

Abstract

Göktürk, is a suburban neighborhood taking place on the urban fringe of İstanbul. This neighborhood existed as a rural settlement until the 1980s, however, it has been exposed to rural-to-urban transformation in parallel with the socioeconomic transformations in Türkiye. Since the beginning of the 2000s, gated communities (GCs) have been the primary housing settlement type in Göktürk. In this context, the research has aimed to propose a methodology to determine a local typology reflecting the unique attributes of suburban GCs. Research methodology has adopted the features of Grant and Mittelsteadt (2004) as having a comprehensive point of view on GCs. GC samples are chosen considering a set of social, morphological, and spatial qualities they provide. The building coverage ratio (BCR) of GCs and the current market value of GC properties are distinctive and correlated indicators for recreational qualities that emphasize a typology of GCs. As a result, GCs are defined through the recreation possibilities offered by open spaces in GCs, therefore, the typology of GCs in Göktürk determined as non-leisure, shared leisure, and semi-private leisure. Moreover, the residents' social characteristics in GCs in Göktürk have changed from upper income level to upper-middle income level, in a chronological view between the years of 1997-2022. Besides, urban tissue in Göktürk has turned out to be a settlement with fewer areas of open spaces. Although the proposed methodology has developed a pragmatic approach to analyzing suburban GCs, further research on central or peripheral-located GCs may contribute to the development of a theoretical framework.

Keywords: Gated Communities, İstanbul, Typology, Rural-to-urban, Göktürk

A Method to Identify Gated Communities in İstanbul, Gokturk Neighborhood

İstanbul, Göktürk Mahallesi Örneğinde Kapalı Sitelerin Tanımlanması İçin Bir Yöntem

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Özet

Göktürk, 1980'li yıllara kadar İstanbul kent çeperinin ötesinde kırsal bir yerleşim olarak varlığını sürdürmüştür. Türkiye'deki sosyoekonomik dönüşümlere paralel olarak gelişen kırdan kente göç olgusu ile büyükentin saçaklanması sonucunda bu dönemden itibaren bir kent banliyösüne dönüşmektedir. 2000'li yılların başından beri bu sürecin baş aktörü olan kapalı siteler, Göktürk'te en yaygın konut yerleşim türünü oluşturmaktadır. Bu bağlamda araştırma, kent çeperinin ötesinde, banliyöde gelişen kapalı sitelerin karakterini betimleyen özgün bir tipoloji oluşturmaya yönelik bir yöntem geliştirmeyi amaçlamaktadır. Araştırma örneklemini oluşturan yirmi-dört kapalı site, sağladıkları bir dizi sosyal, fiziksel ve mekansal özellikler dikkate alınarak, 1997 ve 2022 yılları arasında inşa edilen kapalı siteler arasından kronolojik olarak seçilmektedir. Araştırma modeli, öncelikle Blakely ve Snyder (1997) tarafından önerilen, ardından Grant ve Mittelsteadt (2004) tarafından geliştirilen ve kapalı siteler hakkında bütüncül bir bakış açısı sunan tipoloji ölçütlerini benimsemektedir. Bu ölçütlerin kapsamını, Blakely ve Snyder (1997) tarafından önerilen, siteyi çevresinden ayıran sınırlayıcıların işlevsel nitelikleri, sitenin güvenlik özellikleri, sitede sağlanan sosyal ve sportif amaçlı hizmetler/tesisler, ve sitede meskun kullanıcıların sosyoekonomik karakterine ek olarak, Grant and Mittelsteadt (2004) tarafından önerilen, mülkiyet türü ve sahipliği, sitenin kentsel konumu, sitenin büyüklüğü, ve sitenin yönetim modeli oluşturmaktadır. Bu ölçütlerin çalışma kapsamındaki örneklem grubuna uygulanması ile metropoliten bir banliyöde gelişen kapalı sitelerin özgün karakterini ve ayırt edici özelliklerini tanımlayan göstergeler üzerinden, banliyöde gelişen kapalı sitelere özgü bir tipolojik sınıflandırma yöntemi geliştirilmektedir. Bu ölçütlere göre araştırma kapsamındaki kapalı sitelerin, açık alan rekreasyon eylemleri için oluşturdıkları potansiyelin miktarı üzerinden tanımlanabileceği saptanmaktadır. Buna göre, kapalı sitelerde açık alan rekreasyon eylemlerinin potansiyeli, fiziksel düzlemde kapalı sitelerin taban alanı katsayısı (T.A.K.S) üzerinden belirlenmektedir. Bununla birlikte, kapalı sitelerin gayrimenkul rayiç bedelleri, açık alanları satın alma gücünü yansıtarak T.A.K.S değeri ile korelasyon göstermekte ve kapalı sitelerin sosyoekonomik düzlemde açık alan rekreasyon eylemlerine yönelik potansiyeli için gösterge oluşturmaktadır. Sonuç olarak metropoliten bölgede bir banliyö örneğinde kapalı site tipolojisi, T.A.K.S ve gayrimenkul rayiç bedellerini içeren iki gösterge üzerinden hem fiziksel/ mekansal hem de sosyoekonomik düzlemde oluşturulmaktadır. Çalışma sonucunda metropoliten bir banliyö örneği olan Göktürk'te kapalı site tipolojisini rekreasyon dışı siteler, paylaşımlı rekreasyon siteleri, ve yarı özel rekreasyon siteleri oluşturmaktadır. Rekreasyon dışı siteler, temel barınma ve pasif güvenlik işlevleri dışında hemen hemen hiçbir sosyal veya fiziksel donatı içermez ve yalnızca güvenli bir barınma ortamı sunmayı amaçlar. Paylaşımlı rekreasyon siteleri, temel barınma ve aktif güvenlik işlevlerine ek olarak açık alanlar üzerinden belirli ölçüde rekreasyon potansiyeli sunarken, bu alanların bakım ve yönetim maliyetlerini paylaşılarak optimize etmeyi amaçlar. Yarı özel rekreasyon siteleri, ortaklaşa kullanılan açık alanlarda sundukları rekreasyon potansiyeline ek olarak, site içerisinde yalnızca kendi mülkiyetine ayrılmış özel bahçeler içerisinde konumlanan müstakil konut birimleri ile daha fazla mahremiyet ve kişisel alan sunmayı amaçlar. Kronolojik olarak Göktürk yerleşiminin kırdan kente dönüşümündeki ilk evrede T.A.K.S. oranı düşük düzeyde seyrederken, açık alan rekreasyon potansiyeli yüksek ve üst gelir grubuna yönelik kapalı siteler inşa edilmektedir. Ancak günümüze yaklaştıkça, T.A.K.S. oranı daha yüksek düzeyde, açık alan rekreasyon potansiyeli daha düşük ve üst-orta gelir grubuna yönelik kapalı sitelerin inşa edildiği saptanmaktadır. Bu durum, yerleşimin ulaşım altyapısının iyileştirilerek merkezi iş alanları ile bağlarının güçlenmesi ve İstanbul Havalimanı, Yavuz Sultan Selim Köprüsü, Kuzey Marmara Otoyolu gibi büyük projelerle etkileşimi sonucunda arazi maliyetinin yükselmesi ile birlikte arz-talep ilişkisinin yeniden kurulmasından kaynaklanmaktadır. Bunun sonucunda Göktürk, kapalı sitelerin etkisinde kırsal karakterini kaybederken, yerleşim dokusunun karakteri yüksek yoğunluklu bir kentsel konut alanına dönüşmek üzere ivme kazanmaktadır. Çalışma kapsamında önerilen yöntem, banliyöde gelişen kapalı sitelerin çözümlemesinde pragmatik bir yaklaşım geliştirmektedir. Bununla birlikte çalışma kapsamında geliştirilen yöntemin, alternatif banliyö yerleşimlerinde uygulanması ile, çalışmanın yaygın etkisinin artırılması beklenmektedir. Yöntemin, kent merkezinde veya kent çeperinde konumlanan kapalı siteler için ayrıca sınanması, önerilen yöntem üzerine kuramsal çerçevenin geliştirilmesine katkıda bulunacaktır.

