
Aesthetic and functional development of multifamily residential buildings in Sofia, Bulgaria, in the 1930s and 1940s

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1 ABSTRACT

The paper provides an overview of the development of multifamily residential (condominium) buildings in the capital of Bulgaria – Sofia in the 1930s and 1940s through using key examples from the works of famous Bulgarian architects, which are landmarks of the city’s architectural scenery.

The aesthetic and functional effect, which different architectural styles have on the facades and floor plans of the buildings, is analyzed. Examples of architectural trends and styles developing in parallel during the discussed period are provided. The building cooperatives, which flourished at the time, are outlined as a local phenomenon. The positive and negative aesthetic and functional characteristics of multifamily residential buildings of that period are examined in their historical context.

The paper is adequately illustrated with drawings and photographs of the condominium buildings which are discussed.

2 HISTORICAL BACKGROUND

The beginning of the 20th century found Sofia – Bulgaria's capital – being a city encompassing one- and two-storey family houses randomly built within their plots and surrounded by their beautifully landscaped gardens. The vigorous growth of the city population after the wars of 1912, 1913, and 1914 – 1918 resulted both in an increase in the total area of the city and in the density of residents in the city centre. Thus the concept of increasing the number of floors of residential buildings emerged, providing a solution to two issues: the raised prices of land in the heart of Sofia, determined by the demand; and the need to accommodate a larger number of families in the city centre. In 1921 the development of multifamily buildings was supported by a law on cooperative housing, which provided that a group of at least seven persons could establish a cooperative for the construction of a condominium building on a plot of land owned by the cooperative. This law exists in Bulgaria to this day.

All the prerequisites for the flourishing of cooperative residential construction existed in the period discussed. There was a demand for housing, there was available capital for construction, there was legislation providing for the setting up of residential cooperatives, there was a working force to do the building works, and most importantly – the cohorts of Bulgarian architects – graduates of German and French schools of architecture – were also there to do the design work.

3 OUTLOOK AND INTERIOR OF MULTIFAMILY RESIDENTIAL BUILDINGS

The cooperative residential buildings in the discussed period were children of their time, reflecting the requirements and preferences of the investors, the functional needs dictated by the social stratification and lifestyle, the European and local architectural traditions and trends, and the architects’ aesthetic outlooks, educational backgrounds and professional accomplishments.

3.1 Metamorphosis of facades

In the period discussed in stylistic terms the development of residential buildings goes from eclecticism and Art Deco to the total dominance of Modernism.

The appearance of the condominium buildings at their dawn in the mid 1910s was characterized by eclecticism, which was fading in Western Europe at the time, but kept vital in the residential buildings in Bulgaria until the late 1920s. Art Deco also gave its strong impact through the intense verticalizing of facade elements. However, Art Deco – together with the manifestations of eclecticism alongside it – had to give way to the horizontalism of Modernism. The latter became the prevailing style in the outer appearance of buildings from the late 1920s to the mid 1940s. In the 1930s, unlike the previous decades, the exterior of

buildings began to reflect their internal organisation. Thus, according to the main functions of the rooms, windows – appropriate in size and shape – appeared on the facades. Facades ceased to be exquisite, but uncomfortable garments for the buildings, and were increasingly becoming clothes that sought their beauty in functionality.

This process of rational design of facades, based on the function of the rooms behind them, at times did not bear good fruit in terms of aesthetics (especially in case of poorly designed internal spaces), however, it did not last for a long time. Thus, in the late 1930s and early 1940s, good examples of facades appeared which reached a balance between the rationally justified need for windows of different size, and the facade-garment – delicately proportioned, but lacking the functional window disposition. Facades were designed with optimum size of the window openings (corresponding to the function of the rooms), which both had good proportions (height to width of the separate windows) and were disposed proportionally to one another and unified in an overall facade composition. This brings us back to a kind of eclecticism: there appears a framing of all kinds of windows like in classical architecture; in some cases windows are verticalized, unlike the modernist horizontality of the facade. While the front elevation is modernistically flat, it is sometimes divided into a central part and two wings through the window disposition – the windows in the centre are larger than those of the wings. In some cases the elevation is vertically divided with two moldings. And all this covers a completely modernistic interior floor plan with clear zoning.

