

10. Towards an Ecological Urbanism for Istanbul

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Istanbul is one of the largest metropolitan areas of the world, a megacity with a population of about 12.5 million and a total area of approximately 5,000 km². On the north–south axis, the metropolitan region stretches along the Bosphorus, a 30-km long stretch of water, which acts as a natural frontier between the European and the Asian continents. On its east–west axis, the city has expanded to 100 km in width (Fig. 10-1).

Istanbul grew rapidly in the second half of the twentieth century. The population of the city swelled from 4% of the national population in the 1920s to 17% in 2007 (Fig. 10-2). The city has also been facing an important spatial restructuring in its growth and development over the past two decades. This paper will provide context for the contemporary development of Istanbul and discuss its ecology, sustainability, and terrain as they relate to urbanism.

With the effects of globalization, the implementation of privatization and liberalization policies starting in 1980, and the European Union accession negotiations of Turkey – which have triggered an increase in the amount of foreign investment in the city as well as formal pressures to comply with European standards of environmental regulation – contemporary Istanbul aims to become a new regional node.¹ In parallel, the city is positioning

¹The EU-Turkey relationship started with the Ankara Agreement in 1963 and since then has gone through various stages. The decision of the Helsinki European Council in 1999, seen as a landmark of this relationship, has affected the legal, political and economic structures of Turkey since then. As for the impacts of EU environmental policy on the national policies of Turkey, as early as 1999, the National Environmental Action Plan of 1999 required the adoption of EU environmental standards. The EU, for its part, granted 2.3 million Euros in 2002 for the development of environmental sector in Turkey. For more on the topic, see Izci (2005).



Fig. 10-1. Istanbul. Satellite (ASTER) image of the central Istanbul in 2000. (Image courtesy NASA and U.S./Japan ASTER Science Team)

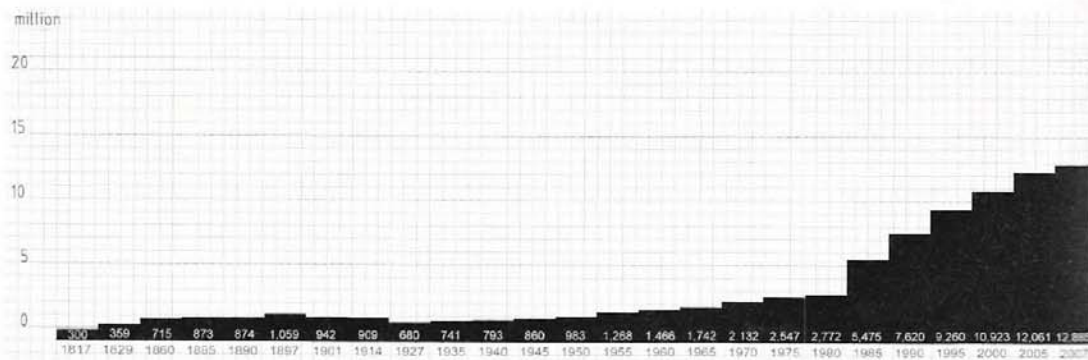


Fig. 10-2. Population growth in Istanbul, 1817–2007 (Diagram by Neyran Turan)

itself as a new service center and has been facing massive urban development projects to expedite this new regional role. Three recent developments exemplify this condition: the Istanbul Spatial Development Plan (2009), large-scale infrastructure projects such as the Marmaray Tunnel Project (Marmara Rail) that goes under the Bosphorus Strait, and the selection of Istanbul as the European Cultural Capital for 2010 (along with Essen,

Germany, and Pécs, Hungary) by the European Union Council. The director of the Istanbul Metropolitan Planning and Urban Design Centre (IMP) declares, "We will be creating a new Istanbul for 2025."

10.1 Sustainable Istanbul

In this context, the terms "sustainability," "environmental protection," "urban regeneration," and "global city" have become pervasive in the urban planning discourse of the city. A recent report prepared by the Turkish Sciences Academy summarizes the priorities for Turkey's "sustainable development" as "environmental awareness, environmental education, water supply networks, coastal management and marine environment, urbanization, treatment of waste, protection of ecosystems, energy policy, emissions of pollutants, environmental health." Meanwhile, the term "world city" appeared for the first time in the 1995 plan of Istanbul, as a concept which guided the city's historical, cultural and natural development and protection.²

Considering the popularity of the topic of "sustainability" as well as the city's desire to attract investment and to become an important node in the global economy, Istanbul's attention to the relationship between the sustainable and the urban is not surprising, and typifies many other rapidly growing cities with similar aspirations (see Jonas and While 2007). It should be noted that while urban planning in Istanbul has been going through a rapid restructuring process aiming for an integrated and decentralized system, issues such as environmental protection, "risk management," transportation, and "urban renewal and regeneration" have increasingly been incorporated into its urban planning

²For the report of Turkish Sciences Academy, see Tekeli (2002). The first Turkish 5-year development plan to include a section on environmental protection was the plan prepared for 1973–1978, released to coincide with the Stockholm Conference of 1972. The Turkish Ministry of Environment was created in 1991 as part of the process leading to the Rio Summit in 1992. In 2003, the Ministry of Environment and Ministry of Forestry were merged. Early examples of promoting Istanbul as a "global" or "world" city could be seen in a report prepared by TUSIAD (the Turkish Industrialists' and Businessmen's Association) (TUSIAD 1991). The report outlines Istanbul's new role as a service center for Europe and the surrounding region after the dissolution of the Soviet Union. Another early document is a report presented at the 1993 Habitat Conference (held in Istanbul) titled: "Future's Istanbul: A Democratic, Efficient, and Livable Global City." For a more recent account of Istanbul's role within the international economy, its aspirations to be a regional node, and the relation to urban governance, see OECD (2008).

