

# MIDDLE-CLASS HOUSING DEVELOPMENT IN THESSALONIKI, GREECE

## Polykatoikia: from Heterogeneous to Homogeneous and Vice Versa

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**ABSTRACT:** Middle-class housing in Greece developed rapidly after World War II (WWII). Across all Greek cities a multi-story building type, so-called “polykatoikia” emerged because before the war, in 1929, a social and legal contract was constituted, according to which each apartment could be owned by “micro-owners”. The applied General and Special Building Regulations envisioned a homogeneous city volume composed of these polykatoikias. On the other hand, the new ownership model invited a heterogeneous middle-class population to buy and reside in these apartments, in contrast to the previous homogenous one owner per building model. Thessaloniki developed differently than other cities, starting with homogeneous urban planning and city volume, but heterogeneous architectural styles that would evolve vice versa in the post-WWII era. The contemporary political–social–economic changes modified the city’s development vision and population’s needs related to the polykatoikia. Today, the matured state of the polykatoikias, the expected deterioration of the building stock and its environmental (in)efficiency troubles the micro-owners. The lack of common decision-making strategies to enforce building unity increases the entropy to a dysfunctional level. The paper’s main goal is to investigate whether the polykatoikia model is reaching a breaking point. Will the future of the polykatoikia return to homogeneity by relying on one investor per building and be leading a decrease of polykatoikia’s variety, or are there strategies that lead to the sustainability of the building type and its micro-owners? The research is based on the author’s Ph.D. thesis; recent literature on the topic and in-situ observations both support the objectives.

**KEYWORDS:** Polykatoikia, ownership, efficiency, maintenance, Thessaloniki

**INTRODUCTION:** The housing sector in Greece has increased significantly since the 1950s. The rise of the middle class and the post-WWII consumerism lifestyle introduced to it through the American “soft power” strategy (Castillo, 2010) resulted in the need for improved housing conditions. The type representing the “new era” in the middle-class lifestyle was the multi-story building or “polykatoikia.” The polykatoikia was the result of a bottom-up approach that allowed anyone with middle-class financial means to obtain ownership of an apartment. The building would have all the new amenities that the era offered, like elevators, a central heating system, etc. The

apartment would be designed to host the new tenants with gradually obtained new furniture and home appliances related to the consumerism lifestyle (Alexiadou, 2021). The owners in these brand-new buildings had minimum maintenance expenses; there was not much physical deterioration and conservation need for technical or function issues yet, in contrast to pre-WWII constructions. They had to learn the new model of living together in a vertical system and sharing commonly owned spaces. The improvement of their living environment offered great comfort and satisfaction since they had accomplished residing in a modern apartment.

This paper refers to Thessaloniki as the second port city in northern Greece, exploring the homogeneity and heterogeneity of various aspects of its built environment deriving from polykatoikia's genesis, maturity, and future. It refers to the owners' and the tenants' social and economic profiles, exploring the differences between various levels of ownership, from independent to co-ownership. It distinguishes the differences in housing development and construction methods before and after WWII and their effect on the maintenance problems and solutions of the years that followed. The paper examines the building regulations applied to the city's landscape that generated the polykatoikia and the current set of laws or practices that affect its function and its relationship with the urban public space. It follows the architectural form transformations from before and after the polykatoikia's generation, as well as the façade transformations of some polykatoikias due to aging, maintenance, and upgrade solutions. The storyline of all the above differentiates—to a higher or lower degree—Thessaloniki from other Greek cities. The change of state of those aspects between homogeneity and heterogeneity portrays the middle-class polykatoikia of Thessaloniki.

