A "Classical" Response to Contemporary Issues: Examples of Informal Mosque Production in Beykoz, Istanbul

Güncel Sorunlara "Klasik" Bir Çözüm: İstanbul, Beykoz'da Enformel Cami Üretiminden Örnekler

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ÖZ

Bu araştırma, İstanbul'un enformel olarak gelişmiş mahallelerindeki cami yapılarının mimari ve mekânsal oluşum süreçlerinde önemli bir olgu olarak yer alan enformelliği, Beykoz ilçesinden seçilen örnekler üzerinden araştırmakta ve sorgulamaktadır. Amaç, İstanbul'a özgü enformel kentleşme ve mimarlık dinamikleri içinde gelişen, meşru ancak yasadışı olan bu sosyo-mekânsal pratiğe yönelik yeni bir kuramsal bakış açısı oluşturmaktır. Yöntem olarak, kapsamlı bir tarihsel ve kavramsal literatür araştırmasının ardından, seçilen üç camii kompleksinin mimari ve mekânsal özellikleri incelenmiş ve tartışılmıştır. Araştırmada kullanılan veriler yürütülen saha araştırmasına ve yapıların üretiminde rol oynayan önemli aktörlerle yapılan söyleşilere dayanmaktadır. Bu veriler ölçekli çizimlere dönüştürülerek yapıların biçimsel ve mekânsal özellikleri karşılaştırılmıştır. Sonuçlar, kullanıcıları tarafından katılımcı eylemlerle üretilen bu enformel yapıların klasik cami şemasını izlediklerini göstermektedir. Aynı zamanda bu karmaşık yapılar kendi kentsel bağlamlarına özgü enformel ilişki ağları tarafından biçimlendirilmişlerdir. Yapım sürecinin doğaçlama sürdürülmesi biçim ve işlev açısından yeniliklerin yanı sıra, yapısal ve kentsel ölçekte önemli mimari ve mekânsal sorunlar da üretmiştir. Sonuç olarak bu araştırma yerel dinamikleri daha fazla anlamaya çalışan ve kullanıcıların kendi sosyal ve fiziksel çevrelerini biçimlendirme isteğine cevap veren yeni bir kuramsal ve yasal çerçeve oluşturmak üzere stratejiler geliştirebilecek çalışmalara katkıda bulunmayı amaçlamaktadır.

Anahtar Kelimeler: Beykoz, İstanbul, Cami Mimarisi, Klasik Osmanlı Camisi, Enformel Mimarlık

ABSTRACT

Through examples from Beykoz, this study questions and investigates informality as a substantial phenomenon in the architectural and spatial formation of mosque buildings in Istanbul's informally developed neighbourhoods. The goal is to provide a new theoretical perspective on this legitimate yet illegal/informal form of socio-spatial practice in relation to the specific dynamics of Istanbul's informal urbanity and architectural production. As for methodology, following a theoretical and historical survey on the informal urbanity and procedures of mosque production in Turkey, the architectural and spatial features of three mosque complexes are analysed, evaluated, and discussed. The data was obtained through site surveys and interviews with the primary actors involved in their constructions. This data was processed into scaled drawings for a comparative analysis of their formal and spatial configurations. The study concentrated on gathering first-hand information from the producers of these mosques and the buildings themselves. The results showed that the builders, who were also the future users, followed an imprecise classical mosque scheme during their building processes. Their participatory and spontaneous construction processes also brought innovation in the spatial and formal organization, employing improvisation. The architectural and spatial aspects of these building complexes also presented considerable problems. Finally, the research aims to contribute new studies for developing new strategies and legal frames, engaging the will and the energy of the users to shape their social and physical environments in the urban context.

Keywords: Beykoz, Istanbul, Mosque Architecture, Classical Ottoman Mosque, Informal Architecture

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INTRODUCTION:

From the 1950s onward, Turkey experienced rapid urbanization in parallel to industrialization. This brought massive rural-to-urban migration, especially to Istanbul, the most populous city in the country. Istanbul's population exploded from over one million in 1950 to almost fifteen million in 2021 (World Population Review, 2021). A principal factor that eased this dramatic growth was the illegal formation of settlements, especially in the city's unused peripheral lands which were primarily public property (Keyder, 1999). The name attributed to these fast-growing informal settlements is *gecekondu*, which meant "built overnight". These were illegal due to various reasons, such as being built on public land or others' private property and being constructed without occupancy or construction permits (Baharoglu and Leitmann, 1998). Informality is nevertheless a broad concept, meaning these settlements did not comply with the prevailing planning and building regulations.

The formation of informal settlements in the metropolitan areas of the developing world, also called the Global South, is a wide-reaching process that also started in the 1950s. It is also a broad field of research and analysis for many scholars and policymakers. The emergent literature on informal urbanity as well offers to see this global phenomenon beyond its negative perception as a "problem" related to housing and illegality. Alternative theoretical positions aim to understand it as a concept out of the formal-informal dichotomy and as related to social, cultural, economic, and spatial production in the urban context (AlSayyad, 2004). Various theoretical positions on informal settlements include claims on their clearance and redevelopment, their consideration as self-help or do-it-yourself solution to the insufficient urbanization processes, or their potential of speculative market value and role in the urban space as a commodity (Billig, 2019). By the end of the 1980s, the already established vernacular theory was referred to for understanding these self-made urban environments. This was mainly a position against their negative perception due to their incapability of self-improvement, absence of legality, substandard in terms of space and infrastructure, etc. (Kellett and Napier, 1995) The terms "contemporary vernacular" or "contemporary spontaneous" were introduced along with this theoretical perspective. These terms were proposed for understanding the self-made urban environments in terms of process over product, and people as both producers and users (Kellett and Napier, 1995; Kellett, 2011). Amos Rapoport (1988) called them "cultural landscapes" because spontaneous settlements were the closest contemporary equivalent of the vernacular, shaped by the decisions of many individuals over a long period, this time in an urban context. Auto-construction, organizational wisdom of available resources, collectivity in construction, and utilization of shared knowledge were all commonalities with the traditional vernacular, resulting in a common culture and sense of belonging for the locals (Tang, 2014).

