

## SPATIAL ORGANISATION CONCEPT OF TWO-ENTRANCE APARTMENT

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**Abstract.** *The location of the entrance and its relation to the main functional apartment groups in multi-storey, multi-family buildings, is to a great extent determined by the organizational concept of the apartment. The apartments with auxiliary entrances are less present in practice, majority of apartments fit the spatial frame of the building itself. The apartments can border with the next apartment on the same floor, be oriented towards one or more facades, but what is of key importance in determining the number of apartment entrances and their positioning is the size of contact zone between the apartment and common communication areas, as well as the configuration of the apartment. The aims of this paper include the analysis of the main positions of the entrance and the concepts of apartment organization that they determine, analysis of characteristic concepts of two-entrance apartments in multi-storey, multi-family buildings and re-examination of the relation between the introduction of the additional entrance and the necessity of having constant or occasional segregation of certain activities in them.*

**Key words:** *architecture, housing, concept, two-entrance apartment.*

### 1. INTRODUCTION

The entrance to multi-family buildings is most often achieved directly from the corridor zone, the lift, the stairway or some other communal space. Due to economic reasons of the construction, the inclination is to restrict the zone of common communication as much as possible, which often hampers or makes it impossible to achieve the auxiliary entrance to the apartment space. In apartments with small surface area, there is usually only one entrance, while bigger apartments often have two, and sometimes (but quite rarely) multiple entrances. Depending on the configuration of the flat, architectural solution of the building,

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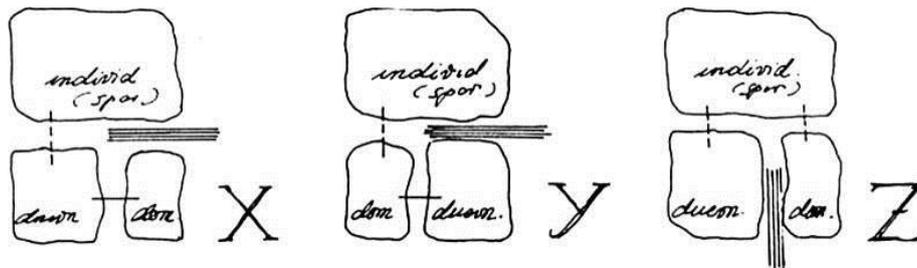
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as well as the needs of its users, the doors can lead directly or indirectly (via some of the “transitional” spaces)<sup>1</sup> from the living quarters towards the exterior space.

Numerous scientific research has been conducted so far, considering the organisation of the living space from different aspects and its influence on the following factors: usability value of the apartment, the quality of living, achievement of living comfort, compatibility of living functions, constructive systems, flexibility, etc., but there were just a few studies directed at theoretical consideration of the inter-relation of the functional apartment organisation and the position of the entrance. A significant contribution in this sense was made by Mate Bajlon, Grozdan Knežević, Milica Živković, Goran Jovanović and Mihailo Čanak<sup>2</sup>

When considering the basic concept of living space organization, Mate Bajlon stated that, generally speaking, there were three common concepts of apartment organization and he refers to these in his papers as “X”, “Y” and “Z” grouping concepts (Bajlon, 1979, 1975, 1972). (Fig. 1) By analysing the positions and inter-relation of the basic functional units in an apartment (common areas, individual areas and the household), Bajlon takes into consideration three characteristic positions of the apartment entrance (between the functional groups), without reference to the context and motives leading to application of just one, and not multiple entrances.



**Fig. 1** Possibility of connecting functional groups within an apartment with relation to the direction of entry movement (Source: Bajlon, 1979:40)

Grozdan Knežević studied the position of the entrance and its relation to functional groups within the apartment, with a particular focus on the middle and corner position of the entrance. Knežević stresses that the middle position of the entrance is used more often in practice, but that the corner position can be incorporated successfully by using extended circulation area and irregular contour of the apartment (Knežević, 1989:39).

Milica Živković and Goran Jovanović analyse the importance of the central and peripheral position of the entrance from the aspect of space organisation and achieving the flexibility and they find the central position more optimal as it enables the shortest connection between all parts of the apartment (Živković, Jovanović, 2012:25).

<sup>1</sup> The term “transitional space” in architecture means the space whose main purpose is to connect two or more main rooms. In the functional sense, transitional space can have the purpose of transit (connective space), the purpose of preparation (transitional space) or the purpose of greeting guests. When looked at from the aspect of the position, they can be placed between the interior and the exterior, between the two interior or two exterior spaces (Kray, Fritze, Fechner, Schwering, Li, Anacta, 2013:17).