3.2 Floor plan evolution

In the 1920s the floor plans of the condominium buildings are relatively similar, and the rooms of the apartments are arranged around a central vestibule. During the 1930s, under the dominant influence of Modernism in Bulgaria, the vestibule gradually merged with the living zone of the apartment. The actual zoning of the apartment plan took place in Bulgaria in the 1930s and the condominium living space was split into three main zones - living zone, bedroom zone and service (kitchen) zone. The concepts of Modernism in the large apartments at that time caused also merging of the rooms in the living zone into one another, providing a variety of interesting floor plan designs. Bathrooms adjacent to the bedrooms appeared in the sleeping zone. A room for servants was added to the service zones.

In the early 1940s luxurious multifamily residential buildings appeared in the centre of Sofia with one apartment per floor. The three types of zones mentioned above are easy to differentiate in their floor plans. The interrelations among those zones are based on the optimal functioning of the apartment. The condominium of the 1940s is a miniature model of the city - the spaces in it can be graded on the bases of accessibility and the number of persons who inhabit them. Thus an apartment has the equivalent of urban public spaces (living zone), private spaces (bedroom zone), and industrial areas (service / kitchen zone). There is a hierarchy of life in the apartment of that time. The owners of apartments inhabited predominantly the living and sleeping zones, and their servants occupied the service (kitchen) zone. Moreover, the different zones were accessed through two separate entrances – one front entrance, leading directly to the living zone, and one back (also called “black” or “servants”) entrance, providing access to the service zone. In view of the proper functioning of this mini-city, the architectural logic dictated a kind of uniformity in the arrangement and connection of the three main zones:

- The living zone plays the part of a town square being the public space of the apartment-mini-city. It is the-site for interaction of family members and their guests. The living zone through its dining room always neighbours upon the service area, but is not in direct contact with the kitchen because of a an existing buffer space – an office or a passage.
- The sleeping zone, being the private space of family members, is separated by its own passage from the living and service zones and has its own bathroom. This architectural solution makes it an autonomous area with maximum privacy of space.
- The service (kitchen) area gained its own entrance in the 1930s as a rational answer to the problem of fast and smooth supply of foodstuffs to the kitchen without passing through the living zone. The back entrance appeared also for reasons of prestige – the living zone had to keep its shiny representative city-centre character of the mini-city, away from the excessively frequent presence of servants passing by. Probably the same idea dawned on the designers of the undergrounds in

London, Paris and New York about three decades earlier. Highways and railways do not have to pass through the town square to reach the industrial area.

Thus the condominium buildings of the period were simultaneously an answer to the social demand for housing, a reflection of the economic and functional stratification of society at the time, sometimes a demonstration of the owners' prosperity, and of course an embodiment of the aesthetic and functional visions of architects in those days.

4 SAME TIME, DIFFERENT STYLES

On the same street in Sofia at the same time – in 1928-1929 – two cooperative condominium buildings were erected as if to demonstrate that architectural styles do not emerge and end abruptly overnight following one another but rather blend into each other gradually, and can peacefully coexist in parallel, just meters away from one another.

The *St. Sofia* multifamily residential building (**Fig.1**) can be described as anything but laconic. The front elevation is centrally baroque-like symmetrical and verticalized through projecting its central part forward into the street. It has three mouldings above each other and the balusters of the balcony railings are in the shape of antique Ionic order columns. This facade is a living proof that long periods of the history of architecture can fit just on a single facade.



Fig. 1 *St. Sofia* multifamily residential building at the corner of Rakovski and Moskovska St., Sofia,¹
Architect Lazar Parashkevanov

The *Karadzhat* multifamily residential building (**Fig. 2**), which is physically just a hundred or so meters away from *St. Sofia* building, seems to be an epoch away from it in terms of architectural styles. It is totally different with its modernistically horizontalized facade having no central axis. It lacks any ornamentation whatsoever. The structural properties of reinforced concrete to span large distances are made good use of to provide large window openings extending almost from column to column, ensuring good illumination of the deep rooms. Cornices and mouldings are all absent. Balusters are forsaken and left out to rest in peace.