Anahtar Kelimeler: Kapalı Site, İstanbul, Tipoloji, Kırdan Kente Dönüşüm, Göktürk

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INTRODUCTION

Turkish transformation experience in social, political, and economic aspects has led to a phenomenon of internal migration from rural to urban areas since 1950s. During this period, important cities such as İstanbul, Ankara, and İzmir have turned into contemporary metropolises. Boundaries of the built environment in those cities have expanded with the increasing population every year towards fringing areas. As a result of urban fringing, the settlements beneath the economic impact zone of the metropolises, have lost their rural characteristics and transformed into suburban settlements.

As globalization has been spreading around the world, global economic growth caused the emergence of new housing phenomena. During globalization processes, social and spatial demands of the housing clients have increased correlating income levels and changing lifestyles. Local investors had started to respond to those expectations by developing gated communities (GCs) since the 1980s (Keyder, 1999) and GCs have characterized urban development and morphology in Turkish cities parallel to the same procedures in big cities of the world by responding to spatial expectations of all income groups in society.

In this context, the study of Geniş (2007) indicates that early examples of GCs were developed as low-rise single housing through expectations of upper-income level clients considering prestige, privacy, and spatial quality. Later on, GCs are developed as high-rise multiple housing through expectations of upper-income level clients considering prestige and services. By the 2000s GCs are developed as middle-rise multiple housing settlements through expectations of middle-income level housing clients considering spatial quality, security, and safety (Görgülü, 2011). In this manner, GCs emerge as a dynamic phenomenon reflecting the transformation of the city and society.

Aim and Scope

This research tries to propose a practical

and pragmatic methodology to define the GCs according to their physical, social, and spatial features. This methodology considers a typological classification approach enlightening the characteristics of GCs as suburban settlements and aims to provide a quick assessment method exploring the characteristics of GCs through architectural and social features.

Using the broad features of the global literature in the suburbs of İstanbul; to test the validity of these features in the local context; to identify the valid and non-valid features in the local context (*suburban İstanbul*); to identify the socioeconomic and spatial indicators with which these features are correlated; research has aimed to create a typology for suburban GCs based on those indicators.

Since the aim of this article is to present a method to understand rapidly the character of suburban GCs and present a new classification of suburban GCs in research scope; therefore, both rural-to-urban transformation process, and rural/urban characterization of neighborhood is out of research concept. Yet, the components of which constitute a (*sub*)urban character of the neighborhood, which form the basis for examining and understanding GCs, are emphasized according to suburban dynamics through ties with the CBDs in daily routine and self-sufficiency of the neighborhood provided by public facilities and infrastructure.

The proposed methodology may be developed through further research on different GC settlements built in peripheral or central locations of the city. Thus, the local context and features of GCs will have the opportunity to be highlighted and understood through an inclusive approach.

Material and Methodology

Göktürk neighborhood consists of more than a hundred GC enclaves. The research scope is restricted to twenty-four sampling GCs in order to develop a deeper understanding of the subject considering the physical, social, and spatial features of GCs. The sample buildings are selected chronologically according to the construc-

tion dates aiming to collect data about the transformation process on the typology of GCs. Twenty-four GCs with diverse morphological features about parcel form (*regular or irregular*), block type (*attached/ detached or row/courtyard*), and quantity of housing units of which built in different time periods are chosen as the research sampling. These GCs are evaluated for their physical and social characteristics.

The methodology of this research is based on a systematical classification of current global literature on the typology of GCs and testing proposed features in a local context. As a widely known approach to literature, Blakely and Snyder (1997) proposed classification features considering outcomes on the social context of GCs; *function of enclosures, security, amenities and facilities, and resident type*. However,

Grant and Mittelsteadt (2004) developed and detailed the study with additional features; *property ownership, location, size, and policy context*. In this study, all of those physical, social, and spatial features that compose the architecture of GCs are adopted to ensure a holistic approach.

Research Hypothesis

GCs which became evident in the urban macro form in a very brief time, were introduced predominantly in the center or at the periphery of metropolitan cities until the 1990s. However, since the 2000s, GCs started to be developed beyond the boundaries of cities crossing natural borders. By spreading over rural settlements, GCs have been transforming rural settlements into suburban or exurban fringes since then (Table 1).

Table 1. Typology of urban residential location (Prepared by the authors).

Urban location				
	central	peripheral	suburban	exurban

GCs in Göktürk are built within borders of formerly rural areas and changed the usage of function zones from rural to housing areas. These residential buildings which are planned and built on existing parcel geometry display a great morphological diversity in terms of size, architectural character, parcel size, etc. pointing out the inefficacy of a method considering only the morphological aspect to define a typology method.

In this study, amenities and facilities provided in GCs are thought to be effective in determining a typology in suburban İstanbul, rather than an absolute morphological approach. Amenities and facilities are basically shaped and varied according to the relationship between quantitative components such as the BCR¹ of GCs, and qualitative components such as leisure and outdoor recreation activities presented in GCs.

Research hypothesis depend on the claim

that open space ratio determine the variety and quality of amenities and facilities. According to field survey of Çınar (2003) including in-depth interviews and on-site observation; diversity and quality of open space activities increase or decrease depending on the BCR of a GC. Amenities and facilities offered in GCs vary according to the BCR. GC developers aim to construct as much space as possible to maximize the financial profit of the construction (Usui, 2022). The apartment owners mostly prefer the use of the permitted construction area by BCR to be used vertically for having wider leisure and recreational areas on the ground. In this regard, BCR has emerged as the defining generator of the leisure programs that may define the typology of GCs (Table 2).

1. BCR is the ratio between built and unbuilt areas of GCs. In other words, BCR is the built-up area of an enclave. (Schläpfer et al., 2015). For instance, if a parcel is 1000 sqm., and BCR is 40 %, building coverage area might not exceed 400 sqm. in size.

Amenities and Facilities	
Quantitative	Qualitative
building coverage ratio (BCR)	leisure and recreational activities

Table 2. The quantitative and qualitative distinctive features to be examined of GCs beyond the periphery of Istanbul, Göktürk case (Prepared by the authors).

Specifically, leisure/outdoor recreation activities of the research sample are measured indirectly. According to La Grange (2018), housing market is strongly driven by the ability to purchase i.e. affordability. Therefore, characteristics of GCs are expressed in the aspirations that residents cherish and are prepared to purchase. Architecture of GCs is the spatial organization of those aspirations. The research hypothesis is based on this view; amenities and facilities offered in GCs vary according to the BCR. Low BCR reflects more ability to purchase, and high BCR indicates less ability to purchase for the open spaces, leisure and recreational areas in GCs.

Data Collection

Research data is acquired from many sources such as on-site observation, web portfolios of designers or contractors of GCs, records of the General Directorate of Land Registry and Cadastre. Chronological figure-ground mapping and other mappings drawn using sources such as historical aerials and satellite photos acquired from open source data of Istanbul Metropolitan Municipality, and illustrated by authors. Current value of properties are acquired from Eyüpsultan Municipality as an open source data published annually.

Features of which *function of enclosure, security, amenities and facilities* data were obtained from on-site observation; conducted to recognize the architecture and spatial composition of the research sampling. Data about *size* of GCs was obtained from designer and contractor web portfolios. No data were collected on non-distinctive features such as *property ownership, location, and policy context* due to improper legal framework and the suburban location of all sampling. Data on *resident type* was obtained from current value of properties, which is considered as an indicator of the income level of the residents.

