RESEARCH ARTICLE

Type Projects as Tools: Housing Type Design in Communist Romania

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This paper investigates so-called type projects and the process of housing typification in Romania under the communist regime (1948–89). It studies designs for housing of particular types ('type projects'), primarily apartment buildings, disseminated through catalogues, that were used as more than just models for construction. They were 'tools', the active interface between political goals and actual buildings, similar to the contexts of contemporary developments in Eastern and Western Europe. Politicians exerted governmental control to ensure an institutional control over the design and production of type projects. A type project, with plans, section, elevation and specifications, contributed to the organization of the socialist lifestyle within family dwellings, led to new urban forms and cityscapes, standardized construction, guided industrialization and sustained the prefabrication of housing, especially large-panel prefabrication. This paper examines how these types entirely determined housing production.

Introduction

Housing production in Romania under the communist regime used type projects extensively. Type projects (*proiecte tip*) were generic designs used by architects in state institutes to build serial housing. They were centrally produced, compiled in 'catalogues', distributed across the country and applied on a mass scale. They were used as instruments of design by architects, but also as vehicles for political control by the Romanian regime. These pre-designed projects (**Figure 1**) are essential for understanding the housing that was produced during the communist period. By researching their purposes and the process of their design, the paper investigates their role as 'tools' from several angles.

To understand how the government used type projects to control housing design, the first section of this paper sets housing production within the context of communist Romania, showing how successive political objectives affected the design of housing types. The second section focuses on the institutional role of type design: catalogues of type projects were disseminated via the institutions of the state system of design, serving as vehicles for the bureaucratization of design activity and unifying the system. The role that type projects played in absorbing foreign influence and controlling the importation of modernity is addressed in the third section, which introduces a comparative perspective and places Romanian housing developments in the larger context of similar developments in Eastern and Western Europe. The comparative perspective, addressed in the fourth section, reveals how type plans affected the larger scales of the inhabited space and determined building and public space typologies. In the last section, the paper explores

the relationship between types and prefabrication, also highlighting the technological difference and chronological divergence between Eastern and Western European housing estates developments.

When we question the performance of housing types, we should consider the fact that type projects actually worked on three levels, which were quite different in terms of their respective effects. Treating homes as types meant using *type plans, type buildings* and *type construction methods.* Through the study of plans, Romanian architects conducted most of their research on the spatial and functional qualities of apartments. Type buildings were treated in catalogues as architectural objects and thus created similarities in urban planning. Catalogues also indicated the methods for type construction, imposing standarized building techniques.

Tools of Political Control

Romanian housing production has been often been determined by political goals: to support industrial development, homogenize urban expansion throughout the national territory, exert social control, effect demographic change and even control the balance of power among various state institutions. Even the persistent discourse on economic efficiency was a political statement rather than a product of the economic logic of housing. Throughout the Soviet Bloc, economic planning determined how housing was produced (Elman-Zarecor 2014: 256). In Romania, too, under both political leaders Gheorghe Gheorghiu-Dej (1948–65) and Nicolae Ceaușescu (1965–89), the entire economy was planned following the Soviet model. Housing production was shaped by successive plans — first from each one-year plan to the next, then according to
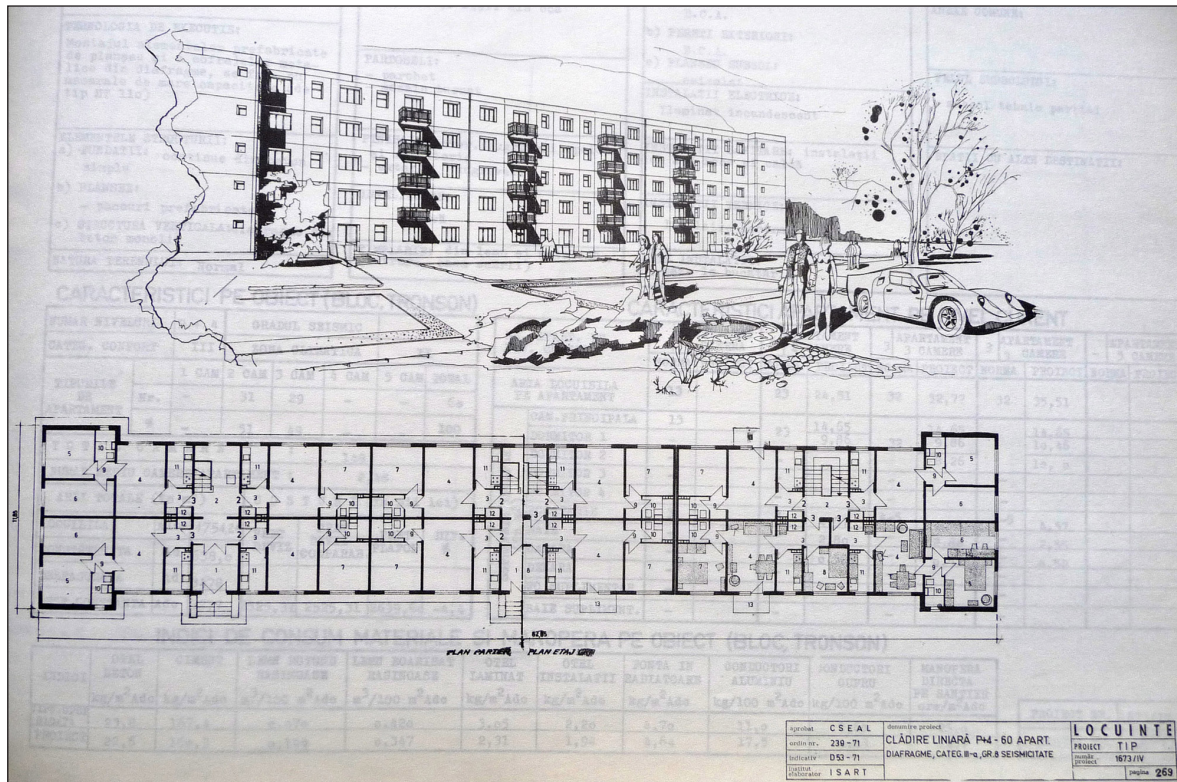
Figure 1: Type project no. 1673, for housing with concrete diaphragm structure (perspective drawing and plan), designed by ISART (Institutul de Studii și Proiecte pentru Sistematizare, Arhitectură și Tipizare/The Institute for Studies and Projects for Systematization, Architecture and Typification) in 1971. From ISLGC (1971: 269).

each five-year plan. But in the Soviet model, housing was also considered a 'non-productive' investment (Andrusz 1984: 6), which also showed that it served political purposes and depended at least as much on political interference as on any economic rationale.

Housing development in communist Romania continually adjusted to the evolving political reality of the regime. Certain types can be clearly associated with certain periods of that regime, although the beginning and ending of these periods is not clear-cut; any period may appear 'transitory' (Tulbure 2016: 12). However, it is possible to identify four turning points in both architectural production in general and that of housing in particular. These shifts all correspond with particular political decisions of the communist regime, which was established in 1948.

The first turning point, which appears to have been 'the decisive year' (Zahariade 2011: 25), began in 1952 and continued until 1956–57, according to Irina Tulbure (2016: 12) (or from 1950 to 1958, according to Mara Mărginean (2015: 87, 144)). In 1952 the regime put an end to architecture as a liberal profession and all architects became state employees. However, interwar housing models persisted for some time. Type projects reflected the fact that while the state wanted to control the way homes were built — that is, mostly self-constructed using outdated techniques — the state was not yet able to get involved in large-scale housing production. Romania was an underdeveloped country in which, in 1948, about 77% of the population was rural (Lăzărescu 1977: 12). Initially, the communist regime encouraged construction of the small

semi-detached family house (**Figure 2**), well adapted to this prevailing rural condition.

In the early 1950s, however, the interwar models gradually disappeared and housing types began to follow Soviet models. The distinctive classical style of socialist realism gave housing the relative coherence of a visual identity. While in the USSR that style came to an end in 1954 with Nikita Khrushchev's speech, in Romania, its demise officially came about only in 1958 in a speech by Gheorghe Gheorghiu-Dej. Miruna Stroe, who writes specifically on the relationship between housing and political decisions, highlights 1958 as being a 'most distinctive year' (Stroe 2015: 78).

The second turning point can indeed be identified in 1958 when the last Red Army troops left Romania, direct economic and political Soviet intervention ceased, and the so-called modernist period began. This was, however, an ambiguous moment, when the Gheorghiu-Dej regime began to diverge from the Soviet line but also opposed the liberalizing influence of the Thaw (Tănase 1998: 126–127), delaying the relative openness that other Soviet Bloc countries enjoyed (although a political thaw did occur in Romania between 1964 and 1971) (Tismăneanu 2006: 501). In terms of architectural production, this rupture meant a relative independence from the Soviet design model, but architecture then evolved in almost the same direction: towards increased economic efficiency and forced industrialization. Modernism was embraced, although the word 'modernist' was avoided in political discourse.
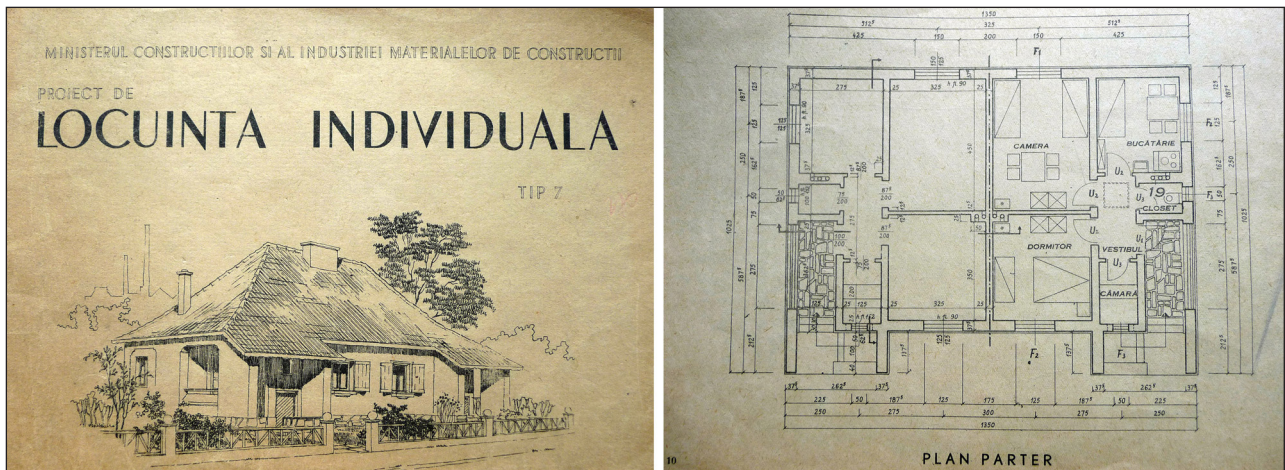
Figure 2: Type project for semi-detached family houses (perspective drawing and plan), no. 7, designed by IPC. From Ministry of Constructions, Industry and Construction Materials/IPC (1952, no. 7: cover and p. 10).

