

The Effects of Urban Sprawl on Spatial Fragmentation and Social Segregation in Istanbul

INTRODUCTION

A vast variety of activities have existed in cities over centuries; nevertheless cities can be said to have a simple - uncomplicated structure until the industrial revolution. It is also possible to state that this compact, dense, and pedestrian dominated urban structure has transition and integrity at a certain extent with respect to the functions and social classes included in it. Existence of a clear differentiation between rural and urban, and in contrast absence of a sharp distinction between functionality and social classes in the space, can be regarded as the common characteristics of pre-industrial era cities.

It can be asserted that until 20th Century 3 fundamental transformations have occurred in the cities following the industry revolution and these transformations has fractured the said common characteristics of pre-industrial era cities. First of these transformations is the growth and agglomeration of population at the cities. Increase of the population of the cities incomparable to the previous periods in history, has caused the cities to be denser and to cover larger spaces. Second fundamental transformation is emerging of the new settlement selection criteria depending on the functional diversity brought about by change of production methods. In particular, the urban growth processes determined by the industry capital seeking easy access to raw materials, energy, cheap labor, market and transportation has played a major role both in creation of new settlement locations and growth of small cities. The third fundamental transformation in cities triggered by the industrial revolution is the introduction of new transportation vehicles. It can be said that all new transportation vehicles from steam train to omnibus and from omnibus to electric streetcars and electric subway have increased the accessibility within the cities and have a strong impact on determination of the common characteristics of early industrial cities in combination with the other fundamental transformations referred above. Consequently, at the beginning of 20th Century, cities were no more basically a “pedestrians’ city” and began to have a new structure that was more dispersed, overcrowded and distributed over larger spaces. In parallel, the gradual transition between the social and spatial differences characterizing the city of the previous period had begun to disappear in time.

As the solution to labor housing problem, rising due to the increasing population of 19th Century city, were sought in a liberal market context, a class-based mobility became noticeable within the city. Standardized housing areas emerging as a result of maximum dwelling production goal in a speculative land and housing environment have become an important part of the spatial segregation process of social classes of 19th Century cities. In addition, increasing renting at the center has led the filtering of higher income groups towards the contours of the city. In this new period, the Baroque tenement where different social classes were dwelt in different floors, have transformed into a new tenement type where each room was hired to laborers at relatively low rentals.

Indeed, it can be asserted that the cities undergoing major transformations in every aspect due to the impacts of industrial revolution have experienced social and spatial fragmentation and segregation processes. However, the fragmentation and segregation processes occurring in the 20th Century cities, especially as a result of the transformations taking place in the second half of the century, have significant differences.

In both periods cities have followed the so-called “sprawl” enlargement and expansion pattern and the sprawl seen in both periods are defined as a low-density development frequently “leapfrogging” over green space and open land (Razin and Rosentraub, 2000:821). However; some aspects differing the two periods in views of characteristics, dimensions and effects of the sprawl should be underlined

Advent of enhanced technological developments in transportation and communication, increase in private car ownership in the second half of the 20th Century and increasing

income imbalance and inequality (which led the losers of the system to solve their housing problems illegally on low-value lands) depending on the volume and new characteristics of capital market are the most significant of these differences. Combined with these developments, urban sprawl phenomenon has become an actual and top priority problem for most of the cities as a result of implementation of considerable infrastructure investments both in the center and the peripherals especially in transportation, the attracting impact of market powers preferring peripheral lands and erroneous / insufficient urban policies.

Specifying a single factor that triggers the urban sprawl or commonly present in all examples is not possible. For example, the housing improvement brought about as a natural outcome of population growth can turn into a bidirectional supply and demand cycle in some cases. Supply meeting the demands of the increasing population also creates the demand in some instances and becomes an additional factor attracting the population. Moreover, the decentralization process of the industrial zones can also create certain desirability for housing stock at the peripherals of the city.

Especially due to the recent economic and technological stipulations emerging in the second half of 20th century, some functions prefer periphery or can leap from the center to peripherals as in the case of industry zones. Such factors also act as variables increasing the desirability of the peripheral. On the other hand, the referred decentralization processes renders the redeeming of vacated functional areas in the center a necessity and has a significant effect on the determination of urban regeneration policies.

The peri-urban growth of cities has raised the values of agricultural lands and the agricultural lands have been disintegrating as a consequence transfer of ownership of these agricultural lands observed in time. This process increases land speculation, leads to the determination of the market by strong players and brings about resource inequality too. Planning as well can turn into a regulatory instrument for these developments.