Thessaloniki's post-WWII urban tissue resulted from the interwar International Planning Committee's urban plan under the guidance of Ernest Hébrard, established in 1919 after the Great Fire of 1917. The committee designed the future development of Thessaloniki, inside and outside the burned zone. It envisioned a homogeneous development of the city and its buildings, providing in 1920 a "Special Building Code for Thessaloniki" that was truly unique to Thessaloniki (Yerolympos, 2003). After alterations, the implementation during the interwar era resulted in a heterogeneous city image. Following the tradition of "superficies solo cedit"<sup>1</sup> (Chatzicharisi, 2015), one owner per building would define it from top to bottom and in discussion with the architect, would decide the building's architectural style following eclecticism with morphological variations (Colonas, 2012). Building permissions were provided for different construction heights depending on the owner's needs and financial condition, leading to an inhomogeneous skyline of interwar Thessaloniki's building blocks. World War II and the ensuing civil war in Greece, which lasted until 1949, led to a ten-year interruption of building activity that would restart in the 1950s with private-sector constructions.

Today, more than sixty years since the construction of the majority of buildings in large Greek cities, when most of the fundamental aspects of a polykatoikia are reaching a turning point, it is crucial to address the challenges. Are the communities of each building ready to offer a homogeneous answer to maintenance problems of the construction

and the facilities of the polykatoikia? Will the sustainability acknowledgment concerning resource and energy efficiency provide homogeneous solutions? How does the heterogeneity balance among long, medium, and short-term tenants? Is the heterogeneity of the ownership model able to survive, or are new models needed in the future?

The core of the research is based on the author's Ph.D. thesis (Alexiadou, 2022<sup>a</sup>). The methodology included research in primary and secondary sources, interviews, and field observation. There was a particular focus on building regulations and polykatoikias' architectural plans of that era. The future of the buildings was approached through regulations, recent interdisciplinary literature on the topic, and in-situ observations.

### THE MIDDLE-CLASS HOUSING DEVELOPMENT IN THESSALONIKI: THE GENESIS OF THE POLYKATOIKIA

The apartment building is a product of the need that arose in Greek cities to house the rising urban population (Kalfa & Theodosis, 2022). Although there was a need for rapid growth in height and densification of the Greek city, neither the urban fabric nor the building code legislations were homogeneous throughout Greece. Equally, the new ownership model's heterogeneity of "micro-owners"<sup>2</sup> challenged the homogeneity of the polykatoikia as a unit.

Although general building codes for Greece were established in 1929 and 1955, they did not produce the typical polykatoikia's homogeneity in Thessaloniki, since some parts of the "Special Building Code for Thessaloniki" were valid even after WWII, prevailing the "General Building Code". Important information regarding the building volume would refer to each specific plot through various regulations. The city was divided into sectors according to plot size restrictions and the specifically permitted number of building floors. Since the road system outside the burned zone was still under development, the plots would be specified as buildable or not, after the implementation of "acts of adjustment and rearrangement" that would readjust the limits of each plot in relationship with the boundaries of the street and the neighbor plots. Limitations according to the building plot type would also provide plot coverage allowance. The width of the street facing the building would arrange the number of setbacks on each building's top (Alexiadou, 2022<sup>a</sup>). [FIGURE 01]

All the additional regulations generated a significant differentiation concerning the essential characteristics of a building's volume, reinforcing the city's heterogeneity, which would try to hide under the modern facade of the polykatoikia. The homogeneous socio-economic framework of the future middle-class attribute would be best served by the equality and homogeneity of the typical floor and the façade of a modern polykatoikia. The new



01 Thessaloniki's interwar architecture on the left and postwar architecture (mid-1960s) on the right. The change in volume and architectural style generated a new city.  
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02 The homogeneous facades of the newly built polykatoikias expressed the modernized lifestyle of its tenants and "micro-owners."  
© Socrates Iordanidis Archive/ MOMus- Thessaloniki Museum of Photography, mid-1960s.

buildings follow European and American standards of postwar modernity, belonging to Jester's and Fixler's category of "Ordinary Everyday Modernism" (OEM)<sup>3</sup> (Jester & Fixler, 2011). [FIGURE 02]