discourse.³ One of the recent signs of the restructuring process is the change in the administrative boundaries of the Istanbul Metropolitan Area Municipality in 2004 to include provinces previously governed by the central government (the urban area increased from 1,830 to 5,340 km²) and the establishment of the Istanbul Metropolitan Planning and Urban Design Center (IMP) – a research center created to serve the different directorates in the municipalities.⁴

In an attempt to balance rapid population increases and the city's massive and uncontrolled growth while reinforcing Istanbul's competitiveness within the global economy, the Istanbul Spatial Development Plan was prepared in 2006 and revised in 2009 – the first plan prepared by the IMP. The plan places a strong emphasis on sustainability. The population limit of Istanbul according to the "sustainability principle" is determined as 16 million for 2023 in the Plan, which would mean growth of less than four million people within the upcoming 15 years. To preserve critical water basins and associated forests to the north of the city and keep a check on continued northwards urban growth, the east–west linear development of the macro-form is the main strategy in Istanbul development policies today. Another important emphasis of the plan is a development pattern that includes a hierarchical ranking of sub-centers aligned on the east–west axis as a remedy both to the highly imbalanced structure on either side of the Bosphorus and heavy commuter traffic. To alleviate the fragmentation of the multi-centered metropolitan structure, an extensive subway network is proposed (the first phase of development and construction has already begun). The plan also proposes the decentralization and relocation of the main ports and the industrial zones to the outskirts of the city and the redevelopment of those former industrial areas into education, finance and service areas, hotels, congress, festival and convention centers. While a strong emphasis is given to the development of the service, finance and information sectors, employment distribution is aimed to be 70% service, 25% industry, and 5% agriculture by 2023 (whereas the current numbers are 60%, 32%, and 8%, respectively) according to the plan (see Istanbul Municipality 2009).

³For a critical review of recent urban renewal projects in contemporary Istanbul, see Candan and Kolluoğlu (2008) and Uzun (2003). The topic of risk relates to the prediction that Istanbul will be subject to a strong earthquake in the next 30 years. The city is in danger because of the North Anatolian Fault, which stretches from northern Anatolia to the Marmara Sea. On August 17, 1999, the Kocaeli earthquake (7.4 magnitude) killed more than 18,000 people, destroyed 15,400 buildings, and caused \$10–20 billion damage. The epicenter of the Kocaeli earthquake was about 90 km east of Istanbul.

⁴The law that granted the change is the Municipality Law 5216. The same law also emphasizes sustainability as an expected approach.

Although the plan itself was approved very recently and some of its ideas need to be further discussed and critically re-evaluated, the plan is a symbol of the current aspirations and challenges of contemporary Istanbul. Given EU environmental regulatory requirements, concerns about resource and risk management, and its dream of becoming a regional node, Istanbul's preoccupation with "sustainability" is hardly surprising.

As the "ecological turn" of Istanbul is currently limited to specific managerial perspectives on urban governance – such as "resource management," "environmental risk," or "urban renewal and transformation" – it could be argued that this turn may also be seen as an opportunity to recalibrate certain dialogues regarding much broader interpretations of ecology for the city. Rather than limiting the sustainability discussions to dichotomies of either an uncritical/progressive urban management framework or cynical ignorance of the new challenges that the city will face in the near future, sustainability might provide the necessary framework to build new relationships between various scales of Istanbul's contemporary urbanism (i.e., between the city and its larger geographical setting, as well as between the physical and the social aspects of its urbanism). To elucidate this idea, this paper will review the urban development of twentieth century Istanbul and reflect on the current situation of the city.

10.2 Early Development Until the 1950s

Istanbul was founded in the seventh century BC, and acted as the capital city of the Byzantine (395–1453), and the Ottoman (1453–1923) empires until the founding of the Republic of Turkey in 1923. Until the beginning of the nineteenth century, the urban form of Istanbul was confined to the area within the city walls on the peninsula and some small villages along the Bosphorus. Starting with the 1838 Anglo-Turkish Commercial Treaty, the nineteenth century marked a series of reforms by which Istanbul became an important port city within European commercial networks.

In parallel with the government reforms and the urban legislative developments taking place within the nineteenth century reformist Ottoman Tanzimat Era (1839–1976), the city went through a period of infrastructure development. Although the adoption of the first building codes and regulations date back to 1796, Istanbul would witness most of its important legislative transformations – including the establishment of the first municipal organization, the formation of a road improvement commission, and the first plan or development policy of the city in 1839 – in the nineteenth century. In addition to these legal reforms, a series of important infrastructure

projects were undertaken during the same era. The establishment of the first ferry services, the telegraph, the illumination of some public buildings, the commencement of street lighting, and the construction of the first underground railway line all took place during the last part of the nineteenth century (see Çelik 1986).

Mainly due to the growth of the Ottoman economy in the nineteenth century and migration from lost territories in Europe, the population of Istanbul nearly tripled relative to that of the early 1800s and reached one million at the end of the nineteenth century. As economic development spurred infrastructural transformations such as the east–west rail line and ferry services along the Bosphorus, it also brought new institutions (banks, insurance companies, trading firms) as well as new building types (military barracks, train stations, apartment blocks). As its population grew, the city expanded toward the northern bank of the historical peninsula, along the shores of the Bosphorus as well as in an east–west direction along the Marmara Sea shores (Fig. 10-3).