¹ Picture taken in February 2012



Fig. 2 *Karadzhatia* multifamily residential building (on the left) in Moskovska St., Sofia,²
Architects Krastan Gechev and Petar Karasimeonov

5 AN INSIGHT INTO MULTIFAMILY RESIDENTIAL BUILDINGS

This part discusses four examples of multifamily residential cooperative buildings designed by famous Bulgarian architects: Ivan Vasilyov, Dimitar Tsolov, Angel Damyanov, Radoslav Radoslavov and Konstantin Dzhangozov. They were graduates respectively of *Polytechnische Schule* in Karlsruhe, *Polytechnische Schule* in Munich, *Polytechnische Schule* in Dresden, and the last two of *Ecole Spéciale d'Architecture* in Paris.

5.1 A 1935 condominium building *Graf Ignatiev* by the architects Ivan Vasilyov and Dimitar Tsolov

The *Graf Ignatiev* cooperative building is situated at a street corner. It has ground floor shops, four residential floors overlooking Graf Ignatiev St. and five residential floors overlooking Vasil Levski Blvd.

The number, size and location of vertical communications played a crucial role in the design of this well-functioning building. The staircases are designed without unnecessary ostentation, yet are not too small. Their size varies according to the number of apartments. The principal staircase is located very rationally in the inner corner of the building which is unsuitable for other rooms. The staircase light well makes it more spacious and imposing, but this design has also its rational basis – it allows the development of a comparatively large floor landing. Thus the latter serves two apartments, with two entrances each, on each of the five floors of the building. Due to the increased number of floors and apartments, an elevator is also present with its door comfortably placed in the optimized floor landing. The stairwell at the western blind wall has no elevator, since it serves only four apartments – one on each of the four floors.

5.1.1 Floor plan analysis

The floor plan of the building (**Fig. 3**) has three condominiums per floor, serviced by two stair wells. The presence of a second staircase by the west blind wall is a logical decision. First, it occupies a part of the unfavourable northern facade. Second, its presence makes it possible to avoid a corridor providing access from the central staircase to the apartment by the west blind wall, thus allowing the corner apartment to face three rather than two directions. In this way its living zone has a wide front to the south and east, the sleeping zone is designed to the east, and the service zone is developed on the northern facade in the area that could

² Picture taken before 1963

have otherwise been an access corridor to the western apartment. This makes it a model apartment in terms of its rooms' global orientation. The other two apartments face two directions. The three functional zones in all three condominiums are clearly distinct and face suitable global directions. Each apartment has two entrances – a front one and a “black” or “kitchen” one.

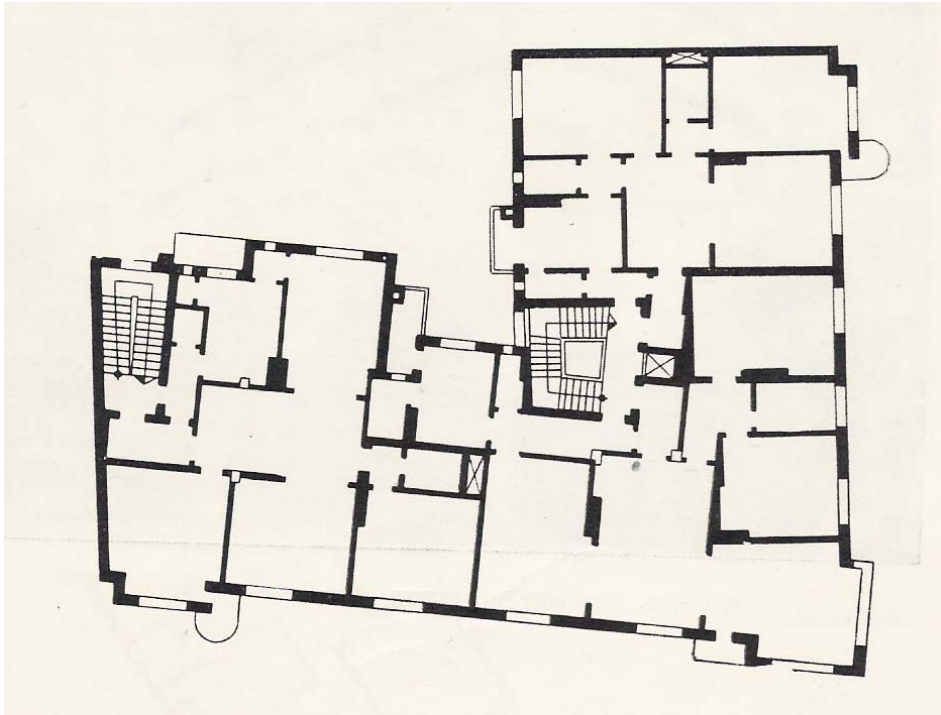


Fig.3 Floor plan of *Graf Ignatiev* multifamily residential building, Architects Ivan Vasilyov and Dimitar Tsolov



