research work. Moreover, the city is particularly interesting - it is a monocentric city with negligible proportion of industrial workers and a highly homogenous population in terms of ethnicity.

The city has grown out of colonial military outpost to become a city with 3 lakh population during a period of 100 years. The growth rate of the city’s population
was very high during 1901-1911. This was the initial period of consolidation of Aizawl as the official headquarters of the colonial British Empire in Mizo Hills. The colonial administrators however maintained strict regulation to discourage migration as a result of which the growth of population remained stagnant during the colonial period.

The post-Independence period has witnessed rampant growth of Aizawl population. The decadal growth rate of Aizawl has continuously exceeded 3 digits during 1951-1991. This may be attributed to a number of factors including removal of the strict migration control policy, the infamous ‘insurgency’ that occurred during 1966-1986 and the attainment of Union Territory in 1972 which resulted into large-scale opening of government jobs and concomitant increase in employment opportunities in other sectors.

After witnessing a long period of rapidly increasing growth rate, a significant slowdown of population growth has been witnessed after the inter-censal year of 1981-1991. In fact, there is a reversal of population growth rate of Aizawl city. The decadal growth rate has been declining continuously from 134.69 in 1971-1981 to 28.56 in 2001-2011. A number of factors like lack of employment opportunities, deterioration of infrastructures, notification of a number of bigger villages as urban centres after 1981 census, and creation of new districts have been attributed as the main causes of rapid declining of population growth rate of the city.

The negligence of planning in the post-Independence period has created Aizawl city as a highly congested, compact, monocentric, un-orderly and chaotic city. Inadequate and narrow roadways restricted mobility and expansion of settlement took place along the few roadways. This limitation encourages intensive use of land in the
inner part of the city. Multi-storey buildings are constructed even at high degree sloping surfaces. When the heavy torrential Monsoon rain falls on the unstable geology, the hill slopes often fail to hold together resulting into landslide and slumping.

Residential pattern is studied horizontally and vertically. Horizontal pattern of residential differentiation was analyzed with the help of factor analysis. It was found out that the city’s urban space was differentiated along five axes - socio-economic status, family status, household size, working population status and ethnic status.

The horizontal pattern of residential differentiation is highly comparable with those of western industrialized cities. The horizontal space of the city is differentiated along socio-economic status, family status, household status, workers status and ethnic status. Like western cities, the most important factor determining urban social differentiation is found to be socio-economic status.

Our first hypothesis that residential pattern in Aizawl city is primarily differentiated along socio-economic status has been validated successfully. Variables related to socio-economic status form the first factor which explained the largest variance. It has also been found out that localities with high socio-economic status are found along the most important route in the city i.e. Bawngkawn-Kulikawn (B-K) route that runs through the main commercial area. The residential pattern, therefore, largely conforms to the Hoytian sector model. It has also been found out that family size increases with distance from the city centre as conceived by Burgess’ concentric zone theory. However, unlike western capitalist cities which are older, bigger and highly industrialized, a clear-cut zonal or concentric pattern failed to evolve in Aizawl city.
It has also been identified that high socio-economic status localities are normally found at the inner parts of the city while localities with low socio-economic statuses are found at the peripheral areas. This implies that ‘inverse-Burgess pattern’ is an important characteristic of residential pattern in Aizawl city. The pattern is also commonly observed Mediterranean cities and some developing cities.

Another important finding of the study is that localities at higher altitude or hilltops were found to be inhabited by high status population as envisaged by Burgess’ altitudinal zonation theory (Burgess, 1929). Hilltop localities like Tuikhuahtlang, Laipuitlang, Chaltlang and Thakthing are all high status localities. However, all hilltop localities are not the most developed localities, but only those localities which are either lying along or nearby the Bawngkawn- Kulikawn (B-K) route are classified under high status.

The second hypothesis of the study is that ‘unlike industrialized and western cities, residential pattern in Aizawl city does show any differentiation on the basis of family or demographic status and ethnicity’. This hypothesis was framed keeping in mind the lower level of societal scale in comparison to western society and the relatively few non-local population in the city. Our analysis, however, revealed that the city is also differentiated along family status, household size status and ethnic status. Ethnic localities are mostly found at the peripheral areas of the city. Interestingly, the spatial distribution of non-scheduled tribe population largely conforms to multiple nuclei model which maintains that the locations of these nuclei are determined by the tendency of some social-group to separate from others due to externality effects. It may be noted that the only significant difference between the general horizontal pattern of the study area and most western cities is that family related variables failed to form under a single dimension but disaggregated into two
factors viz. family status and household size status. This may be related to the difference in social structure between the tribal society and industrialized society.