Essential for this research is the mechanism that financed the construction of the buildings since it gave the middle class the possibility to obtain ownership in a multi-story building in the city center that hosted various uses. The polykatoikia, after the Horizontal Ownership Law (Official Gazette 4/A/4-1-1929), separated into two fundamental kinds of ownership. The independent/"divided ownership" and the common/"undivided ownership." Independent residences could be found from the ground floor to the topmost apartments, built *en retiré*. Also, stores

and storage rooms usually found on the ground or underground floor could be independently owned. In this new period, the plot owner or the to-be-demolished-building owner would agree with a constructor to give land for flats through the "antiparochi" mechanism. The constructor would undertake the handling and coordination of all works, like demolition of the old property, application for building permission, and building construction. The first agreement made for each apartment building was that a percentage of the new independent properties would belong to the landlord and a percentage to the constructor. Since the height regulations permitted seven to nine floors per building, there was a significant increase of floors added and divided into apartments, resulting in a

win-win situation for both beneficiaries. Both received a significant number of independent properties within the polykatoikia and had the chance to use, sell or rent them. The constructor usually sold the apartments off-plan to ensure cash for the building's completion and business profit (Kalfa, 2020; Theocharopoulou, 2017).

In this way, the micro-owners multiplied; they bought independent properties from the contractors and sometimes from the landlords. The buyers were from the middle class (Emmanuel, 2014), who managed to ensure some savings or could buy with installment payments. They arrived from rural areas to the city as internal migrants to claim a better future. They might be former refugees due to the compulsory population exchange between Greece and Turkey after the Treaty of Lausanne (1923), who raised enough money to buy an apartment in the city center. Everyone wanted to modernize their lifestyle. The apartments offered amenities lacking in Thessaloniki's old houses (Triantafyllidis, 1968). Popular Greek films of that time advertised the amenities of the new lifestyle, such as "light, water, elephone connections" and, for instance, bathtubs in the bathroom (Georgiadis, 1964; Dalianidis, 1965).

According to the Horizontal Ownership Law, when buying an independent property in a building, one simultaneously becomes the owner of a percentage of the building's shared infrastructure, facilities, and equipment. They include the plot itself, the structural core, the common basement parts, the common *pilotis* parts, the terrace, the facades, the corridors, the steps, the entrance, and all the building mechanical systems like the central plumbing and heating system, the elevator, the power, and telephone installations, etc. There may be facilities at the building entrance, such as concierges, or on the shared terrace, like laundromats and storage rooms, or even air raid shelters in the basement of buildings, all part of the common "undivided ownership." Some of them are no longer in use since the needs of the tenants have evolved. Occupied or abandoned, these valuable zones/facilities for the building community remain grey zones in the polykatoikia due to the common ownership. (Alexiadou, 2022a). It is clear from the above that the polykatoikia was designed and constructed to function as a unified whole. The advantages of the unified building included the division of maintenance costs and the extension of each owner's personal space limits to the shared space of the building.

Since the co-ownership could be among fifteen to forty other micro-owners, depending on the size of the building, the Horizontal Ownership Law covered the basic terms of co-ownership and its management. Further details for each polykatoikia could or should be composed in an

additional formal "Regulation of the Polykatoikia."<sup>4</sup> In the regulation, among others, specific directions were given for the building's management by an Owner's Management Committee elected by the General Owner's Assembly. The regulation better defined its common parts and the financial burden each property should contribute to the expenses agreed by the majority of the General Owners' Assembly. The financial burden was divided according to the objective construction value of the respective property and not its subjective commercial value (Ovsevan, 2022).

## MATURITY YEARS OF THE POLYKATOIKIA

Sixty years later, the individual ownerships in the form of apartments, stores, and storage rooms of the polykatoikia have a different living and maintenance history and different needs than the common ownership parts. Especially when there is no "Regulation of the Polykatoikia," there might be disagreements among the micro-owners about the extent of the commonly owned parts and who is responsible for their maintenance (Chatzicharisi, 2015; Tsiami, 2018). The deterioration of the common ownership exposes the lack of a building community's ability to agree on common management due to various reasons.