Research Motivation

Typology is a well-established analytical tool in architecture; it is useful in understanding an architectural composition, in explaining form and order, proportion and measure, thus, depicting a spatial concept or a phenomenon. Typology contributes to analytical tasks in order to make a research universe distinguishable and understandable; such as revealing the basic dimensions of the research universe, creating classification categories, and developing concepts considering research themes (Collier et al., 2012). Typology is significant in explaining the relationship between architecture and social structure by which establishing GCs. This relationship is found in a vast diversity, identified through numerous typologies around the world. In this manner, typology is adopted as an analytical tool aiming to systematically classify and dissolve GCs.

Typologies in literature represent a contextual framework that reflects the dwelling culture of their unique research universe. In this case, answering the research question about the contribution of GCs to the urban settings requires site-specific and contextual typologies. Typologies of GCs based on causes and consequences focused on motivations of residents (Blakely & Snyder 1997; Blandy, 2006; Walks, 2014; La Grange, 2018), access control and perimeter permeability level (Luymes, 1997; Grant & Mittelstaedt, 2004), location and tenure (Burke, 2001; Glasze and Alkhayyal, 2002; Richter and Goetz, 2007; Akgün and Baycan, 2012). A consistent typology has yet to be developed that will enable most GCs to be explained within their socio-economic context, and categorized within architectural and urban settings following a coherent, conceptual framework (La Grange, 2018).

TYPOLOGICAL CLASSIFICATION APPROACHES FOR GATED COMMUNITIES

According to the global aspect, GC typology is identified and varied contextually. In this scope, GCs are examined through a wide variety of factors by researchers (Table 5). Blakely and Snyder (1997) determined GC typology through case studies from the American context. The classification approach is based on the analysis of the social structure of GCs. Thus, Blakely and Snyder classified GCs as lifestyle communities providing an isolated area to present a wide variety of amenities and leisure activities, prestige communities providing a social status, and security zone communities responding to the safety expectations of residents. Luymes (1997) also defined GC typology through case studies from the American context. The classification approach depends on access and perimeter control of the enclaves in the social and economic context. Thus, Luymes classified GCs as a typology of control; *masterplanned communities* including either guarded custom housing units or unguarded speculative housing units; also, *retirement and resort communities* either with guarded-gated access for upper income residents, or with unguarded-gated access for upper-middle income residents. Burke (2001) defined GC typology through

case studies in American, British, and Australian contexts. The classification approach depends on access and perimeter control, additionally the urban location of the GCs in the context of social and physical features. Thus, Burke classified GCs as urban security zones, secure apartment complexes, secure suburban estates, secure resort communities, and secure rural-residential estates. The classification of Grant and Mittelsteadt (2004) depends on the type and grade of access control provided by components that physically separate them from their surroundings. The degree of control ranges from full to partial. *Partially gated communities*; including ornamental gating, walled subdivisions, faux-gated entries, barricaded streets, partially gated roads, surrounded by either continuous or fractional fences and walls. However, partially gated communities aim for a psychological level of control by not preventing public pedestrian and vehicle access at the gates of the enclave. In this manner, the entrance of partially gated communities as a landmark feature gives a symbolic identity to the enclave. *Fully gated communities*; including fully gated roads, restricted entry with bounded areas, restricted entry with guarded areas, surrounded by continuous fences and walls. Fully gated communities aim for a physical level of control that completely prevents public access.

Table 3. Classification of GCs in literature (Prepared by the authors).

Blakely & Snyder	Luymes	Burke	Grant & Mittelsteadt		Levent & Gülümser
1997	1997	2001	2004		2007
			<i>Partially Gated</i>	<i>Fully Gated</i>	
Lifestyle communities	Masterplanned communities	Urban security zone	Ornamental gating	Fully gated roads	Gated towers
Prestige communities	Retirement & resort communities	Secure apartment complex	Walled subdivision	Restricted entry/ bounded area	Gated villa towns
Security zone communities		Secure suburban states	Faux-gate entries	Restricted entry/ guarded area	Gated apartment blocks
		Secure resort communities	Barricaded street		Mixed areas
		Secure rural-residential estate	Partially gated roads		

According to previous studies, GCs were mostly defined through security aspects in which access control and gating properties

are the common features considered between these four typologies. However, Blakely and Snyder (1997) called attention

to the social context of GCs through the outcomes of the research. Even though Grant and Mittelsteadt (2004) produced a typology according to physical features on gating, they proposed an inclusive methodology considering missing aspects of previous studies.

According to local aspects, Kurtuluş (2004) categorized the typology of GCs in Istanbul into three. The first is large suburbs or satellite towns designed for the city's elite middle class, such as Bahçeşehir. The second is for an emerging class of urbanites with a rising income recently; consisting of luxury condominiums and medium-sized villas, with shared swimming pools, sports areas, well-designed landscaping, public services provided by the city administration; surrounded by gates and iron fences or walls accompanied by security staff and CCTV but without a very strict security. The third is characterized by a complete socio-spatial segregation, closed to the outside with strict security measures, consisting of a certain number of luxurious and large villas and mansions, and composed of residents who are close to each other in terms of class and culture, such as Kemer Country. Moreover, Levent and Gülümser (2007) have conducted a study on the typology of GCs in İstanbul. They determined the typology of GCs according to abstract characteristics of building morphology related to the income level of households and urban location. Their classification includes building height, building type, income level of households, and urban location of enclaves. This approach has led to the exposure of typo-morphological attributes of GCs in the social context. They developed overarching urban-scale, yet superficial architectural-scale typology for all metropolitan locations that make up the urban macroform of İstanbul. However, their typology based on matching urban location and building layout, limits the understanding of suburban gated community dynamics and places it in a narrow framework.

According to the typology of Levent and

Gülümser (2007), gated towers are occupied by upper-income groups and located around the inner city. Gated villa towns are also occupied by the upper-income groups but are located in the outer city. Gated apartment blocks are occupied by upper, upper-middle, or middle-income groups, also located in the outer city. Mixed areas are occupied by upper, upper-middle, or middle-income groups, also located in the outer city.

DEVELOPMENT OF GATED COMMUNITIES

The spread of GCs as a global phenomenon (Webster et al., 2002) has been discussed more frequently in literature since the 1990s (Roitman, 2010). The basic concept that lies beneath the historical origin of GCs is the safety requirement of individuals and their properties. The sense of safety created behind walls and ditches in the past is realized by building reinforced concrete walls or metal fences in the contemporary era. Even though contemporary gated enclaves maintain this historical ascription, GCs have gained a social context including meanings and references beyond safety apprehension today (Zaireen et al., 2015).

GCs are residential settlements mostly built on privatized public areas with controlled entries to which only specific residents or visitors are allowed to exceed (Blakely and Snyder, 1997). GCs can also be described as homogeneous communities that socially bind residents to common behavioral rules and by having their own governing body tasks to regulate the way residents live together (Atkinson and Blandy, 2005; Roitman, 2008).

GCs vary from single housing units to apartment blocks or tower blocks, which are insufficient to offer some amenities, especially recreational and open space activities even though they have specified physical boundaries. Furthermore, the basic concept lying beneath the GC phenomena is formed by the isolation of a part of the city by a dwelling program which is supported by physical qualities in social and spatial contexts.

The physical features of GCs root in these general definitions, they are surrounded by fences or walls and have entrance gates provided with security staff or devices, and access between residential units and supplementary units in these settlements is realized through internal routes. Besides, GCs are provided with sports, recreation or entertainment facilities presented to the residents. Amenities provided in a GC can only be used by its residents with certain periodic fees. Moreover, having distinctive and symbolic architectural character is another important determinant of GCs.