Fig.4 *Graf Ignatiev* multifamily residential building at the corner of Graf Ignatiev St. and Vasil Levski Blvd., Sofia ³

³ Picture taken before 1963

5.1.2 Features of the facades

The building (**Fig. 4**) is situated at a street corner and its own corner is emphasized upon through a double corner oriel projecting into the perpendicular streets. The oriel windows are accentuated through their larger horizontal dimension, compared to that of the windows in the other sections of the facade. Such oriels are typical of traditional Bulgarian residential architecture. The front elevations are flat with uniform, proportionally sized horizontal windows. The semicircular balconies on each side are very distinctive features of the elevations overlooking the two perpendicular streets. The internal facades overlooking the courtyard entirely follow the function of the rooms, thus a variety of different-sized windows appears on them. The overall design of the front elevations brings a whiff of German modernism, which is only natural since the authors of the building are German university graduates.

5.2 A 1938 condominium building on *Vasil Levski Blvd.* by architect **Dimitar Tsolov**

This cooperative building has six floors, five of which are residential. It is located on a wide boulevard and boasts nice views on two sides - a large park across the boulevard and a small one on the other side.

5.2.1 Floor plan analysis

The building contains one apartment per floor (**Fig. 5**) which faces north, east and south; and has a blind wall to the west. The common areas are minimal, yet the building has an elevator. The three functional zones of the apartments are clearly differentiated.

- The living zone faces north and east, because there are spacious parks and nice views in both directions, while the southern facade overlooks a internal courtyard. The zone consists of a dining room, living room, parlour and study.
- The sleeping zone faces east and south, has its own passage and two bedrooms separated by a bathroom.
- The service zone faces north and south and has a separate entrance. In this apartment it reaches the most eloquent development. It is divided into two autonomous parts. The kitchen, closet, servant's room and kitchen office face north. There is a guest bedroom facing south with a balcony and a bathroom.

5.2.2 Features of the functional links between the zones.

The passage of the sleeping zone has two entrances – one to the entrance area of the living zone and another one to the study. This solution provides unobtrusive and extremely functional link between the study and the bedrooms.

The service zone passage, accessible from the back entrance, quite rationally serves both the kitchen and the guest bedroom, while also being a buffer area between the two.

5.2.3 Features of the facades

The eastern facade (**Fig. 6**) facing the boulevard has a central and two side windows. The impressive appearance, sought for through the symmetrical disposition of the window openings, has been straightforwardly achieved, since the number and size of windows reflect the number, size and functionality of the rooms behind them.

The northern facade is a single plane with two graded by their functional importance sections – a higher and a lower one. The higher part is symmetrical like the eastern facade. Behind it stands the living zone. The second part – one floor lower – leaves the impression that this part of the building is a separate building. The proportion of the window openings is substantially different from that in the higher part.

The southern facade overlooks the courtyard and has a rational series of window openings with different widths.

The facades have achieved the desired stylishness without their functionality being disturbed. They are proportional compositions of window elements that at the same time provide enough light and comfort for the rooms behind them.