After the collapse of the Ottoman Empire and the inauguration of the Turkish Republic in 1923, when Ankara became the administrative center

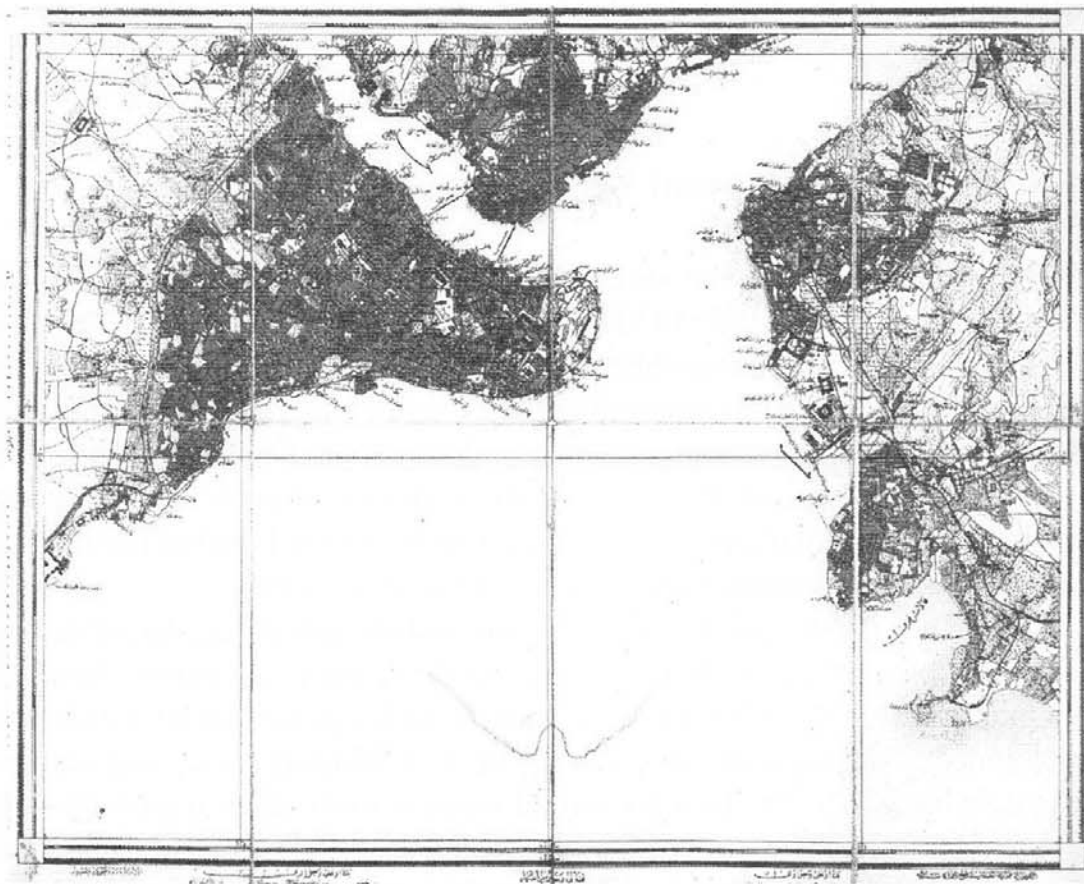


Fig. 10-3. Istanbul at the end of the nineteenth century (Source: Istanbul Atatürk Library)

of the new state, Istanbul's population started to shrink dramatically.⁵ The population of Istanbul was 356,653 in 1844; it reached 909,978 in 1914, and dropped to almost half or about 500,000 in 1924. The population decrease during the 1920s was related to many factors: the exodus of higher-income groups, including foreign residents, during the First World War; the migration of populations from Istanbul to Anatolia because of the financial and economic predicaments caused by the war; and the relocation of the bureaucracy, including embassies and military officials from Istanbul to Ankara (Toprak 1992; see also Karpat 1985). The population of Istanbul started to increase again after 1924 and reached 741,148 in 1935. Despite the population decrease, by the late 1930s, Istanbul was still the most populous city of the country (in 1935, the population of the two other big cities, Izmir and Ankara, were 171,000 and 123,000, respectively) and was continuing to grow.

Although the early years of the Turkish Republic focused on the countrywide industrialization and rail network as well as the development of the capital city of Ankara, as early as the mid-1930s, Turkish modernity embraced the development of Istanbul. Henri Prost, the previous chief architect of Paris, who also had planning experience in Casablanca, the Port of Algiers, and Rabat, prepared the first plan for Istanbul. The main features of Prost's 1937 master plan were proposals for new roads and transportation networks (including highways, tunnels, bridges, and viaducts), functional zoning (industrial, residential, and recreational), ports, parks, and public promenades as well as the preservation of the Bosphorus silhouette and the historical peninsula.⁶

After the late 1940s – an era of nationalist and isolationist economic policies, an interventionist economic program based on rural industrial development, and secular authoritarianism – Turkey turned toward policies based on models of “development” and “modernization” followed by economic liberalization.⁷ Within the context of the Cold War, Turkey clearly

⁵ Istanbul was capital of the Ottoman Empire for five centuries. In the history of transforming the country to a nation-state and its cities to places of modernity, Ankara was chosen as the capital of the newly founded Turkish Republic instead of Istanbul. While some argue that this selection was clearly a result of the search for a real “from-scratch” modernization model for the nation-state, Ankara ultimately became the ground on which the Turkish modernist utopia was established, not Istanbul (see Tekeli 1998). For more on the Turkish modernity project and its relation to modern Turkish architecture, see Bozdoğan (2001).

⁶ For more on the work of Henri Prost in Istanbul, see Hauteceur (1960) and Akpınar (2003).

⁷ The era between 1923 and 1945 is regarded as the Republican Era by most scholars of Turkey.

stayed within the capitalist camp, being one of the first countries to join the Bretton Woods system. Loyalty to liberalization and alignment with the West were ensured by American financial aid through the Truman Doctrine and the Marshall Plan, and resulted in Turkey's sending troops to the Korean War, allowing U.S. air bases on its territory, and, finally, joining NATO (see Dodd 1983; Keyder 1987). The Turkish government used the aid especially for the development of industry, mechanized agriculture, and the military sector. In relation to these changes, Istanbul became the engine of industrial development within the country.