The major shift from socialist realist ensembles to modernist mass housing estates has been widely researched. Most of the recent literature on socialist urbanism and architecture in Romania (Tulbure 2016; Stroe 2015; Mărginean 2015; Maxim 2009; Maxim 2019) addresses the early socialist post-war period, which covers the regime of Gheorghiu-Dej almost exclusively and, with one notable exception (Mărginean 2015), refers primarily to the capital city, Bucharest. The history of socialist housing estates appears to be limited to its origins — to how the system of production was put in place, a system located at the centre of political decision-making. Its evolution in the last decades of the communist regime and across the nation is considered an inevitable by-product of this establishment. However, studying the evolution of type design reveals that the crucial years for the process of housing typification came later, brought on by the modernist period and its expansion throughout the country.

With the modernist period, which lasted from around 1958 to around 1977, came the development of large-scale housing estates throughout the country. Even if typification was an important part of the Soviet model prevailing in the 1950s, it was only in the 1960s that type projects were used on a mass scale, and only through the 1970s that their *production* was programmatically diffused throughout country. During this twenty-year period, type design became fully shaped as a system of mass design production at the national scale. Abstract pre-designed type projects were the tools devised to help designers cope with the large scale of sites and multitude of locations.

During the first half of the 1960s, the policy was focused more on creating a compelling urban environment and less on the family environment of the dwelling, where improvement was, for now, limited to decent, hygienic sanitary equipment — real progress nonetheless from the conditions in which most of the dwellers had previously lived. The first large collective housing estates conveyed an image of clean, simple buildings in generous green areas — a kind of Radiant City (**Figure 3**). This image embodied the discourse of development, urbanization and social progress that was promoted by the political elite. At the same time, the policy allowed apartment types to be programmatically small, with only one or two rooms, reduced to the functionalist basics (**Figure 4**). This small size was a response to the political imperative of 'one apartment per family', whereby the primary requirement was a large number of units. Minimal square footage meant more apartments could be built — a very important economic reason for such a limitation. But that limitation also contributed to moulding the socialist lifestyle, because some of the traditional family dwelling functions had to be externalized to the collective facilities of the *microraion* and also because, although small, the many units served the new social reality of 'smaller families', as architect Mihail Caffé explained at that time (Caffé 1963).

The universal image of modernist estates, built all over the country, also served another political objective: that of cultural homogenization. In its united form, Romania was born only in the aftermath of the First World War, in 1918, from territories historically shaped by three empires (Austro-Hungarian, Russian and Ottoman). It thus encompassed great regional differences, both cultural and economic. Housing estates based on types from catalogues helped endorse the national(ist) objective of unity through the uniformity of the new socialist urban culture they created.

The third turning point in Romanian housing production occurred within this modernist period, when in the late 1960s the pure, Radiant City type of ensembles, with their combination of generous green urbanity and minimal family units, began to be affected by several political decisions. A new demographic policy, formalized in the anti-abortion decree of 1966, led to types with more rooms per apartment. But the cost of larger apartment types was to be mitigated by densification and the reduction of green areas, which also led to building plans of greater depth (**Figure 5**).

The decade from 1967 to 1977 was one of privatization of home ownership. The state wanted to sell apartments to people who also lived there, and to increase sales, the state expanded the types of apartments available. A major

Figure 3: Directive project for a P+10 block of flats (perspective drawing, ground floor plan and typical floor plan), designed by IPCT (Institutul de Proiectare pentru Construcţii Tip) in 1965. From CSCAS/IPCT (1965: project no. 3030, plate C13).

Figure 4: Type project for a P+4 block with one-room apartments (exterior and interior perspective drawings and apartments plans), designed by IPCT in 1965. From CSCAS/IPCT (1965: project no. 1215, plates A1 and A3).

change was brought about by the decision of partial privatization, translated into a series of laws between 1967 and 1973 (Lupulescu 1975: 6–10). These laws allowed some apartments to be sold to their residents. This decision came as a response to the economic reality of economic crisis and housing shortage created by extensive industrialization, and also to the need to make an 'unproductive investment' productive. Allowing citizens to own their own homes led to more diversification of types, with increased floor area for some of them (**Figure 6**). However, when the concept of 'diversification' entered political discourse in 1968, in what was called the 'action

of diversification of housing' (Caffé 1975), it also brought back types with small square footage, along with 'comfort categories' (**Figure 7**) to accommodate people of different incomes. Type projects thus became instruments through which social difference was politically sanctioned in socialist Romania.

The change was also visible in terms of architectural language, as pure modernism gave way to a more complex Brutalist appearance. The relative rise in quality of life allowed a new political objective for housing to develop: ,one person per room'. After 1975, lower-comfort types were abandoned, at least in bigger cities (Panaitescu 2012:
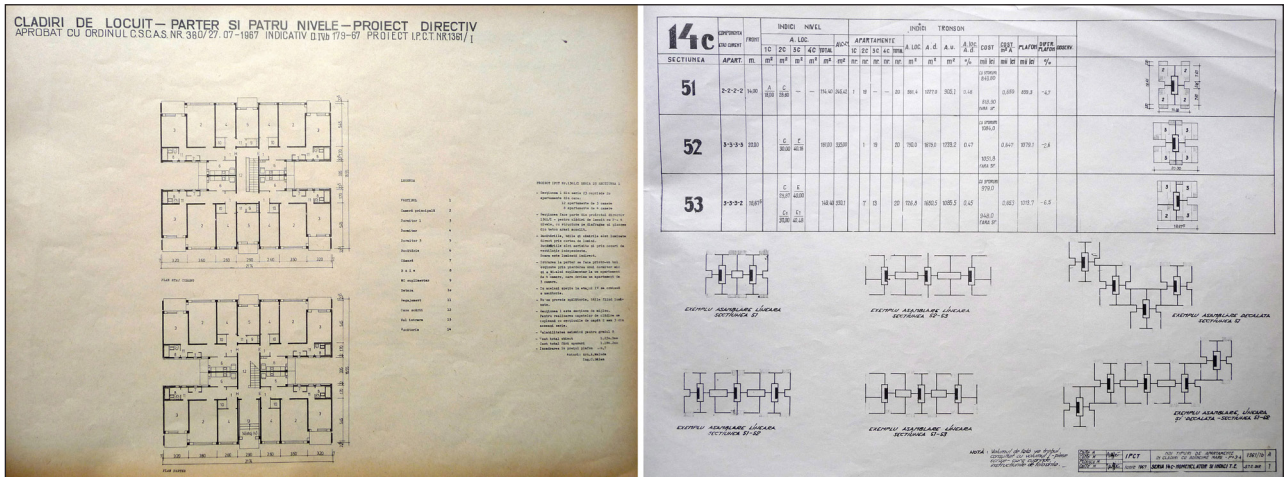

Figure 5: Directive project for a P+4 block of flats — series 1361 (floor plans, tab with indexes and combination examples), designed by architect Mihail Caffé, IPCT, June 1967. From ISART (1971).
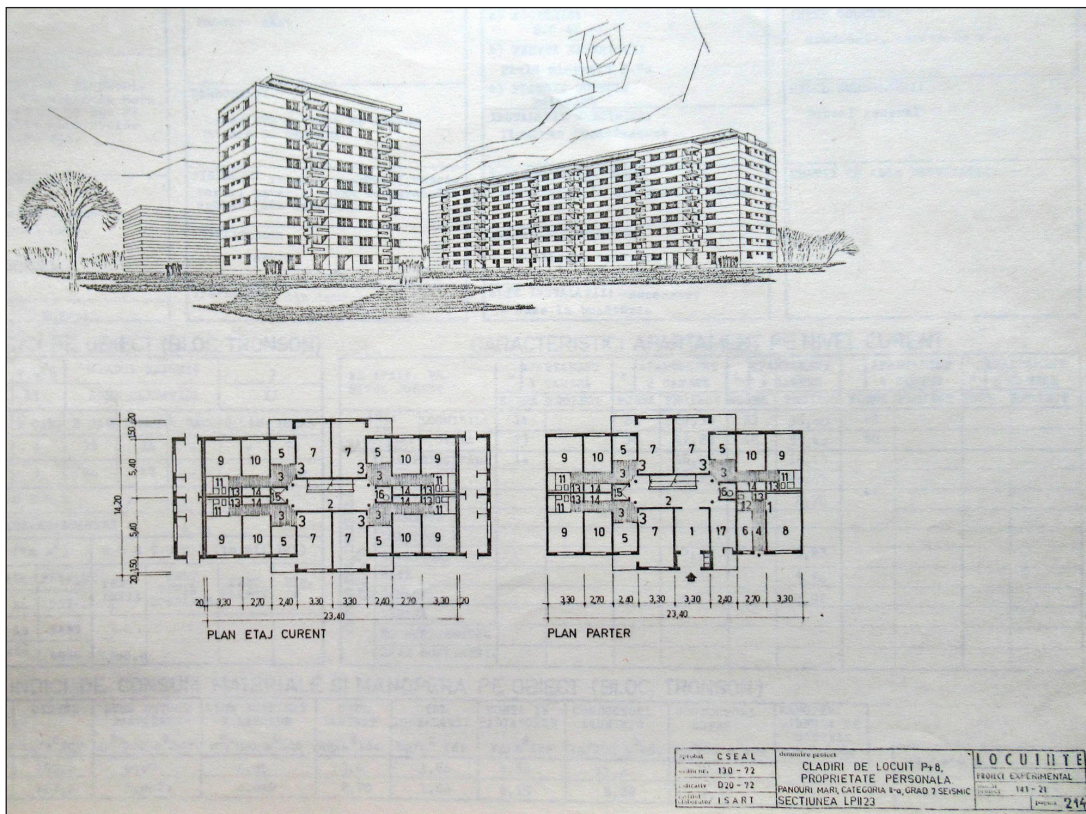

Figure 6: Type experimental project for housing with large panels structure for personal property (perspective drawing and floor plans), designed by ISART in 1972. From ISLGC (1975: 214).