<sup>2</sup> Bajlon, 1979, 1975; Knežević, 1989; Živković, Jovanović, 2012; Čanak, 1976; et al.

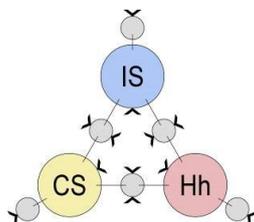
In his study on the functional concept and usability value of the apartment Mihailo Čanak assesses the ways to achieve a certain connection in housing functions of the apartment (Čanak, 1976:306). According to this study, optimal relations are established by connecting the entrance with a) living room (in the form of extended or integral connection), b) dining (in the form of extended or integral connection), c) kitchen, d) toilet or e) bedroom (in the form of a *dégagement*).

After analysing a range of reference books dealing with the area of housing, it can be concluded that up to now, there has been no research into the concept of the apartment with two or more entrances, although multiple examples of such flats have been present in the architectural practice. The aims of this paper are:

- 1) Analysis of basic positions of the entrance and the concept of apartment organization stemming from them,
- 2) Analysis of characteristic concepts of two-entrance apartments in multi-storey, multi-family buildings and establishing the most frequent starting points that define their spatial and functional organisation, and
- 3) Examining the viewpoints that claim that the need for introduction of additional apartment entrance is characteristic in situations when, due to certain reasons, it is necessary to enable constant or occasional segregation of certain activities within the apartment.

## 2. APARTMENT FUNCTIONAL ORGANIZATION AND ENTRANCE POSITION

Relying on theoretical stands expressed by Mate Majlon, referring to basic concepts of living space organization (Bajlon, 1979, 1975, 1972), it can be stressed that, along with three above stated concepts of apartment organization, that Bajlon named “X”, “Y” and “Z” grouping method<sup>3</sup>, in a wider sense we can also identify three more methods, resulting from the possibility of direct entrance into one of the living space functions. Thus, it is possible to determine twelve characteristic positions of an apartment entrance, as shown in the scheme below (Fig. 2).

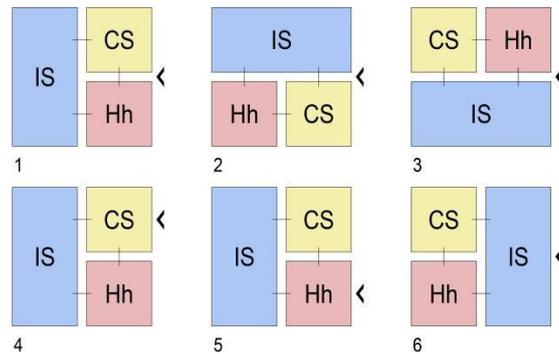


**Fig. 2** Main positions of apartment entrance (IS – individual space, CS – common space, Hh - household) (Source: author’s archive)

<sup>3</sup> Mate Bajlon does not state in his research which spaces he denotes as main groups of rooms in an apartment, but he identifies “common space” with the living room, “household” with the kitchen and “individual space” with sleeping and hygiene, in this way aspiring to abstract the concept of organization of the apartment into primary factor, as to make it easier to be understood and schematically presented. By analyzing numerous examples which illustrate his claims, it can be concluded that when using the term “common space” he means, along with the living room, free spaces (terrace, loggia), quite often even the dining room, if it was designed as the extension of the living room (the so-called “common table”); “household” stands for the kitchen and dining room, if it was an extension of the kitchen, then the pantry, sometimes the toilet; while the term “individual space” meant the bedroom or bedrooms, with bathroom, *dégagement* and sometimes the toilet.

If we were (during the course of extensive analysis) to eliminate from further consideration sub-versions of “external” and “internal” apartment entrance<sup>4</sup>, in accordance with the shown scheme, we can get the following typology of apartment entrance (Fig. 3):

- 1) Indirect entrance between common space and the household
- 2) Indirect entrance between common and individual space
- 3) Indirect entrance between individual space and the household
- 4) Direct or indirect entrance through common space
- 5) Direct or indirect entrance through household space
- 6) Direct or indirect entrance through individual space



**Fig. 3** Typology of the main concepts of apartment organisation with relation to the entrance position (IS – individual space, CS – common space, Hh - household)  
(Source: author’s archive)

It is important to stress that not all presented entrance positions are of the same importance in terms of functional organisation of the apartment, nor can they provide equally good solutions. Depending on the position, importance, purpose or access, entrances can be divided according to:

- importance (or frequency) – into *primary* (main) entrance, used most often and *secondary* (auxiliary) entrance, used occasionally;
- position – into *external* entrance, through the external contour of the apartment (on the horizontal plane) and *internal* entrance, through the communication core in the centre – lift or staircase (on a vertical plane);
- type of access – into *direct* entrance, which directly leads into one of the main living space rooms and *indirect* entrance, through one of the “connecting” rooms (windbreak, dégagement, corridor, loggia, terrace, balcony, etc.);
- purpose – into economic, service, fire escape, staff entrance, etc.