Recognizing that urbanization and development were the fundamental challenges to the country, Prime Minister Adnan Menderes, the "honorary mayor of the city," started an extensive urban development plan for Istanbul during the mid-1950s. In contrast to the bureaucratic nature and isolated situation of Ankara, Istanbul was a perfect setting for Menderes's development in an era of economic liberalization. Starting in 1956, similar to, for instance, the work of Robert Moses in New York City in the 1950s and 1960s, Menderes launched the construction of a new highway network for Istanbul (Fig. 10-4a). The implementation of this new highway network was the major component of the "industrial development plan" in Turkey, carried out by the newly founded General Directorate of Highways with the advice of a group of about 50 engineers of the United States Bureau of Public Roads. U.S. Marshall Plan aid remained crucial for the populist political propaganda of the "little America" or "the welfare state."

Although some roads and highways were constructed in Istanbul before the 1950s, what made the operations under the directive of Prime Minister Adnan Menderes remarkable was their more extensive scale.⁸ Between 1956 and 1960, following the main features of the previous Henri Prost plans (but with major difference in the width of streets, as Prost's proposals were enlarged by a factor of two or three), and the slogan "This city has a hunchback, let's straighten it," Istanbul embarked up a large-scale urban intervention that resulted in wide avenues being cut through the historical fabric of the city in a Haussmannian fashion. With that and the construction of new highways, Istanbul would experience the most radical urban development in years (Fig. 10-4b).

The rapid urbanization of the 1950s affected the physical and social form of the city in a different way from that imagined in Menderes's plans. Triggered by the widespread mechanization and commercialization of

⁸Expenditure by the Istanbul municipality on highways and bridges increased 334% between 1950 and 1957 compared to spending in the period 1923–1949.

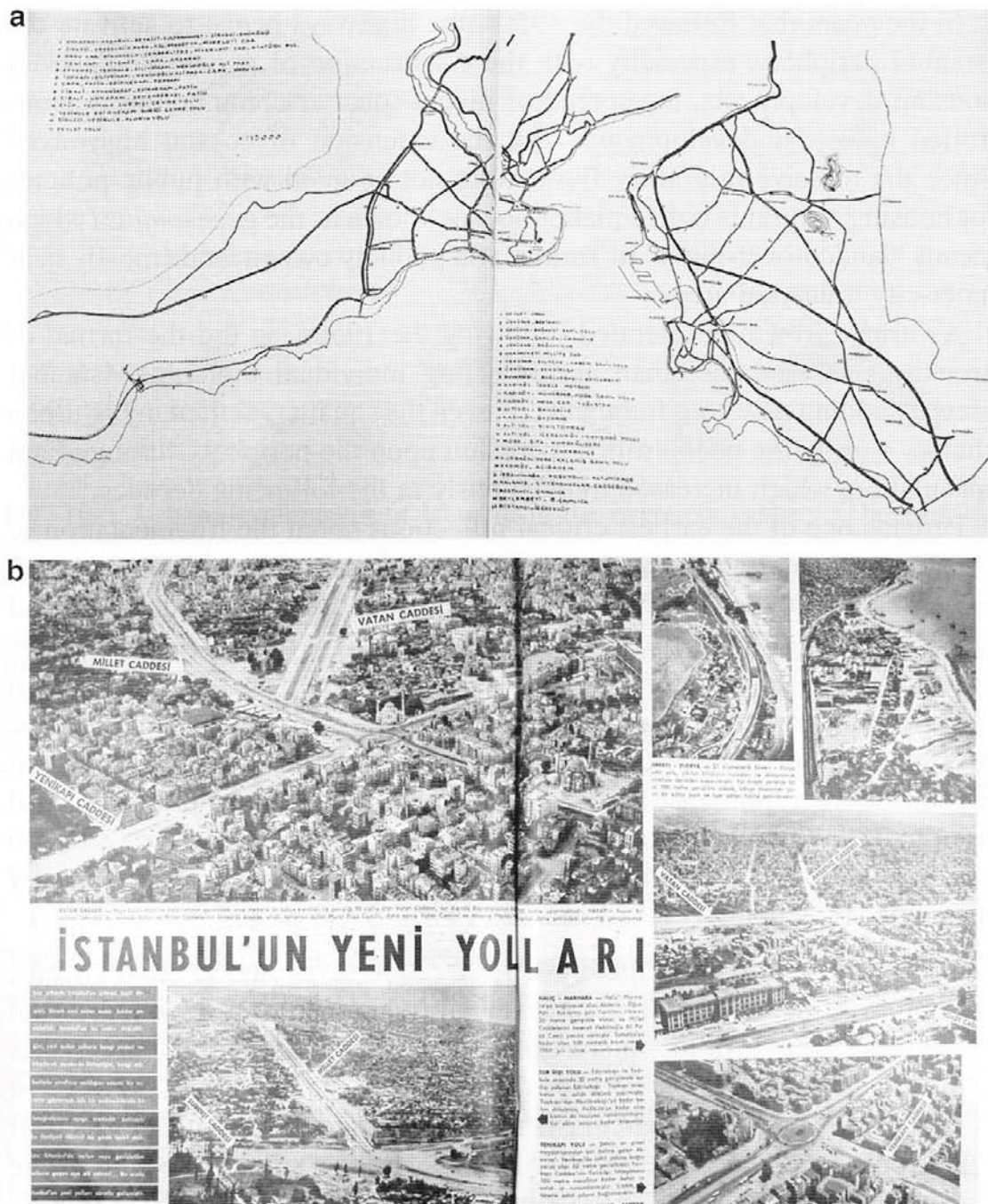


Fig. 10-4. (a) New highways of Istanbul as illustrated in a report from the Urban Development Bureau of Istanbul in the 1950s. (Source: *Arkitekt*, 1955). **(b)** New highways of Istanbul as represented in the news. (Source: *Hayat*, 1958)

agriculture, a massive exodus from rural areas during the 1950s overwhelmed major Turkish cities, including Istanbul. In the early 1920s, the population of Istanbul was about 500,000; in 1950 it was 975,000, and in 1965 it reached 2,141,000. Migration to big cities, the emergence of squatter settlements, the increased ownership of motor vehicles, and inner-city industrialization all contributed to extremely rapid urbanization.