At first glance, GCs create the urban built environment by the morphological components they have, such as the forms of the buildings, the walls surrounding buildings, and private open spaces. However, their effects on the social context have often been the subject of discussion rather than their morphological features. Social outcomes of GCs are defined depending on the concepts of segregation, exclusion, and fragmentation, respectively² (Rafie Manzelat, 2016). In line with this, Bozdoğan (2013) states that GCs prevent urban integrity in physical, social, and spatial contexts as disconnected fragments in the urban tissue.

Socioeconomic conditions are one of the main reasons for the definition of social groups. Individuals or groups with similar socioeconomic characteristics form small communities to create a private social environment (Le Goix, 2005). Thus, a homogeneous social group structure can be formed by the combination of many variables such as age, gender, ideology, and income level.

The definition of GC residents is depending on household income level through a wide variety of aspects in literature. Essentially, GCs have emerged as an isolated territory in a social context through fear of crime but also with the need for discrimination to feel exclusive (Le Goix and Vesselinov, 2012). According to Thuillier (2005), GC residents are mostly members of successful and high living standards demanding groups for the adaptability

to unstable economic conditions of the countries.

Contrarily, Glasze (2003) rejects social discrimination and isolation discourse claiming that not only higher-income groups but also middle-income groups are interested in GCs. Moreover, Smith-Bowers and Manzi (2006) claim that GCs are residential areas for lower-income groups.

Development of Gated Communities in Istanbul

The emergence of GCs in İstanbul has derived from a series of reasons reflecting the global aspect of the phenomena. GCs are global residential models that have been shaping suburbs in many developing countries (Üçoğlu, 2021), including Türkiye (Kan Ülkü, 2010). The emergence of GCs in İstanbul begins with the birth of a new social class created by the economic and political changes that began in the 1980s and the efforts of large-scale real estate developers to meet the needs of this new social class having strong ties with the CBDs (Bali, 2002).

Since GCs are surrounded by walls and controlled by staff and devices, security is the most obvious aspect of GCs in İstanbul (Firidin Özgür, 2006). Aydın Yönet and Yirmibeşoğlu (2018) also emphasize security and fear of crime as an absolute motive for preferring GCs. Yalçinkaya Erol (2011) demonstrates that sense of security and fear of crime have a similar level of influence on GC preference along with open green spaces. However, considering the suburban areas of İstanbul, Çınar (2003) indicates security is a secondary motive since the quantity of green open spaces is a more influential agent encouraging housing clients towards GCs. Hereby, there are more studies reflecting similar results; GCs in İstanbul are characterized by the environmental quality of landscape areas (Firidin Özgür, 2006) and green open spaces (Berköz, 2008) proposing various leisure activities.

Berköz (2008) claims that social relations between residents are another motive for GCs. Moreover, communication difficulties between social classes which belong

2. Segregation depicts a decomposition of a specific segment of the community from the rest of the society derived from social features such as age, ethnicity, socioeconomic conditions or common rules. Exclusion reflects the physical manifestation of segregation. Exclusion aims to host the segregated community around a unique and homogeneous environment apart from society. In physical context, borders are intended to develop an interior zone to achieve a homogeneous living style excluding the rest of the society. Fragmentation indicates the scale of exclusion in a spectrum that extends from the neighborhood scale to the urban scale.

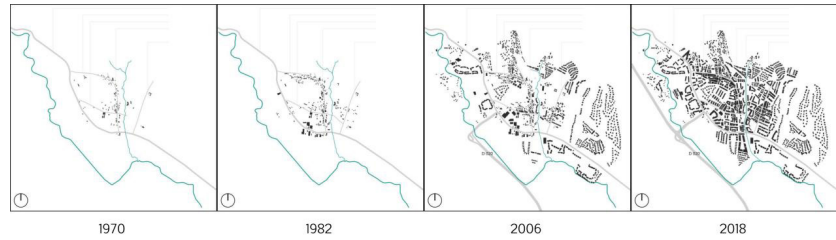
to different educational backgrounds and income levels cause an expectation for a privileged social life (Ünsal Gülmez and Ulus Uraz, 2010) and spatial segregation from the homogeneous urban society (Işık and Pınarcıoğlu, 2009; Ataç, 2016). According to Gökçe (2023) GCs can be promoted as an ideal living form, promoting social interaction as well as place identity and nature bonding; contrary to belief that GCs are associated with socio-spatial segregation (Pérouse and Danış, 2005; Bartu Candan and Kolluoğlu, 2008).

These researches show that spatial expectations of housing clients arising from their social background cause GCs to develop and spread around metropolitan Istanbul. In the light of these references, it is possible to say GCs in İstanbul can be characterized by not only the physical attributes of enclaves but also the social attributes of residents living inside the walls of enclaves.

Development of Gated Communities in Göktürk

Göktürk neighborhood of Eyüpsultan district in İstanbul (Figure 1) maintained its existence as a rural settlement until the 1990s. However, since the 2000s, Göktürk has experienced the suburbanization phenomenon by fringing the metropolitan İstanbul, especially through the influence of GCs. Therefore, Göktürk is chosen as the study area within the research scope for being an important example of the rural-to-urban transformation process driven by GCs as mentioned above. GCs in this area have very different characteristics in terms of plan type, block type, or parcel morphology. The aim of this study is to create a local typology method reflecting the unique attributes by considering both morphological and sociological characteristics of the settlement.

As a rural settlement beyond the metropolitan boundaries of İstanbul, Göktürk had gained an exurban character upon the establishment of Kemer Country by the 1990s. Until the early 2000s, the first-ever built GCs had indicated an exurban lifestyle by having a low-density



population and were tied to metropolitan areas economically in every aspect. In a short period of time, Göktürk has started to be characterized by housing, particularly by GCs (Figure 2). As the number of GCs increased and spread around the area, services and infrastructure developed triggering the transformation of the area from rural to urban and from an exurban settlement to a suburban settlement. As a suburban settlement, a self-sufficient everyday life has been established in Göktürk in terms of urban services and by its firm ties to the central business districts (CBDs). Furthermore, Göktürk is chosen as the study area of research due to having an imminent potential on illuminating the role of GCs in rural-to-urban transformation.

Figure 1. Transformation of the built environment in Göktürk neighborhood (Prepared by the authors).

Figure 2. Administrative location of Göktürk neighborhood in Eyüpsultan district (Prepared by the authors).



Göktürk neighborhood constitutes the sampling of a research trend on GCs, which accelerated in the 2000s and slowed down towards the 2020s. The scope of these studies is largely composed of research articles and graduate theses. Kurtuluş (2002) examines GCs as a means of socio-spatial segregation through four of the most well-known examples of

Istanbul's urban macroform, including Kemer Country. Altınışik (2003), in his research based on image and identity analysis through Kemer Country, the first GC initiative in Göktürk, emphasizes the contrast in the GC residents' tendency towards architectural arrangements adorned with cultural/traditional elements despite the segregation effort created by socioeconomic difference of residents. Çınar (2003) examines the open space uses, qualities, qualifications, adequacies, and expectations of residents from open spaces within the framework of legal standards in low-density, high environmental quality GCs located on the urban periphery through a group of sampling GCs in Göktürk. Pérouse and Daniş (2005) examine the factors and actors driving the emergence and development process of GCs in Istanbul through a group of sampling GCs in Göktürk. Gülümser (2005) examines the development processes of GCs from the perspective of real estate developers and proposes a typology for GCs in Istanbul through a sample of thirty-one GCs, nine of which are located in Göktürk. Özdemir and Zeren Gülersoy (2006) examine GCs as representatives of the New Urbanism movement with their spatial characteristics through a sample of twenty-four GCs, a couple of which are located in Göktürk. İşlek (2007), based on a comprehensive literature review, examines the factors and actors driving the emergence and development process of GCs in Istanbul from an investor-consumer perspective, with a particular focus on Kemer Country. Candaş (2007) examines the security features of GCs built in the city center and beyond the periphery of Istanbul metropolitan area through a sample of twelve GCs, seven of which are located in Göktürk. Bartu Candan & Kolluoğlu (2008) comparatively examine two neighborhoods, one of which is the Göktürk, with different urban location and socioeconomic structure, but developed with GCs. The motivations that lead residents to GCs, the daily life dynamics of GCs and their interaction with the city are examined. Esen and Rieniets