<sup>4</sup> The term “external entrance” refers to the access through the external contour (as seen from the horizontal plane), while the “internal” entrance refers to an access through the center of the flat from the communication core (the staircase or the lift) and it is found mainly in large apartments with a core area.

### **2.1. Entrance between common areas and the household**

In this type of apartment organisation the direction of entry movement divides the direct connection between common areas and the household. The position of the entrance enables quick access to the daily zone, through entry area and quick provisions required by household. Individual zone of the apartment is positioned away from the entrance, which, in certain situations, can impede the aim to achieve isolation and lead to reduction of the intimacy of occupants. Cutting off the direction of entry movement from the common space and household area can disturb the functioning of this quite frequent communication in the apartment (Čanák, 1976:203). This position of entry is mainly adequate for the main entrance to the apartment, although it can be used in some of the secondary entrances, such as economic, servants' entrance, business entrance in residential and business apartments, i.e. when the block of common rooms includes working space (office, library or cabinet room).

### **2.2. Entrance between common and individual areas**

In this type of apartment organisation the direction of entry movement divides the direct connection between common and individual areas. The position of the entrance enables quick access to common and individual areas through entry area. The position of the entrance does not disturb the connection between common areas and household areas, while the distance of the household area from the entrance (and in some cases difficult provision for the household) can affect the activities carried out in the common areas. According to research by Boumová and Zdráhalová, this is one of the most preferred entrances by architects, as it enables a direct access to common areas, central position of the living room and achievement of the minimum of communication in the apartment (Boumová, Zdráhalová, 2016:37). This position of entry is mainly adequate for the main entrance to the apartment, although it can be used in some of the secondary entrances, such as business entrance in residential and business apartments, i.e. when the block of common rooms includes working space (office, library or cabinet room) or in cases when it is desirable to have auxiliary entrance for younger occupants or for the third generation of occupants.

### **2.3. Entrance between individual areas and the household area**

In this type of apartment organisation the direction of entry movement divides the direct connection between the household area and individual areas. The position of the entrance does not disturb the connection between common areas and household areas and at the same time it enables quick access to household area, as well as provisions for the household through the entrance area. The proximity of individual areas enables undisturbed use of both the daily and the night zone, as well as achieving the required intimacy in the apartment. In some cases, the distance of common areas from the entrance zone can lead to cutting off the direction of visitors' movement and interrupted connection with the group of rooms reserved for personal life of all family members, and this has a negative effect on organisation of life within the apartment. (Bajlon, 1979:46). This position of entry is mainly adequate for the main entrance, although it can be used in some of the secondary entrances, such as economic, servants' entrance (as it is close to household areas), or in cases when it is desirable to have auxiliary entrance for younger occupants or for the third generation of occupants.

#### **2.4. Entrance through common area**

In this type of apartment organisation, the direction of entry movement penetrates directly or indirectly into the common area zone. Most often, it is thought that on entering the apartment it is necessary to provide adequate "preparation" area which enables the adequate level of preparation, for either the guest or the occupant, before they enter the intimate zone of the apartment, even in case of common areas. This "preparation" area can be in the form of the windbreak, staircase, corridor, lift or any other type of connecting area, depending on the structure of the apartment, i.e. the character that we want to achieve. Since the connection with individual areas and the household area is established through common areas, it is often necessary to introduce "circular connection" in order to achieve the required relation between functional groups (Alfirević, Simonović Alfirević, 2018). This position of apartment entrance is primarily fit for some of the auxiliary entrances (business entrance or the one for receiving guests), which are used less often and are expected to lead to some of the common areas (drawing room, cabinet room, library), areas not associated with the intimacy requirements. However, if the entrance leads to common rooms used primarily by the family (living room, dining room, TV room, etc.), and the preparation prerequisites were not met, i.e. there is no intimacy at the moment of entering the room, this could create functional conflicts.