The financial instability of the Greek middle class and its connection to private property affected the polykatoikia (Panagiotopoulos, 2021). New taxes on private property and income insecurity turned the dream of private ownership into a burden. Moreover, mortgages were not easy to pay off and were no longer provided (Katsinas, 2021). The relationship between owners and lessees was redefined either in favor of the owner or the lessee. Rising rent prices were not viable for the lessees and gradually forced expectations for better amenities. Decreasing rent prices made the property unprofitable and turned the owners to solutions given by financial aid programs and international practices. One was related to improving energy efficiency, while the other was related to renovations, prioritizing the apartment and not the building; increasing the levels of heterogeneity.

The expectations of living in an apartment, whether owned or rented, focus on issues like energy efficiency, among others. When most polykatoikias were built, one of the offered luxuries was the central heating system with petroleum boilers. It was not until 1979 that the Thermal Insulation Regulation mandated the thermal protection of newly built buildings (Official Gazette 362/Δ/4-7-1979). As a result, the structures before 1979 are classified higher on the energy loss scale. (Ministry of Environment and Energy, 2021). The financial difficulty of the micro-owners of paying for the central heating oil supply due to the financial crisis of the last decade and the recent energy crisis created additional problems in polykatoikia's



03 The patchwork of individual interventions on the facades. © Sotiria Alexiadou, 2022.

management. The Owners' Management Committee could not resolve them in the general favor of the tenants. At the same time, the desire for autonomy and individual heating control of each apartment (Chatzikonstantinou & Vatavali, 2020) was often manifested in the General Owners' Assemblies.

Since 2011, the government has established a financial aid program for energy saving, the 'Saving Energy at Home' Program (European Construction Sector Observatory, 2017). The energy problem in Thessaloniki was more significant than in Athens due to the city's northern seaside climate, which includes high levels of moisture, low temperature, and heavy northerly winds, especially during autumn and winter, resulting in many submitted applications (Tziogas et al., 2021). The program facilitated the owners to replace central oil heating with individual gas heating, financing part of the installation expenses. The program's other most popular supported tasks were a building envelope upgrade through thermal insulation applications and the replacement of window frames (European Construction Sector Observatory, 2017). Those interventions had the effect of canceling a fundamental characteristic of the apartment building, meaning its function as a unified whole. Since there was no longer a common energy strategy, heterogeneity developed to the extent that could lead to entropy. For example, an apartment was rated as class B after the new autonomous installations. Yet another remained in—or even dropped to—the lowest classes, Z or H, since it turned to energivorous electric power for heating without the common heating system. Different energy classes made the building have different heating life cycles throughout one day, lacking a homogeneous response that would minimize the energy footprint of the polykatoikia.

One controversial point relates to the management of the common property facade. Any changes to it, like the installation of external piping for individual gas distribution, individual replacement of frames and blinds, adding shading systems, partial alteration of the facade due to external application of insulation, etc., concern the common area of the building and should be treated as such. Individual patchworks and exposed installations disrupt the unity of the facade (Alexiadou, 2022b) [FIGURE 03]. The way that the energy-saving program was implemented until recently raises an issue both in energetic and morphological terms of maintenance. The last update of the program (Ministry of Environment and Energy, 2021) focused on the unity of the building<sup>5</sup>, promoting the simultaneous upgrade of the building's envelope, heating system, and other energy-consuming installations. The coordinated actions—either on common areas or on individual ownerships—are supported with extra financial aid and lead to the best practice of polykatoikia's homogeneous treatment as a unified whole.

Another critical parameter for OEM middle-class housing buildings is the user's succession. Many current micro-owners have inherited their apartment from family or bought the property second or third-hand. In Thessaloniki, even though the rate of owner-occupation is high, equally high is the percentage of second ownership (Katsinas, 2021) that can be rented as an income source. In both cases, the homeowners usually conduct total or partial renovation with the help of an architect/engineering firm or just technicians or contractors. Especially in the rental scenario, the different categories of tenants alter the investment that the owner is willing to make. One category is families that reside in an apartment as long as their need for space, location, and rent affordability remains stable.