(2008) examine the sociospatial effects of GCs in Göktürk by considering GCs as an apparatus of neoliberal urbanization. Geniş (2009), focusing on Kemer Country, explains the reasons for the shift towards GCs together with the sociopolitical dynamics that cause GCs at the global and local levels. İnal Çekiç and Gezici (2009) examine the spatial effects and development motivations of GCs in Göktürk neighborhood by conducting in-depth interviews with real estate developers. They define GCs in two groups as prestige villas and lifestyle condos. Aytar (2010) examines the architectural and spatial characteristics of GCs built in the city center and beyond the periphery of Istanbul metropolitan area, as well as the diversity of amenities/facilities, through a sample of thirty GCs, one of which are located in Göktürk. Ozaslan, Akalin and Wilson (2011) problematize the use of architecture as a stylistic consumption and lifestyle marketing tool through Kemer Country, one of their two case studies. Tanulku (2013) comparatively examines the social, cultural, political and economic interaction of GCs with their surroundings through a sample of two GCs, one of which is located in Göktürk. Boyacıoğlu (2014) criticizes the Göktürk neighborhood as a representation of socio-spatial segregation and anti-city construct through only one sample of GC designed by a national star architect. Çelebi Gürkan and Özaslan (2019) examine the impact of GCs on public space morphology and occupancy in their surroundings. Üçoğlu (2021), in his research based on a comparison between the Toronto/Brampton neighborhood and Göktürk, examines the use of housing as a model of economic growth that transforms the socio-economic conditions of households. Evren (2022) examines the effects of GCs in the fringing of the metropolitan area and in the rural to urban transformation process beyond the periphery of the metropolitan area. Considering Göktürk as a sample of those processes, explains the growth layers of the neighborhood in the last century with typo-morphological analysis. To sum up, Göktürk has been

the object of numerous studies as a manifestation of neoliberal urbanization, a shelter for escape from the heterogeneous city center, and a means of socio-spatial segregation of the metropolitan city. These studies have examined the interaction of GCs with the city in cultural-social-economic-political contexts. However, the interaction between urban contextual dynamics and the architectural-spatial features of GCs has not been sufficiently discussed.

The emergence of GCs on the periphery of İstanbul including Göktürk is mostly the result of the changing demands on dwelling paradigms after the beginning of the global domination of neo-liberal approaches at the beginning of the 1980s. Consequently, the housing demand of the upper and middle-class income groups has also changed due to the increasing Gross Domestic Product (GDP) in Türkiye (UN-Habitat, 1996). The new expectations regarding physical, social, and spatial quality of the housing environment were diversified as open and green spaces, clean air, leisure and recreation, security, and privacy which all require a spatial composition that can not be satisfied within the existing boundaries of the built environment of the cities. Therefore, the city has expanded beyond the periphery of the built environment towards rural areas to meet the new demands (Figure 3).

In this context, GCs are the spatial product in which the expectations of upper and middle-income housing clients are met by investors, while public administration organizes the platform this relationship takes place (Table 4). Expectations of housing clients on *natural environment*, *solid geological conditions*, *transportation and accessibility*, have been fulfilled by investors, through developing GCs; *land value*, *building permit procedure*, and *existing references* are the affordances of the building investors.

<i>Public administration</i>	<i>Clients' expectations</i>	<i>Investors' affordances</i>
<i>Organization of the platform</i>	Natural environment	Land value
	Solid geological conditions	Existing references
	Transportation & accessibility	Building permit procedure

Even though public administration-related factors such as public infrastructure, leisure, security, and safety are mentioned in the global scope on the emergence of GCs, these features are not common in the local scope of GCs considering Göktürk case. Those administrative factors are mostly related to the privatization of urban public services on infrastructure, leisure, security, and safety. Therefore, public administration seems to be a limited agent on the development of GCs in Göktürk.

Natural environment: Residential occupants tend to move to low-density areas within natural thresholds due to insufficient green space in the urban environment (Çınar, 2003). The development of urban settlement has taken place on the northern periphery of İstanbul which has been low-density residential areas in the rural areas defined by natural thresholds as forests and water basins.

Table 4. Factors of GC development beyond the periphery of İstanbul, Göktürk case. (Prepared by the authors).



Figure 3. Figure-ground mapping of buildings and GCs in Göktürk neighborhood (Prepared by authors).

Solid geological conditions: The rising demand for building low-rise housing on solid ground after the earthquakes of Gölcük and Düzce in 1999 has been another driving factor for the development of GCs in the northern periphery of İstanbul

on the farthest area to the North Anatolian Fault (*İnal Çekiç and Gezici, 2004*).

Transportation and accessibility:

Construction of the D-020 highway connection at the South-West fringe of Göktürk has increased accessibility between urban and rural areas by strengthening the bonds with CBDs. Increased accessibility has accelerated the spread of GCs in the area, in terms of a resident group associated with CBDs.

Land value: GCs increase the land value in the surrounding environment³. The land value affects the initial investment cost and determines the capital value of GCs as it has been a factor for the development of Göktürk. Land value is also an indicator of the economic level of the GC resident as it affects the purchasing price of the building.

Existing references: The existence of GCs in a specific environment constitutes a reference for other potential GC developments considering investors (*İnal Çekiç and Gezici, 2009*). So that, the existence of early-developed GCs in Göktürk have ensured trust in potential residents as a reference.

Building permit procedure: Göktürk had been a rural village for a long period of time until the beginning of the 1980s. Exposed to the urban growth of the Istanbul Metropolitan area, the village of Göktürk was declared as a town due to population growth, and Göktürk Town Municipality was established in 1994.⁴

Gaining an autonomous administration, the town municipality of Göktürk acquired the authority to develop a master plan and to issue building permits independently from District or Metropolitan Municipalities. In addition to this, the fact

that the limited responsibility area of the town municipalities compared to the district and metropolitan municipalities has accelerated the building permit processes. In this context, zoning plan preparation and building permit processes, which triggered the development of GCs were faster than district municipalities. Thus, the settlements located on the fringes of the metropolitan area began to lose their rural character by turning into residential suburbs contrary to the regional-scale plans.

The first zoning plan for Göktürk was prepared in 1998 when the settlement was administrated as a town municipality.⁵ The plan increased the floor area ratio and BCR on parcels that have developed before the date of approval. More importantly, rural and agricultural parcels of varying sizes, which had not yet been built up to this date, are designated as residential areas suitable for GC development by this plan. In 2008, another law numbered 5747 (2008) abolished the town municipality of Göktürk. Regardless of being turned into a self-sufficient suburban settlement with a growing population, Göktürk was declared as a neighborhood, which was directly subordinate to the district municipality of Eyüpsultan, in the Metropolitan area of Istanbul, from the following year. However, the zoning plan prepared by the abolished town municipality has been maintained to rule the development of the built environment in the settlement, which was converted into a neighborhood. So, local administration structure is definitely a factor in the development of GCs. Table 5 indicates the transformation process in Göktürk according to administrative status.

Table 5. Transformation of administrative status of Göktürk (Prepared by the authors).