Along with this perspective, this study examines three mosque complexes from informal settlements in Istanbul's Beykoz district, as the outcomes of collective and participatory actions of their users. Those informal settlements that began to appear in Istanbul in the 1950s took the form of socially constituted neighbourhoods (*mahalle*) framed by an Islamic code of ethics through kinship and regional networks such as home towners (*hemşerilik*) (Yavuz, 2003). These early informal settlers had strong communal links, and mosques were seen as a collective confirmation of the residents' existence and legitimacy (Kılıç, 2018). The mosque-building associations in these informal neighbourhoods were voluntary community groups that played a prominent part in the community's place-making processes (Aksoylu, 1985; Arefi, 2011a). They were used every day by men, or by the larger community on special occasions. Thus, the mosque, together with the elementary school and the coffeehouse, appears to be one of the fundamental sites of the public sphere in these areas (Erder, 2013).

These mosques' initial socio-spatial role evolved in tandem with these communities' changing legal statuses and physical settings. Thus, this is a long process of transformation with several stages in

Turkey's urban history. The primary goal of this research is to track the processes and dynamics influential in the architectural formation of the selected mosques as well as the changes in their urban context over years. The research methodology is grounded in theoretical discussions of informality in architecture addressing key concepts of actors, process and spontaneity, and the legal frame of prevalent mosque building practices also pursuing an imprecise "classical Ottoman image". Collection of the data was carried out through field study activities including site visits, inspections, interviews and recordings such as drawings in scale and photographs throughout 2019 and 2020. The visualization and comparative analysis of the buildings' urban context, architectural forms, interior and exterior spatial organizations, and distinctive architectural aspects showing innovation are all covered in the architectural survey and analysis section.

1. An Overview of Informal Urbanity in Istanbul

In comparison to slums in Latin America or South Asia, Istanbul's informal settlements have a very dynamic interaction with their urban surroundings, owing to their obscure framework of legitimacy and the possibility of becoming legal someday (Şenyapılı, 1986). These settlement areas have higher spatial and material standards than the "slums," as defined by UN-HABITAT as insecure and overcrowded informal housing with inadequate access to water and sanitation (United Nations, 2003). Several studies have investigated the internal dynamics of these communities, including their rich spatial organization, vibrant social structures, and ability to adapt to urban circumstances (Şenyapılı, 1986; Çağdaş, 1995; Turgut, 2001; Arefi, 2011b). These builders connect their rural past with their new urban context and yet remain open to change through imitation and innovation. There is also growing literature on the organization of squatter settlements at larger scales regarding the generative formation of the public sphere that extends the private dwelling unit (Arefi, 2011b; Billig, 2013, 2019). The recent process of legalizing informally built areas is likewise a complicated topic that has sparked new architectural inquiries (Asan & Ozsoy, 2018). Except for a few studies, it appears that the collaborative construction of public buildings such as mosques has been overlooked in the existing literature (Kuppinger, 2011).

During Turkey's lengthy period of urban informality, substantial informal areas were legalized because of urban policies, and municipal services continued to expand into these new regions (Keyder, 1999). By the mid-1980s, the owners were given the ability to expand the size of their properties, turning single-story houses into 3-5 story apartment buildings. This phase was also known as "post-gecekondu" (Esen, 2009). Beginning in the 1980s, urban land was commercialized, new infrastructure projects such as highways and bridges were erected, and Istanbul's municipal boundaries were continuously enlarged because of international money flow (Tang, 2014). This process resulted in the emergence of new urban forms, dwelling typologies, and public space usage in these spontaneous settlements (Asan & Ozsoy, 2018). Throughout the 1990s, new real estate developments of middle and upper-class housing and business centres began to arise in the urban peripheries such as Beykoz's hinterland, which had previously been available for new immigrants' informal settlements. Despite this, the emergence of new squatter settlements in Istanbul has continued unabated. Following the 1999 earthquake, a new phase began when the state's policies on informal settlements were altered by a new Law on Transformation of Areas Under Disaster Risk (No. 6306), often known as the urban transformation or urban renewal law. With the enactment of this law in May 2012, informally developed lands were subjected to a contentious redevelopment process based on an official discourse of public safety in the face of seismic risk. Since then, Istanbul has become an even more complicated urban fabric of formal and informal layers.

2. Formal/Informal Framework of Mosque Architecture Since the 1950s

The overall number of mosques in Turkey increased from 45,151 to 89.945, almost twofold, in the years between 1973 and 2020 (Diyanet İşleri Başkanlığı, 2021). The dynamics behind this process are manifold, including socio-political factors as well as accelerated urbanization. The 1950s appear to be a turning point when the construction of new mosques resumed after a long hiatus during the early republican years (Kutlu and Düzenli, 2016). Şişli Mosque (1945-49) was the first mosque built in Istanbul during the republican period, designed by Vasfi Egeli and built with the cooperation and donations of the local populace (Tanman, 2016) (Figure 1). This mosque imitated an imprecise "Classical Ottoman Mosque" image, which would become a mainstream tendency in the following years.

The term "Classical Ottoman Mosque" refers to the imperial mosque complexes built during Sinan's tenure as chief royal architect between 1539 and 1588. It was Celal Esad Arseven who first used the term "classical period" in 1928 for describing these buildings as the "zenith of Ottoman art and architecture" (Necipoğlu, 2007). The term was canonized in national architectural historiography, particularly after the 1950s, by adopting a linear model of stylistic evolution that peaked with Selimiye Mosque (Necipoğlu, 2007). These monumental mosques, such as Süleymaniye, comprised daring structures and domed central spaces, and they were built as part of a larger complex with detached public and commercial annexes. Symmetrical plans with clear structural layouts were common in mosque schemes, with the mihrab and main dome placed along the central axis. The foremost idea of space comprised a main dome with alternating types of square, hexagonal, or octagonal support systems. These were not only large and monumental but also structurally and spatially innovative.

Built as the "largest mosque of the republican era", Kocatepe Mosque in Ankara is another symbolic project having a considerable place in Turkey's architectural investigation of mosques (Batuman, 2016). The initial project obtained with a competition in 1957 proposed a remarkably thin concrete shell as a dome designed by Vedat Dalokay and Nejat Tekelioğlu. It was later abandoned in favor of a colossal Ottoman replica, designed by Hüsrev Tayla and Fatin Uluengin and finished in 1987, primarily mimicking Sinan's Şehzade Mosque (Tayla, 2002) (Figure 2). It marked the ongoing tendency for reinforced concrete structures to imitate the forms of stone architecture of the sixteenth century as also seen in the most recent projects of Ataşehir Mimar Sinan Mosque (2012) and Çamlıca Mosque (2019). Bülent Batuman (2016) discussed this design strategy with the concept of "architectural mimicry" relating to the nationalistic nostalgia of a glorious past. These reproductions were not exact replicas, but rather followed the "general idea of a classical mosque" by combining elements from several sources, such as one mosque's plan and another's number of minarets (Batuman, 2016). This common approach provided unlimited variations of the same image, without being an exact copy of any single source.