64). As project types became more diversified, the overall quality of apartment floorplans improved (**Figure 8**). The policy of privatizing apartment ownership continued, in order to secure the financing of state housing production. In 1975, 60% of the new housing in Bucharest was built for private ownership (Ricci 1976).

The commencement of Nicolae Ceaușescu's investment in the Civic Centre of Bucharest in 1977 marks the fourth turning point for architectural production. This last period of the communist regime, from 1977 to 1989, was one of general decline. The economic situation was ‚at the limit of despair' and the dictatorship entered a phase of ‚total immovability' (Burakowski 2011: 28, 385). During the 1980s, almost all national resources were diverted to the Civic Centre in Bucharest, with one exception: type housing. Type housing, selecting types from catalogues, was the only other kind of architecture that was permitted (Panaitescu 2012: 73). By political decision again, but also because typification, privatization and cheap construction

ensured the survival of a production system with minimal resources, the production of state housing persisted until the end of the regime.

Tools of Institutional Control

One particular role of type projects as political tools can be related to what Gregory Andrusz called ‘bureaucratic politics’. Power relationships in the communist regime concerned not only the central leadership and the state, but also the various state institutions. To stress their own importance and defend their resources, they developed ‘parochial perspectives’ and competed among themselves. Ministries, departments or planning institutes promoted their own interests and ‘behaved like private owners’ when using public resources, including those related to the production and distribution of public housing (Andrusz 1984: xiv–xv). The main design institutes also used such relationships of power, trying to ensure the maximum relevance and independence for their own design produc-
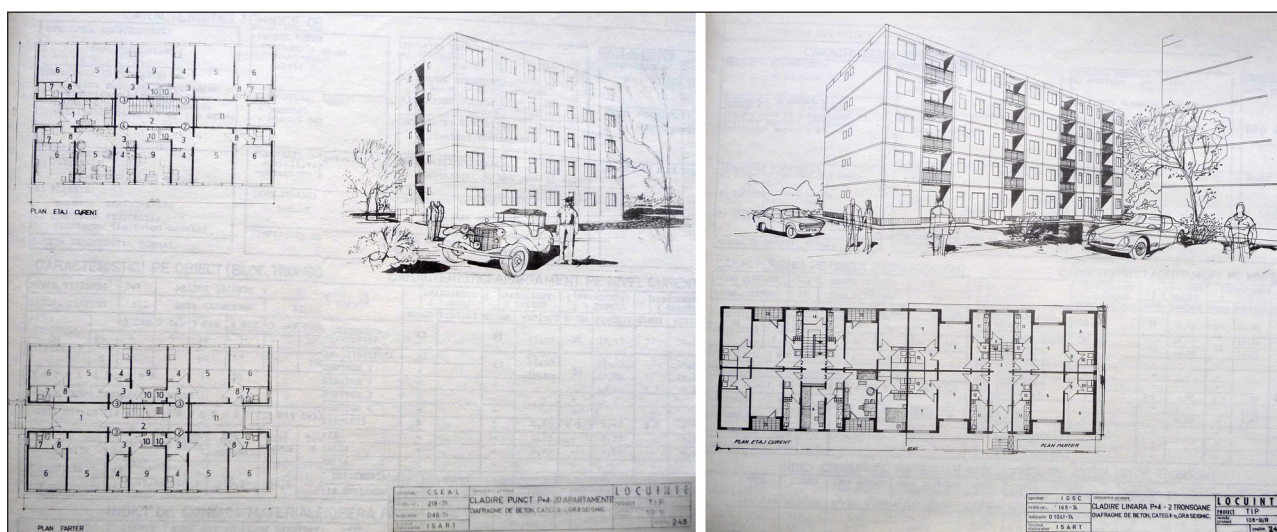
Figure 7: Type projects for housing with concrete diaphragm structure, 2nd category apartments (perspective drawings and floor plans), designed by ISART in 1971 (left) and 1974 (right). From ISLGC (1975: 248, 245).
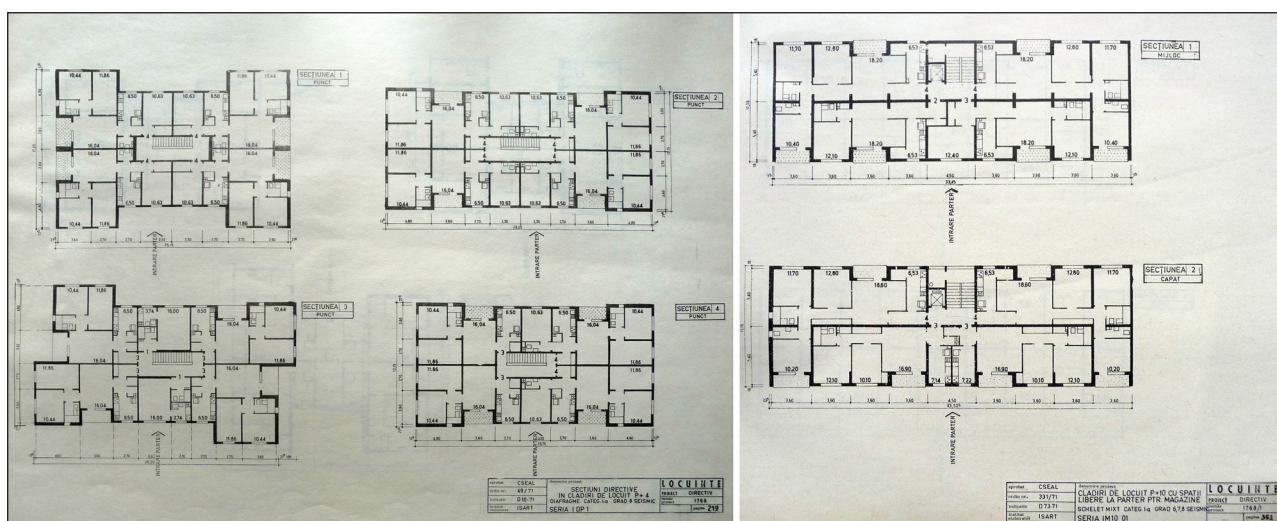
Figure 8: Type projects for housing with concrete diaphragm and mixed structure, 1st category apartments (floor plans), designed by ISART in 1971. From ISLGC (1975: 219, 352).

tion. Institutes held stronger or weaker positions within the system according to the kind of design they were allowed to produce.

Type projects were both acts of design and bureaucratic instruments. In addition to reshaping the design process itself — most architects only adapted type projects, rather than designing new housing — they also shaped the relationships within and between the institutions that approved, produced or only used them. Trans-institutional by nature, type projects supported the integration and hierarchy structure of the system of design institutes.

In communist Romania, following the Soviet model, state design institutions began to emerge in 1949. Until 1952, when architects were required to work in state institutions exclusively, only one state institute for civil constructions design existed. That year, this institute split in two, one institute for Bucharest and one 'for the rest of the country' (Iubu 2005: 156). In the first half of the 1950s, industrial construction received much more attention than housing and the parallel system of institutes for industrial design grew much faster; by the late 1950s, there were 26 design institutes in Bucharest (Ionescu 1969: 61).

An institute specializing in type projects, the Design Institute for Type Construction (*Institutul de Proiectare pentru Construcții Tip*), or IPCT, was created only at the dawn of the 'modernist' large estates period, in 1956. Its name and affiliation changed a few times during the communist period, but it remained active until the end of the regime. Changes to its affiliations reflected political priorities of the time for design. Beginning in 1956, these priorities evolved from general construction, when mostly engineers were involved, and when IPCT belonged to the Ministry of Construction, to architecture, beginning in 1963, when control shifted to the central government advisory body for architecture. From 1969 to 1974, urbanism became the priority, when IPCT merged with an institute that expanded its field to systematization. Then from 1974 to 1977, design focused on managing the existing housing stock, and the institute enlarged its activities with communal management. At the end of the regime, from 1977 to 1989, the priority was using generalized typification as a way to expand prefabrication, when the institute again functioned as the type-design institute IPCT. This institutional metamorphosis of type design between 1956 and 1977 gives another perspective on how political control expanded in terms of scale and relevance, from general construction to architecture to urbanism, and highlights the critical importance of the 'modernist' period in the definitive establishment of type design in communist Romania.

IPCT's establishment in 1956 was the turning point for type-design production, when type design became literally institutionalized. IPCT was created with a clear though apparently paradoxical purpose: the decentralization of housing design. When IPCT was created, architectural design was a highly centralized profession: almost all design institutions, and all but 4% of architects, were located in the capital, Bucharest (Ionescu 1969: 64). IPCT was established precisely in view of the impending administrative decentralization of design institutes and their expansion throughout the country, which followed in 1957. Type projects became the common element that assured the coherence and centre-to-periphery, hierarchical nature of the newly expanded system.