04 The types of uses in stores on polykatoikia's street-level. Left to right: Parking, retail store, vacant store, entrance of the polykatoikia, former retail store that transformed to residence convenience store.  
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Another is university students residing in an apartment for only four to five years. And there are young people who live on their own for a short period. This category was eliminated by Greece's financial crisis in the last decade, creating a boomerang effect for this generation (Siatista, 2021). The previous two categories are medium-term residents who tend to live in the city center and usually have a low budget. The rise of short-term tenants and the affirmed income that they offer led many middle-class micro-owners to conduct renovations and even divide larger apartments into 30 to 50 m<sup>2</sup> apartments to rent them out for a short time through popular online platforms, as simple hosts and to a lower professional degree than in other cities (Katsinas, 2021). Despite the local administration's attempt to attract tourists (Katsinas, 2019), the fact that Thessaloniki's tourist season is shorter and in less demand than that of Athens prevented the mass intrusion (Boutsoukis et al., 2019) that is observed in the capital city (Balamanidis et al., 2021). Unfortunately, the renovations begin and end at the private ownership limits without any contribution to the commonly owned property and usually burden them to entropic levels.

The need for affordable housing in the city center created a new phenomenon: the "transformation of ground-floor stores into residences" strategy (i.e., Tiktapanidou, 2022). Due to the maximization of supermarkets that took over the sale of fresh meat, fish, dairy products, and groceries from the smaller stores, the financial crisis, and the introduction of e-commerce, polykatoikia's stores on secondary non-commercial streets remained unrented and empty for many years. This strategy not only turns ground-floor individual ownership stores into apartments but also changes the public space in front of them. For example, since there is no official outdoor space, the sidewalk pavement

arbitrarily turns into a semi-public space, where you can dry your freshly washed clothes or even place a little table to spend some outdoor time. This change affects the dipole private-public since instead of the public entering a private space, meaning a retail store, the private space is occupying the public space. Even if it proves to be a solution for storeowners and tenants looking for cheaper housing in the city, there should be a general plan on the urban scale to avoid the increase of privatization at the ground-floor level that does not accord with the Greek urban profile, decreasing the diversity of uses that retail stores were offering. Even worse is the change of use from a store to parking (Tsireka, 2019) because the commonly installed non-transparent metal doors prevent the view expansion that the storefront window offers to the city [FIGURE 04]. It is crucial to involve architects who could experiment with the design process of these condensed alternative individual living spaces (Mitroulias, 2021a, 2021b) or other uses providing new layers of complexity to the city's ground level.

## DIRECTIONS FOR THE POLYKATOIKA'S FUTURE AND ITS OWNERSHIP MODEL

### TOP-DOWN / ALL FOR ONE

A recently developed strategy relies on homogeneity on the part of the building owner. In this case, a single investor buys all the independent ownerships of an apartment building, reaching 100% ownership of private and shared space. The investor usually has a business plan for the polykatoikia related to medium-term and/or short-term rentals. According to the location of the building, the size of the floorplan, amenities like fast internet, and the business orientation of the investor, the future tenants could be university students, digital nomads (Katrana, 2022), or



05 The transformation of the typical floor typology of four apartments (6 toilets in blue and 4 kitchens in green) to eight apartments (9 toilets and 9 kitchenettes). The building was initially designed in 1965 by local architect George Chatzinakos. The refurbishment was made in 2011 by the architecture and design firm LoT. © Image processing: Sotiria Alexiadou, 2022. Source of plans. Left: Building Permissions Archive of Thessaloniki. © Right: LoT via Archdaily, Gallery of AS67 Student Housing / LoT - 25. Retrieved January 20, 2023, from <https://www.archdaily.com/529705/as67-student-housing-lot/53cdd906c07a80492d000365-as67-student-housing-lot-third-floor-plan>.