From this point of view, utilization of the urban land by the capital both as a speculative investment field and as a crisis solution capability where over production is transferred, can be regarded as a factor inducing the urban sprawl. This view leads to the opinion that the capital, in search of a “perpetual” accumulation process, has a tendency to maintain the urban sprawl as an incessant routine. Therefore, regarding the urban sprawl as a coincidental phenomenon, at least in economic-political aspects, would be mistake.

In their study published in 1983 Brueckner and Fansler have shown that urban size is related to the variables like population, income and agricultural rent and they denoted that urban sprawl is the result of an orderly market process rather than a symptom of an economic system out of control. In their study, the authors have shown that high-quality, high-priced farmland is more resistant to urban expansion than poor-quality land and have concluded that expansion in rural areas is quite natural process (Brueckner and Fansler, 1983:481-482).

In general the sprawling urban parts can be said to include the legal and illegal housing areas where different social class can select joint or separate locations, industry, warehouse and commerce areas (shopping, dining, entertainment etc) at various scales, national and international scale business and finance centers, special public and private functional areas requiring extensive land use, airports terminals and connection points. Accordingly, the way that each function is implemented within the course of the sprawling growth, can either disprove or affirm the approaches of Brueckner and Fansler for each individual case. Because, especially the sprawling growth model in third world examples do not always meet high quality spatial organizations idealized by Brueckner and Fansler.

It is an important debate that whether the sprawl is an urban problem or not. Different authors foster different opinions on this matter. Brueckner and Fansler denote that most critics have the option that urban sprawl disrupts the natural balance between urban and non-urban land uses (Brueckner and Fansler, 1983:479). The critics fostering this opinion are generally defining the urban sprawl as an uncontrolled development process. In this scope, the critics having the referred point of view are defining the following fundamental problem

areas with regard to the urban sprawl:

- 1) Population growth and sprawl cycle: Critique of the relation between the optimum urban size and population; inefficiency of management of massive sprawled cities
- 2) Private car ownership and sprawl cycle: Elaboration of private car ownership in views of cost and environmental quality criteria.
- 3) Uncontrolled housing process and emerging of wide urban lands or even dormitory suburban areas dedicated to solely residential purposes (Particularly in Turkey, the relevant literature investigates the squatter housing areas, recently developing mortgage type housing areas for middle and upper income groups and gated communities especially booming after 1990's, in combination)
- 4) Unplanned use of valuable agricultural lands and natural resources (forest lands, basins etc.) X ecological sustainability: Prevalence of a development against the inheritance of natural environment to future generations, detachment from biophilia.
- 5) The level of quality of life in the resulting urban space.
- 6) Cost of infrastructure and provision of utilities.
- 7) The problem of not being defined and integrated: Indefiniteness of the relation between the rural and urban land within the fragmented pattern (Yazar, 2006:64); integration problems caused by the subdivisional planning processes detached from the entirety of the city and leapfrog development, disorganized planning sizes unconnected with the macro scale.
- 8) Increasing spatial fragmentation and social segregation, "social sustainability": Different zones selected by different social / cultural groups, isolated spaces and lifestyles, social integration problems of a massive urban organism divided into various subsystems functioning in a fragmented manner, loss of collective urban memory and citizen sensitivity as a result of lacking integration, vanishing of collective public area concept etc.

When all the clauses above are considered together, sprawl appears not merely as spatial and demographic growth problem but more as a social, economic, political and administrative matter

Can sprawl be prevented? Is there possible way of urbanization that is not based on sprawl? Several approaches exist on these issues. Since the subject can be investigated in various dimensions in views of physical, social and economic aspects, problem definition and solution suggestions can be significantly different.

SOCIAL AND SPATIAL EFFECTS OF URBAN SPRAWL: SOCIAL SEGREGATION, SPATIAL FRAGMENTATION

Limiting the adverse environmental effects of urban sprawl is included in the actions determined by OECD regarding the problems related with urbanization and spatial development (OECD, 2001:18). Incorporation of urban sprawl in the environmental strategies, goals and policies of OECD certainly implies that the environmental side of the problem is absolutely important. However, it should be noted that the urban-spatial and social effects of the phenomenon are already being widely debated in literature.

In this paper mainly two facts related with the social and spatial effects of urban sprawl are examined. These two are social segregation and spatial fragmentation.

Generally, it is observed that four aspects of fragmentation are emphasized in literature. First issue is the spatial aspects of fragmentation. In this scope, discordance of urban land use and physical properties of the space, spatial atomization and general lack of integration of the city are the main areas of debate. In particular, increasing separation of functions like housing, business, recreation and shopping, over the urban space is defined as an important

problem area.

Second dimension of the fragmentation is the environmental aspect. Here, particularly the disintegration and depletion of rural lands with their natural assets due to use throughout the urban development process is discussed and accordingly disintegration of agricultural and forest lands constitutes the main area of debate. This point can also be regarded as the closest relation of the concept with urban sprawl.