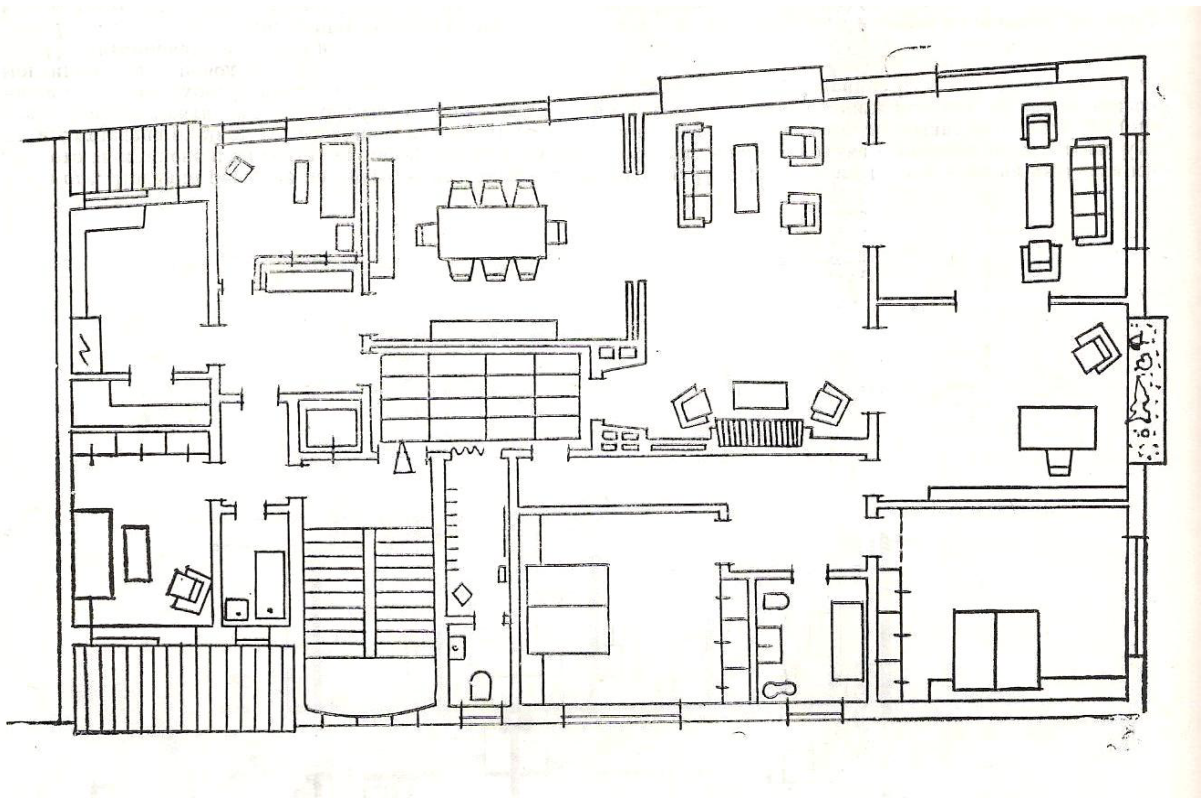


Fig. 5 Floor plan of cooperative residential building at the corner of Vasil Levski Blvd and Slavyanska St.
Architect Dimitar Tsolov



Fig. 6 Cooperative residential building at the corner of Vasil Levski Blvd. and Slavyanska St., Sofia⁴

⁴ Picture taken in 2012

5.3 A 1939 cooperative residential building at the corner of Vitosha Blvd. and Neofit Rilski St., Sofia, Architects Radoslav Radoslavov and Konstantin Dzhangozov

The *Ouroumov* cooperative building is a shining example of how functionality does not spoil beauty, neither does beauty infringe functionality. It is located at a street corner and contains eight floors of which seven are residential. There are three condominiums on each floor, but the last where there is only one. The common areas are designed to be representative – there is a broad staircase and two elevators.

5.3.1 Floor plan analysis

The floor plan (Fig. 7) is a superb example of apartments with clearly distinguishable three zones, rationally interconnected. The rooms are very well proportioned in size compared to one another, and in accordance with their function. In their arrangement the architects have achieved amazing results by using a simple compositional tool – symmetry.

The three apartments are designed around two perpendicular axes of symmetry around which whole functional areas are rotated. The corner apartment can be assumed to be the archetype of the other two apartments on the floor. The L-shaped part of the living zone (next to the north blind wall), and the sleeping zone of the apartment to the left (north) are a mirror image of the living and sleeping zones of the corner apartment. Thus the sleeping zones of the two apartments become adjacent. Similarly along the other axis of symmetry the service zone and part of the living zone of the apartment bordering the eastern blind wall are mirror images of those in the corner apartment. Thus the service zones of the two apartments become adjacent.

The axes of symmetry used in the design and the subsequent grouping of mirror zones of different apartments which have the same functions improve the comfort of the condominiums in two essential ways:

- enhances the comfort of living in the two apartments by creating neighbouring quiet sleeping zones;
- creates an opportunity for better ventilation of the wet zones by twice as large ventilation shafts. The shaft between the corner apartment and the apartment to the north ventilates three rooms, and in the other one – between the corner apartment and the one to the east – ventilates six rooms on each floor.

To put it in a nutshell: The floor plan is simply beautiful because it is beautifully simple.

