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The home as a resource.

From privacy to relations, between rooms and open spaces

Abstract

During the current pandemics several themes have emerged also concerning architecture. Among these there are the different forms of home living. This has been an extraordinary situation in which we had to do more activities within the same home environment: education, work, and workout have claimed their own legitimate space within our homes in order to enable us to continue carrying out multiple tasks at the same time. We have felt the need of an alternative dwelling model and realized that we should require our homes to be more adaptable, even in not so dramatic emergency circumstances. The need of housing flexibility requires a re-thinking of distribution criteria which could affect the structures of our buildings.

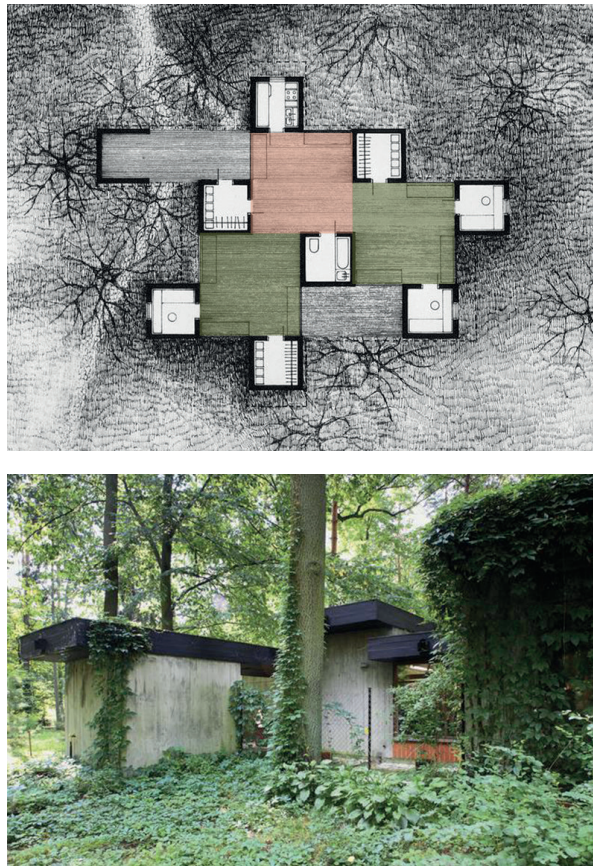
Keywords

Flexibility — Home — Work — Room — Architecture

A home conceived as an assemblage of small independent units which can be joined into a single or more units according to ever changing needs can offer economic advantages and thus become a resource if we assume that some of these parts can function as places attached to the home to work, study, host people and generate income¹. A certain number of changes can be made to the inner space during the 24th day/night cycle.

A further theme has come out in the lapse of time between the pre- and post-Covid periods: before the pandemics outbreak we could notice in the new generations a certain marked indifference for face-to face interaction, replaced by a preference for virtual relations. I could observe a certain degree of indifference in students of Architecture when asked to think about the two main places of communal life, the living room inside the home and the square as a space framed by buildings which give it its own peculiar gathering features². When compared with the popularity of social networks, real space seemed to have been entirely forgotten. The loss of interest for the space of communal real life represents a historical oddity which could have serious consequences even for the city's cultural and architectural heritage. A few months later, this tendency seems to have been replaced by the wish to go back to face-to-face contacts with people and things³. The effects of this new phenomenon are hard to predict. The search for a new housing model providing a link between private and public space can be a first step towards a new idea of complexity connecting the house to the city in the different settlement models: consolidated city, village, suburban sprawl, natural resort, etc.

We are aware of the consequences of globalization on people's lifestyle, on their daily habits and search for standard comfort and we also know about