Third aspect is the political-administrative fragmentation. Related with this issue, it is observed that are mostly the division of massive cities and metropolitan regions into numerous administrative units and failing of local administrative units to introduce an integral approach for the space with collaborative policies and strategies is deliberated. Furthermore, there are several opinions agreeing that by representing a postmodern planning approach existence of multiple local administrative units will create a boosting effect on the competition on private property and this effect will in turn perpetuate the urban sprawl¹.

Fourth aspect of fragmentation can be expressed as social fragmentation. Social fragmentation notion can be said to be defined with an approach based on poverty and deprivation, otherness, being a minority member, racial discrimination, social and class-based segregation concepts. At this point, it can be stated that the social side of fragmentation is also closely related with the social segregation.

As can be seen above, the question whether there is a correlation between urban sprawl and spatial fragmentation appears as a noteworthy field of study in social aspects and social segregation.

According to Razin and Rosentraub if a connection is to be suggested between administrative fragmentation and urban sprawl, such a relationship would be asserting that fragmentation is causing urban sprawl. The impact of residential sprawl on fragmentation is significant, but fragmentation does not predict sprawl (Razin and Rosentraub, 2000:821). Moreover, according to Razin and Rosentraub fragmentation is not a major factor responsible for sprawl (Razin and Rosentraub, 2000:832).

The study of Razin and Rosentraub, has a special significance with regard to its findings on fragmentation and stratification as well as the approaches it brings to the administrative fragmentation and its relation with urban sprawl. In contrast to the commonly held opinion, the results of the study suggests that fragmentation pressures are associated more with middle-class population; hence a high proportion of lower-income population produces a less fragmented pattern (Razin and Rosentraub, 2000:832).

The evaluation of fragmentation with respect to the social classes can particularly be availed as a method to observe the results urban growth for the winners and losers of the city. Especially the rapid rise of income inequality over the last 20 years which is defined to be a result of neo-liberal policies is discussed in combination with the features of neo-liberal real estate market in the evaluation carried out in the context of urban growth.

With the emergence of neo-liberal system private capital becomes the major actor determining the real estate market. Governments, which in fact assumed the leading role in real estate market from private Capital in 19th Century and played the dominant part in the urban development between the crisis of 1929 and 1973, have returned their role to private capital as a consequence of neo-liberal doctrine. The influences of this transformation on cities can particularly be evaluated as the reflections of income inequality. Here again, urban space pattern divided into different districts with respect to the housing areas bringing social and class segregation appears as a main point of discussion.

Deliberation of the relationship between the urban growth and the income inequality and the class-based segregation in housing areas in the period of neo-liberal globalization gains a further importance in this respect. In this matter, testing a hypothesis postulated as “urban growth boosts the income balance” can provide a considerable contribution for the subject. In fact, Wheeler’s study of 2006 can provide certain points on this issue. Wheeler’s study

demonstrates that the extent of income inequality observed within tracts shows a strong, negative association with population density, whereas between-tract inequality shows little correlation with density. Although in general the findings of the study show that as cities spread out, they do not become increasingly segregated by income at a significant extent, Wheeler denotes that this situation does not assert the absence of such a correlation as well (Wheeler, 2006:21).

In the context of urban sprawl, Wheeler also investigates the relationship between the urban decentralization and suburbanization processes and the income inequality. Wheeler defines less dense suburbs which are the more racially integrated than central cities and highly inhabited by low wage and high wage workers, to be areas where there are fewer social interactions among individuals of different groups and suggests that these groups are segregated in the space more on basis of income and education (Wheeler, 2006:22).

As stated by himself, Wheeler's study is a hypothetical study and in literature there is a serious need for that type of studies investigating such correlations.

Wheeler pays particular attention on the suburban areas inhabited by low wage and high wage workers where there are fewer interactions among different groups and gives hints regarding the "gated communities" which is drawing broad interest in the literature especially after 1980's. *Number of gated communities usually favored by local governments to pay for the cost of urban sprawl* (Goix, 2003:1), which are inhabited by a class of privileged citizens has been increasing since the mid 1970's (Coy, 2006:121).

Gated communities create private areas which are only open to special people, to please their residents that are also segregated in themselves. *Due to their totally privatized organization, they form new extraterritorial spaces beyond public management and control* (Coy, 2006:122). In view of these, the development of gated communities renders the boundary between the public and private strictly defined borders.

According to Goix, in the literature there are three different arguments regarding the gated communities:

- 1-They are described both as a physical and obvious expression of the post-industrial societal changes (fragmentation, individualism, rise of communities)
- 2-They are part of a commoditization trend of urban public space,
- 3-Penetration of ideologies of fear and security.