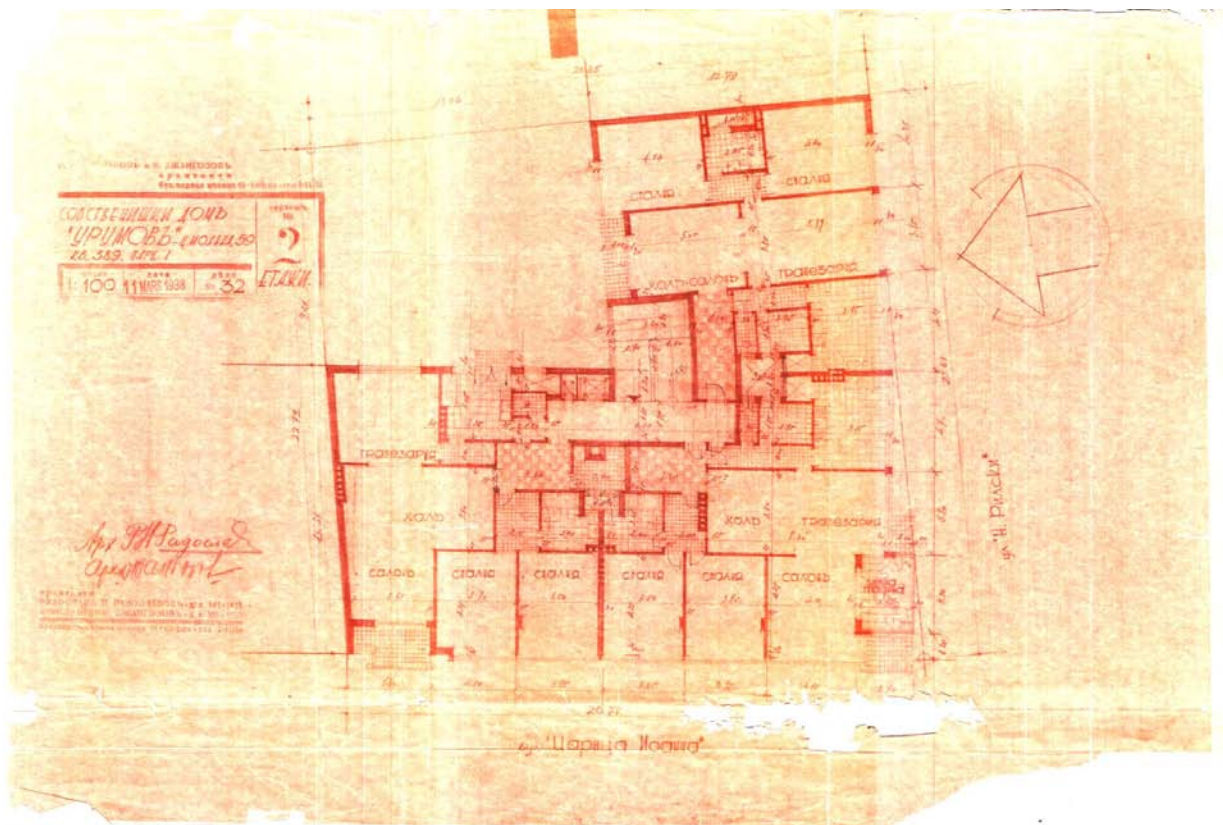


Fig. 7 Floor plan of *Ouroumov* cooperative residential building at the corner of Vitosha Blvd. and Neofit Rilski St., Architects Radoslav Radoslavov and Konstantin Dzhangozov



Fig. 8 Cooperative residential building *Ouroumov* at the corner of Vitosha Blvd. and Neofit Rilski St., Sofia⁵

5.3.2 Features of the facades

The front elevations (**Fig. 8**) – west and south – can be defined as nothing less than a triumph of modernism. The facades, projecting into the street, allow a radical horizontalization of the window openings, forming a continuous window strip. The detail designed for the drainage of the corner balconies – a horizontal slot, partially separating the floor slab from the solid balcony parapet, is both rational and extremely elegant. The railings of the loggias at the end of the west facade are a clear response to the De Stijl movement with its characteristic planes that do not intersect, thereby allowing each element to exist independently and unobstructed by other elements. In this case the reinforced concrete rectangles of the railings, supported by metal jambs, are completely visually separated from the horizontal floor structure below and from the adjacent walls.