#### **2.5. Entrance through household area**

In this type of apartment organisation, the direction of entry movement penetrates directly or indirectly into the household area. As the household can, in a way, be considered an unrepresentative zone of the apartment, not meant to be seen by visitors, due to different rhythms and ways of maintenance, the entrance through household zone cannot be deemed as an adequate solution for the main entrance. In apartments with smaller surface areas, where the aim is to form the daily zone by maximally using the lit part of the apartment. This places the kitchen, out of necessity, at the far end of the daily zone, close to the entrance. On the other hand, the existence of auxiliary entrance thorough the household area, especially in larger apartments or apartments with servants, can contribute to usability value of the apartment, as the activities such as receiving guests or supplying the household can be conducted simultaneously and undisturbedly.

#### **2.6. Entrance through individual space**

In this type of apartment organisation, the direction of entry movement penetrates directly or indirectly into the individual space. As individual space requires the highest level of intimacy in the apartment, in most cases this position of entrance is not suitable for the main apartment entrance. A specific case of apartment organization which can, in certain versions and in an acceptable way, use this position of entrance is the concept of the apartment with a corner entrance, which requires a direct connection of one of the functional groups with the entrance (most often individual group of rooms), with the use of an extended communication area or a circular connection (Knežević, 1989:39). This entrance position is most suitable for some of the auxiliary entrances, particularly when we want to achieve a higher level of autonomy of the room for guests, younger occupants or the third generation of occupants. Grozdan Knežević is of the opinion that the intimate zone of the apartment should under no circumstances be "exposed" to the entry area, regardless of the size of the apartment (Knežević, 1989:44).

### 3. CHARACTERISTIC CONCEPTS OF TWO-ENTRANCE APARTMENTS

Previously discussed typology examined possible positions of the entrance in the living courters in a multi-storey, multi-family building and its impact on the layout of the main functional groups, whether it is the main or auxiliary apartment entrance. We also stressed which type of entrance was the most suitable for certain apartment organisation. In order to establish what motives could initiate the choice of having the secondary entrance along with the main entrance, it is necessary to analyse characteristic concepts of two-entrance apartments.

#### 3.1. The apartment with auxiliary entrance through the kitchen

Auxiliary entrance through the kitchen is most frequently used in situations when it is necessary to visually isolate the household area as a unit separate from the rest of the apartment, which enables easier supply and functioning of the household. In this type of apartment organization the dining area is most often separated from the kitchen area and is an independent space (or part of the living room, in the open-plan type of space), while the area for receiving guests and other social activities of representative character are distanced from the potentially unrepresentative space. (Fig. 4) The need to separate the kitchen and have an auxiliary entrance is also present when the kitchen is used intensively, as well as in apartments with more occupants or three-generation families. Due to different lifestyle rhythms and specific individual needs, it is necessary to achieve a certain level of autonomy of the kitchen space. The entrance through the kitchen can be achieved indirectly or directly, while the secondary spaces, whose purpose is subordinate to the functioning of the household (pantry, service room, terrace, loggia, etc.)



**Fig. 4** Characteristic apartments with auxiliary entrance through the kitchen: 1) Kanchanjunga tower, Mumbai (Charles Correa Associates, 1983), 2) Ninetree Village, Hangzhou (David Chipperfield Architects, 2008), 3) Rue Franklin Apartments, Paris (Auguste Perret, 1904) (Source: author's archive)

#### 3.2. The apartment with auxiliary servants' entrance

Unlike examples with auxiliary entrance through kitchen used mainly by family members, in apartments with auxiliary service entrance, it is used for the staff maintaining the apartment or helping in different activities. This approach is characteristic of larger

living spaces, with areas too large to be maintained by a family, but in adequate social and economic conditions when a family can afford to engage help outside the family to run the household and carry out service tasks (Brkanić, Stober, Mihić, 2018:27). These apartment concepts are characterised by having a separate block for accommodation of one or more servants, and the block is directly connected with the household area. (Fig. 5). Servants' block can be an integral part of individual areas or can be completely separate, but in such a position which is close to common apartment areas (Kubet, 2015:182; Cunha, Trigueiro, 2005:39). In the past, this apartment concept was much more used, as hiring servants was much more affordable (Gürel, 2012:115; Ducat, 2007:10; Alfirević, Simonović Alfirević, 2017:7). Nowadays the concept of having servants is mainly found in capitalistic societies and in well-off families that can afford it.