**Fig. 1-2**

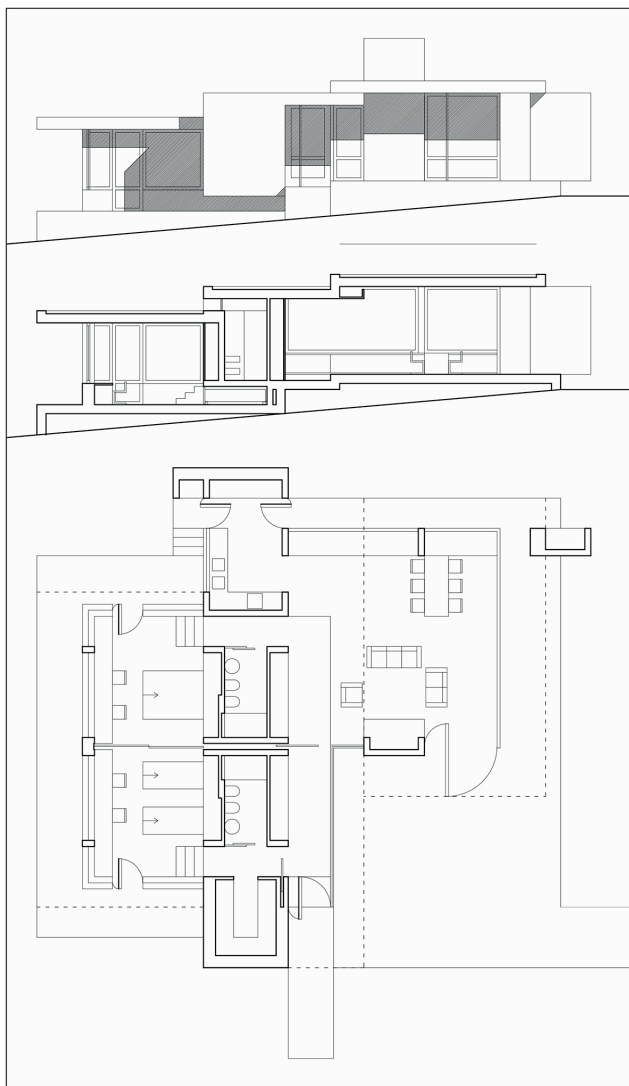
Jan Szpakowicz, house in the wood in Zalesie Dolny (Warsaw) -early '60s.

On the top hand-side, floor-plan of the three living rooms facing the separate nuclei of the two sleeping rooms, kitchen, bathroom and wardrobe. At the bottom, a picture by Marek Kambler showing the different heights of the floor-slabs and the connection between the building and the wood.

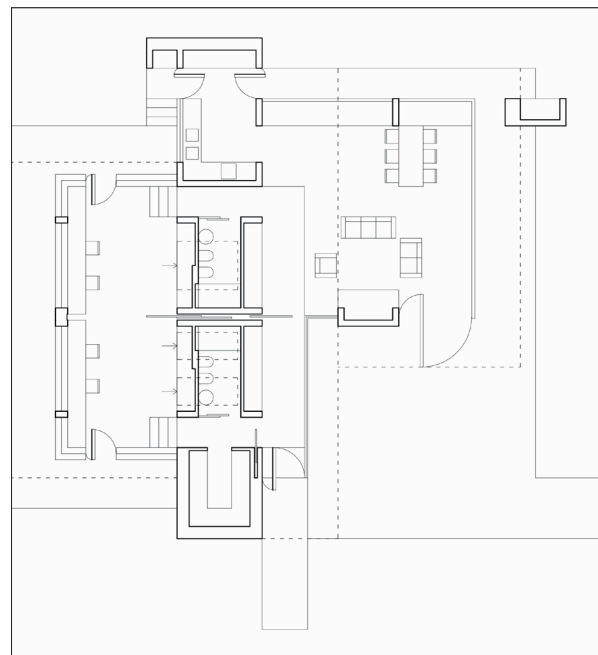
the changes of family patterns and that even the traditional family requires a higher degree of flexibility. A kind of lifestyle based on some certainties necessary to face an idea of the future seems to coexists with the impossibility to give it a full shape. The uncertainty of the future is by no means a contemporary issue but one which is profoundly human. We can state that, as architects, we are faced with questions which are deeply rooted in human society. The question of time in housing looks back to an endless tension between the past idea of the house, sometimes not even linked to real -life experiences but full of memories and longing and a desire for a future housing project which is somewhat stereotyped, displaying an idea of modernity inspired by glossy fashion- magazines, advertising and the media.

Beyond the Coronavirus pandemics, housing design has been addressing the theme of flexibility for quite some time, even though the proposed solutions seem to focus principally on how to make the maximum use of space in small-sized dwelling units and emergency residences⁴.