Figure 1. Şişli Mosque, Istanbul, 1949 (SALT Research)

Figure 2. Kocatepe Mosque, Ankara, 1987 (SALT Research, Gültekin Çizgen Archive)

The legal basis for mosque construction must first be defined. The Directorate of Religious Affairs (DRA) has been the central institution in charge of all the Islamic activities in the country since its inception in 1924. This comprised mosque management and upkeep, as well as religious services and employees. However, because of the disparities between the legal framework and practice, the construction of new mosques appears to be a more complicated phenomenon (Onay, 2008; Yıldırım & Yıldırım, 2013). According to the regulations, the DRA must authorize any application for the construction of a mosque, while building and construction permits must be provided by local municipalities or governorships. The Construction Act (No. 3194) also governs the Master Plan allotment of land for mosques. Different parties, such as residents of a settlement, public-sector organisations, individuals, and the Turkish Religious Foundation (Türkiye Diyanet Vakfı), may develop and sponsor projects. As stated by Ahmet Onay (2008), as of 2002, there were 76,922 total mosques and masjids in Turkey and 51,134 (67%) of them were built directly by the local society.

When the total panorama of mosque architecture is reviewed, the role of architects among others remains uncertain. According to Onay (2008), 55 per cent of completed buildings lacked architectural plans, and 64 per cent lacked structural plans. Another study undertaken at the Mufti Archives on mosques built in Van from 1941 to 2013 found that only 17 per cent of mosques (40 out of 238) were designed by architects (Gülen & Düzenli, 2018). These examples demonstrate the legal framework's inadequacy in dealing with the country's actual mosque-building mechanism. In the 1970s, the state offered a solution to these challenges by providing blueprints at various scales under the classical model. In 1973, the General Directorate of Foundations (Vakıflar Genel Müdürlüğü), published these blueprints to guide local mosque construction around the country (Batuman, 2016). However, due to supervision gaps in the construction processes, the finished projects may not be following the blueprints. In 2010 the DRA was tasked with the management and control of architectural standards and the spatial and technical quality of new mosque projects, as well as the role of drafting new architectural blueprints, under a new regulation. With the convening of multiple mosque design conferences, all organized by the DRA, the official desire to improve architectural quality has become even more evident (Uzunoğlu, 2006; Tokay et al., 2013; Topraklı, 2017).

In the newly developing areas of informal urbanization, the mosques were commonly produced along the routes of collective building methods, replicating alternative images of the Ottoman classical mosque. This was also linked to the continuance of building traditions with rural roots, where the collective idea of the mosque was followed without the inclusion of architects. These were labelled

"kitsch" or "cheap products out of aesthetic pastiche" in the sparse architectural literature on these buildings (Köksal, 1994; Bozdoğan, 2002). The terminology offered for defining these informal buildings is also multiple. These mosques were attributed labels such as "anonymous" (Köksal, 1994), "unprincipled" (Gürsoy, 2013), and "without architects" (Gülen & Düzenli, 2018) in the limited literature. Although mosques are prevalent in today's urban landscape, the processes by which these structures are constructed, the actors involved, and the mechanisms by which architectural knowledge is transmitted and reproduced remain largely unexplored. The mosques' dynamic informal ground has also aided the expansion of their programs by providing spaces for new commercial and social activities, while the builders improvised with the mosque space, as will be discussed below. In the research's architectural survey and analysis section, the outcomes of these complex processes will be presented in detail.

3. Architectural Survey and Analysis of Three Mosque Buildings from Beykoz

3.1. Background Information on Beykoz

Istanbul's unique geographic position as a metropolis spread over two continents and divided by a strait, plays a crucial role in the rapid formation of new informal areas on its outskirts, the majority of which are public lands and forests. From the 1950s onwards, historic villages along the Bosporus, such as Beykoz, were focal points for the informal settlements that began to surround them (Erder, 2013). Beykoz is Istanbul's second-largest administrative district, with a rich history that portrays all phases of informal urbanization (Akbayar et al., 1993; Avcı, 1993).

Figure 3. Istanbul district map showing Beykoz.

Geographically, Beykoz is bordered on the north by the Black Sea, on the west by the Bosporus, on the east by Şile, and on the south by Üsküdar and Ümraniye (Figure 3). It was once a suburban village located on the Anatolian side of the Bosporus, along the Beykoz Bay, with hills to the north and east. Being so far from the city centre, it consisted of a loose rural settlement with agricultural farms, springs, and forests on its hills. Beykoz became a manufacturing and industrial centre in the late 1800s, with factories producing glass, paper, and leather (Akbayar et al., 1993; Avcı, 1993). In the 1950s, because of migration from rural Anatolia, the eastern slopes of Beykoz began to fill with new informal settlements and small-scale businesses. Between 1935 and 1990, the city's population increased over eightfold. The first migrant groups arrived in the 1950s and 1960s, largely from the Black Sea region, but substantial populations from Eastern and South-eastern Anatolia arrived in the following decades. These new labour groups have been drawn to large-scale enterprises such as Paşabahçe Bottle and Glass, Beykoz Leather and Shoes, and Tekel. Even though these factories have all closed, Beykoz's

population continues to expand into the city's formerly rural and agricultural hinterland through both authorized and unauthorized housing settlements.