According to this view, the gated communities are presented as a symptom of urban pathologies. The decline of public spaces in cities is seen as being detrimental to the poorest social classes. Social exclusion is considered to be the preeminent one of these symptoms (Goix, 2003:1-2). Gated communities have become a symbol of metropolitan fragmentation and increased social segregation (Goix, 2003:1).

Goix's argument being a highly accurate view regarding the Latin America example which he is especially concerned, is also an appropriate determination for Turkey and particularly for Istanbul. Because, these communities constitute the evident results of urban fragmentation and social segregation also in Istanbul too. According to Cana Bilsel, cities will in time become "clusters of urban areas" partially owned by irreconcilable social groups / cultural groups instead of a public area commonly shared by all inhabitants, as a consequence of these fragmentation and segregation processes which can be defined as the common problem of today's cities (Bilsel, 2006).

In conclusion, 3 fundamental scenarios for the cities, defined by Coy in this context are quite noteworthy:

1- The Fragmented city: disintegration between the formal and the informal city deepens, the self-segregation of the wealthier urban dwellers increases, urban transformation is controlled by private capital.

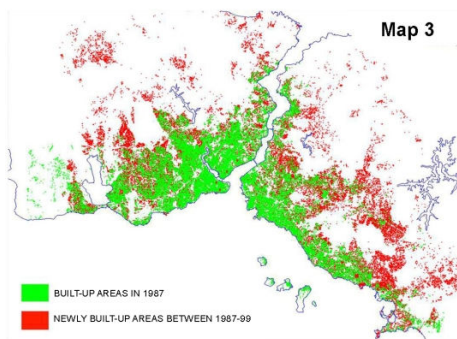
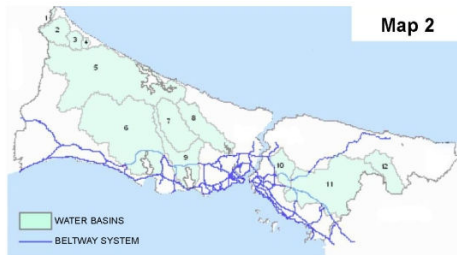
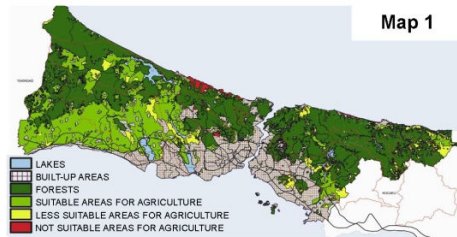
2- The correcting city: civil society and public authorities become more conscious of these urban problems. Reduced urban expansion; search for locally adapted solutions and projects of urban renewal.

3- The re-integrating city: mainly based on principles of solidarity and respect, emphasizes participatory strategies of enablement and empowerment, aims towards social integration and balance in the existing socio-spatial, e.g. reducing the barriers between the formal and the informal city. Besides there being only a very few examples of this city this scenario represents nothing more than a utopian vision (Coy, M., 2006:130).

FOOTPRINTS OF SPATIAL FRAGMENTATION AND SOCIAL SEGREGATION AT THE PERIPHERALS OF ISTANBUL

Urban Sprawl in Istanbul

Urban sprawl in Istanbul dates back to 1950 where the first emigrations were observed and as a consequence of the saturation of the center the sprawl continues as an increased peripheral expansion in 1970's.



Map 1: Forest and agriculture areas in Istanbul (Istanbul Metropolitan Environmental Plan Report, 2006)

Map 2: Water Basins in Istanbul (Geymen, A. and Baz, I., 2007)

Map 3: Spatial development of housing areas between 1987 and 1999 (Istanbul Kaçak Yapılaşma Kronolojisi, 2004; cited by Kalkan, S., Çetiz, S., Akay, Z., 2004)

Kalkan, Çetiz ve Akay identifies four fundamental processes accelerating the urban sprawl in Istanbul and causing the urbanization process to move in an uncontrolled manner as below:

1) *Strait crossings and establishment of relevant beltway system*

2) *Establishment of neighborhood municipalities in the subdivisions of metropolitan areas of Istanbul*

3) *Settlement improvement plans*²

4) *Peripheralization tendency at the post-quake period of 1999 Marmara Earthquake* (Kalkan, S., Çetiz, S., Akay, Z., 2004).

Most resources underline the fact that that the first Bosphorus strait bridge opened in 1970 and its beltway system completed in 1972 have accelerated the course that depletes the water basins, forests and agricultural areas. Indeed the transportation parameter which is often referred as a basic inducing effect for urban sprawl has been a triggering factor for Istanbul too. *This transportation backbone changing the behavioral pattern and creating its own demand soon started to show signs of inadequacy; in 1989 Fatih Sultan Mehmet Bridge was opened as the second bridge and in the following years the second generation of beltway network was completed* (Kalkan, S., Çetiz, S., Akay, Z., 2004).