3. GCs have caused land prices to increase in related environment to 300 USD/m² as of 2000, and 1000 USD/m² as of 2020, through development of transportation and infrastructure systems on those lands in which purchased with a price of 2 USD m² prior to 1990 (*İnal Çekiç and Gezici, 2004*).
4. Local governing structures in Republic of Türkiye are arranged as metropolitan municipality, district municipality, town municipality, and neighborhood (urban) or village (rural), hierarchically (5393 numbered Municipality Law, 2005).
5. 02.02.1998 dated master plan was revised on 19.06.2003 preserving the main context of the previous one.

	Village of Göktürk	Town of Göktürk	Borough of Göktürk
	before 1994	1994-2009	since 2009
Character	Rural	Rural/Suburban	Suburban/Urban
Dependency of zoning	Yet to be planned	Independently planned	Dependant
First level of dominion	-	-	District municipality
Second level of dominion	Metropolitan municipality	-	Metropolitan municipality
Metropolitan area	Included in	Excluded of	Included in

CLASSIFICATION OF GATED COMMUNITIES IN GÖKTÜRK

According to the theoretical framework, Blakely and Snyder's study (1997) was the first to describe the spatial and physical features of GCs in terms of social context such as the *function of enclosure*, *security*, *amenities/facilities*, and *resident type* (Table 6). Grant and Mittelstaedt (2004) proposed additional features such as *property ownership*, *location*, *size*, and *policy context* to provide a more comprehensive explanation of GCs (Table 6). Therefore, this study

relies on distinguishing features/indicators proposed by both methodologies to define a local and unique typology for GCs in the Göktürk neighborhood sampling the suburban context of İstanbul. Each of those features is determined according to secondary qualifications (Table 6)⁶. Exemplarily, the resident type of GCs may be defined according to age, income, ethnicity, and common social or cultural values (Blakely and Snyder, 1997). In research scope, however, some secondary qualifications are replaced by correlating features, due to the convenience of obtaining relevant data.

Table 6. Distinguishing features and qualifications of GCs in Göktürk (Prepared by the authors).

	Primary features		Secondary qualifications			
Blakely and Snyder (1997)	Function of enclosure		physical	economic	social	symbolic
	Security		boundary	staff	physical	symbolic
	Amenities and facilities		infrastructural	individual	social	recreational
	Resident type		age	income	ethnicity	values
Grant and Mittelstaedt (2004)	Property ownership		private	collective	limited	rental
	Location		urban	suburban	exurban	rural
	Size		cul-de-sac	village	neighborhood	town
	Policy context		restricting	enabling	growing	stable

*Bold and underlined words are secondary qualifications which are the distinguishing indicators of sampling GCs in the research scope.

Typological Features of Blakely and Snyder (1997)

The enclosure level of GCs describes four different cases regarding the boundaries of the enclaves; increasing or protecting the capital value, providing privacy, providing sheltered and safe living space, and creating a social privilege, in other words, social status (Blakely and Snyder, 1997). Attributes in which contained beneath the boundaries of GC emerged on physical and visual interfaces. Perception of gating varies depending on the material quality of the border. Elements such as reinforced concrete walls or wire fences may affect the perception of physical access, and elements such as glass walls or plant lines may affect the perception of visual access. The physical performance of the border defines security, and the visual performance defines privacy. Either physical or visual, the border itself conducts capital value or social privilege depending on security or privacy.

GCs which are examined in the re-

arch scope provide privacy and safety. However, enclosure components neither increase the capital value of GCs nor create a social privilege for residents due to the enclosure components of each GC being arranged similarly. Therefore, the function of the enclosure is not able to distinguish and determine the typology of GCs in the research scope considering current market value of properties.

Security in GCs can be obtained by the quality of the borders, access control, and guarding staff (Blakely and Snyder, 1997). The borders which can be formed as walls, wires, or fences restrict any kind of access between the GC and its surroundings. Access control features contain elements such as automated gates, speed barriers or road bumps, and Closed Circuit Television (CCTV) enabling controlled access between a GC and its surroundings. The staff feature ensures successful management and monitoring. Security is not a distinguishing feature in the research scope as it is a mutual feature in all the sampling GCs which have boundaries and staff establishing security and controlled access.

6. Bold and underlined words at Table 6 are secondary qualifications which are the distinguishing indicators of sampling GCs in the research scope.

Table 7. *Typological features of GCs in Göktürk (Prepared by the authors).*

Primary feature			Amenities and facilities	Resident type	Size
Secondary qualifications			Recreational	Income level	Village /Neighborhood
Quantitative indicator			Building coverage ratio	Current market value	Housing unit
	Year	Name of GC			
	1997	Kemer Country	% 20	Upper 8255,70	Village < 1000 unit
	2001	Altıntaş Göktürk	% 40	Upper 8311,29	Neighborhood 79 unit
	2001	İstanbul İstanbul	% 20	Upper 8255,70	Village 204 unit
	2002	Panorama	% 20	Upper 8255,70	Village 107 unit
	2003	Kemer Park	% 20	Upper 8255,70	Neighborhood 25 unit
	2004	Rose Residence	% 40	Upper 8255,70	Neighborhood 73 unit
	2005	Mesa Yamaç	% 40	Upper-middle 7030,46	Village 174 unit
	2006	Mesa Yankı	% 40	Upper-middle 7030,46	Village 124 unit
	2007	Kemerlife 21	% 40	Upper-middle 7384,05	Village 206 unit
	2008	Casa Particular	% 60	Upper-middle 7030,46	Neighborhood 40 unit
	2009	Fantasia Elite	% 60	Upper-middle 6958,99	Neighborhood 46 unit
	2010	Kemerlife 22	% 60	Upper-middle 6959,22	Village 133 unit
	2011	Arketip	% 40	Upper 7669,58	Village 273 unit
	2012	Doğa Teras	% 60	Upper-middle 6959,22	Neighborhood 63 unit
	2013	Aya Göktürk	% 40	Upper-middle 7237,18	Neighborhood 86 unit
	2014	Yalınevler	% 60	Upper-middle 7334,25	Village 146 unit
	2015	Park Evleri	% 60	Middle 6126,87	Neighborhood 40 unit
	2016	Pine Homes	% 60	Upper-middle 7030,46	Neighborhood 66 unit
	2017	Koru Life	% 40	Upper-middle 7030,46	Neighborhood 95 unit
	2018	Koray Bianco	% 60	Upper-middle 7030,46	Village 167 unit
	2019	Gökada Suites	% 60	Upper-middle 7157,80	Neighborhood 78 unit
	2020	Neva Suites	% 60	Middle 6126,87	Neighborhood 62 unit
	2021	İCS Roya	% 60	Upper-middle 7030,46	Neighborhood 90 unit
	2022	Özak Göktürk I	% 40	Upper 7811,24	Village 157 unit

Amenities and facilities in GCs conduct features such as *infrastructural, individual, social, and recreational*. Amenities are the series of activities provided in gated communities prompting and enabling leisure and recreation. Facilities are the spatial arrangement providing those activities in which takes place indoor and outdoor. Amenities cover all requirements of residents inside and outside of a housing unit in a GC. Those requirements may vary according to a wide variety of technical, social, cultural, or recreational properties which may range from simple repairs to extensive sports events. Services directly affect the interaction between a GC and its surrounding. For instance, if a GC includes a comprehensive program of amenities, residents may not require to step out of GC except for the services not covered by the program. Amenities and facilities of the observed GCs in the research are yoga, dance, meetings, and festive gatherings; or outdoor sports and leisure activities such as swimming, tennis, basketball, jogging-walking-cycling routes, and golf courses. Diversity and quality of open space activities increase or decrease depending on the BCR of a GC (Çınar, 2003). In this context, the site plans must be organized to enable those activities, since they require widely continuous open spaces as a distinguishing feature of the architectural design. GCs which are examined in the research scope provide amenities and facilities through leisure activities indicated by the BCR of GCs. Therefore, amenities and facilities can distinguish and determine the typology of GCs (Table 7).