In the years that followed the 1950s, the highways began to activate the Istanbul periphery, especially with the construction of upper-middle class housing developments, the spread of illegal squatter communities, uncontrolled industrial developments, and the extension of coastal highways.⁹ Since the massive migratory flows were not coupled with public policies for housing, migrants built squatter houses known as the *gecekondus* (which means “landed-over-night” in Turkish) on publicly owned lands mostly near inner-city industrial areas.

As urban growth accelerated following the 1950s, so did the format of growth. That is, rather than accumulating individual buildings, Istanbul grew by adding new “big fragments” – even the squatters settled in big urban chunks – or by the uncontrolled incursion upon the periphery through land speculation, which increased tremendously in the following decades.¹⁰

Perhaps one of the earliest critical reflections about the fragmentation of Istanbul was an article published by architect Zeki Sayar in 1954, in which he writes about the “artificial expansion” of the city beyond its official boundaries. “Artificial” because, as Sayar argues, the boundaries at the time were generous enough to accommodate population growth, so expansion came about through intensified land speculation. In 1955, the difference between the population within the municipal boundaries of Istanbul and that within the metropolitan boundaries was 50,000; by 1965, this figure had risen to 380,000. Of the total metropolitan population increase of 802,000 between 1955 and 1965, 40% settled in areas outside of the municipality (Istanbul Municipality 1971; Piccinato 1970). Sayar writes:

There are some parcels that have 1000–2000 divisions. These divisions, because of being outside the Municipality boundaries, are done by land registry office or in the interest of the landowner, and not by any means of urbanism guidelines. Perhaps there are more than 100 or 150 of them now in Istanbul. These parcel islands—disconnected from the city as well as from each other—are able to survive via their sole connection to the waterfront, the highway or the railway (Sayar 1954).

Despite Sayar’s critical reflection, in 1950, with a population of one million, Istanbul’s urbanized areas extended only 30 km from the center. The population increased to five million in 1980 and doubled to ten million

⁹For a further discussion on the development of the periphery and its relation to informality in Istanbul, see Keyder (2000).

¹⁰In 1948, it was estimated that there were about 25,000–30,000 *gecekondus* in Turkey; in 1953 this number increased to 80,000, and in 1970 to 500,000. Of those, 20% were in Istanbul. See Öncü 1988 and Buğra (1998).

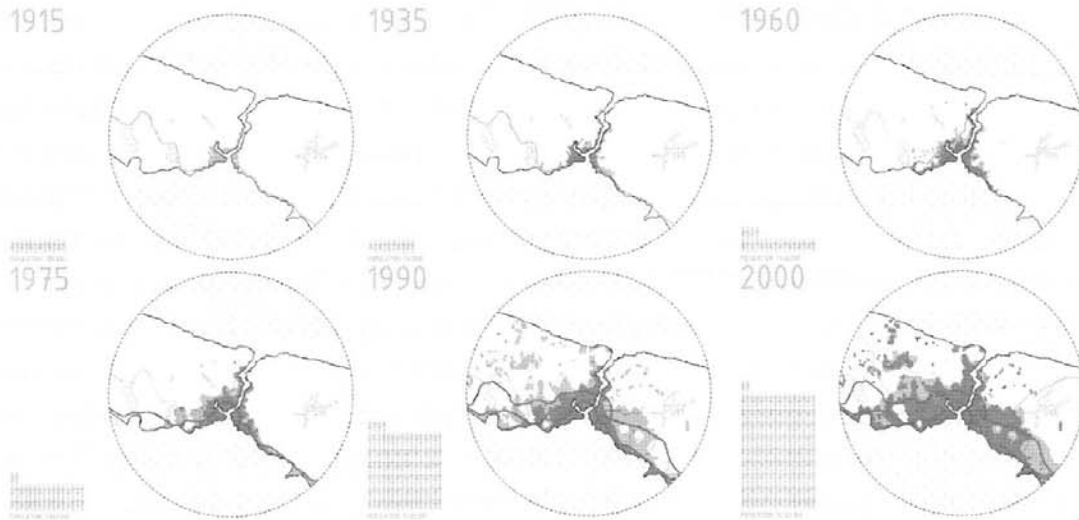


Fig. 10-5. Urban development of Istanbul in the twentieth century. (Diagram by Neyran Turan)

in 2000, while the expanse of the urbanized area grew to 50 km wide in 1980 (Fig. 10.5). Today, Istanbul extends about 80 km to the west of the Bosphorus and 40 km to the east.

10.3 Istanbul After the 1980s

The 1980s marked the era in which neoliberal economic policies opened the national economy of Turkey to world markets – a macroeconomic, social and political restructuring which was very much in line with wider global transformations around the world, including disorganized capitalism, post-Fordism, flexible accumulation, and globalization (Harvey 1989; Lash and Urry 1987). These policies had tremendous effects on the social and spatial form of Istanbul as they did in many other cities around the world (Sassen 1991; Brenner and Theodore 2002; Hackworth 2007). For Istanbul, one of the most important factors in the impact of globalization in the city has been the increase of foreign direct investments. Between 1980 and 1998, foreign direct investments in Turkey increased 320 times, with an even sharper increase after the 1990s (Kaptan and Enlil 2009). As of 2003, 75.4% of foreign direct investment in Turkey was in Istanbul – 2.53% in agriculture, 25.8% in industry, and 71.7% in the service sector (see Özdemir 2002: 249–259).