Various arguments suggesting that the E-5 and TEM connections essentially constituting the international link and turning into the dual transportation backbone of the city in time have induced sprawl, generally agree that these backbones play a major role in the decentralization of industry. As the industry was undergoing decentralization across this dual axis, the labor population required by the industry inhabited

around these areas through mostly illegal and rarely low-quality legal housing production; and by clinging onto each other such settlements have expanded and developed. With regard to this point, the villages located on the basins and forest lands getting the “neighborhood municipality” status are both the outcome and driving force of this process³ Especially during the period from 70’s to 90’s, these vast urban areas which are almost entirely built-up illegally were legitimized with settlement improvement plans approved by the neighborhood municipalities and by 2000 the city, over-exceeding its boundaries, has turned into an urban area at its expansion limits.

Map 1 shows the boundaries of the built-up areas, forest lands and arable lands in Istanbul as of 2006. In Map 2 the boundaries of existing water basins are depicted. When Map 3 is interpreted in combination with Map 1 and Map 2, newly built-up areas expanding over the forest and agricultural lands between 1987 and 1999 can be read.

The striking sprawl history of Istanbul has maintained its continuum under the influence of the 1999 Marmara Earthquake which killed approximately 17,000 people. Substantial changes in location selection criteria have emerged at the aftermath of this earthquake in Istanbul. There has been a rush preferably for strong grounds in accordance with the purchasing power of individuals and consequently the tendency of urban expansion towards northern parts of Istanbul where fresh water basins and forest lands are located has become apparent.

Population growth rate in Istanbul between 1990 and 2000 was 37.1%, and in comparison the increase in the built-up land size is 17.9%. These figures show that within this period Istanbul has experienced an expansion to become a denser city. Table 1 depicts the results of the study carried out by Geymen and Baz in 2007. The study carried out by means of Remote Sensing and Geographical Information System (GIS) capabilities, gives a striking picture of the growth rate of settlement areas and decrease in agricultural, forest and parks and recreational areas. As shown in the Table 1, within the period from 1990 to 2005, the size of built-up area of Istanbul has increased by a ratio of 40.8%. In comparison, agricultural areas, forest areas and parks and recreational areas were reduced by 12.7%, 3.6% and 18% respectively.

Table 1: Shift of land use in Istanbul in the period of 1990-2005

Classes	1990		1995		2000		2005	
	ha	%	ha	%	ha	%	ha	%
Housing Areas	60524	11,13	68512	12,60	71345	13,12	85239	15,68
Empty lands	13166	2,42	13235	2,43	13749	2,53	12880	2,37
Obscured by clouds	-	-	7437	1,37	-	-	8944	1,64
Agricultural lands	144775	26,62	144230	26,52	139392	25,63	126339	23,23
Deciduous	137169	25,23	136671	25,13	134452	24,73	132058	24,29
Evergreen	17415	3,20	17332	3,19	17031	3,13	16993	3,13
Parks and recreational areas	30552	5,62	28362	5,22	26317	4,84	25038	4,60
Shrublands	122344	22,50	122727	22,57	123202	22,66	120302	22,12
Water	16935	3,11	4494	0,83	16889	3,11	14965	2,75
Wetlands	890	0,16	770	0,14	1392	0,26	1011	0,19
Total	543769		543769		543769		543769	

(Source: Geymen, A. and Baz, I., 2007)

Spatial Fragmentation and Social Segregation in Istanbul

Before discussing the fragmentation and segregation issues in Istanbul, the two uniqueness distinguishing urbanization examples in Turkey from their western counterparts will be pointed out. First of these is the “illegal housing” phenomenon.

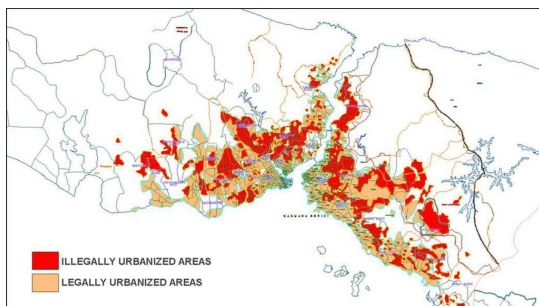
In Turkey case, during the interval from 1950 to 1980, which corresponds to an import-substitution development period, under the influence of increasing industrial production a

migration episode has been observed in metropolitan cities meeting the industrial and non-industrial labor requirements. The development of squatter housing areas which emerged as a solution to the housing problem of masses rushing into cities and which was initially favored, was later restricted when these housing zones turned into problem areas, can be viewed as the advent of unavoidable, uncontrolled and characteristic growth process of metropolitan cities. This unwritten and unspoken consensus with the society in fact represents a period especially after 1980's where the government was relieved from the cost of rapid urban growth and the yield accruing was returned to masses instead of government.