3.2. Methodology

Based on this background information on the history of informal urbanity in Istanbul and various theoretical perspectives over this phenomenon highlighting actors and processes, this study investigates three examples selected for comparative analysis and a critical discussion of their histories of production, formal and spatial configurations, besides actors and dynamics involved in their construction processes. Accordingly, Kavacık Hasan Yavuz Mosque, Çavuşbaşı Central Mosque, and Karlıtepe Central Mosque, constructed between 1974 and 2016, during varying stages of Istanbul's urban history were selected and surveyed as examples from areas that emerged as informal settlements in Beykoz (Figure 4). The criteria for selecting these buildings were their belonging to different periods of the informal urbanization process of Istanbul, being built in line with the "classical scheme" and the inclination of the builders for interviews and sharing of information. Frequent site visits were performed to collect the required data, including scaled drawings, inspections of functional layout and use patterns on different times and occasions. Semi-structured interviews with members of the MBSAs were conducted to gather information on the mosques' construction history. Since the buildings relied on spontaneous processes of planning and construction, all the architectural drawings were produced after these field surveys by the authors.
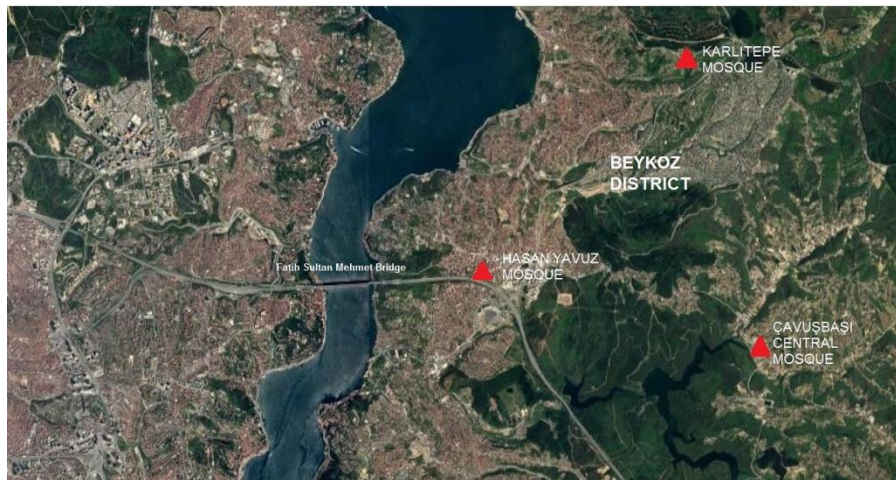

Figure 4. Locations of the mosques in Beykoz District (Satellite image edited by the authors).

Kavacık Hasan Yavuz Mosque

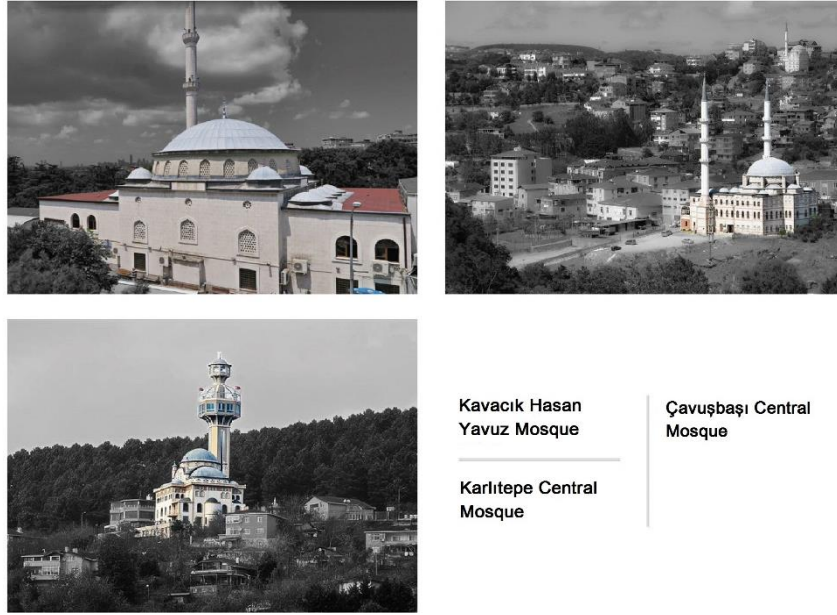Çavuşbaşı Central Mosque

Karlıtepe Central Mosque

Figure 5. Case study mosques in their urban contexts (Photos by the authors).

The analysis and final discussion are based on the comparative discussion and analysis of the quantitative and qualitative data produced from these surveys, interviews, observations, scaled drawings and diagrams. The theoretical frame on spontaneous/informal architecture was influential in defining the role of actors as builders and final users, and the buildings as outcomes of builders' collective envision in dialogue with the available resources as materials and know-how.

3.2.1. Actors and Processes

Actors involved in the planning and constructing of the mosques are multiple. A frequent pattern is the founding of a "Mosque Building and Supporting Association" (MBSA) by the locals of the neighbourhood. These are non-profit organizations with a minimum of seven members, one of whom is elected president. This legal organization oversees funding and monitoring the mosque's construction, besides providing maintenance and financial support after it is completed. These organizations also have the authority to invest in real estate to generate revenue for the mosque. In each case of this survey, locals founded such associations which are still active today. Again, in all of them the presidents, who are local businessmen, appear to be the most influential actors in the overall decision-making processes, and they were the primary sources of information during the survey. Since these buildings were unauthorized, further information on the buildings including architectural blueprints was not available in the archives of the municipality.

According to the information acquired from the interviews, the associations oversaw all the building planning and construction processes. Nonetheless, none of them included architects and engineers. In the cases of the oldest Hasan Yavuz Mosque (1974-2004) and the newest Karlıtepe Mosque (2008-16), sketchy architectural projects were offered by architects (both of whom remained unidentified) through unprofessional relationships such as an acquaintance. The architectural project for the Çavuşbaşı Central Mosque (1985-1995) was based on the blueprints provided by the Directorate of Foundations. These initial schemes were improvised in all three cases in response to the demands of the association members. Also in the oldest two mosques, the necessity for gradual expansion by adding new volumes to their initial masses had been constant, as the population of their neighbourhoods grew. As commonly told by the presidents, because of the variable finances, which

were dependent on monetary and material donations from the people, local businesses, and even municipal officials, the construction procedures relied on spontaneously made decisions.