06 For the original façade, the architect (G. Chatzinakos, 1965) was to provide a vague scenario of the building's tenants. In the refurbishment, the architects (LoT, 2011) had a specific vision for the use of the building. Homogeneity is expressed in both façades but in different directions. The 1965 façade is homogeneous in itself and with its surroundings (extrovert), the 2011 façade is homogeneous in itself but heterogenous with its surroundings (introvert). © Image processing: Sotiria Alexiadou, 2022. Source of plans. Left: Building Permissions Archive of Thessaloniki. © Right: LoT via Archdaily, Gallery of AS67 Student Housing / LoT - 25. Retrieved January 20, 2023, from <https://www.archdaily.com/529705/as67-student-housing-lot/53cdd8c5c07a80492d000364-as67-student-housing-lot-elevation>.

guests/tourists. A significant rise in university student-oriented housing has been documented in Thessaloniki (Hatziprokopiou et al., 2021).

Since the original apartments of the polykatoikia were not designed for short-term or medium-term rentals, a total renovation of the building and redistribution of the floor plans makes the facility more functional and profitable. The homogeneity in ownership accelerates the decisions, the application, and the completion of any upgrade. Certainly, the costs are not shared, but most likely, the payback of the investment is faster. The increase of possible independent rentals can rise, i.e., from four family apartments per floorplan to nine single-room student apartments, leading to a significant change in the typology of polykatoikia apartments since multiple kitchenettes and toilets are added, and the family apartment shrinks to a single-room unit [FIGURE 05]. In addition, the building typology usually changes since amenities are added in former common areas that remained out of use or had a minimum impact on the functionality of the polykatoikia. Areas on the underground floor can turn into a gym, a laundry room, or a bike parking area. The terrace easily turns into a roof garden offering extra outdoor space for gathering since the private spaces are reduced to a minimum. The facades surpass the limit of homogeneity with resembling frames, common colorization, and furniture [FIGURE 06]. All the equipment that creates the heterogenic polykatoikia's facades and balconies, such as air conditioners, gas boilers, and antennas, are part of the common facilities upgrade and are carefully interpreted on the new façade. The tenants usually do not individually alter the facades.

In this case scenario, the multi-story building loses the qualities of a Greek polykatoikia in terms of typology, morphology, and uses. It turns into an enterprise imitating the city hotels. The characteristic micro-ownership that can calibrate the social need for affordable housing (Maloutas et al., 2020) diminishes.

#### BOTTOM-UP / ALL FOR ALL

Another strategy for polykatoikia's future focusing on coordinating with the micro-ownership is the model of self-management and collective ownership of a building by a housing collective formed for a specific building. This model has been implemented in Central and South-Eastern Europe ("MOBA Housing Model," 2018). In Greece, it has not been applied yet. Still, since 2016, Co-Hab Athens has been formed as a research group exploring the possibilities of organizing the first "cooperative housing/collective ownership" project in Greece ("About Us\_CoHab Athens," 2016). The concept is straightforward; each collective member owns stocks of the building's ownership that they reside in but does not have separate private ownership in it. Every member has a voice in the management of the building, and no independent decisions are made for each part of the building's living, working, and entertainment areas. The fundamental division of the polykatoikia in private and common areas is eliminated, and the whole building turns into a common-used-owned space.

This strategy should not be confused with cooperative housing. Even though the two strategies share common concepts, the scale of possible Co-Hab projects is smaller,

and the ownership is divided among tenants. Since such a model of ownership has not been applied to a single building, overcoming many obstacles related to laws, taxes and financial procedures like loans is vital. The Co-Habs could benefit from strategic approaches on how a cooperative housing enterprise successfully receives financial or tax aid from the state and how the neighbors develop the sustainability of the community and the building. (Profiles of a Movement: Co-Operative Housing Around the World, 2012).

This housing model could be a more prominent solution for young professionals or people transitioning from parental housing to independent living, overcoming the usual problems that young people especially face when they decide to rent, such as affordability, stability, secure tenure, etc. (Siatista, 2021). Sustained heterogeneous ownership of a homogeneous group of people with common beliefs in the housing model could support the sustainability of the community and the building itself.