During the 1980s, integration with the market economy triggered legal, financial, and institutional restructuring in local governance. The newly

elected center-right government (ANAP), which aimed to accomplish full liberalization and deregulation for Turkey, saw the urban development of big cities as crucial in attracting international capital (see Keyder 1994). Local governance restructuring was needed to create the necessary setting for ambitious infrastructural investments and urban renewal projects. For instance, the government increased the total tax revenues allocated to municipalities and also passed the Municipality Law of 1984, which allowed the complete decentralization of the metropolitan municipalities of the three big cities (Istanbul, Ankara, and Izmir). The Law expanded not only the metropolitan municipalities' administrative and financial resources, but also the direct control and jurisdiction of various public works agencies, which were previously under the domain of central government ministries. (An example would be the creation of the Master Planning Bureau and the Water Supply and Sewage Authority.) This restructuring led to the privatization of municipal services such as transportation, housing, and natural gas in Istanbul, as well as a series of urban renewal projects administered by the metropolitan mayor Bedrettin Dalan in the late 1980s. Like the urban development projects of the 1950s – such as the Hausmannian boulevards cut into the historical fabric – the large-scale infrastructure projects of the 1980s spurred the uncontrolled development of the city.

In addition to the 1984 Municipal Law, the Act on the Promotion of Tourism (1982) and the Mass Housing Fund (1984) were important pieces of legislation, as they affected the nature of urban growth over the following years. The Act on the Promotion of Tourism designated certain sites in the city as “Tourism Areas,” which functioned like free zones in that they were exempt from local planning regulations (for instance, building heights) and eligible for financial incentives such as exemptions from custom duties and tax deductions. Forty areas were declared “tourism and business centers” between 1984 and 1991 in Istanbul (Kaptan and Enlil 2009). High-rise office buildings and luxury hotels were built in these areas, and a financial center developed in the northern part of the city. As for the establishment of the Mass Housing Fund, more than 750,000 housing units were constructed in Turkey by the Mass Housing Administration (MHA) between 1984 and 1999. Of those, more than 100,000 were in Istanbul (Keyder 1994: 402). The MHA is still responsible for one-third of housing starts in Istanbul, mostly units built on government land, and for offering long-term loans (Ayata 2002).

Along with restructuring in governance, the 1980s marked the accelerated fragmentation of Istanbul beyond its original contours. Although the city still retained a relatively compact form until 1980s, the opening

of the two Bosphorus Bridges (1970s and 1980s, respectively) and the creation of peripheral ring roads associated with the bridges (the E-5 international highway and the Trans-European Highway respectively), led to massive fragmentation. Unplanned industrial developments and illegal squatter settlements began to appear along the highways on the periphery (Öncü 1988).

The fragmentation of the city occurred at different levels, each of which developed independently while triggering the growth of the others. The main changes were: (1) a dramatic increase in uncontrolled development within the outer limits of the Municipal area; (2) the spread of *gecekondus* (see Keyder 2005); (3) state-initiated high-rise, high-density mass-housing projects on the periphery, developed by the Mass Housing Administration, which ended up serving mostly upper-middle class and higher-income groups; (4) a new financial center toward the north; (5) gated residential developments in the suburbs with easy access to the Trans-European Highway and the northern financial center.¹¹ These developments not only accelerated uncontrolled urban expansion, they also made the city into a megalopolis, or an archipelago, i.e. dispersed fragments separated by voids (Fig. 10-6).



Fig. 10-6. Archipelago of voids in contemporary Istanbul (Mapping by Neyran Turan)

¹¹According to one estimate, there were 650 gated communities in Istanbul in 2005 (see Daniş and Pérouse 2005).

10.4 Towards an Ecological Urbanism for the Istanbul Archipelago

Ecology is guilty of forgetting about society, just as social science and social theory are predicated on the forgetting of ecology (Ulrich Beck, *Ecological Politics in an Age of Risk*, 1995, 40).

Partially created by the impacts of globalization and observed in many other megacities of the world, the archipelago form of the city might at first seem to be the spatial expression of transnational connections, market flows, and expanded infrastructure. However, it is widely argued today that, as much as the archipelago model portrays connections, it is composed of “splintered” and highly differentiated networks with sharply defined enclave spaces where not only the physical attributes or parts of the city are fragmenting, but also the infrastructure and networks themselves (Graham and Marvin 2001).

Broadly speaking, fragmentation is interpreted in the field of urban studies as “dividing,” “splintering,” or “partitioning” contemporary cities, indicating social and spatial disparities and polarization within income groups as well as in the provision of infrastructure. Although various studies use the term fragmentation to refer to urban structure, urban form, the system of land use, the disjunction of public and private spaces, or the socio-economic and cultural integrity of the city, the most prominent common factor in each example is an uneven, or asymmetrical access to infrastructure and resources. Extremes are critically portrayed in a range of theories about gated communities, gentrification, *laissez-faire* planning, neoliberal economic policies and their effect on the form of the city (see, for example, Davis 1990; Fainstein et al. 1992; Zukin 1995; Caldeira 2000; Graham and Marvin 2001; Marcuse and van Kempen 2002; Bauman 2004).

Although the fragmentation of the city is by no means a new phenomenon, and dates back to the altering nature of the metropolis at the turn of the twentieth century, what seems to make contemporary fragmentation strikingly different from previous instances is the level of autonomy and self-containment reflected by the fragments or the islands of the archipelago as well as their extremely unbalanced access to resources compared to the vast array of infrastructure to which they are connected. Yet as much as the contemporary archipelago poses new urban symptoms and spatial configurations, it also provides a framework to critically examine the form of the city and reflect on the forces that constitute it.