Illegal housing, which was originally the preferred housing method for the lower class immigrants settling in urban lands since 1980's, turned into a housing method also preferred by middle and upper income classes after 1980's. During the course of the development, the squatter housing areas of the first generation immigrants have gained value as they remained in urban core of expanding city and become important sources of yield for the initial immigrant groups with thanks to period of transformation to tenements which also changed the silhouette of the city as well. On the other hand, the "illegal villas" of the middle and upper income classes become apparent on the valuable forest lands located at the peripherals and in particular for Istanbul strait viewing hills where these classes could not get legitimate settlement licenses for such locations. On Map 4, the status of the illegally built-up areas of Istanbul is shown as of 1995.

In addition to the illegal housing which mostly defined with reference to lower and upper income classes, another significant aspect of urbanization in Turkey distinguishing it from the Western examples is the housing development of middle classes based on "build and sell" concept.

Prior to 1980, middle classes of Turkey can be said to have a quite exceptional relationship with the city and a great influence on the urban transformation processes as a result of this relationship. Examples of such a relationship which can be signified by the spreading of tenements constructed under the "build and sell" concept, with reference resulting physical environment of the city, are even hard to be seen in third world nations (Altınok, 2006:48).



Map 4: Status of the illegally built-up areas of Istanbul as of 1995
(Timeline of illegal housing in Istanbul, 2004; cited by Kalkan, S., Çetiz, S., Akay, Z., 2004)

During 1980's there has been as major breach in this extraordinary housing production concept of middle classes as well. Indeed, we

observe that the middle classes joined the decentralization movement of 1980's in metropolitan cities by buying into housing cooperatives and mass housing projects.

The complex housing pattern of Istanbul comprising of a diversity of legal and illegal housing areas inhabited by different classes represents a fragmented and segregated structure across the urban space.

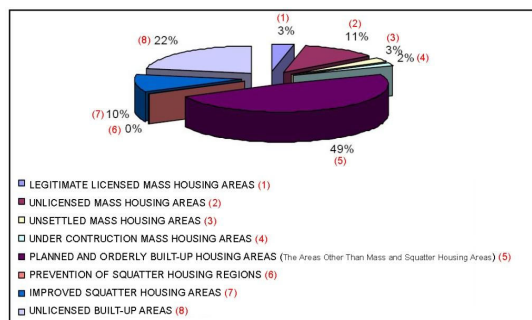


Chart 1: Distribution of various housing areas in Istanbul (Istanbul Metropolitan Environmental Plan Report, 2006:352)

In chart 1 the breakdown of this structure is given as of 2006. According to the figures, the overall ratio of the licensed, unlicensed completed and ongoing housing areas is 19%; the sum of the squatter housing prevention areas with a settlement improvement plan and other illegally built-up areas is 32%. The remaining 49% is planned and orderly built-up

housing areas with a variety of quality, density and dwellers.

As a result, an overview of the housing areas of today's Istanbul will reveal the coexistence of lower income class urban striving to exist at the peripherals of the city with a variety of methods and relationships and willing to make many sacrifices for this goal, the middle classes joining the division struggle through housing cooperatives and mass housing projects located at the vast lands at the peripherals and the wealthier classes living in the gated communities guarded by walls built on the most prestigious lands seized and who do not look back at the city and the society they left behind (Altınok, 2006:55).