The acquisition of project plots also reveals the informal relationships and dynamics that take place on city land. The Kavacık Hasan Yavuz Mosque's site is now a bustling commercial district named after the mosque. Its property was acquired through a series of purchases and donations, and due to the rapid urbanization of the neighbourhood, both the site and the structure have continued to expand over the past 40 years. The Çavuşbaşı Central Mosque had replaced a smaller masjid that had previously been on the same site, and its acreage had been expanded through piecemeal purchases and donations of properties surrounding the prior masjid. Çavuşbaşı area still has complex legality problems because it is titled Natural Protected Area with no building authorization. Both the first and second mosques have land deeds that belong to the associations. Unexpectedly, by the end of 2020, Hasan Yavuz Mosque was decided to be demolished and rebuilt, this time with the cooperation of all of the required architectural and engineering services. Even though this new stage of construction is outside the scope of this study, the changing dynamics in the informally developed neighbourhoods in response to the 2018 Zoning Peace Law (İmar Barışı) appear to mark the beginning of a new era in Istanbul's urban space. This law, which issued building registration certificates for buildings built without licenses and proprietorship certificates, was considered a possibility to settle the authorization concerns for numerous informally produced mosque buildings (Diyanet Haber, 2018). Unlike the former two, Karlıtepe Mosque has no land title, yet its site is reserved for religious use in the Master Plan. The site is a loosely populated forest area with hilly topography, yet prone to new construction activities as was observed during site visits.
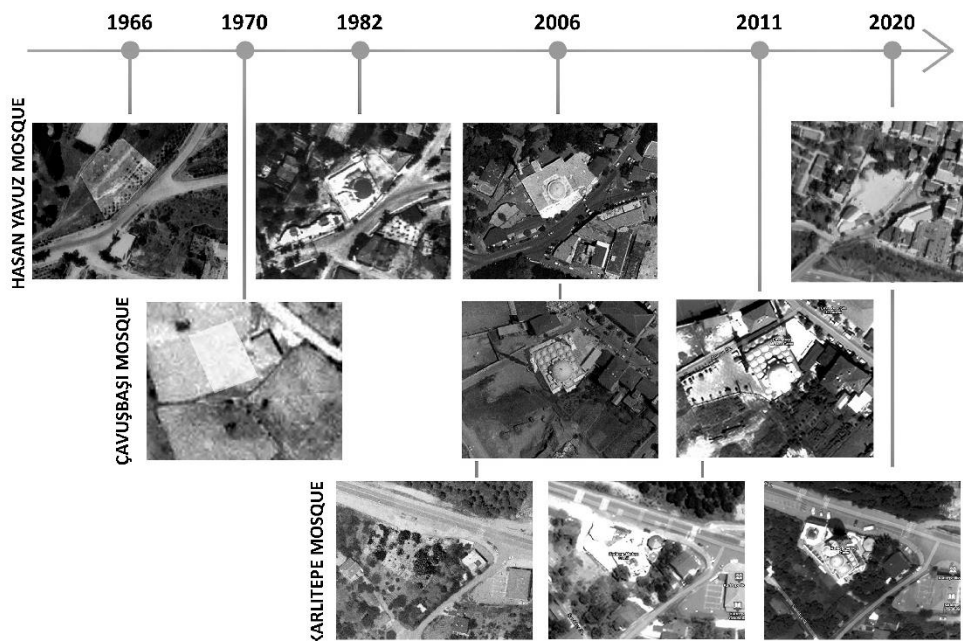

Figure 6. Changes in the immediate environment of each mosque are shown in the timeline (Istanbul Municipality Archives).

To conclude, land acquisitions and project funding were jointly settled by direct engagement of locals, while association members were the most influential actors in decision-making during the concurrently executed architectural planning and building processes. Local craftsmen specialized in informal mosque construction passed on their architectural know-how based on experience, with the professional architect remaining out of the entire procedure in all three cases.

3.2.2. Functions and Activities Involved

These mosque complexes are important religious and social centres for the local community. The programs of these local mosques are not restricted to the congregations' daily prayers. Funeral ceremonies, holy nights, and religious holiday meetings are all activities that take place regularly. Additional educational activities have increased the age range of users. Apart from the main prayer hall, and auxiliary buildings such as public restrooms, personnel lodges and educational areas, mosques also have commercial spaces. These are means of generating revenue for the mosque complex, as in the Ottoman era. This was regulated in the Building Legislation (No. 30113) of 2017 as follows: Commercial spaces in worship areas must be entered separately from the place of worship, may only face one of the facades, and cannot exceed the whole floor area of the religious spaces. The mosques in this survey all predate this legislation and they have varying types of commercial activities placed differently within their complexes (Figure 7).
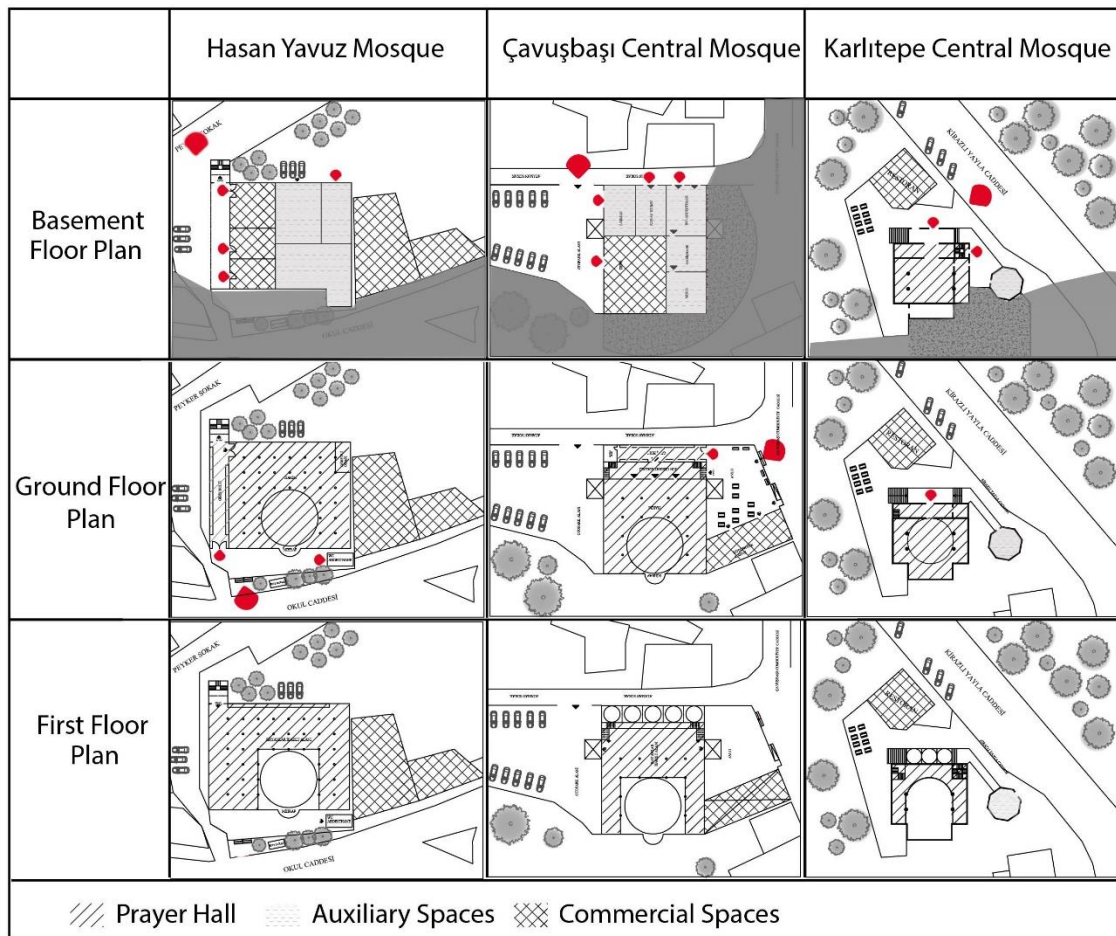

Figure 7. Distribution of functions in the planar layout with their immediate environment, drawn on the same scale.