The main task of the sixteen new regional design institutes created in 1957 was to fulfil the plans regarding the large housing estates all over the country. IPCT provided catalogues of pre-designed type projects and signed contracts of 'technical assistance' with these peripheral institutes (Cocheci and Pruncu 1958) to help them begin to function. This 'assistance' would also keep them under close central control.

For a long time, the regional design institutes lacked sufficient qualified professionals, especially architects. The problem worsened again when, after the administrative reform of 1968, the number of institutes increased, to 39 county institutes. There were only 2000 architects in Romania, in a population of 19 million — very few compared to Bulgaria, where there were 7,000 architects in a population of 8 million (Nedelescu 1968). Architects were overworked and could barely cope with the speed of design: a project had to be rendered every five days and the average time per apartment was four hours, as architects Alexandru Iotzu and Mircea Dima complained at the Architects' Union conference in 1965 (*A doua conferință pe țară a Uniunii Arhitecților* 1965: 29, 37). The lack of qualified professionals working at the institutes in the country legitimized extensive typification during the 1960s and early 1970s.

Because the capital, Bucharest, had a special status in the system, with its own design institute, it could claim a certain independence from the rest of the system. All housing in Bucharest was designed by the Project-Bucharest Institute (Institutul Proiect-București), or IPB, from its establishment in 1952 until the end of the regime in 1989. Here, typification was practiced rather naturally, through reuse (Ricci, 1960). By reusing projects in a programmatic way, IPB became both producer and user of 'type design'. The best projects were selected each year, serialized and repeated as much as possible. 'Reusable projects' would be added to the type projects produced by IPCT and would be also catalogued, in order to be distributed all over the country (**Figure 9**). IPB formed its own type-project studio and was thus able, if not to escape, at least to totally control the process of housing typification in Bucharest. In the early 1970s, this studio was led by architect Tiberiu Ricci, who also served as the chief architect of Bucharest between 1969 and 1974 (Panaitescu 2012: 276); he thus ensured an institutional intersection between politics and design that was typical for the communist regime. Under his supervision, IPB's type-projects studio researched more flexible type plans (Ricci 1976) and produced apartments of quite good quality (**Figure 10**).

For the rest of the system of design institutes, how type projects were assigned seemed to induce clear differences of status among architects and institutions, according to whether they were producers or consumers of these tools. The 'typifiers' in IPCT and IPB were at the higher end of the professional spectrum and at the centre of things,
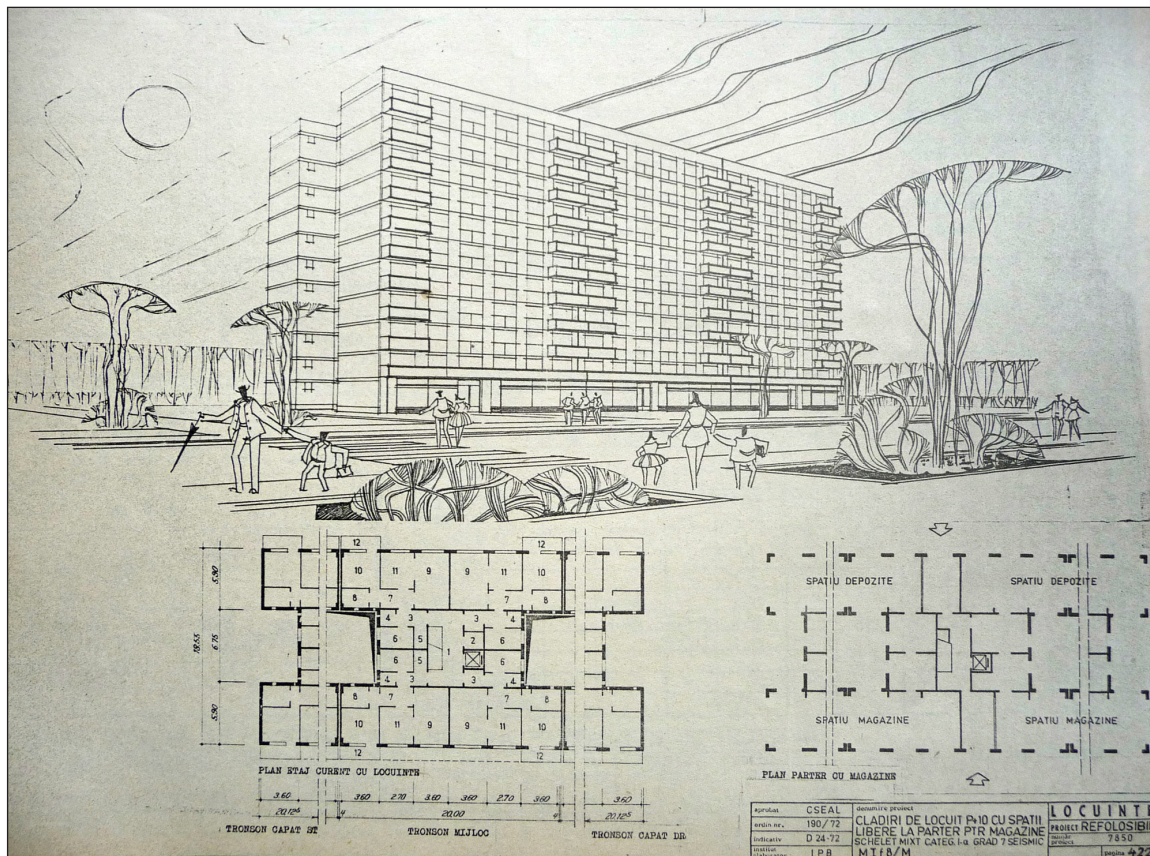
Figure 9: Reusable project for housing with mixed structure, first-category apartments (perspective drawings and plans), project no. 7850, designed by IPB in 1972. From ISLGC (1975: 422).
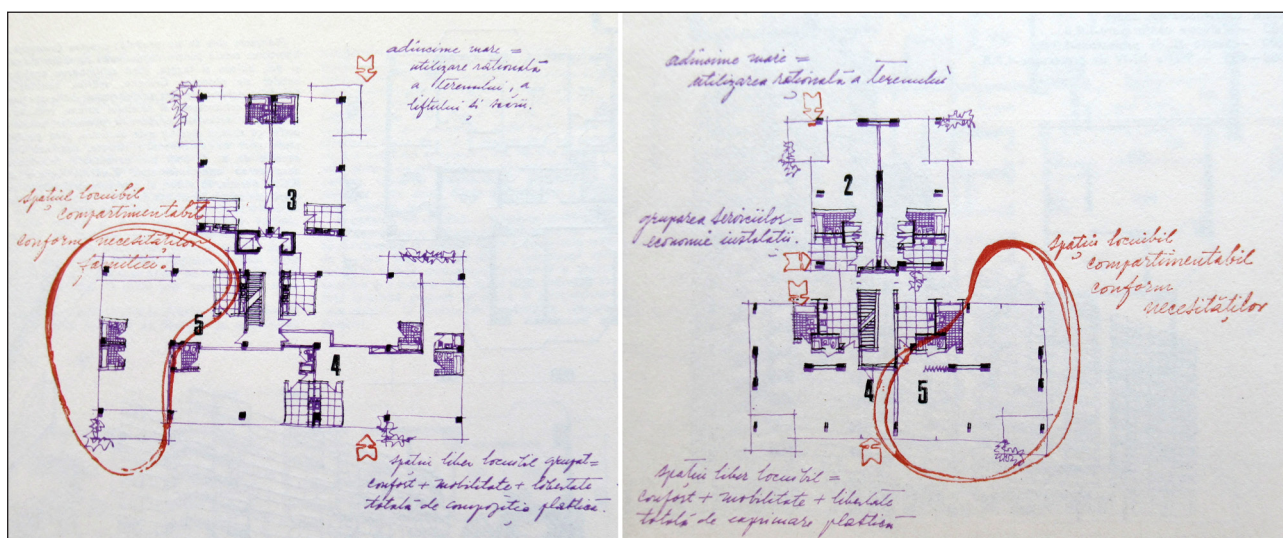
Figure 10: Studies drawn by architect Tiberiu Ricci for housing type projects with flexible floor plans. From Ricci (1976: 23).

as they conducted important and genuine architectural research. Mihail Caffé, for instance, made his name as one of the main type-housing architects in IPCT; he would later become professor of housing theory at the only school of architecture in the country, the Ion Mincu Institute of Architecture (Institutul de Arhitectură Ion Mincu), or IAIM, in Bucharest. At the opposite end were the 'adaptors' at the periphery who ensured the site adaptation of type plans designed by others (Lupescu 1965).

The distinction between makers and users of type projects was nevertheless blurred, because of how the typification process worked. Sometimes the catalogues of type projects provided by IPCT (which were periodically revised to comply with the frequently changing norms and laws) were sent to the regional institutes too late to be used in the current housing plan. To meet the deadlines, local architects had to design their own type projects instead (Orban 1959). Peripheral institutes were thus forced by

circumstances not only to become type project consumers, but also producers, if at first only occasionally.

By the mid-1970s, local institutes had gained enough experience to contribute steadily to the process of typification. It became common practice for certain projects designed by local institutes to be chosen as types. After careful selection and revision, and if approved by the central advisory body — the State Council for Constructions, Architecture and Systematization (Consiliul de Stat pentru Construcții, Arhitectură și Sistematizare), or CSCAS, a kind of ministry of architecture (Panaitescu 2012: 40) — they could be introduced into the catalogues centrally compiled by IPCT. Nothing distinguished the types produced in peripheral institutes from the centrally designed ones; the homogenization of type design had been already achieved.