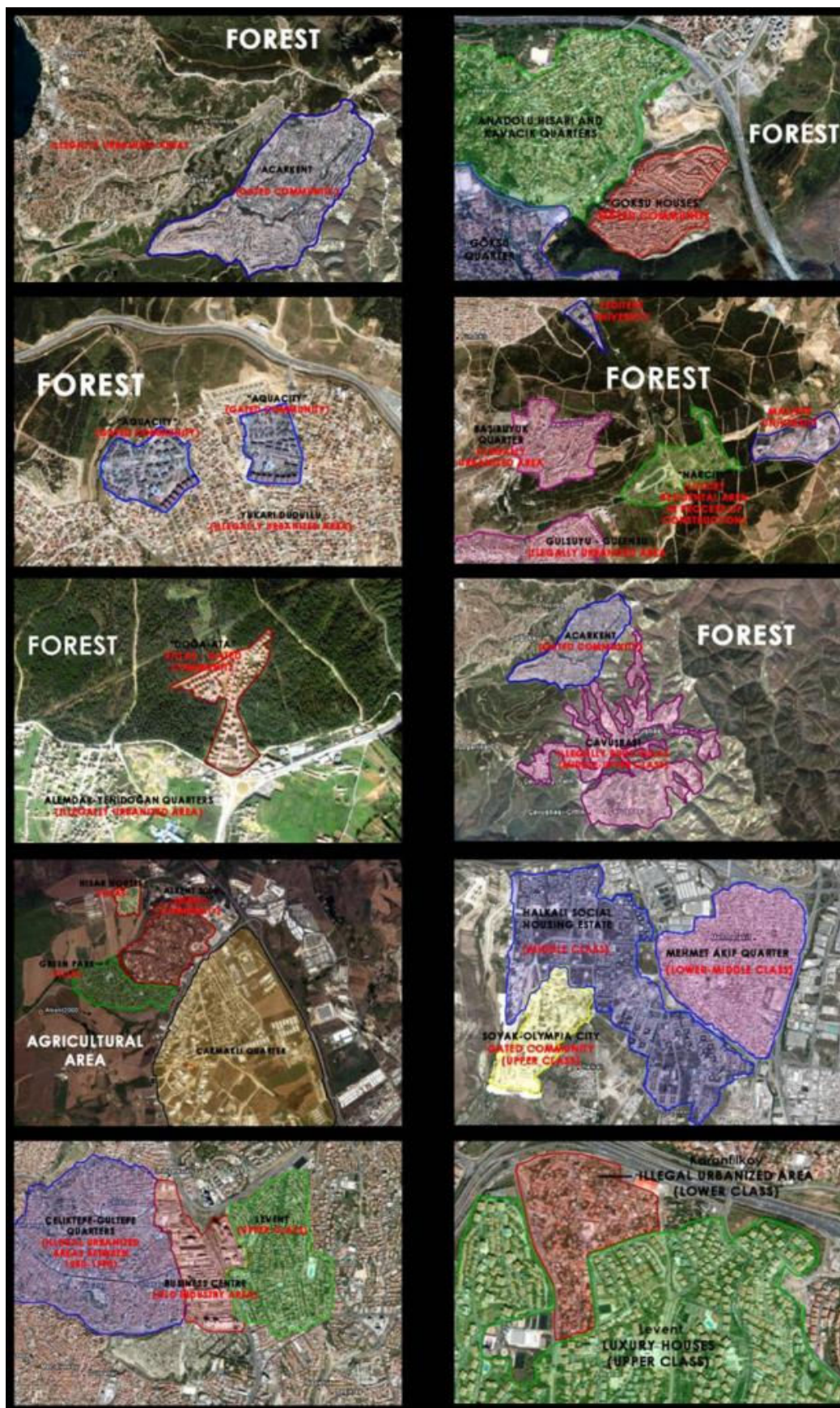
After 1980 the fundamental conflict dominating the segregation of higher and lower income classes in Istanbul, is the wealthier class's reclamation of both the center and the peripheral of the city through a variety of intervention methods. The wealthier class demanding both the center and peripheral through *gentrification projects* carried out in the center and through gated communities for security and isolation concerns, plays a significant role in crystallization of the class-based spatial segregation. The lower income groups deprived of the cheap housing opportunities in the center are driven to the "new poverty" zones located at the peripherals of the city.

In parallel to the global examples, gated communities started to rapidly increase in Istanbul during 1990's and the real boom came by the end of 1990's (Kurtuluş, 2005:162).

In the examples dispersed across Istanbul, the inclination of new wealthier class to prefer living in guarded communities combining the traditional and modern in somewhat bizarre setting is worth being studied in sociological views. These gated communities which are built out of the urban core are especially highlighting the desirable qualities of natural ambience and are generally based on themes symbolizing the village life with their architectural and landscape design. In other words, the new wealthier class has a deep aspiration for enjoying the lifestyle of the villager whom they avoided while they were living in the city (Altınok, 2006:57).

Today, as the spatially fragmented social classes live on their own part of the map, they tend to abandon their opinions and responsibilities regarding the entirety of the metropolitan city they live in. This new segregation is more like a randomly patched texture where different pieces are brought together due to the practical necessities, rather than a harmonious patchwork of a diversity of metropolitan forms and patterns where these parts constitute a meaningful whole (Kurtuluş, 2005 cited in Kurtuluş, 2005:181).