Resident-type of GCs has features such as *age, income, ethnicity, and common values*. Although GCs may be developed for a certain age or ethnic group in the global context; this is not an observed feature considering research scope. Besides, common value concern was observed in only one of the GCs. Therefore, age, ethnicity or common values do not appear as distinguishing features of GCs in research scope. However, income level of residents stands out as a determining feature of the

GC residents, due to housing market is strongly driven by the ability to purchase i.e. affordability. The characteristics of GCs are expressed in the aspirations that residents cherish and are prepared to purchase (La Grange, 2018). Hence, architecture of GCs is the spatial organization of those aspirations. By which, income level is correlated to the current value of properties in GCs which reflects the purchasing ability of residents. To this extent, the current property value has been adopted as an indicator of the resident type of GCs in research scope.

GC residents in the research scope belong to a variety of different income levels. Hierarchically, GCs with low current value are occupied by middle-income residents, higher-priced GCs are occupied by upper-middle-income residents and the highest-priced GCs are occupied by upper-income residents. GCs which are mostly occupied by upper-middle income residents cover the widest built area in Göktürk. So, The income level of households can be a distinguishing factor on the typology of GCs, correlating with the current market value of GC properties (Table 7).

Typological Features of Grant and Mittelsteadt (2004)

Property ownership in GCs conducts features such as private property, collective property or timeshare, limited property, and rental property. The global definition of ownership features does not equivalent the local context of the research scope since all sampling GC fits the definition of private property⁷. Furthermore, the ownership feature of GC is not able to distinguish and determine the typology of GCs in the research scope.

The location of GCs is defined as urban, suburban, exurban, and rural in theoretical reference. Location is not a distinctive feature in the typology of the GCs in the scope of the study as all of the buildings are located in the suburban area.

The size of GCs conducts features such as a cul-de-sac, less than 10 housing units; *neighborhood*, up to 100 housing

7. According to the property ownership description which is defined by 3194 numbered Zoning Law, all GCs within the research scope suit to be defined as private property ownership.

units; *village*, up to 1000 housing units; and *town*, more than 1000 housing units according to the total sum of housing units (Grant & Mittelstaedt, 2004). All GCs of which examined in the research scope meet the size of the neighborhood or village. Furthermore, size is a limited feature as a distinguishing feature to determine the typology of GCs in the research scope (Table 7).

The policy context of legislation defines the set of rules regarding both the construction and maintenance of the infrastructure and superstructure services required by the areas inside and outside GC boundaries. This set of rules or legislation may vary according to the countries where GCs are located. Some of these can be promoted by GCs in order to reduce the financial responsibility of the public administration (McKenzie, 2003). For example, the construction and maintenance cost of vehicle roads or lighting elements within the boundaries of a GC is covered by its residents, not from the public budget, thus limiting the investment responsibility of the public administration.

There is no management and regulatory variability for GCs within the research scope. Apart from the relationship of the settlement with the public administration, two applications are seen in the operation and management of the GCs. Accordingly,

in the vast majority of the GCs examined, the management function is performed by private firms, the owners pay fees called *service procurement*. In the rest of the settlements, the board of directors formed by the users on a voluntary basis carries out the management of the enclave.

As a result, all sampling GCs have the same qualifications considering the *function of enclosure, security, property ownership, location and policy context*. Therefore those features are excluded from research scope due to being unable to determine the typology of GCs (Table 7).

Defining the Typology of Gated Communities in Göktürk

Distinguishing features determining the typology of GCs in Göktürk depend on physical, social, and spatial factors. *Amenities and facilities* in GCs can be followed through *leisure and recreational activities* and can be measured by BCR between parcel and building area as it indicates a correlation with qualities and quantities of recreational and leisure activities (Table 8). *Resident type* of GCs can be followed through the income level of *households* which can be measured by the current market value of the *property* as an indicator of the purchasing power of the residents. The physical size is also a distinguishing factor of the typology (Table 8).

Table 8. Correlation process and hierarchy of distinguishing features in GCs (Prepared by the authors according to Blakely & Snyder, 1997; indicators are proposed by authors).

Primary feature	Amenities and facilities	Resident type
Secondary qualification	Leisure and recreational activities	Income level
Indicator	Building coverage ratio	Current market value of property

BCR of the GCs in the research scope varies between 60%, 40%, and 20%, and property values of GCs vary between 6126 TRY and 8311 TRY (Table 9).⁸ Less than 6500 TRY of value correspond to middle-class households, values between 6500-7500 TRY correspond to upper-middle-class households, and values higher than 7500 TRY of value correspond to upper-class households. GCs which have 20% BCR, are occupied by upper-income households. GCs which have

40% BCR, are occupied by upper-middle-income or upper-income households. GCs that have 60% BCR are occupied by upper-middle-income households. Even though a divergent sample of property value has been observed, it is disregarded for having a low impact on the research. The first samples of the study which were built in the early periods of urban development in the Göktürk neighborhood, have higher property values than the rest of the sampling.

8. The current market values of GC properties determined by the district municipality of Eyüpsultan (2022).

Indicators	Typology				
	Non-leisure	Non-leisure	Shared-leisure	Shared-leisure	Semi-private leisure
Leisure and recreational activity					
Building coverage ratio of GC	60 %	60 %	40 %	40 %	20 %
Income level of the household	Middle	Upper-middle	Upper-middle	Upper	Upper
Current value of property (by the end of 2022)	<6500 TRY	6500-7500 TRY	6500-7500 TRY	>7500 TRY	>7500 TRY
Period of construction	Late (since 2015)	Late (since 2015)	Middle (2005-2014)	Early (before 2005)	Early (before 2005)
Prevalence (by number of samples)	2	6	8	4	4
Size (number of housing units)	Neighborhood <100 units	Neighborhood <100 units	Village <1000 units	Village <1000 units	Village <1000 units

There are two variables proposing a typology of GCs; (a) building coverage ratio, and (b) current value of property. According to those variables; (i) if BCR %60, Current value of property is to be either less than 6500 TRY or inbetween 6500-7500 TRY; (ii) if BCR %60, Current value of property is to be either more than 7500 TRY or inbetween 6500-7500 TRY; (iii) if BCR %80, Current value of property is to be more than 7500 TRY.

BCR and the current market value of a property are related to each other (Table 9). Furthermore, those indicators crosscheck each other in determining the typology of GCs as the BCR decreases in a GC, the property value increases. Thus, it is possible to determine the typology of GCs through the proportionality of BCR and property value. However, either BCR or the property's current market value can be an indicator to define the typology of GCs in the research. BCR emerges as a more pragmatic indicator since it does not require in-depth field research as it can easily be calculated through figure-ground mapping. In this context, the typology of GCs can be classified as non-leisure, shared leisure, and semi-private leisure, according to their BCRs.

Non-leisure GCs consist of at least two blocks and their main task is to dwell as many users as possible in the area determined by the BCR of the parcel (Figure 4a). Non-leisure GCs differ from single-block

residential housing by providing a certain level of security through restricted access to the parcel. The parcel boundaries are defined by restriction elements such as walls or fences, and access is often provided by passive devices such as electric gates and CCTV. Through a limited presence of open spaces for outdoor recreation and passive service of security, non-leisure GCs aim to overcome the administrative and additional cost of maintenance and management because the income level of residents and their ability to meet the operating expenses is limited. Non-leisure types of GCs were developed in the later period of the morphological process of Göktürk and are mostly occupied by middle-income households. They are not a common type compared to the higher demand for the other types of GCs in the real estate market. Moreover, non-leisure GCs are developed on the smaller size of parcels due to the lack of larger size of parcels yet to be built in the research area.