Recent literature on Istanbul (especially in the fields of urban studies and sociology) has examined the fragmented condition of the city in the context of globalization, and provided critical reflections on it (see, for example,

Kurtuluş 2005; Keyder 2005). Although these studies provide an important framework for understanding the contemporary contradictions inherent in Istanbul's urban fragmentation, there is a compelling need for a careful examination of the specific characteristics of this new spatial configuration in the hinterland of Istanbul. In this light, a closer spatial analysis reveals certain important relationships.

In the spatial mappings of the contemporary Istanbul archipelago, a clear relationship between the highway system and fragmentation becomes apparent (Fig. 10-7a). In particular, after Istanbul's accelerated growth during the 1980s, when its transition to a megalopolis took place, one can observe from the mappings that the first spatial transformation was a result of the Trans-European Highway, which spurred an outward leap-frog pattern of growth and sprawl in the form of squatter settlements, industrial developments, financial centers, and gated communities on the outer edge of the city; most of this development was uncontrolled (Fig. 10-7b).

At this point, it could be argued that a second – and rather specific – spatial configuration has been taking form very recently (starting in the mid-1990s). Beginning once more at the edge of the city, this second spatial transformation has again been triggered by the Trans-European Highway; but rather than the leap-frog centrifugal sprawl just described, the second expansion has been more centripetal and has taken the form of intensification and infill. That is, large tracts of land along the Trans-European Highway and its interchanges are becoming crowded with big-box stores, identical high-rise and high-density housing (mostly built on government land by the Mass Housing Administration), and mixed-use office buildings. This has produced a different spatial configuration along the edge of Istanbul, where the city has started to change in its development pattern through differentiated clusters of infill projects (on sites along or with easy access to the highway), most of which are surrounded by existing lower-income or squatter housing developed during the first round of leap-frog developments after the 1980s. Although leaving undeveloped voids could be seen as an efficient pattern of urbanization because of their potential to develop at higher densities later, in Istanbul's case, these developments have proceeded in an unplanned, uncontrolled manner.

At first glance, the previously described configuration on the edge of Istanbul can be likened to a typical "edge city" formation in which increasing concentrations of shopping, entertainment, and business agglomerate at highway intersections (Garreau 1991). However, in contrast to a typical edge city model – where "side-by-side development" occurs near the highways radiating out from the city center – concentric growth tendencies of urbanization in Istanbul are actually balanced by the linear axis of the geography where the hinterland-edge still keeps a level of attachment

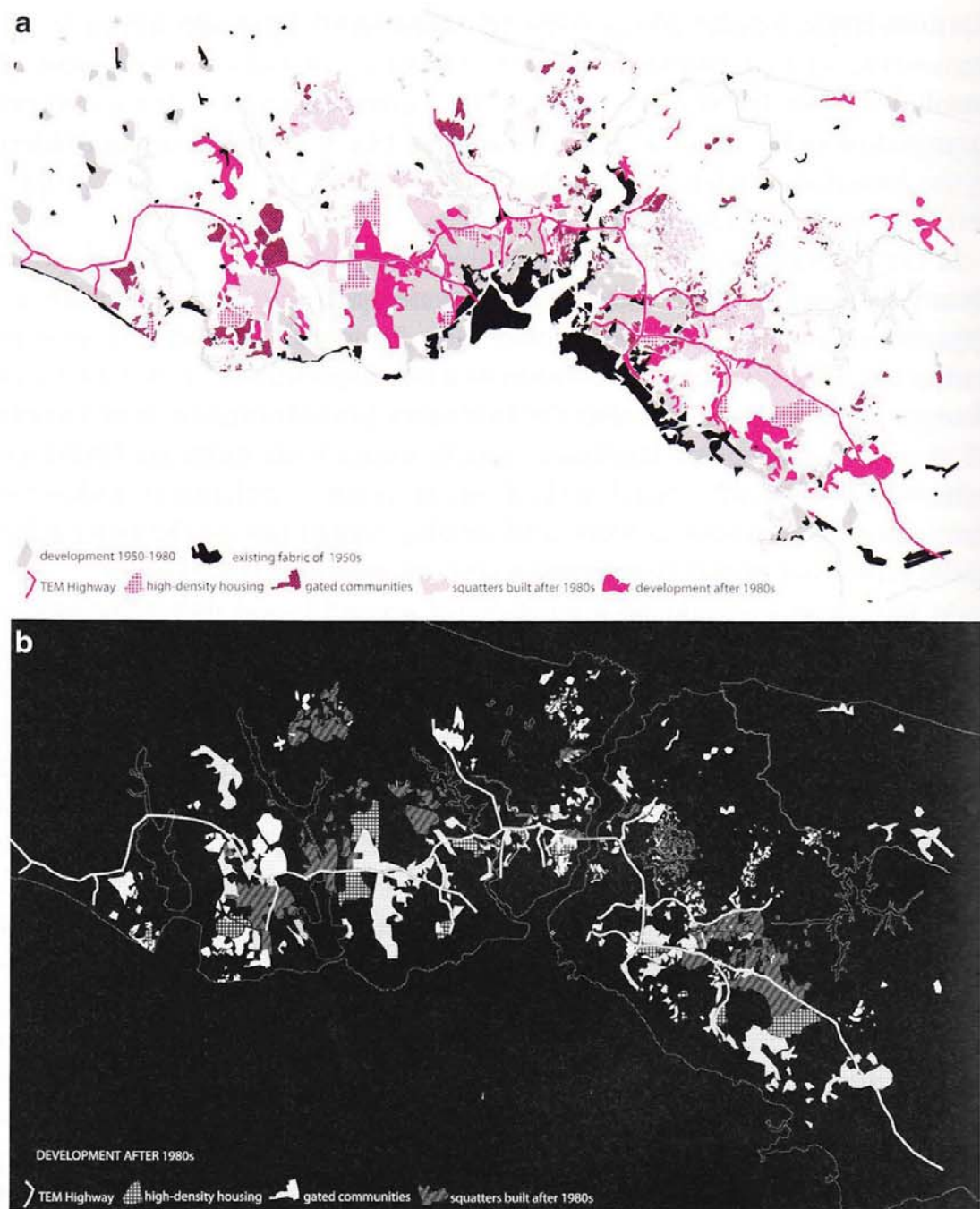


Fig. 10-7. (a) Fragmented hinterland of Istanbul (Mapping by Neyran Turan). **(b)** The development of Istanbul after the 1980s in relation to the TEM (highway). The map shows built fabric after 1980 and also depicts high-density housing (mostly developed along the TEM), squatter areas and gated communities. (Mapping by Neyran Turan)