**Fig. 5** Characteristic apartments with auxiliary servants' entrance: 1) Apartment building at Carrer del Mestre Nicolau, Barcelona (Francesc Mitjans, 1960), 2) Seida building, Barcelona (Francesc Mitjans, 1962), 3) Banco Urquijo, Barcelona (José Antonio Coderch, 1967) (Source: author's archive)

### 3.3. The apartment with auxiliary entrance through individual space

Although we mentioned previously that the main entrance into individual spaces can be functional in rare cases, in apartments with this type of entrance serving as auxiliary entrance, its existence can contribute to better functioning. It enables the option of separation from the individual block and autonomous functioning of certain activities carried out in it. According to Bajlon, the contribution to good apartment organisation is also proven by the fact that in such an apartment children and their friends can engage in activities separated from the activities of parents and their visitors (Bajlon, 1979:45). In apartments with multi-generation structure of occupants it is desirable to achieve a higher level of intimacy in spatial units, which justifies the existence of the auxiliary entrance that can be used on special occasions, when family members require to be separated from others in order to perform their own activities (social activities of younger occupants, arriving back home later in the evening, etc.), particularly if the individual spaces include secondary space for family gatherings (Ghadir, 2016:52). (Fig. 6)



**Fig. 6** Characteristic apartments with auxiliary entrance through individual space: 1) Cité Descartes, Marne-la-Vallée (Yves Lion, 1995); 2) Housing in J. S. Bach street, Barcelona (José Antonio Coderch, 1957); 3) Holland Green, London (OMA & Allies & Morrison, 2016) (Source: author's archive)

#### 3.4. The apartment with auxiliary entrance through working space

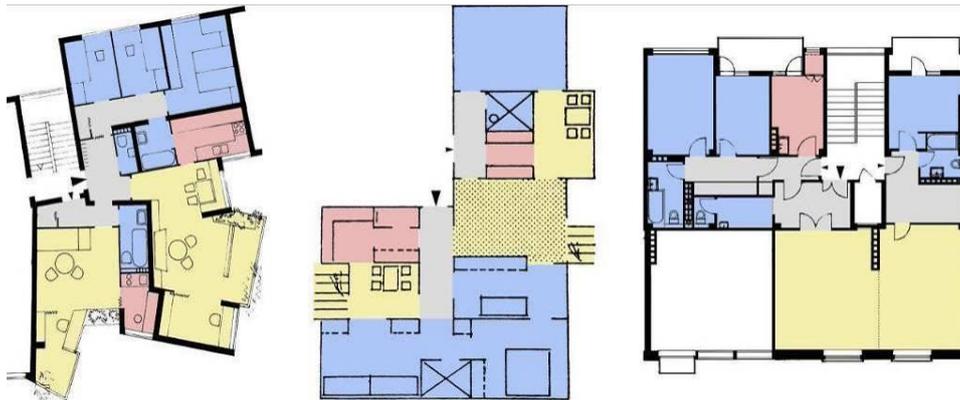
The concept of the apartment with joined residential and business activities, the use of auxiliary entrance through the working space can be of multiple importance. Depending on the type and intensity of business activities carried out in the apartment, auxiliary entrance can lead into: a) working room (cabinet), connected to the common space of the apartment, b) working block (office with kitchenette and sanitary block), reserved for business activities and reception of clients and c) indirectly to linked functional unit with developed space structure (business area with kitchen, sanitary block, pantry, bedroom, etc.). In rare cases, when the scope of business is intensive and includes receiving frequent clients, it is possible to use the main entrance, for representative purposes, to receive clients, while the auxiliary entrance can be used by family members. (Fig. 7)



**Fig. 7** Characteristic apartments with auxiliary entrance through working space: 1) Casa N, Murcia (Ad-Hoc, 2015); 2) Residential building in Senjak, Osijek (Andrija Mutnjaković, Stanka Polić, Ivan Tomičić, 1968); 3) Photographer's Loft, New York (Desai Chia Architecture, 2014) (Source: author's archive)