Shared leisure GCs emerge as multiple blocks of housing aim to provide dwellings with recreation and leisure requirements to the users including a wide variety of amenities and facilities (Figure 4b). Through a collective use of open space and active services of security, shared leisure GCs conceptually aim to optimize and overcome the increased amount of administrative and additional cost of maintenance and management derived from a wide

Table 9. Typology of GCs in suburban Istanbul, Göktürk (Prepared by the authors).

variety of services considering amenities and facilities included in GCs. Parcel boundaries of the shared-leisure GCs are defined by restriction elements such as walls or fences as well as the non-leisure GCs, however, access is often provided by active security staff in addition to passive devices such as automated gates and CCTV. Shared-leisure type, which is the most common morphological type in Göktürk, constitutes the majority of the research samples. Shared-leisure GCs are developed both in the early and late periods of the morphological process of the area. The earlier samples of shared-leisure GCs are occupied by upper-income households. But the later samples are occupied by upper-middle-income households.

leisure GCs. As activities and services become privatized, investment and operating costs will increase and optimization will decrease. Vast open spaces are not part of the semi-private-leisure GCs as the activities need qualified areas. This type of GCs is developed in the early periods of the morphological process of the area. Semi-private-leisure GCs are occupied by upper-income households. They have an average prevalence in the built environment. In this context, it is possible to say that the social formation of the study area is transforming from upper-income to upper-middle-income class, and the building morphology is transforming to a higher density of buildings with a lower ratio of open spaces.

CONCLUSION

GCs have emerged beyond the periphery of the Istanbul Metropolitan Area beginning in the 1980s transforming rural settlements to exurban and suburban towns due to socio-economic and political changes in Türkiye. Göktürk has also been transformed from a small village with rural characteristics into a suburban community beginning from this period of time. Factors leading the development of GCs in Göktürk can be defined according to the motivations of the actors who are residential users, investors, and local administration. The motivation factors of the residential users were the need to live in the natural environment, easy access to central business districts, the existence of similar residential areas in close vicinity, and the solid geological conditions against earthquake hazards. The investors had the will to invest in the region in accordance with this demand. The ease of building permit process of the local administration has also encouraged investors to build in Göktürk.

GCs that have morphological diversity on urban and architectural scales also have varying social and economic features. The typology of GCs in the local context is discussed according to the spatial expectations of the housing clients representing different income groups. In this context,

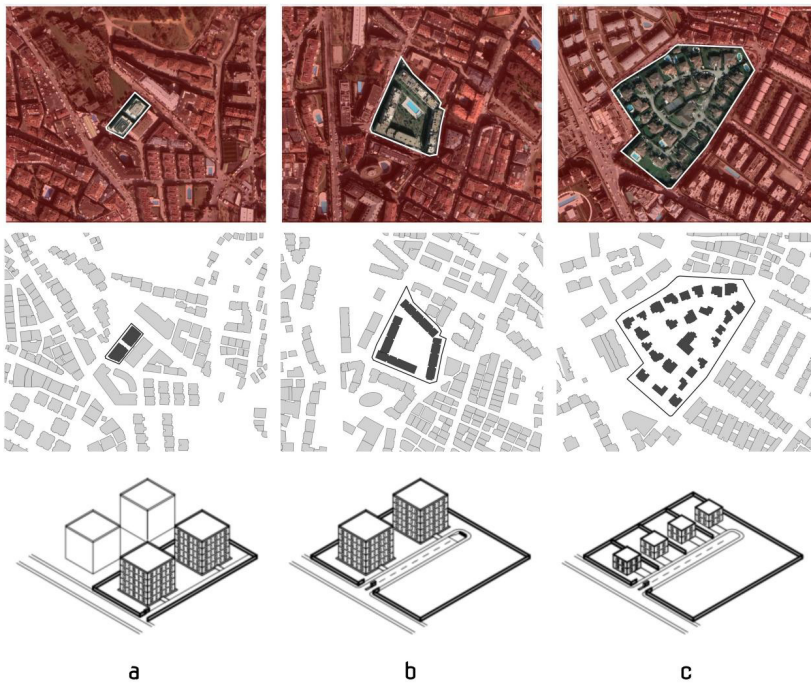


Figure 4. Typology of GCs in Göktürk neighborhood. (a) Non-leisure. (b) Shared-leisure. (c) Semi-private leisure (Prepared by the authors).

Semi-private leisure GCs emerge as multiple blocks of housing that aim to satisfy the recreation and leisure requirements of residents as well as the shared leisure GCs (Figure 4c). In addition to that, semi-private leisure GCs, differ from shared-leisure GCs by having pieces of open spaces such as a garden or a backyard, used privately by the owners of the housing unit. The optimized operating cost obtained by sharing activities and services in shared-leisure settlements is higher in semi-private

amenities and facilities included in GCs indicated by BCR, is one of the distinguishing features determining the typology of GCs in suburban Istanbul. The other feature is the type of residents accommodated in a GC indicated by the current market value of a property as a sign of income level of the homeowners. Consequently, the typology of GCs in Göktürk case is defined as non-leisure, shared leisure, and semi-private leisure, considering the BCR.

Non-leisure GCs do not contain almost any social or physical function except basic dwelling and passive security functions. They only aim to provide a safe and secure dwelling. Shared leisure GCs contain a certain quality of leisure spaces and functions in addition to the dwelling and active security. They aim to share maintenance and management costs of leisure and recreation functions. Semi-private leisure GCs are allocated on a specified part of a parcel within the boundaries of a GC. They aim to develop more privacy and personal space while providing shared leisure properties.

Chronologically, between 1997 and 2022, the socio-economic characteristics of Göktürk according to resident type have changed from upper income level to upper-middle or middle income level. The data about the current preference of the income groups on typology of GCs reveals that the upper-middle-income group largely prefers the shared-leisure GCs. The non-leisure GCs are mostly occupied by the middle-income group while the upper-income group occupies the semi-private GCs.

The desire for more open spaces and living in a natural environment, which are the main reasons for GCs in Göktürk, have changed over time. As vacant parcels in the neighborhood became scarce and large parcels were already built up, newly constructed GCs neglected open spaces to build more housing units on smaller parcels. As a result of the expected dynamics of the real estate market, GCs with high BCR have become the preferred locations for middle-income and upper-middle-income

groups as they are offered at relatively lower prices. Eventually, the built-up area of Göktürk is transforming into an urban fabric with less open spaces.

Further Research

As this study contributes to developing an understanding of the phenomena of GCs in a specific context of suburban location beyond the periphery of the metropolitan area, comparative studies are needed considering the central or peripheral context of the city. Thus, it is expected that the proposed typology of GCs in suburban research scope as the outcome of this study is to be transformed into a widely accepted theoretical framework for interpreting GCs.

Moreover, the proposed typology of GCs in the research scope is related to the architectural features of GCs. Each type is determined according to the building coverage ratio between building and parcel ascribing a quantitative approach. However, describing the architectural features of each building and the architectural organization between buildings in GCs may contribute to research outcomes considering a qualitative approach and an integrated methodology may develop a comprehensive framework both to describe and explain the socio-spatial arrangement of GCs. The results also bring to mind the questioning of up-to-date causative reasons for the demand of GCs for all actors as another expanding study for the subject.

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Abbreviations

BCR: Building Coverage Ratio, CBD: Central Business District, CCTV: Closed Circuit Television, GCs: Gated Communities, GDP: Gross Domestic

Product, TRY: Turkish Liras, USD: United States Dollars.

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