It became possible, and was actually encouraged, given that the regime was becoming increasingly nationalistic and suppressed regional identities, for institutes in a certain region of the country to use types designed by institutes in another region. For instance, IPJ Mureș extensively used and adapted a type designed by IPJ Bacău in the early 1970s (Radó 1973); in the 1980s, many of the blocks of flats built in Cluj would also use a 'Bacău type' project. In other words, an institute in Moldova designed housing types for various towns in Transylvania. This universality of type projects as tools, and of typification as process, contributed to erasing the differences between specific cultures of housing across the national territory.

The true climax of typification was therefore reached in the 1970s, when not only type projects but the process of typification itself was disseminated all over the country. Caffé remarked in 1975 that it was finally time to decentralize typification completely and let local institutes make their own local type designs. This did not mean that all hierarchy and control disappeared, however, for he suggested a new distinction, between 'fundamental typification' in the centre and 'operational typification' at the periphery (Caffé 1975).

After the mid-1970s, the Romanian housing design system became a large pool of shared type-design resources. However, through the selection and decision-making processes, the system still remained highly centralized. All type projects, including the looser forms of 'reusable projects' and 'directive projects' (type projects with a permitted margin of variability), whether made by central or local institutes, had to be approved by CSCAS, the main advisory body, which often significantly reduced the number of housing types actually used.

The Importation of Modernity

The general perception of the Eastern Bloc is that models of radical modernization from the West were imported after a considerable delay. As architectural historian Jean Louis Cohen puts it, post-war Eastern Europe adopted the same 'Fordist concept of affordable standardized products', only with 'a ten to fifteen years' time difference in respect to the most advanced areas of the West' (Cohen 2005: 278). However, this concept of a unique model that simply arrives from the West after a delay can be challenged. Brigitte Le Normand found that beginning in the mid-1950s, the mass production of housing in France and Eastern Europe was nearly simultaneous, (Le Normand 2014: 17), at least until the mid-1970s.

Placing housing developments in communist Romania in the context of those in post-war Europe in general, and the rest of the Soviet Bloc in particular, creates a diverse picture. There are indeed delays in introduction from the West, but in the more advanced Eastern countries there are also synchronicities. There are also considerable differences amongst the Eastern countries themselves. In communist Romania, travel abroad was never freely allowed, and the state exerted stricter control on professional (and personal) international exchanges than other East European countries did. However, exchanges within and outside the Soviet Bloc took place, especially from the mid-1960s to the mid-1970s, when the regime of closure and control was partially relaxed.

Type projects had the potential to not only become the medium by which selective foreign influences could be absorbed into local housing developments, but also to play a part in the delay of such influences. This was because of the privileged position of IPCT as the central maker of type projects for the entire state design system. In addition, the way architectural documentation itself was centralized and organized favoured IPCT. Foreign documentation was controlled by CSCAS, the national advisory body, which selected, imported and gave access to international architectural publications through its documentation centre (Panaitescu 2012: 35, 41; Tabacu 2013). As IPCT functioned in direct relation to CSCAS, architects involved in type design were literally the closest to its resources. Information reached the majority of the other architects mostly via second-hand reports. Subscriptions to Western magazines — primarily *L'Architecture d'aujourd'hui* (Mitrea 2017; Popescu 2009) — became possible on an individual basis only after the late 1960s, and then only for a short while and in limited numbers. It was the excessive centralization and control of information, and the long path from architectural documentation to actual construction (including the stage of type design, acting itself as a kind of 'documentation'), that explains the delay that characterized housing developments in Romania when compared to more advanced European countries.

The sources of foreign influence varied during the communist period. In the first decade, between 1948 and 1958, it was the Soviet model of housing typification that gradually transformed Romanian housing design. Type projects were promoted through imported Russian documentation, but also by local publications, such as *Arhitectura RPR* magazine or *The Architect's Manual* (Chițulescu 1954). Costs were calculated with the same kind of 'indicators'.[1] These indicators were based on manipulating the proportion of 'living space' — the surface of the inhabitable rooms only, as distinct from 'useful space', a distinction that had been made in the USSR since the 1930s (Harris 2013: 78–79) and which Romanian architects adopted.

However, during this period of almost exclusive Soviet influence, typification had not yet succeeded in imposing itself as a generalized method of design in Romania.

Only 30% of the new dwelling units were based on type projects in 1956, compared to 80% in the USSR and 70% in Poland and Hungary (Stroe 2015: 71). This slowness might be explained by a reality that the official figures often obscured: the majority of the Romanian population was still predominantly rural, and the new housing policies could not yet be applied to rural areas. New houses in the countryside generally remained traditional, escaping norms of the state housing system that were imposed in urban areas. Also, the modern building industry was underdeveloped. The interwar experience was almost nonexistent in this respect, as Romanian modernism did not develop a radical technological and social approach and did not apply industrialized methods to larger scale social housing ensembles. Type projects had been used before the Second World War, but only for small social ensembles of low-rise semi-collective and individual houses, built on small lots, with traditional techniques and even mostly traditional in style (see Calotă 2017). This was far behind the modernist ethos developed in the interwar housing of Germany, Czechoslovakia or the USSR, which might explain why in the mid-1950s, Romanian housing construction had the lowest number of newly built units per capita in Europe, West or East (Stroe 2015: 69).

The precepts on industrialization and efficiency of construction provided by Khrushchev in 1954 became the norm in Romania after 1958 (Stroe 2015: 78). Khrushchev's policy of single-family occupancy legitimized housing developments based on a very limited number of type plans and standard modules, which led to the small apartment type called *khrushchevka* (Harris 2013: 71–72; Andrusz 1984: 144). This policy was copied almost exactly in Romania and was accompanied by the same justifications. As in the USSR, housing shortages caused by intensive industrialization meant apartments were often shared among families. Caffé presented small apartments types as the solution to this problem of widespread co-habitation in Romanian cities, relating it to the urgency of providing each family with its own flat. Small apartment types became the instrument for preventing communal living in shared apartments: it was preferable to build many undersized one-family apartments than fewer larger apartments that would end up being co-habited (Caffé 1963: 19). Khruschev's idea was that larger apartments had to be avoided to solve the problem of more than one family sharing a single apartment. Small apartment types prevailed in the first modernist housing ensembles in Romania during the early 1960s, and also in the later, less desirable, types that were smaller and less well equipped (**Figure 11**).

Romania shares more similarities and synchronicities with the USSR than other members of the communist bloc did, as far as housing developments are concerned. After the small apartments in the early 1960s, the almost perfect echo of the *khrushchevka*, came the same call for introducing 'improved standard designs' with the same timing, in the late 1960s and early 1970s; the same rapid shift from the extensive form of urban development and wasteful land use during the 1960s to the economical use of urban land from the mid-1970s (Andrusz 1984:

160, 196–97) and, until the end of the regime, the same attachment to the total prefabrication of heavy material (e.g. reinforced concrete slabs). These similarities may be related to Romania's 'crushing' economic dependency on the USSR, despite the image it projected of being relatively free from the USSR politically (Burakowski 2012: 36). There were even deeper historical similarities that made Romania resemble the USSR to some degree — belated urbanization and industrialization, a thin layer of modernized elites disconnected from the masses, large rural populations, and the cultural predominance of the rural ethos. The 'aspirational tone' of the discourse on modernization and progress promoted by the Soviet model of urbanization and industrialization might have been lost on the already modern and progressive Czechoslovakia, as Elman Zarecor remarks (2011: 122), but Romania was a more fertile ground for the ideal of communist modernization.

Romanian architects could begin to compare themselves to their counterparts in other countries of Eastern Europe in 1957 after Romania attended the conference on type design in the communist bloc, organized in East Berlin (Silvan 1957), and especially after the conference's exhibition was hosted in Bucharest in 1958. In the same year, Romania attended the 5th Congress of the International Union of Architects on urban reconstruction in Moscow, which was also the first major international congress on the problems of typification. The year 1958 could also be considered the moment of a certain re-opening to the West, albeit indirectly. Through exchanges within the UIA and through foreign publications, information on Western architecture gradually became available. Western inspiration was even explicitly demanded by Ceaușescu, the Communist Party leader, after 1965 (Stroe 2015: 143). During the next decade, which during the communist period in Romania was the time of maximum liberalization and openness, even documentation from the West prevailed.

Little by little, it became normal for architects to explicitly discuss various foreign models of inspiration. Mircea Alifanti, an architect who worked with IPCT, presented his research in the journal *Arhitectura RPR*, along with five examples that inspired him: three from Czechoslovakia, one from France and only one from the USSR (Alifanti 1963). Alifanti paid great attention to the spatial quality of flexible type plans and their capacity to function well over time, which challenges the perception that typification as a process was exclusively guided by low cost (**Figure 12**). However, working mostly on apartment plans, as happened in Romania, had its limitations. In spite of the increasingly diverse sources of inspiration and the continual research on type plans in terms of spatial flexibility, the range of types that were eventually retained in catalogues appears to have been very limited.