### 3.5. The apartment with the option of unit division

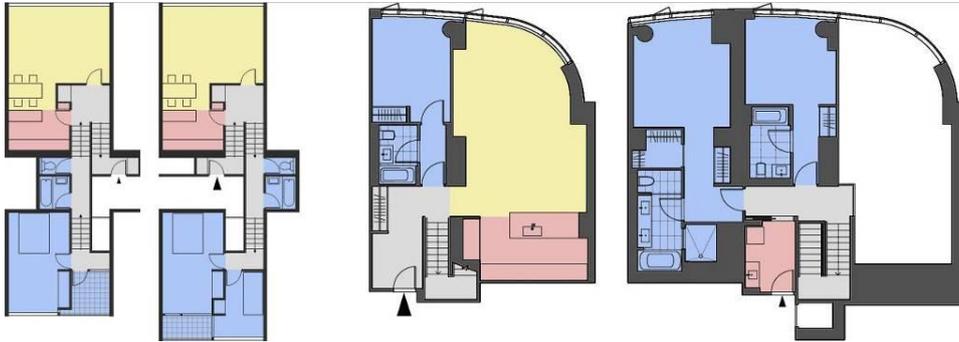
In cases of multi-generation family units, the concept of apartment organisation with division options enables the independence of grown-up children or younger couples, as well as the elderly, who can be close to their family members if they need care, but also live independently (*In-law suite*) (Borsi, 2018:1116). Functional units can be of the same size and structure or in subordinate positions, but both must have all the essential spaces, that two separate apartments would have. Most often, they are linked through the entrance zone connection, which achieves unity of space, as in the concept of dual-key apartment. Depending on the organisation concept, the units can share certain contents, such as common space or household areas, which in some cases can disturb intimacy within these units. If one unit is subordinate to the other, i.e. when it has a more minimalist space structure, the minimum required is the existence of the room and the bathroom, sometimes even the kitchen. According to Bajlon, the solution of two connected flats on the same floor, which can be enlarged, or reduced by adding or reducing space of one of the units is considered one of the most optimal solutions in cases when the number of family members is increased or reduced (Bajlon, 1979:51). (Fig. 8) In shared apartments, such as apartments which are rented, apartments for students or the elderly, there could be separate entrances to separate rooms with bathrooms, while the common spaces include the kitchen, living room or working space.



**Fig. 8** Characteristic apartments with the option of unit division: 1) Siemensstadt, Berlin (Hans Scharoun, 1958) (Source: Borsi, 2018:1116); 2) Apartment "plus-minus" (concept) (Source: Mate Bajlon, 1979:51); 3) Residential building at 14 Pariska street, Belgrade (Mirko Jovanović, 1956) (Source: author's archive)

### 3.6. The apartment with auxiliary entrance on the second level

Secondary entrances are quite often found in duplex apartments or maisonette apartments, spreading on two or more levels, as their use shortens the way from the entrance to distant rooms. In most cases their functions are divided, on two levels, into daily or night functions, with main entrance leading to common rooms, while auxiliary entrance leads to individual space or sometimes, to service zone. The importance of separating the entrance in this kind of apartment organisation concept is reflected in light differentiation of zones and achieving a higher level of intimacy in the apartment. (Fig. 9)



**Fig. 9** Characteristic examples of apartments with auxiliary entrance on the second level: 1) Corringham building, London (Kenneth Frampton, 1960); 2) 50 West, New York (Helmut Jahn, 2018) (Source: author's archive)

### 3.7. The apartment with auxiliary fire escape

In apartments in higher buildings, along with the main entrance, reached through common communication areas or directly from the lift leading inside the living quarters, there is often an additional entrance/exit in the form of fire escape, which is not used except in rare situations, for evacuation purposes. Although the role of this type of entrance is mostly peripheral for everyday activities, as it is primarily an emergency exit, it can be used more frequently in order to reduce or neutralize the zone of internal communications within the apartment (corridor, dégageant, and hall). (Fig. 10)



**Fig. 10** Characteristic apartments with auxiliary fire escape: 1) Zellwegerpark Apartment Building, Uster (Herzog & de Meuron, 2015); 2) Tides IV, Charleston (LS3P, 2015) (Source: author's archive)

## 4. DISCUSSION

Summarising the results of the analyses of characteristic concepts of two-entrance apartments and the motives that might initiate their use, it can be concluded that the concepts of apartments with second-level entrance and the apartment that can be divided

into two units, achieve the greatest number of motives. (Tab. 1) This conclusion can be explained by the fact that in the above mentioned concepts, two-space units can be clearly identified in the internal structure (in the horizontal and vertical sense), with the highest level of autonomy, which makes it possible for them to function as separate apartments, while at the same time being part of the same apartment.