The oldest Hasan Yavuz Mosque has a central position in Kavacık that is still under development with new plazas and residences. From 1974 through 2004, the structure was regularly expanded to meet the increasing population. This was a piecemeal extension process that resulted in a complex building plan including additional spaces for both religious and commercial use. Hence a barbershop, woodcraft, and a teahouse occupied the entire basement floor.

After its construction began in 1985, the Çavuşbaşı Central Mosque went through a similar process. The mosque had replaced a small masjid, and it had since evolved into a social and commercial hub with stores within and around the complex. The previous library, which opened to the inner courtyard, has been turned into a café, with the courtyard serving as its lounge. The president described this as users' disinterest in the library. The lower basement was rented as a warehouse to a neighbouring store.

The most current Karlıtepe Central Mosque seems to be part of the urban sprawl caused by new bridges and linking motorways built in the eastern forests and hills of Beykoz. The natural silhouette of this mosque, erected on a mountainous topography in a loose informal settlement, stands out. Its distinctive library and viewing terrace accessed with an elevator and integrated with the minaret has been featured in the popular press as a tourist attraction. This unusual novelty was told to be former president Hüseyin Özyurt's proposal, who was inspired by the watchtowers he had seen abroad. A restaurant and a grocery store are in a separate building on the same plot.
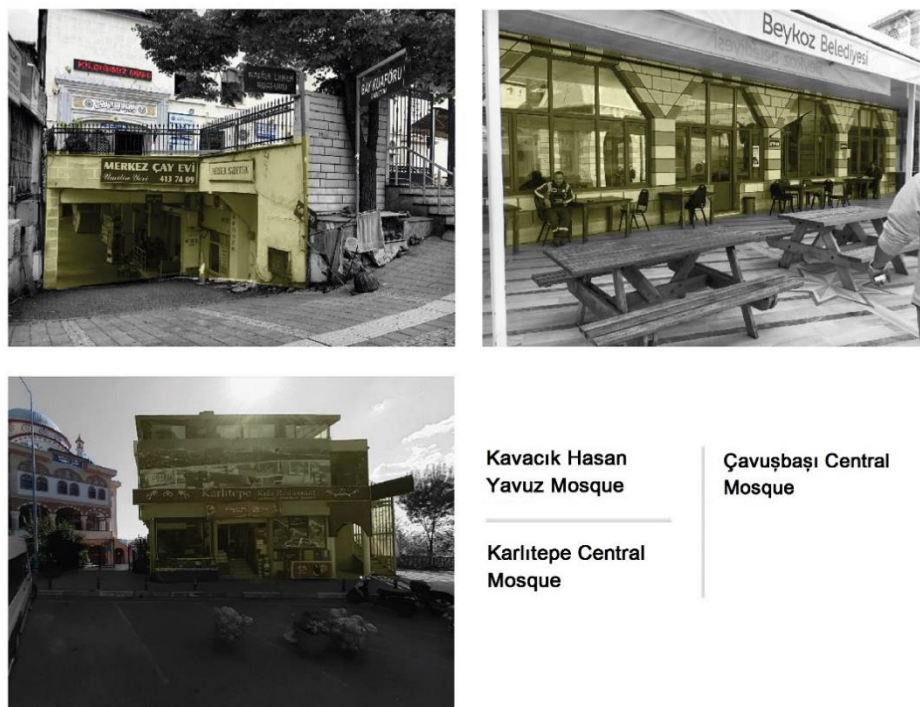

Kavacık Hasan
Yavuz Mosque

Çavuşbaşı Central
Mosque

Karlıtepe Central
Mosque

Figure 8. Commercial functions within the complexes

Proportion of Spaces According to Functions

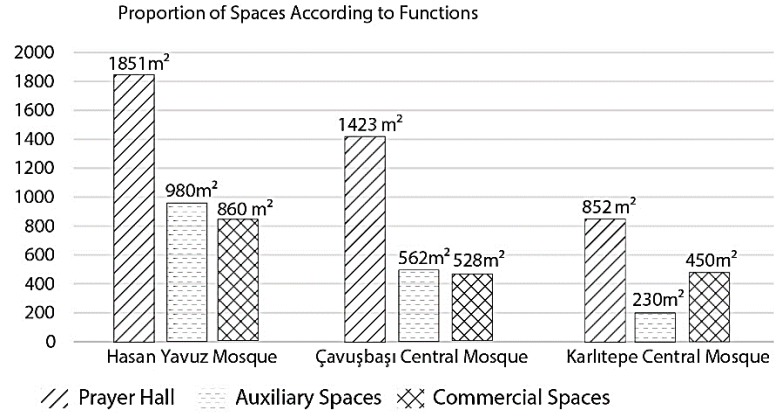Prayer Hall   Auxiliary Spaces   Commercial Spaces

Figure 9. Comparative distribution of areas with different functions in the mosque complexes (prayer hall/auxiliary/commercial).

As seen in Figure 9, the proportion of commercial areas to total space in each mosque varies. The percentage of commercial space areas to total space areas is 23 per cent, 21 per cent, and 29 per cent, in order from left to right. This proportion is the highest in the newest Karlıtepe Central Mosque. When the mosque's location in the city's sparsely populated outskirts is remembered, its role as a landmark with a rich program including a watchtower and a medium-scale restaurant emerges as a new way for a mosque complex to interact with its users. Besides, due to the Beykoz region's hilly topography, all the inspected mosques have been built with basement floors that are not fully underground and these all include different commercial functions (Figure 10). These data also show the flexibility of their programs, in line with the varying needs of their local communities.