Tools of Urban Typology
In the Romanian catalogues of type projects, despite a certain variety in plans, the resulting volumes of the buildings themselves seemed to be simplistic, lacking in variation, at the urban scale. Subsequently composed in similar urban spaces, they led to housing estates that were
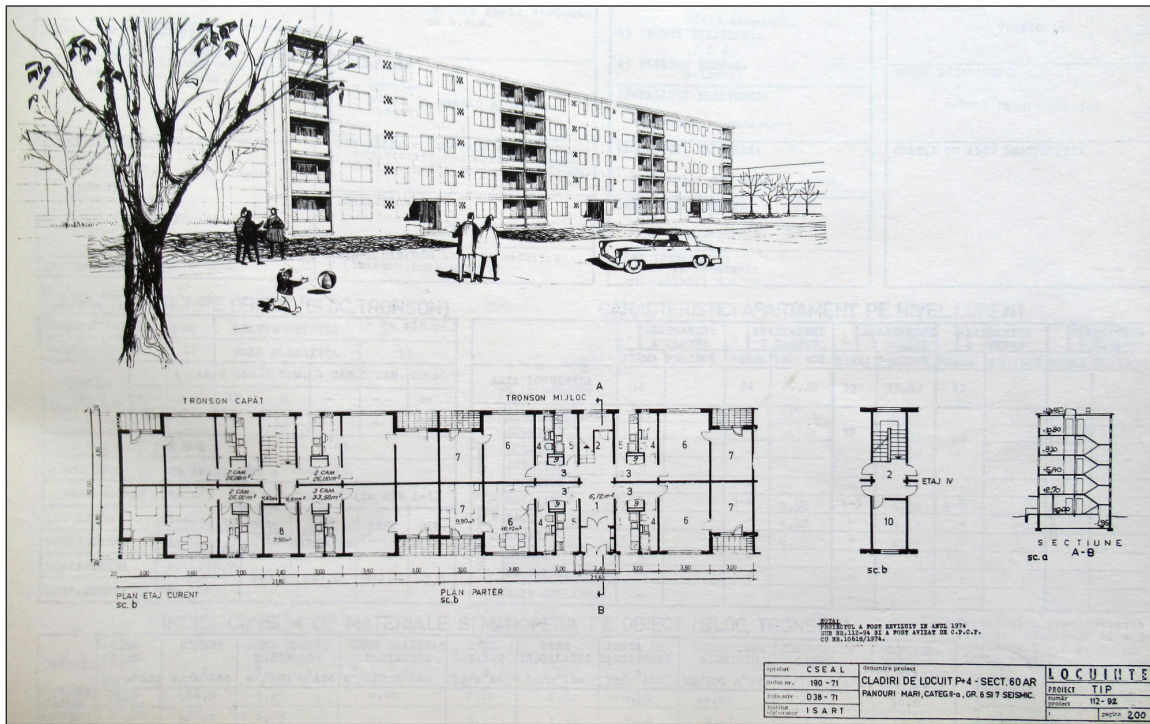
Figure 11: Type project for housing with large-panel structure, 2nd category apartments (perspective drawings and plans), designed by ISART in 1971. Reprinted from: Catalogue ISLGC for Type, Directive and Reusable Projects, vol. 1, January 1975, p. 200.
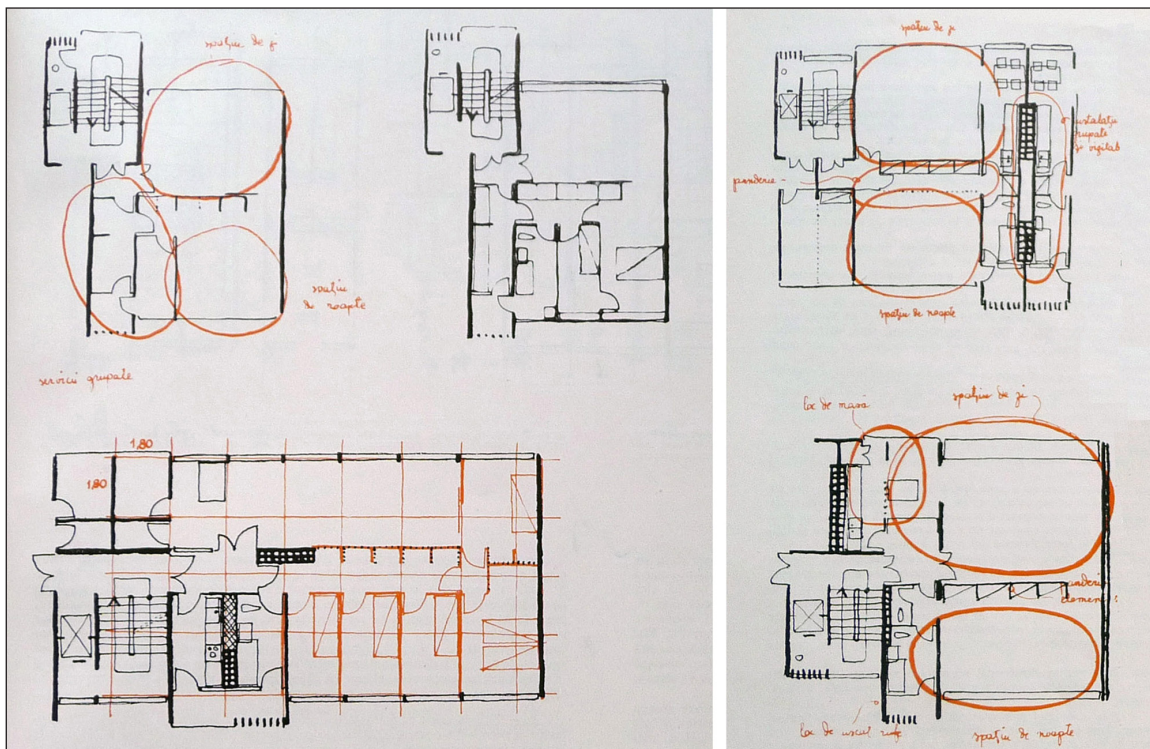
Figure 12: Studies drawn by architect Mircea Alifanti for housing type projects with flexible floor plans. From Alifanti (1963: 42–43).

seen as increasingly monotonous. The fact that building typification had limited the urban aesthetic among the countries of the Soviet Bloc has been generally remarked upon. With only eight building types used in all the housing ensembles in 1951, Czechoslovakia was the country with the most limited range of volume typology and 'building footprints' at the time (Elman Zarecor 2011: 97; chart p.98). In Poland, the prototyping of entire blocks in the 1960s, 'recognized as *type* and passed for mass production', contributed to urban monotony (Crowley 2003: 158).

Similarities can also be found in Western Europe. When one compares the Romanian modernist mass housing

estates published in the magazine *Arhitectura RPR* of the early 1960s with the French *grands ensembles* of the late 1950s and early 1960s as they appear in the pages of *L'Architecture d'aujourd'hui* of the time, the resemblance is striking. The same building forms and the same urban compositions appear. However, on a closer look, it is not so much the type plans themselves, much more varied in the case of French ensembles, but rather their uniform effect on the urban fabric — the same building types are used, the same blocks of flats, the same geometry of slabs, bars, towers — that makes them very similar.

Romanian modernist housing estates of the 1960s and early 1970s, such as Balta Alba (1957–70s) and Drumul Taberei (1961–67) in Bucharest, or Gheorgheni (1964–70) in Cluj, followed the same Athens Charter and Le Corbusier's green Radiant City model. They demonstrate a radical application of modernist housing concepts, as was used, for instance, in Sarcelles near Paris (1955–70), the 'archetype of *grand ensemble'* (Monclús and Díez Medina 2016: 539). As Le Normand writes, referring to similarities between Eastern Europe and France, these are the same functionalist 'suburban housing developments of modernist towers and slabs placed in greenery' (Le Normand 2014: 9).

Elman Zarecor speaks specifically of a 'towers in the park urbanism' in Bucharest, illustrating the notion with a photo of towers from Floreasca (1957–63), one of the earliest large housing estates in Romania (Elman Zarecor 2014: 258–59). Eli Rubin too writes about 'the Corbusean model of "towers in the park"' in relation to the later Marzahn estate near Berlin (1977–89) (Rubin 2016: 40). However, defining the urban typology of these estates as an urbanism of 'towers' is not entirely appropriate and represents a mostly American perspective. Jane Jacobs talks of 'Le Corbusier's city of towers in the park' and refers to 'housing project design' as 'a routine matter of plunking down ever higher towers in ever more vacuous settings' in reference to Robert Moses's 'projects' in New York (Jacobs 1961: 22, 24, 394).

In Romania, the urban typology of housing estates, as in the case of other European *grands ensembles*, is more one of residential slabs and bars than one of 'towers in the park'. Towers are used, but mostly for accents or a more powerful image, such as the unique line of towers of the Floreasca ensemble, which marks the limit of a generous park, in an estate of predominantly medium-rise horizontal blocks. In Romania, as in the USSR, the typical buildings in the modernist estates of the 1960s and early 1970s were the P+4 (*Pe plus patru*), the five story 'bar' (**Figure 11**). The P+8 and P+10 'towers' (**Figure 13**) and the high-rise P+10 'slabs' (called *lame*) (**Figure 3**) were used moderately and more for compositional effects, or along main streets, and only in major cities. In Romania, as in the USSR, very tall buildings were considered almost 'skyscrapers', 'unjustifiable in a socialist society' until the end of the 1960s (Andrusz 1984: 183). When land was still
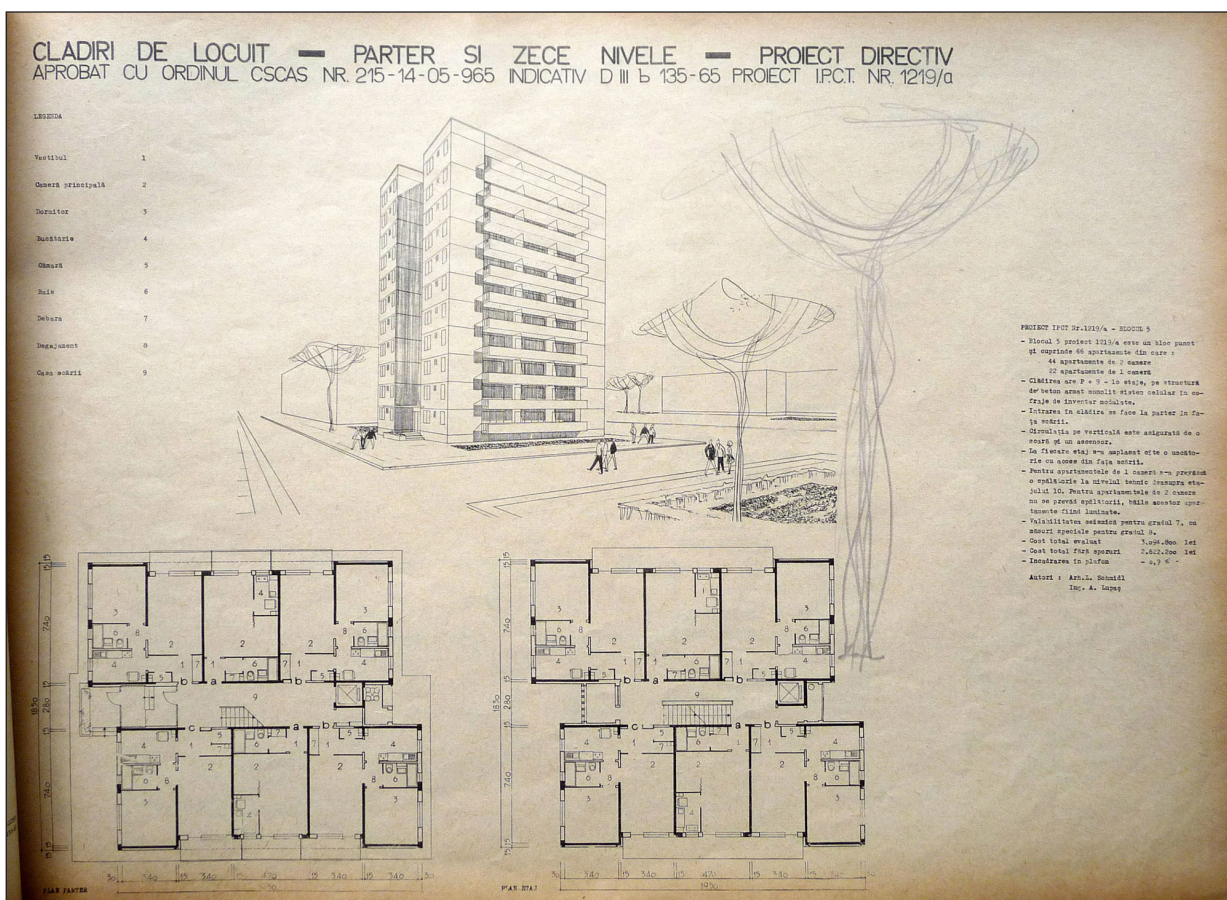