Confirming to the third hypothesis, vertical pattern of residential differentiation is observed in the city. The lowest basements of multi-storey buildings were occupied by the lowest income classes and the top floors were occupied by the highest income classes. In terms of composition, medium income households were the most numerous while very high and low income groups are the least numerous classes. Coincidently, the basement households were usually renters and the topmost households were the owners of the building. Household income generally declines from top to bottom floor. The poorer people stay at the lowest basement while the richer sections are found at the top floor. The basements of multi-storey buildings may be considered as ‘spaces of transition’ where the residents were temporarily staying in the early stage of their life cycle.

The pattern of vertical differentiation is, however, not similar to the pattern observed in Mediterranean cities where the lower classes are more concentrated at the top floors. The difference is due to the popularity of basement floors in multi-storey buildings in Aizawl city which have been constructed by following the configuration of hilly terrain. Thus, Aizawl city has its own distinction by presenting both horizontal and vertical patterns of residential differentiation.

Quality of life is another main focus of the study. It was found that the composite scores of objective quality of life were higher in inner city localities in comparison to localities at greater distance from the city centre. On the other hand, the inner city localities did not perform better in the measurement of subjective QOL. Obviously, the overall QOL is better in centrally located areas in comparison to
peripheral localities. The fourth hypothesis that states that QOL is higher in centrally located localities than in peripheral localities is, therefore, verified successfully.

Analysis of relationship between objective and subjective qualities of life with the help of correlation analysis did not show any significant relationship between the two. High scoring localities in objective QOL have scored relatively low while high scoring localities in subjective QOL includes were some of the lowest scoring localities in objective QOL. It has been maintained that residents of socio-economically poorer areas are no less satisfied than their counterparts in richer localities but even more satisfied with their perceived personal well-being and the quality of their immediate environment.

The analysis of spatial autocorrelation to show the spatial clustering or dispersion of localities on the basis of their composite scores on both objective and subjective qualities of life has been taken out with the help of global Moran’s I. For objective QOL, the value of global Moran’s I indicated that a moderately strong spatial autocorrelation existed among the localities. The null hypothesis that ‘there is no spatial clustering’ is also rejected at 95% level of significance. Thus, we have statistically proved that objective QOL scores are highly clustered. For subjective QOL score, the global Moran’s I value is found to be very low which indicates that localities are neither spatially clustered nor dispersed but are randomly distributed. The random distribution of localities with respect to subjective QOL score may be explained as the absence of spatial effects on individuals’ perception to quality of life.

Local indicators of spatial association (LISA) is another spatial autocorrelation technique that measure the characteristics of individual localities and provides a map that shows spatial clusters and spatial outliers. The LISA map for objective QOL
shows that 14 high scoring localities at the central part of the city are found adjacent to each other thereby forming hot spot or high-high cluster. On the other hand, 7 adjacent localities at the western part of the city together formed cold spot or low-low cluster.

For overall QOL, the global Moran’s I value is 0.141 which is low positive spatial autocorrelation. The value is however significant at 0.05 significance level. This implies that clustering rather than dispersion is observed. Two hot spots were identified for overall QOL. One hot spot includes three centrally located wealthy localities such as Chanmari, Zarkawt and Electric Veng. Another hot spot is formed by four localities at the southern side of the inner city. Adjacent to these two hot spots were four low scoring localities. The existence of low scoring localities at the inner part of the city is attributed to their low scores on subjective QOL. Two cold spots were also identified—one at the western periphery and the other at the inner part of the city. The cold spot at the western corner was formed by Phunchawng and Rangvamual while the cold spot at the inner city consisted of Saron Veng and Tuithiang. Adjacent to these cold spots were two high scoring localities.

The culmination of the study is the identification of clusters of related variables pertaining to residential pattern and the aggregate QOL in each cluster. Cluster analysis was used to group localities on the basis of the factor scores obtained from factor analysis. Seven clusters were identified. They are outer peripheral low-class ethnic enclave, proto-urbanized outer periphery, low-class inner periphery, medium-class modern lifestyle outer core, high-class modern lifestyle inner core, isolated slum and outer peripheral slum. These clusters may be conveniently identified as ‘social development planning zones’ for obtaining equitable and inclusive development in Aizawl city.