These two approaches abolish or absorb one of the two types of ownership in the polykatoikia. The first cancels the building's common ownership part introducing the building into an independent single-ownership model, and the second expands the co-ownership to the entire building. A third approach could renew and follow the existing model. Micro-owners could benefit from educational programs related to ownership (Saoulidou, 2022). The joint coordination between owners about the rising problems in all aspects, cosmological, physical, and environmental, could lead to holistic and articulated management for polykatoikias' future. Help from the state in terms of financial aid and support of the micro-ownership in a polykatoikia through regulating practices that led the model to entropy are to be studied further.

## CONCLUSIONS

This paper focused on the main middle-class housing representative of Thessaloniki, the Greek polykatoikia. In the first part, it pointed out that the parameters which created it derived from the invitation of a heterogeneous ownership crowd to contribute to replacing the former homogeneous ownership model for the rise of a multi-story homogeneous-looking building. The diversity deriving from the regulations made the city model heterogeneous enough to fulfill different living standards.

The current challenges for the polykatoikias in Thessaloniki derive from a number of parameters that need to be included in the discussion for polykatoikias' future. Some are objective, like the aging building stock and the financial crisis, while others are subjective, like the micro-owner strategy for the future management of the

individual and common properties of the building. The two ownership parts, the individual and the common, that exist in a building raise problems for the maintenance program and the efficiency of a building as a unified entity. The financial and energy crises generated major controversies among the micro-owners, resulting in a dysfunctional micro-community with problematic coordination for common solutions. Fierce debates arise in the polykatoikias when some micro-owners renovate and upgrade their individual ownership without investing in saving or contributing to the upgrade of the common property, resulting in increased heterogeneity within a building's shared or private property. Among others, the rising heterogeneity becomes evident in the originally modern homogeneous facade due to independent interventions ignoring one of the fundamental characteristics of the polykatoikia. The current state of the OEM middle-class buildings is reaching a dangerous level of entropy in cosmological, physical, and environmental aspects.

Future scenarios for the development of the polykatoikia have different directions, especially in the ownership model. The first direction is top-down, bringing us back to the homogeneous sole owner. In this case, the enterprise owner alters the building characteristics in typology and morphology and focuses on remodeling the building to attract rental tenants. The second direction is bottom-up, supporting and enhancing micro-ownership. It absorbs the independent part of ownership, creating a shared good, making ownership more accessible and with lower space dependency. Since Greek cities are coined by the polykatoikia, any direction followed for its future will determine the future of the Greek city and, consequently, of the Greek middle class.

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## ENDNOTES

- 1 The "superficies solo cedit" is a Roman Law rule, meaning that whoever owns the plot also owns whatever is structured on the plot. This meant there could not be an ownership division between the land, the building or any part of the building. There could be only one owner of the whole. The Greek Horizontal Ownership Law, in 1929, disrupted the "superficies solo cedit" rule (Chatzicharisi, 2015) and its ownership model since each floor/apartment of the building could form an independent "divided ownership".
- 2 The term "micro-owner" (μικροϊδιοκτήτης in Greek) usually refers to the owner of an apartment or a store in a polykatoikia. This kind of ownership was possible after establishing the Horizontal Ownership Law in 1929. The "micro-owner" would automatically own the apartment or the store, i.e., "divided ownership," and a percentage of the common parts of the building, i.e., "undivided ownership." Usually, all the decisions for the management/maintenance of the "undivided ownership" should be made with the agreement of the "micro-owners" majority, which raises the complexity of their cohabitation
- 3 The global built environment that was constructed between 1945 and 1980, whose characteristic was the vast quantity and uneven quality. (Jester & Fixler, 2011).
- 4 The additional "Regulation of the Polykatoikia" was not popular until the 1970's. Its lack intensified future problems among the "micro-owners".
- 5 Unfortunately, in Thessaloniki only one polykatoikia, out of 27 that applied, was accepted in the program. (Ministry of Energy 2022-2023).