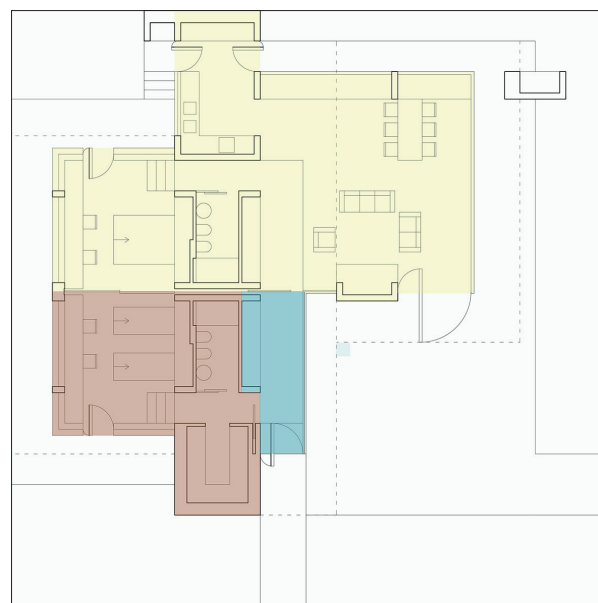
Here, instead, we would like to face the distribution issues connected to the idea of flexibility beyond the boundaries of types and sizes, assuming that it is possible to develop partly old and partly brand new solutions. The new element which could affect the execution of the architectural project is social distancing, provided we have to continue living with the Covid pandemics in the future, a hypothesis we make with some caution. Recent scientific indications show the necessity to assign each individual their own portion of space, a sort of air pocket of a given thickness. The consequences of this on the concept of minimum space and people's relations are quite clear and are going to affect people's behavior. Had we to apply this to life inside a dwelling space, we would not be able to ignore the problem of the high housing costs, above all in big cities, where this is

**Fig. 3**

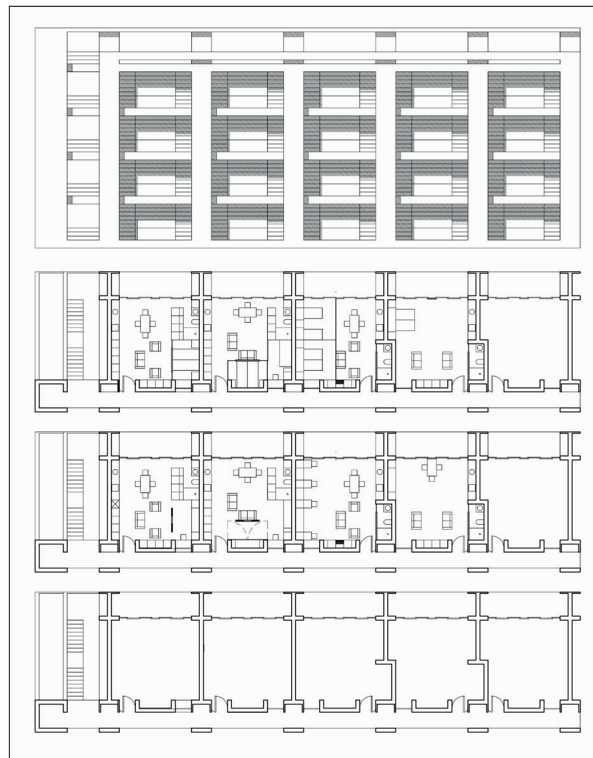
M. Zammerini, study of a single-family house, 2020. Floor plan with pulled-out beds between the two overlapped floor slabs in the sleeping space, section and perspective.

**Fig. 4**

M. Zammerini, study of a single-family house, 2020. Floor-plan with the beds located inside the space between the two floor slabs to realize two study rooms which can be joined to form a single work-, study or workout place.

**Fig. 5**

M. Zammerini, study of a single-family house, 2020. the three colours show the communal hall, the bigger flat, and the unit which can be turned into an autonomous dwelling space.

**Fig. 6**

M. Zammerini, study of a multiple-family residential unit with communal walkways with 40 sq.mt dwelling spaces for as many as 4 occupants, 2018.