and proximate relationship to the city by infill developments. Therefore, because of its linear yet still concentric form, the continuous hinterland-edge created along the highway still keeps a level of adjacency to the city, rather than radiating away from it.

This proximate but rather active characteristic of the hinterland-edge and its more recent spatial configuration suggest an alternative reading of the Istanbul archipelago. That is, rather than seeing the archipelago in terms of its enclaves or islands (gated communities, shopping malls, skyscrapers, squatter settlements) and focusing on their disparities and differentiated structures, one can focus on the potential of the *archipelago of voids* in Istanbul – the interstitial territories on the hinterland-edge which represent alternative sites for future projections on the city.

Before speculating on the relevance of this spatial configuration further, it might be helpful to contextualize some of the related developments more specifically. The transformations brought about by the new Municipality Laws of 2004 and 2005 are a continuation of the liberalization efforts of Turkey since the 1980s, Istanbul's desire to integrate with international market economies, and accompanying policies to decentralize and strengthen the powers of municipalities.¹² These laws have not only granted additional powers to Istanbul's local government by further expanding its limit of jurisdiction to the metropolitan area, but have also relaxed the rules for public-private collaboration and provided the necessary legal framework for the allocation of new responsibilities to the municipalities in the context of natural disaster management and the implementation of "urban transformation" projects. Some recent examples include large-scale urban projects designed by architects Zaha Hadid and Ken Yeang, controversial port development projects in Galataport and Haydarpaşa, and "urban renewal" efforts to transform squatter housing areas into more livable environments. While the goals as well as the implementation of these transformation projects have occasioned much criticism by advocates of more democratic and transparent policy processes and political discussion locally, the projects represent attempts to stabilize the availability of public and private resources as well as the massive growth of the city with more sustainable forms of urban development. Among the most important challenges that Istanbul will face in the upcoming years are the spatial distribution of urban density and infrastructure, controlling development within the water basins, risk management in relation to future earthquakes, and the impact of these changes on the social structure and the quality of life.

Accordingly, recent governance and policy restructuring, as well as developments such as the Istanbul Development Plan, the Marmaray Tunnel Project, the future subway network, and projects associated with the Istanbul 2010 European Cultural Capital, signal the need for even more

¹²Related laws include Law no. 5366 (Law for the Protection of Dilapidated Historical and Cultural Real Estate through Protection by Renewal), passed in 2005, and the 2010 European Cultural Capital Law, approved in 2007.

active urban governance and project implementation for future Istanbul. This period offers an opening to reconsider the contemporary urban form of Istanbul and speculate on its relation to the city's specific challenges. That is, going back to our earlier discussion on the "ecological turn" of Istanbul – where the idea of ecology is interpreted narrowly from a managerial perspective – it could be argued that the current historical situation of Istanbul is an opportunity for more expanded interpretation of ecology and sustainability in Istanbul.

An example would be the spatial configuration of the urban-edge condition as it relates to recent urban policy changes as well as the ambitions of the Istanbul Development Plan. The expansion of the jurisdictional limits of the metropolitan area would suggest the possibility of a more unified and integrated urbanism. Along with the ambition of local government to take rapid action on implementing these projects, the strong emphasis on ecology and infrastructure development in the recent Istanbul Development Plan creates an opening for a new approach. For instance, in addition to designating specific areas for water basin control, ecological preservation, eco-agriculture, and bio-diversity parks along the edge of the city, the Plan proposes specific areas for new housing developments and public facilities (hospital and health centers, education centers, decentralized "mini-terminals" for transportation) along the hinterland-edge. While all of these areas will be connected by new subway infrastructure (construction has started and the subway is expected to be complete in 2023), the meaning of infrastructure could be expanded to benefit Istanbul's urbanism. For instance, infrastructure need not be limited to transportation networks, but could include public facilities such as housing, health, or education services. Rather than simply limiting sustainability to an urban managerial inquiry, the real question remains: what kind of projections might these new urban policies instigate regarding urban ecology and infrastructure and what do they mean for the livability and the social cohesion of Istanbul?

As answers to such questions will be critical in the following years, at this stage, one could argue that sustainability might offer a framework for building necessary relationships between the city and its environment as well as between the physical and the social aspects of its urbanism. An initial conclusion deriving from this framework is the need to establish a wider understanding of Istanbul's larger metropolitan terrain – through further explorations on the changing spatial configuration of the hinterland-edge, its landscape, and the construction of the subway and other elements of public infrastructure – and the incorporation of that knowledge into Istanbul's urbanism.¹³

¹³For a recent study that aims to historicize this relationship, see (Turan 2009).

Revisiting geographer Matthew Gandy's assertion that "it is perhaps only through an ecologically enriched public realm that new kinds of urban environmental discourse may emerge" (Gandy 2006), a second point would be that sustainability stands as a relevant and significant topic for Istanbul's contemporary urbanism as long as it helps to build new interactions among the city's ecologies, infrastructure, and public realm, ultimately resulting with a more expanded understanding of urban sustainability for the city.

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