Picture 1-7 can be seen as an image evidencing the randomly patched texture of Istanbul carrying the signs of the spatial fragmentation and social segregation; however, the adjacency of squatter housing areas still comprising the classical squatter patterns where poverty is a prevailing condition and the gated communities or deluxe villa settlements on the same urban land does not only represent a simple contrast. Today, where poverty turns into a marginalized and chronic condition, existence of the losers of the global cities in absolute poverty and their conviction that they will never be rescued from this adds another dimension to the matter. Because the quantifiable degree of the poverty can be different from the degree of poverty perceived by the individual. Although various factors can affect the perceived poverty, one important element deprived individual's encountering with the immeasurable wealth at his vicinity and in time getting inured to this fact. Perhaps, with its contribution on the marginalization of poverty, social segregation triggering the emotional dynamics of the deprived individual will be the main inducer of a macro sociological and macro economic problem in long term.



Picture 1: Spatial fragmentation and Social segregation in Istanbul, 2008
(Obtained by Google Earth images)



Picture 2: Mass housing areas for middle and higher classes and illegally built-up areas (Photography: Can Binan, 2007)



Picture 3: Illegal Villas - Sarıyer (Photography: Can Binan, 2007)



Picture 4: Diverse land use at the shore: Farming and intense housing areas (Photography: Can Binan, 2007)



Picture 5: A gated community inside the forest land (Photography: Can Binan, 2007)



Picture 6: Squatter housing dwellers viewing the "Nar City"-Başibüyük District (Photography: Emrah Altınok, 2008)



Picture 7: Squatter housing areas located on two hillsides - and mass housing areas in the valley between the hills- Başibüyük Districts (Photography: Emrah Altınok, 2008)

CONCLUSION

Today, we can not clearly distinguish metropolitan cities like Istanbul from the surrounding cities. The cities will not grow perpetually in the spreading oil stain pattern, nevertheless considering the low density settlements extending along the linear axes; we are not very far from referring an urban structure in continuum. From this point on, perhaps the “*ecumenopolis*”, at the end of the road led by the “*Ekistics unit*” should be interpreted as a more realizable utopia that we have to take the necessary measures accordingly.

Even controlling the developments on the transportation axes alone can bring forth major difficulties. With regard to this, design of a transportation axis by planner implies or should imply that the planner also must predict the prospective developments related with this axis too. This point of view renders the planning discipline as a burdensome one. Concentrating the discussion of urban sprawl solely on the optimum urban form should also be regarded as a superficial approach. Urban sprawl is a multidimensional urbanization subject and it is a matter having social, economic environmental or even psychological sides in addition to its physical dimension.

Peri-urban locations where sprawl dynamics takes place are also zones that host complicated energies. Orientation of this energy with correct policies can cause sprawling growth to evolve from a pathology that must be prevented into a phenomenon that can provide benefits at a certain extent.

In this study dedicated to the Istanbul case, the spatial and social dimensions of sprawl are investigated. Although the results obtained are sometimes theoretical or hypothetical they are supported with various analytical studies. In line with these studies, for Istanbul example the following principles can be asserted with regard to the solutions aiming at the urban problems related with sprawl:

- Despite all the counteracting factors, urban growth of a third world metropolitan city like Istanbul can be decelerated. In such a context:
 - Policies aiming to solve the spatial-physical problems of development and to elevate the quality of urban life should be devised.
 - Strengthening of transportation infrastructure, reorganization of the current transportation structure encouraging the use of private cars – Establishment of an efficient mass transport system setting.
 - The requirements of wanting zones within the boundaries of the built-up area of the city should be met without deviations from the constructional standards.
- Incontrovertible positive aspects of sustainable growth concept should be elaborated and implemented in actuality. Accordingly:
 - *All policies set forth by international organizations like The European Declaration Of Urban Rights, Habitat II, Johannesburg Summit and healthy communities movement, aiming the sustainable urban development should be adopted and sustainability of natural resources should be ensured (Yazar, 2006:101).*
 - Taking the national circumstances into account, the requirements of one of the most important aspects of sustainable development, namely social equality and social integration goal should be sought.
 - A fair distribution and widespread accessibility of investments should be ensured.
 - Participation mechanisms enabling the citizens to be a part of the local decision making process should be devised.
 - Provision of basic requirements like healthcare, education, food, accommodation etc. should be done through an egalitarian approach.

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¹ For detailed information on this issue please see "Razin, E. and Rosentraub, M., 2000.

² Settlement improvement plans are a specific type of legislative attempts implemented on the squatter housing areas in Turkey aiming to solve the physical, economic and social problems of such areas. However; due to their nature in practice these plans served the nothing but the legitimization (approval) of these housing areas instead of reaching these goals.

³ Establishment of numerous neighborhood municipalities during this period of İstanbul corresponds to the process that Razin and Rosentraub refer to as administrative fragmentation. While 4 municipalities were incorporated in 1960-1980 period, 36 neighborhood municipalities were founded after 1980 (Kalkan, S., Çetiz, S., Akay, Z., 2004).

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