Figure 13: Type project for a P+10 block of flats (perspective drawing and floor plan), project no. 1219/a, designed by architect L. Schmidl and engineer A. Lupaș, IPCT, 1965. From ISART (1971).

cheap and plentiful, towers were more expensive than low-rise bars. The use of high-rise buildings would be reconsidered only in the 1970s (Andrusz 1984: 159), and would involve the generalization of large-panel prefabrication, in the USSR, GDR and Romania alike (**Figure 6**).

Relating the Romanian large housing estates to their larger European context also provides insights into how urban typology reflects deeper societal realities, such as the rural-urban divide. There are clear similarities between Romania and other Eastern European countries in how modernist housing estates responded to the crisis created by the rapid process of urbanization in a predominantly rural society. The more rural Western countries like France responded in the same way to the 'housing shortage that resulted from urbanization' (Le Normand 2014: 9). Housing ensembles at urban peripheries, for people recently brought from the countryside to cities in huge numbers, were also similar in Romania and France. The British post-war New Towns of the 1950s and 1960s, on the other hand, were very different responses to the same concept of residential pedestrian 'superblocks' (Alexander 2009: 74); Britain, a much more urbanized country, relocated inner city dwellers away from the cities, causing a process of suburbanization (Alexander 2009: 17, 22). The compact but large housing estates in Romania, however, helped maintain a clear spatial divide between cities and the rural countryside and became the clear symbols of the collective social leap from peasant to city dweller.

As for the choice between single-family houses and collective housing types, there was considerable variation. The persistence of individual typologies along with collective ones was a characteristic of the British New Towns, which, by their low density, resembled suburban housing developments more than proper towns (Alexander 2009: 113). But there were large differences even among communist countries themselves. In the 1960s in Hungary and Yugoslavia, types for family houses were developed and promoted (Le Normand 2014: 169, 211). Bulgaria, too, remained strongly attached to the family home (Parusheva and Marcheva 2010: 198). In Romania, collective urban housing was promoted almost exclusively in cities, though sometimes in small towns and rural areas, too (where homeowners continued to build mostly single-family houses using traditional techniques). For state employees in the countryside, type projects of smaller blocks of flats and intermediary types were provided (**Figure 14**).

A radical change in urban typologies occurred in Romania in the mid-1970s. As early as 1969, the architect Cezar Lăzărescu wrote about integrated urban structures and 'spatial urbanism', in a sense that betrays the influence of 'megastructures' and continuous spatial cities that appeared in *L'Architecture d'aujourd'hui* in the 1960s (1969a). Not long after Lăzărescu's article came out, housing changed from simple, freestanding blocks of flats to open combinations of longer and higher continuous structures, with a more monumental 'urban' effect. This was also consistent with the so-called Streets Law of 1975, which explicitly dictated an emphasis on the visual aspect of streets. Continuous housing fronts, which would define the housing ensembles from the mid-1970s on, were
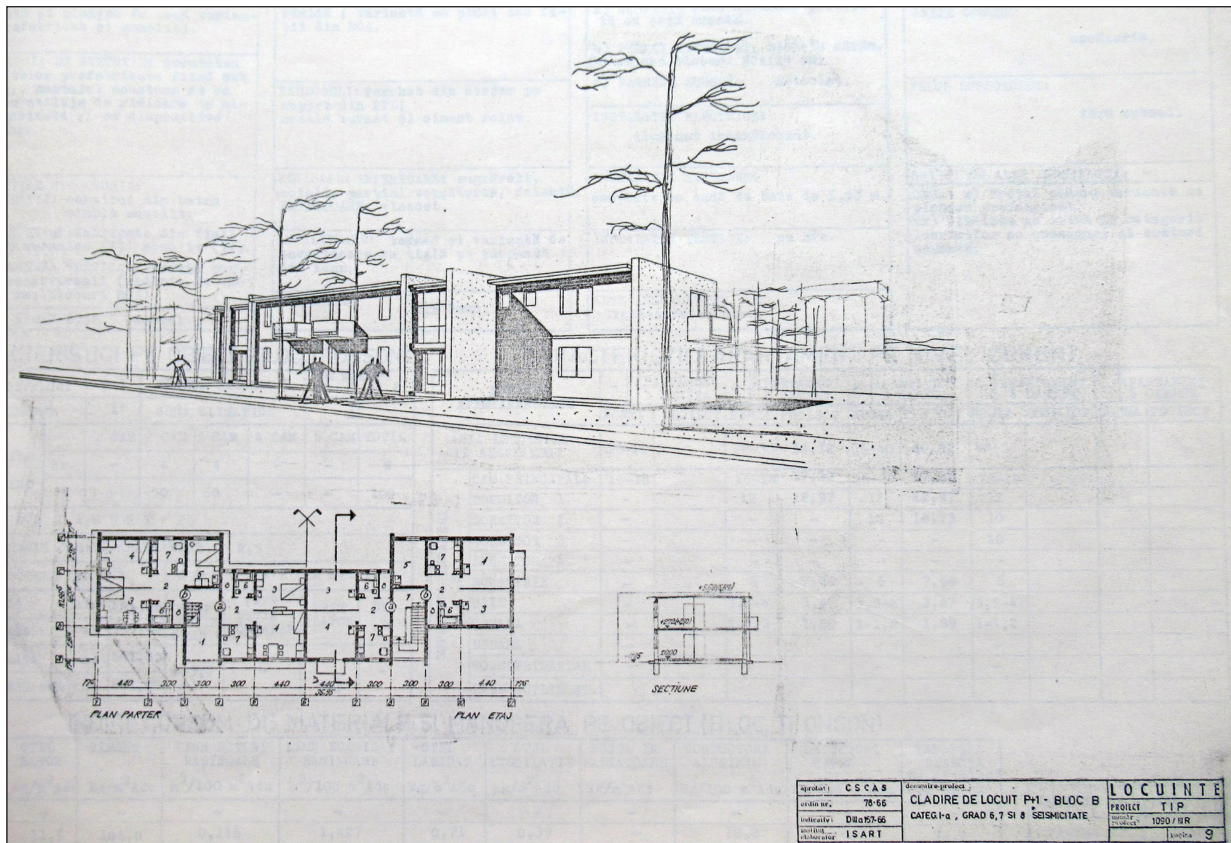

Figure 14: Type project for P+1 housing (perspective drawing and plan), designed by ISART in 1966. From ISLGC (1975: 9).

quite different from the isolated blocks of flats of the previous period.

In the mid-1970s, world economics were changing rapidly, and housing development across Europe followed these shifts, albeit in different directions. *Grands ensembles* were officially banned in France in 1973 (Le Normand 2014: 5). The large developments of the British New Towns movement ended in 1976 (Alexander 2009: 19). In Eastern Europe, it was the other way around in spite of the formal changes that abandoned modernist urban typologies. In the GDR it was only in 1973 that a substantial housing development program was launched, in order to achieve the still unfulfilled ideal of one unit per household — a 'spectacular policy shift … that placed housing at the top of the political agenda' (Rowell 2007: 356). In Bulgaria, too, it was only from the 1970s on that the supply of money destined for housing increased (Perusheva and Marcheva 2010: 205). In Romania, despite a significant decline of the economy after the second half of the 1970s, the privatization policy provided the financing necessary for the new housing figures to continue growing. In all Eastern countries, this growth was possible only through the increased standardization of construction.