Kavacık Hasan Yavuz Mosque

Çavuşbaşı Central Mosque

Karlıtepe Central Mosque

Figure 10. Basement floors used for various functions

3.2.3. Architectural Form and the Interior Space

As stated by all three presidents, the buildings followed the "classical Ottoman Mosque image". The main dome and at least one minaret, with various forms and dimensions, are major components of this composition. Symmetrical plans with clear structural layouts are common features of the general classical scheme where the mihrab and the main dome are placed along the central axis. The main domes' spans, which were all made with reinforced concrete, range from 12 to 15 meters, and the minarets' heights range from 26 to 52 meters in the cases studied (Figure 11). In Karlıtepe Mosque, because the minaret of 52 meters in height served also as a lookout and a library, the inclusion of an elevator resulted in a wider section and a colossal tower form topped with an unusually huge mass. Figure 11 also demonstrates the significant variation in the dome height to minaret height ratios of these buildings. Later additions to the Kavacık Hasan Yavuz Mosque have fragmented and complicated both the structural system and the main prayer hall, and the main dome has lost its central role in the overall interior space.
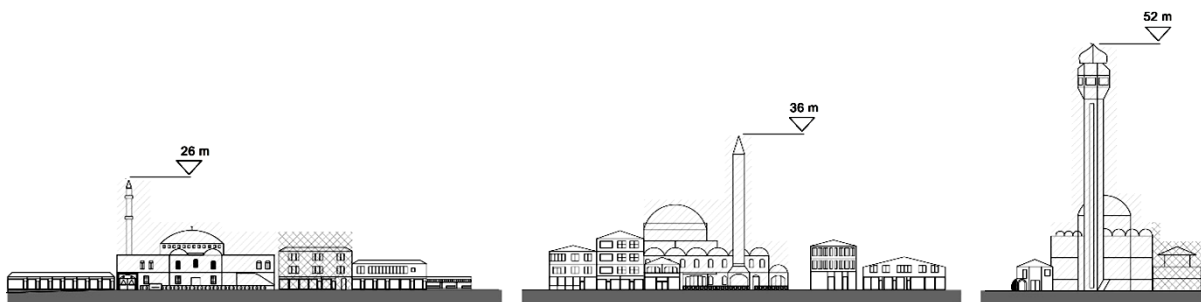

Figure 11. Scaled drawings showing the silhouettes of the mosques with their minarets' heights.

While all mosques are oriented toward the qibla along the northwest-southeast axis, their relationships with the principal streets differed. The inner courtyard of the classical scheme has been replaced with an open terrace in varying size and shape in all three cases, acting as flexible thresholds between the prayer halls and the streetscape. A similar versatility was observed with the adaptation of the latecomers' hall because they were converted into covered entrances with additional glazing and shoe racks (Figure 12). The commitment to form yet flexibility and adaptation of the program into the new urban setting seems to be a common feature in these examples.
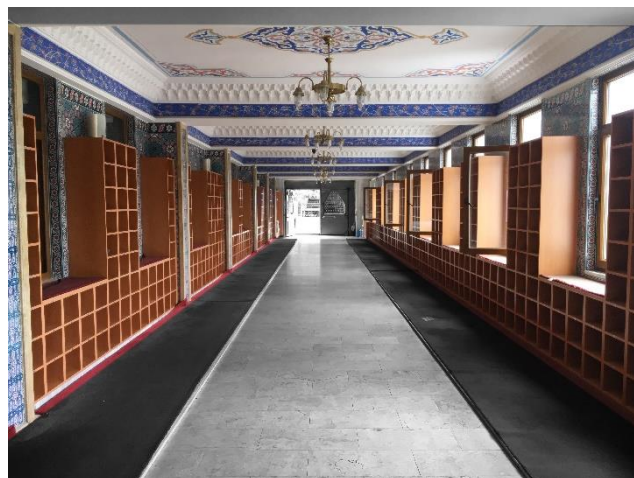

Figure 12. Late comers' hall of Kavacık Hasan Yavuz Mosque

Figure 13. Mihrab, minbar and the preaching chair (from top to bottom) in Hasan Yavuz and Çavuşbaşı Central Mosques (left). Improvised mihrab setting with minbar and preaching chair at Karlıtepe Central Mosque (right)

Major interior furniture like mihrab, minbar and preaching chair with specific practical uses are also the primary symbolic components of the interior space. In the first two cases, these elements were similarly made of marble, decorated with floral and geometric patterns referring to the classical models. Karlıtepe Central Mosque stands out with the improvisation of these features into an entire installation accessed from the mihrab niche. In the words of the president, in order not to have the imam moving back and forth in between the preaching chair and the minbar amidst the congregation, these elements were merged into a single setting as balconies flanking the marble mihrab with a simple and abstract decoration (Figure 13). The minbar was further topped with a marble baldachin so that the symmetry was slightly distorted. As told by the president, for this alteration they asked for consent from the DRA. Another improvisation at Karlıpete Central Mosque is the provision of an auxiliary prayer hall at the basement level with a lower ceiling height and smaller volume due to the heating problems faced at the main prayer hall in winter.
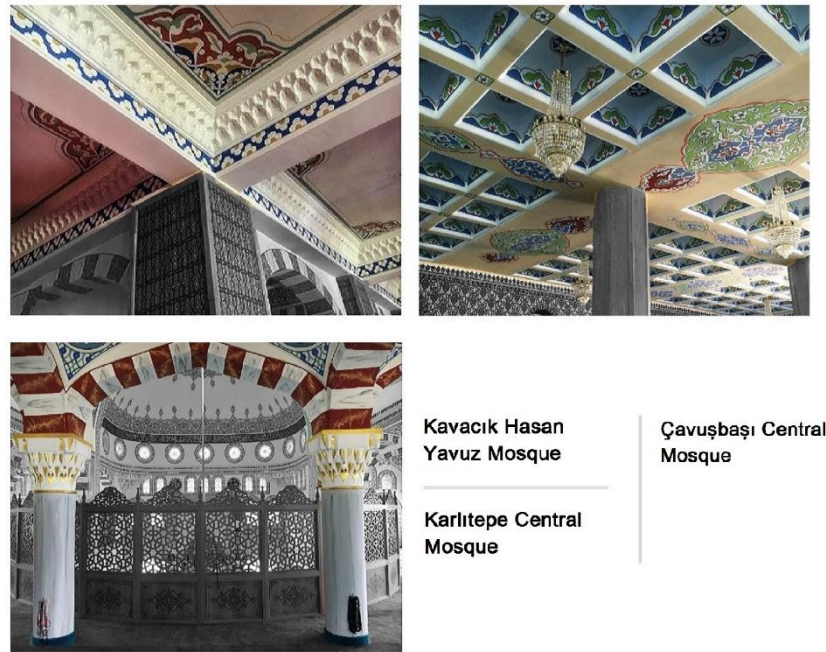
Kavacık Hasan Yavuz Mosque

Çavuşbaşı Central Mosque

Karlıtepe Central Mosque

Figure 14. Decoration of the structural elements in the interior.