**Table 1** Presentation of the most significant motives and concepts of apartment organisations with auxiliary entrances (Source: author's archive)

| Spatial organization concept                               | Application motifs for the auxiliary entrance |                             |   |  |   |   |  |                                       |   |   |   |
|--|---|-----------------------------|---|--|---|---|--|---------------------------------------|---|---|---|
|  | Direct access and supplying of household      | Achieving of users intimacy | Differentiation of activities (occupants and service) | Differentiation of activities (elders and younger) | Differentiation of activities (occupants and clients) | Differentiation of activities (occupant-senior and caregiver) | Differentiation of activities (occupants and guests) | Separate units that use common spaces | The possibility of phase space adaptation | Shortening of communication to the entrance | The evacuation of occupants in case of intervention |
| Apartment with auxiliary entrance through the kitchen      | ●   | ●                           | ●   | ○  | ○   | ○   | ○  | ○                                     | ○   | ○   | ●   |
| Apartment with auxiliary servants' entrance                | ●   | ●                           | ●   | ○  | ○   | ○   | ○  | ○                                     | ○   | ○   | ●   |
| Apartment with auxiliary entrance through individual space | ○   | ●                           | ○   | ●  | ●   | ○   | ○  | ○                                     | ○   | ○   | ●   |
| Apartment with auxiliary entrance through working space    | ○   | ●                           | ○   | ○  | ●   | ○   | ○  | ○                                     | ○   | ○   | ●   |
| Apartment with the option of unit division                 | ○   | ●                           | ○   | ●  | ○   | ●   | ●  | ●                                     | ●   | ○   | ●   |
| Apartment with auxiliary entrance on the second level      | ○   | ●                           | ○   | ●  | ○   | ●   | ●  | ○                                     | ●   | ●   | ●   |
| Apartment with auxiliary fire escape                       | ○   | ●                           | ●   | ●  | ○   | ○   | ○  | ○                                     | ○   | ○   | ●   |

On the other hand, when considering the presence and significance of certain motives in two-entrance apartment constitution, it can be noticed that the aim to achieve intimacy for different categories of users is of paramount significance when making the decision which of the analysed concepts to apply. What is of minor importance is the possibility that each of the secondary entrances can serve the purpose of evacuating the occupants in emergency situations, which can be taken as particularly important in apartments with large surface area, which, due to the larger number of rooms can be complex, and some parts can be quite far from the main entrance. Of equal importance is the option of direct access and household provision activity, which, as historically proven, contributed to the segregation of the activities performed by occupants and servants. Although it seems that the group of motives encouraging differentiation of activities of occupants is the most influential (as it is the most numerous group), the primary motive initiating all forms of differentiation or

segregation is the aspiration towards achievement of intimacy required by the occupants. However, the presented table showing the relation between the apartment concepts and the motives is still not an accurate indicator of real-life conditions, i.e. the frequency of certain concepts. It only indicates potential cause-and-effect connections, which could be further explored in research of a wider scope.

If we consider grouping apartments with two or more entrances into the same dwelling cluster, we can conclude that there is a large number of combinations that could be achieved. As in most cases these are large surface space apartments (100 - 250m<sup>2</sup>), the most frequently used approach is to combine two apartments per floor, and in rare situations a single apartment spreading over the whole surface area of the floor. Grouping three or more apartments within one dwelling cluster is the least frequently used approach and is found most often when combining two residing units with two entrances and one single-entrance apartment or in duplex apartments, when the entrance to the apartment can be accessed from interior corridor or the gallery, from different levels.

## 5. CONCLUSION

Our paper explored cause-and-effect relations between the entrance and the concepts of spatial organisation of apartments in multi-storey, multi-family buildings. Generally, the paper focused on possible positions of apartment entrances, whether they were main or auxiliary entrances, their influence on the distribution of basic functional groups in a living space. On the other hand, the paper also analysed characteristic concepts of two-entrance apartments in multi-storey, multi-family buildings, aiming to establish the most frequent starting points which determine the characteristics of their spatial and functional organisation.

The starting hypothesis, claiming that the introduction of additional entrance to the apartment emerges when it is necessary to enable constant or temporary segregation of certain activities, was proven as true, with additional note that the primary motive (leading to numerous other motives) is the aspiration to achieve an adequate level of intimacy of the apartment users.

The research included primarily the concepts of two-entrance apartments, which constitute the most numerous group, while indicating possible further research, focusing on apartments with three or more entrances. The relevance of this paper lies mainly in promoting the possibilities stemming from concepts of two-entrance apartments and which are reflected in achieving better functional connections in the living space and increasing its usability value.