Each unit can be divided into parts and converted into a living space for study, leisure, work and workout activities. From bottom to top: the serial shell structures, the living space floor-plan, the sleeping space lay-out, the perspective.

calculated in square meters. Social distancing could take place in a wider domestic environment, that is, in a bigger and thus more expensive house. However, we'd rather go down the easier path, which consists in changing the distribution criteria of the dwelling space, a process which is already unfolding before our eyes beyond serious emergency circumstances⁵.

The idea behind a flexible house is very easy: it is a floor-plan conceived by pulling together independent dwelling units, which can also be joined so as to form bigger and bigger dwelling spaces. If we reverse the process, we get a house with an unchangeable surface, which can be separated into smaller and autonomous units to meet several needs such as:

the possibility to collocate at the side of the house a workplace for one or more household members;

the case of a family house containing a small dwelling space to host domestic personnel once grown-up kids leave home or turn into a small source of income for an elderly person who lives alone;

the need to host guests while granting them total privacy;

the possibility to live a family life in which each member enjoys their own private space.

Given these partitions, it is necessary to turn back the communal space of the living room to a sort of square where the family can socialize.

The house designed by Jan Szpakowicz for himself and his wife Grazing in Zalesie Dolny near Warsaw in the 60's (Fig.1) is an extremely interesting and almost unknown example of the importance of geometry as a way to control a flexible space, beyond the undersized dimensions of the bedrooms, according to our standards: nine square-plan concrete nuclei of 2,4 meters side, eight of which with a vertical window, containing respectively three "monk-like" rooms with a bed and a desk, a bathroom, a kitchen and three wardrobes: their well-planned and fixed location gives rise to three square-plan living room spaces which are connected to each other but can be separated and are equipped with big glass-windows linking the interior space with the wood outside. The cement parallelepipeds are of different

heights and support floors of various heights creating light stripes between one and the other. The three “squares”, one of which is close to the kitchen and bathroom and is used as hall/living room, can be joined into a single fluid multifunctional space and make it possible for each small private nucleus to communicate with the communal space⁶.

In order to achieve a high level of flexibility it is not easy to plan several outdoor access points, the distribution of bathrooms and toilets and their ventilation, the allocation of facilities, the maximum use of sunlight.

Different models and dimensions require some specific refection: if the single-family house lends itself to not so easy solutions, the multiple family house needs to be investigated starting from well-known models, which can give us some hints to increase flexibility and lead to new forms of housing aggregation and internal lay-out.

The typical Anglo-Saxon row detached house, for example, thanks to its repetitive pattern and its different heights and widths allows to realize a kind of urban settlement based on the alternation of streets and squares. The presence of two facades favors the existence of at least two access points, to which others can be added to create parts separated by the two gardens. In the longitudinal section of the row it is then possible to plan a sequence of three independent units which can be joined together⁷.

The residential building, which was very popular in Italy in the 50's and 60's, contained a certain number of dwelling units for floor and two or three access points, which could be used with a different aim and provide a good solution to locate the access points dead-centre to the floor - plan of the flat. This will have easily predictable consequences for the distribution of the inner spaces, their separation and aggregation⁸.

The multi-storey building with communal walkways looks more interesting due to its communal route which could be turned into an interesting communal space, provided its width and a higher degree of privacy on the balconies are taken into account.

The two project studies in the pictures below show a single-family and a multiple-family house with communal walkways, both inspired by an idea of inner flexibility.

The 140 sq.mt. single-family house (Fig.2,3,4), built on a slight slope, shows the possibility to turn the two bedrooms into two study rooms with independent access points, by sliding the beds into the space obtained by overlapping the two floor slabs of the living and sleeping rooms, a solution made possible by the natural sloping shape of the surface ground. The two study rooms can be joined together by sliding the walls inside a second space which separates the two bathrooms. Besides, the house can be divided into two autonomous units, one smaller and one bigger, without the necessity of any further work.

The multiple-family house with communal walkways (Fig.5) is created by pulling together a series of 40 sq.mt. dwelling units. The walls dividing the units are designed as two-faced shells which can contain 60cm thick wardrobes, folding beds, technical volumes and kitchen worktops, desks and chairs. Each unit is equipped with a ceiling sliding track onto which movable panels can be hung, which allow different lay-outs for as far as four beds and can be converted into a living space with work -and study places that can be joined or separated.