The silhouette of the building is extremely dynamic. This is achieved through raising a top floor including only a part of the corner apartment, which crowns the building and creates an impression of verticalization of its corner. Thus the side of the corner, which forms a glass-and-white vertical band, stands in dynamic opposition to the horizontal strip windows disposed on both elevations. The building ends with a flat roof, crowned with a light-looking railing, dominated by three horizontal thin metal tubes.

The L-shape is a leitmotif of the building and is being repeated throughout it: from the verticalized corner climbing up the building and shaping an L in combination with the top floor, through the L-shaped plans of the living zones, to the water drainage slots' detail in the corner balconies' parapets. The cooperative residential building *Ouroumov* is a reminiscence of something almost extinct from the contemporary Bulgarian architects' 'skill-kit'. That is the ability to make a highly dynamic building be *consubstantial in all its elements* thus creating the impression of being sculptured from a single block of marble; the ability to create laconic masterpieces.

5.4 A 1942 cooperative condominium building on Oborishte St., Architect Angel Damyanov

The building contains one apartment per floor facing north, east, and south; with a blind wall to the west. The landings in front of the condominiums are larger than usual, due to the selected location of the elevator and the two entrances each of the apartments has.

⁵ Picture taken in 2012

5.4.1 Floor plan analysis

When developing the floor plan (**Fig. 9**) the architect has sought and successfully found a longitudinal axis of symmetry in north-south direction, most likely trying to achieve impressive appearance of the inner spaces. Taking this into consideration makes the spacious common access area and the placement of the lift away from the axis aesthetically justified. The functional zones are clearly defined and well designed in respect to the type and number of rooms. However, the strict symmetry of the composition has led to disproportionate sizes of the rooms compared to each other. For example, the kitchen is larger than both the study and the sitting room. The bedrooms have larger spans than the living room. These disproportions are partially overcome by the fusion of rooms belonging to the living zone into one another.

5.4.2 Zoning and features of the functional communication between the zones.

The three functional zones of the apartments are clearly differentiated.

- The living zone is logically placed along the axis of symmetry. Thus, it has an extremely representative formal look. It faces south and east.
- The sleeping zone is rationally designed through placing a loggia between the bedrooms – just outside the bathroom. This drawing back of the bathroom provides an opportunity for its very good lighting and ventilation through three windows yet retaining its intimacy. Its orientation is great – it faces east.
- The service area features a well designed kitchen office placed as a buffer between the kitchen and dining room.

The entrance area to the living zone is a bit larger which turns it into a small vestibule that in a rationally designed optimal way connects the three residential zones. This is a very good solution indeed, for it reduces the area of the walking lines through the living room, thus making it even more representative.