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## REFERENCES

1. AlfIREVIĆ Đ., SIMONOVIĆ ALFIREVIĆ S. (2018) „Koncept kružne veze u stambenoj arhitekturi / 'Circular Connection' Concept in Housing Architecture”, *Arhitektura i urbanizam* 46, pp. 26–38.
2. AlfIREVIĆ Đ., SIMONOVIĆ ALFIREVIĆ S. (2017) „'Salonski' stan između dva svetska rata u Srbiji: Preispitivanje opravdanosti korišćenja termina / 'Salon' Apartment in Serbia Between the Two World Wars: Reassessing the Rationale Behind the Term”, *Arhitektura i urbanizam* 44, pp. 7–13.
3. Bajlon, M. (1979) *Stanovanje - Tema 1: Organizacija stana*. Belgrade: University of Belgrade Faculty of Architecture.
4. Bajlon, M. (1975) „Stan u Beogradu”, *Arhitektura urbanizam* 74-77, pp. 23–42.
5. Bajlon, M. (1972) „Neka pitanja u vezi sa upotrebom vrednosti stana”, *Izgradnja*, special issue „Stan i stanovanje”, pp. 27–38.
6. Borsi, K. (2018) „Hans Scharoun's 'Dwelling Cells' and the autonomy of architecture”, *The Journal of Architecture* 23/7-8, pp. 1104–1142.
7. Boumová I., Zdráhalová J. (2016) „The Apartment with the Best Floor Plan Layout: Architects versus Non-architects”, *Critical Housing Analysis* 3/1, pp. 30–41.
8. Brkanić I., Stober D., Mihić M. (2018) „A Comparative Analysis of the Spatial Configuration of Apartments Built in Osijek, Croatia, between 1930 and 2015”, *Journal of Asian Architecture and Building Engineering* 17/1, pp. 23–30.
9. Cunha V., Trigueiro E. (2005) „Towards a diachronic panorama of apartment living in Brazil”, in: van Nes, A. (ed.) *Proceedings from Space Syntax 5th International Symposium*, Delft: University of Technology, pp. 29–42.
10. Čanak, M. (1976) *Funkcionalna koncepcija i upotrebna vrednost stana*, Belgrade: Institute for Testing of Materials, Center for Housing.
11. Ducat, V. (2007) *Two for One: The "Cutting up" Trend - Apartment Modernization in 1930s Manhattan*, master thesis. New York: Columbia University.
12. Ghadir, A. (2016) *An Analysis of Privacy Through Plan Organization in North Cyprus Mass-Housing Apartment Units*, master thesis. Gazimağusa: Eastern Mediterranean University.
13. Gürel, M. (2012) „Domestic Arrangements: The Maid's Room in the Ataköy Apartment Blocks, Istanbul, Turkey”, *Journal of Architectural Education* 66/1, pp. 115–126.
14. Knežević, G. (1989) *Višestambene zgrade*. Zagreb: Tehnička knjiga.
15. Kray C., Fritze H., Fechner T., Schwering A., Li R., Anacta V. (2013) „Transitional Spaces: Between Indoor and Outdoor Spaces”, *Proceeding from International Conference on Spatial Information Theory COSIT 2013*, Scarborough, UK, September 2-6, pp. 14–32.
16. Kubet, V. (2015) *Arhitektonski diskursi promena odnosa funkcije i forme savremenog stana*, PhD thesis. Novi Sad: Faculty of Technical Sciences.
17. Živković M., Jovanović G. (2012) „A Method for Evaluating the Degree of Housing Unit Flexibility in Multi-Family Housing”, *Facta Universitatis, Series: Architecture and Civil Engineering* 10/1, pp. 17–32.

## KONCEPT PROSTORNE ORGANIZACIJE STANA SA DVA ULAZA

*Položaj ulaza i njegov odnos prema osnovnim funkcionalnim grupama u stanu u višespratnim višeporodičnim objektima, u velikoj meri određuje koncept organizacije stana. Stanovi sa pomoćnim ulazima su manje prisutni u praksi, jer je većina stanova „upakovana” u prostorni okvir zgrade. Stanovi se mogu graničiti sa susednim stanovima na istom spratu, mogu biti orijentisani prema jednoj ili više fasada, ali za određivanje broja ulaza u stan i njihovo pozicioniranje, od presudnog značaja su veličina kontaktne zone između stana i zajedničkih komunikacija, i konfiguracija stana. Ciljevi ovog istraživanja obuhvataju analizu osnovnih pozicija ulaza i koncepata organizacije stanova koje oni određuju, zatim, analizu karakterističnih koncepcija stanova sa dva ulaza u višespratnim višeporodičnim objektima, kao i preispitivanje relacije između uvođenja dodatnog ulaza u stan i neophodnosti stalne ili povremene segregacije pojedinih aktivnosti u njemu.*

**Ključne reči:** arhitektura, stanovanje, koncept, stan sa dva ulaza.