Tools of Prefabrication

The very idea of design typification was to facilitate industrialized means of construction, especially those that maximized *factory* prefabrication. In Romania, while prefabrication was strongly promoted politically, in reality it gained little traction. In 1968, less than 20% of state housing production was built with large panels (Lăzărescu 1969b), and by 1975, the number had scarcely reached 40% (Lăzărescu et al. 1977); in addition, the figure was

only 28% for *integral* large panel prefabrication, according to engineer Adrian Lupescu (1976), a former director of IPCT. The USSR, which was similar to Romania in terms of backward technology and an unskilled workforce (Andrusz 1984: 171), the use of large prefabricated panels was only slightly better, increasing from 1.5% in 1959 to 28.5% in 1965, 49.9 % in 1975, and 60% in 1980 (Andrusz 1984: 160). In Czechoslovakia, meanwhile, large panels became 'omnipresent' in the 1970s and 1980s (Elman Zarecor 2011: 116). The countries that performed much better in terms of industrial fabrication, such as Czechoslovakia and the GDR, developed prefabricated systems with a limited number of standard elements that could be combined. The *plattenbau* system developed in the GDR (Rowell 2007: 356–358) permitted a huge estate like Marzahn near Berlin (1977–89) to be raised quickly, with a limited type of panels produced on a very large scale (Rubin 2016: 60). In Romania, the prefabricated large-panel system was far less efficient. However, towards the end of the regime, large panel buildings were politically imposed and were thus built more and more often.

In Romania, the problem was not so much an issue of design as one of industrial prefabrication, which was extremely inefficient. For instance, the 'series 2926' (**Figure 15**) was prefabricated at the factory Militari in Bucharest, which took five years to be made functional and, when it finally was, in 1967, it produced components exclusively for this already outdated series (Juster 1968). It was hardly a success story.

Because fabrication was limited to a very few pre-established lines of factory production, and thus was totally inflexible, housing built with prefabricated large panels was generally also for the lower-comfort categories,
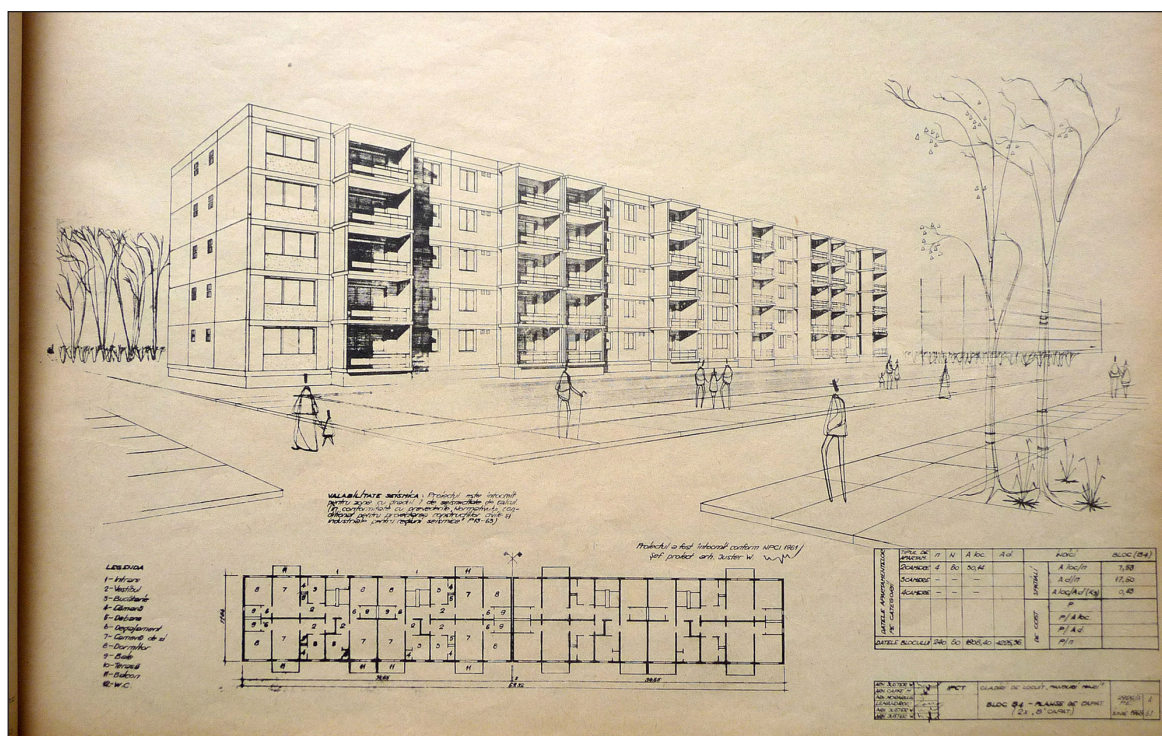

Figure 15: Type project for prefabricated large panels — series 2926/A (perspective drawing and floor plan), designed by architect Willy Juster, IPCT, June 1968. From ISART (1971: plate 61).

which were identically reproduced by the thousands and for years in a row. For instance, in Brașov, a large industrial city, in the early 1970s, housing was built according to the type series ‚IPCT 1013' (**Figure 16**). Designed in the early 1960s, this housing type remained the only one that was fabricated by the factory of large panels in Brașov, which had a single technological line — a situation about which local architect Dan Cristescu had complained since the mid-1960s (*A doua conferință pe țară a Uniunii Arhitecților* 1965: 23).

The problem of inefficiency was that the component elements of a project that was to be prefabricated were, in fact, too many and too diverse. In comparison, in the USSR, for instance, Soviet engineers devised a system of standardized modular building components that were interchangeable among building types with only slight modifications (Andrusz 1984: 160), which meant that more building types could be produced with only a few pre-existing, efficiently produced types of components. In Romania, however, type design preceded and prevailed upon the standardization of fabricated components. Instead of designing a few basic standardized elements, with the possibility of combining them afterwards into a variety of plans, type projects were designed in their entirety first and divided into many different building components afterwards.

Romanian architects realized that they should have reasoned the other way around only by the mid-1970s; then it became clear that they should have typified the plans *after* standardizing the system of interchangeable construction elements. The architect Tiberiu Ricci explained the obsession they had for the so-called 'optimum solutions' plans — that is, for the perfect functionality of the type plan — which led them to 'closed prefabrication' instead of 'open prefabrication' (Ricci 1975). 'We have typified without industrialization, now we industrialize with a rudimentary typification', Caffé wrote (1975). The inefficiency of the heavy concrete prefabricated housing estates, which nevertheless continued to be erected in great numbers, contributed to the economic collapse that led to the fall of the regime in 1989.

Conclusion

Today, the grey monotony and dullness of the socialist housing estates is usually blamed on type projects. As this article demonstrates, type projects were tools, used by various actors for different purposes. Their performance depended on who handled them and whose interests they served.

For those architects at the end of the process of design production whose job was to apply type projects within their area, type projects were indeed just a contrivance. They complained continually about the excesses of typification, which seemed a heavy price to pay only for the purpose of producing more housing faster and cheaper. For the architects who designed them, the 'typifiers', type projects were instrumental in defining the interior living space, as type apartments plans; in shaping the architectural objects, as type buildings; and in endorsing the prefabrication technology, as type designs for factory standardization. The 'typifiers' focused especially on the plans of apartment types and tried to improve functionality and spatiality to achieve the optimal plan. Type projects were also an avenue through which foreign influences flowed into Romanian housing design. Because of their basic position in the housing design process, and because of the typifiers' proximity to the centralized source of foreign documentation, type projects filtered the latest advancements in housing design, first from Eastern Europe, and later from the West.

Because the norms and area indexes changed frequently by decree, type projects became conduits for the fine-tuning of not just housing types, but the actual construction of housing; they translated political decisions into how housing was built. For the communist regime, type projects were the vehicles for implementing various policies: making the 'unproductive investment' in housing productive; integrating all design institutes in the country into a unified system; controlling social differentiations; promoting a socialist lifestyle and producing the socialist city; erasing the differences between specific cultures across the national territory, and affirming national unity through the uniformity of new socialist urban environments.
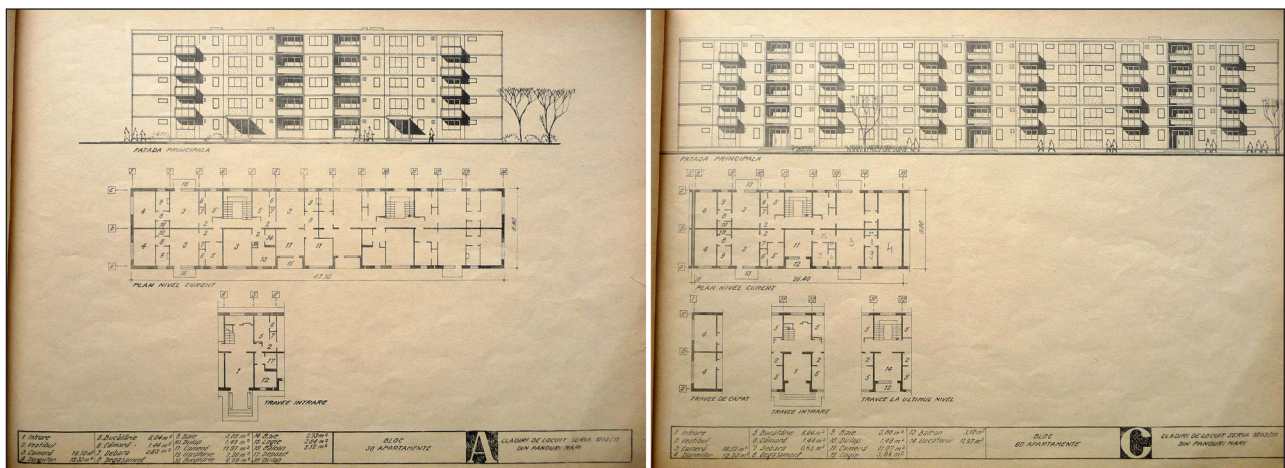

Figure 16: Type project for prefabricated large panels — series 1013/12 (facade and plan), designed by architect Tiberiu Niga and engineer Moses Drimer. From ISART (1971: plates A and C).

Type projects were just instruments. But instruments are never totally neutral. As this paper also showed, the tools of design significantly determined the end result of design — an issue that continues to be of relevance today.

Note

¹ 'Indicators' is a translation from the Romanian 'coeficienți', whose abbreviation appears not as 'C', but as 'K' (Novițchi 1957: 4), from the Russian *коэффициент*.

Competing Interests

The author has no competing interests to declare.

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