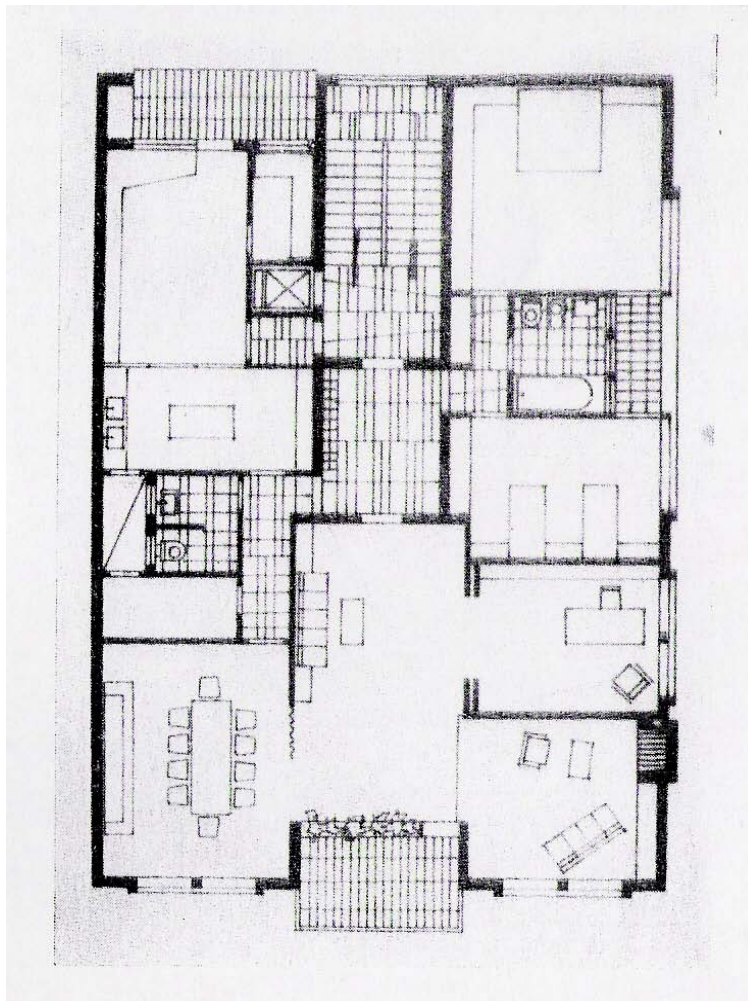


Fig. 9 Floor plan of cooperative residential building on Oborishte St., Architect Angel Damyanov

5.4.3 Features of the facade

The longitudinal axis of symmetry smoothly develops into front south-facing elevation (**Fig. 10**). The desire for verticalization of the window openings is achieved easily due to the high ceilings and through the cleverly coupled French windows providing a rigorously formal stance of the facade as well as sufficient lighting for the rooms behind it. The top floor is deliberately separated by a moulding to achieve a horizontal partitioning of the elevation into a ground rustic part, main residential floors and an attic floor. The facade, although turned into a resonance of past eras, is in no case placed mechanically onto the modernist floor plans. It is rather inextricably bound up with them, making the building a master example of concise eclecticism.

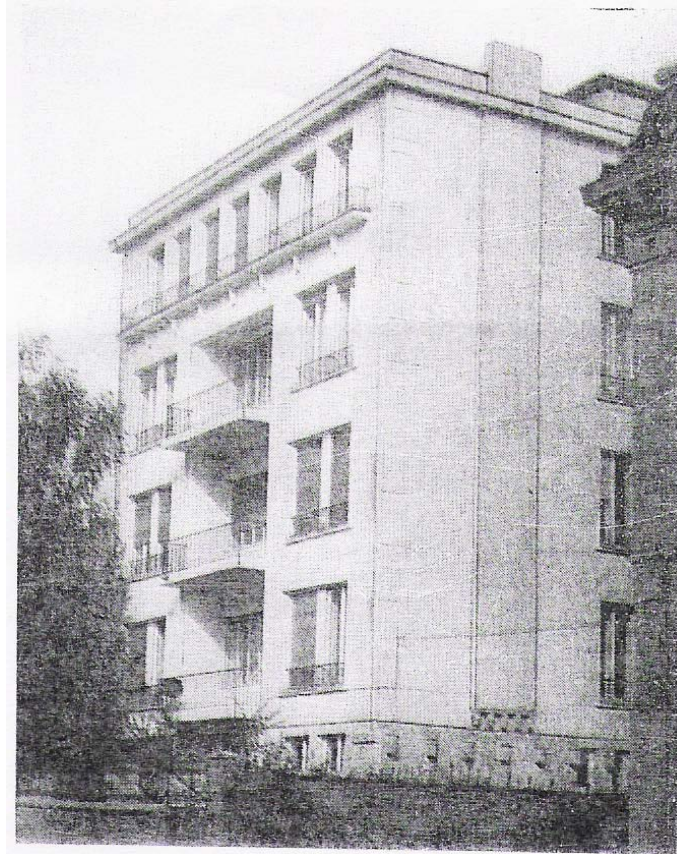


Fig. 10 Cooperative residential building on Oborishte St., Sofia⁶

6 CONCLUSION

The cooperative residential buildings from the 1930s and 1940s overviewed and those discussed in this paper prove the existence of various versions of buildings in the period. Depending on the aesthetic outlook of architects and the requirements of investors, a variety of facade solutions came into being ranging from extremely explicit to fully covert modernism. However, the floor plans of condominiums, regardless of their size, preserved their rational function-based zoning, as well as the modernistic smooth transitions between the rooms in the living zone. A functionally justifiable grouping of zones with the same functions belonging to neighbouring condominiums came into existence.

The architectural trend of the period could be clearly outlined - the multifamily residential buildings develop into a well-organized collection of aesthetically designed rational elements.

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⁶ Picture taken before 1963

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