In all the mosques the inner surfaces of prayer halls (including waffle ceilings) and the stained glassed windows have all been decorated with hand-painted traditional patterns with floral figures applied by the local craftsmen (Figure 14). The modern daisy figures that cover the beams' edges in the Hasan Yavuz Mosque demonstrate the heterogeneity of the decoration program. Columns were clad with marble or glazed tiles, while plaster muqarnases served as transitional components between surfaces such as beams and ceilings, or columns and arches. Reinforced concrete arches coated in double chrome paintings evoke the classical masonry elements of Ottoman mosques, ensuring familiarity of these inner spaces with diverse spatial features.

3.3. Results

The three mosques investigated here are from different phases in Istanbul's urban history. They are unauthorized public buildings that demonstrate the power and influence of informal dynamics in today's urban setting. Kavacık Hasan Yavuz Mosque, the oldest and largest complex, and later erected Çavuşbaşı Central Mosque, has been gradually extended in pace with the expanding population in their respective urban surroundings. The early informal settlers had strong communal links, and mosques were seen as a collective confirmation of the residents' existence and legitimacy (Kılıç, 2018). Eventually, they've both become important constituents of social life, serving as vibrant gathering places for different purposes that aren't solely religious. The newest Karlıtepe Central Mosque belongs to the last phase of Istanbul's urban history marked by the accelerated urban sprawl. It was built in the sparsely populated green hills of Beykoz and appears to precede new informal habitation around it unlike the first two. This also demonstrates the changing dynamics of informal urbanism in the context of Istanbul's continuous urban growth, where informality transforms while remaining dominant.

Figure 15. Karlıtepe Mosque, portrayed in its urban context and praised for its "Life-prolonging panoramic view" (https://www.iyigunler.net, accessed 20 March 2022)

The imperial mosques of the classical era, like the Süleymaniye Mosque, were built as part of a complex with detached public and commercial annexes for also funding the building's maintenance and other expenses. The surveyed mosques were built as one main volume with a complicated arrangement of diverse functions, combining commercial and social usage. In all, the result was a recognizable volume that lacked architectural clarity yet ambiguously referred to the classical model. While the interiors were familiarized through ornamentation and decoration, the exteriors of the buildings varied. Also, it was commonly observed that the MBSAs which were founded as local initiatives, acted as the most influential agent in the formation and the afterlife of these structures. In the Karlıtepe Central Mosque case, the association members have made investigations for the highest efficiency in form and use and added innovative features displaying new architectural sensibilities. This building remarkably demonstrated the organizational wisdom of the available resources as proposed to be a common approach with the traditional vernacular. In the end, unlike the other two mosques, the users of this complex were not limited by the locals concerning the wider visibility of the building in the popular media (Figure 15). This noteworthy case displayed the plurality in the patterns of legality and the legitimization processes composing a complex and dynamic context for informal urbanism in Istanbul.

CONCLUSION:

The three mosques were researched in terms of how they were formed, adapted, and used as collectively produced social and religious spaces in Beykoz's informally developed districts. These buildings exemplified mosque architecture that is common in large but is underrepresented in existing mosque architecture literature due to negative stereotyping of informal construction. This study also concentrated on gathering first-hand information from the producers of these mosques and the buildings themselves. The article attempted to observe and present how these mosques became part of their environment through looking at their land use schemes, collective production processes, and versatility of their programs including religious and non-religious activities, in response to the social, cultural and economic dynamics in their informal urban contexts. Recent theories on informal

architecture helped in understanding how the builders' visions and expectations regarding dominant architectural models shaped these structures. They were all produced by using local craftsmanship and available symbolic features and conventions like the Ottoman classical mosque image and its architectural components such as the dome and the minaret. This is a twofold phenomenon in these informal mosques which includes the process of appropriating the dominant model by mimicry that is already shaped by another complex mechanism of imitation from the "classical model".

Through the analysis and survey of these mosque complexes, it was observed that these buildings were shaped with the freedom to build in a self-organized manner through highly dynamic and flexible processes. Yet, there were many problems experienced in these buildings in terms of architectural formation and structural planning, financial and material efficiency, exterior and interior space quality, and thermal comfort conditions. Being unauthorized primarily means lacking the supervision of a professional authority for providing essential architectural standards for its users including safety against major threats including fires and earthquakes. Considering Istanbul's substantial seismic risk, the dangers posed by informal dynamics to users of these public structures without authorization are not insignificant. Consequently, the oldest mosque of the three, Hasan Yavuz in Kavacık, was quite recently demolished due to its "insufficient performance" and will be replaced with a new mosque complex, this time following legal procedures (Dostbeykoz, 2020).

In general, these buildings are examples displaying the collective production of public spaces based on consensus and common interests in the urban context. However, these common interests are being reshaped in parallel to the new claims on the urban land, which is most visible in the case of Karlıtepe Central Mosque for being also a catalyst of informal housing in its immediate environment. Because of their high legitimacy as a form of social practice and charitable activity, the apparent versatility of the legal and socio-political context of these buildings has resulted in an unusual exercise of informality widespread in the case of mosque buildings. Thus, the informal mode of mosque production is a widescale common spatial practice that structures daily life practices and contributes to a broader urban reality in Turkey today.

A common approach in the literature on informal urbanism and architecture is to advocate learning from informal housing practices and patterns and incorporating them into legal and institutional procedures (Gür & Dülgeroğlu Yüksel, 2011). It is also undeniably true that informality is primarily discussed in the context of housing. Therefore, the question of what we can learn from this rich history of mosque construction in self-made urban environments, as discussed above with the concept of contemporary vernacular/spontaneous, remains unexplored. These buildings, as shown in the examples, tend to become landmarks, also powerfully connected to public life through their highly porous boundaries. Some major features with the potential of drawing policy implications include the flexibility of the structural system and mass so that it can expand over time, versatile use of spaces, and the necessity of including the collective taste and expectations of the local community in the architectural form and symbolic features, and dynamic relationship and integration with the urban context through various commercial and social functions not limited with religious activities. Top-down actions, such as providing blueprints for mosque schemes and/or offering uniformity in form and material through mass production, do not appear to meet the demands of local communities and undermine previous learnings from these informal urban practices. Finally, perhaps the most important takeaway from Turkey's long and rich informal urban experiences is the apparent need for the provision of a theoretical framework and a consistent legal perspective regarding professional contribution within formal processes while remaining in dialogue with local dynamics through user participation.

Compliance with Ethical Standard

Conflict of Interests: The authors declare that for this article they have no actual, potential, or perceived conflict of interests.

Ethics Committee Approval: Ethics committee approval is not required for this study.

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