The theme of a cyclical return to an empty inner space assigns to perimeters and unchangeable elements (technical facilities like bathrooms and kitchens) a fundamental role. This leads to a rediscovery of

previously experimented architectural solutions, in which the idea of the wall and its capacity to organize functional spaces exists alongside the dematerialization of the modernist building envelope and with the idea of a nucleus of autonomous and structurally relevant services, borrowed from the modern office block. This foreseeable mix links to more complex idea of home living contemplating work, study and workout activities which can already reveal its new attitude from the outside.

Notes

¹ Let us consider, for example, the extreme case of the Moriyama House by Ryue Nishizawa designed in 2005 in Tokyo for a client who, having given up work, decided to use a plot of his own land to build ten buildings of different sizes and very close to each other, including one which only hosted a shower. Each of these units can be rented out.

² I'm thinking of a debate session held within the "Laboratorio di Progettazione III" during which lots of students, when prompted to express their own views, showed a marked indifference in designing living room spaces destined to family gatherings, conversation with friends and more in general socialization. This tendency showed itself in the undersized dimensions of the living room space and the odd seating arrangement, with very few seats all located in front of a TV set. The same tendency was clear when designing a square defined by its architectural stage sets placed in such a way as to create the typical gathering effect of historical squares.

³ It is interesting to notice that at the end of the lockdown the same students expressed diametrically different wishes. The effects on the work-in-progress have been positively surprising and have led to a different appreciation of several texts, among which the one by Camillo Sitte on *The art of city building*.

⁴ The case of Schroder House designed in 1924 by Rietveld in Utrecht is perhaps the clearest example of an idea of interior flexibility, a model which has not been adopted for quite some time. However, there are relevant echoes of an idea based on this house in the work of Giò Ponti (Flat in via Dezza, Milano, 1956/57), Herman Hertzberger (Diagoon Housing, Delft, 1977/70), Shigeru Ban (2/5 House, Hyogo, 1995), PKMN architectures (Casa Mje, Salinas, Spain), Oki Sato Nendo (Drawer House, Tokyo, 2011/13), CLEI ("Elastic living", Biennale di Milano), Arrhov Frick Arkitektkontor (Hammarby gard . Hus 2, Stockholm), Ensemble Studio (Cyclopean House, Boston, 2015), Jack Self (Cenobium, 2016) plus other international studies. ⁵ Gli studi sul tema della flessibilità si sono concentrati soprattutto su sistemi di arredo interno e meno sui caratteri distributivi.

⁵ The studies on flexibility have focused more on interior decor systems and less on distribution criteria.

⁶ The source of this project is the article by Lukasz Stepnik "The Avant-Garde in the Forest. The house of Jan Szpakowicz" in: *Przekroj* n. 3567/2019.

⁷ Among others, the row detached houses designed by Eduardo Souto De Moura from 1993 onwards are conceived in plans so as to be reinterpreted for our research on flexibility.

⁸ From the Furmanick building by Mario De Renzi on Lungotevere in Rome to the twin detached houses by Venturing Venturi in via Piccolomini, the floor-plans of the Roman flats in the residential building offer lots of hints about the strategic role of access points.

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Massimo Zammerini (Rome, 1962), architect, PhD in Architectural Composition at Sapienza, Rome. Associate Professor in Architectural Design in the Department of Architecture and Design of the Sapienza University of Rome and member of the teaching staff of the Doctorate in Architectural Theories and Design of Sapienza, Rome. Since 2016 he has directed the Master in Theater and Television Scenography of the Department of Architecture and Design. His activity as a designer is articulated in the continuous participation in national and international architecture competitions, for which he has obtained recommendations and prizes. Many of his projects, some completed, are published in national and international architecture books and magazines. His vision of architecture implies an all-round conception of the discipline, which leads him to operate both in the theoretical dimension, declined in the three areas of the legacy of modernism, in the compositional techniques of design, and in the dimension of design experimentation on the themes of residence, public buildings, interiors. He has published books, essays and articles in leading architecture magazines and has participated in Architecture Conferences and Exhibitions in Italy and abroad.