An analytical reading of the planning structure in Munich

A L Gelfond¹, I V Erofeeva² and V A Moiseenko³*

¹Nizhny Novgorod State University of Architecture and Civil Engineering, 65, Il’inskaya str., Nizhny Novgorod, 603950, Russia
²Research Institute of Building Physics of the Russian Academy of Architecture and Building Sciences, 21, Locomotivny lane, Moscow, 127238, Russia
³National Research Mordovia State University, 24, Sovetskaya str., Moscow, 430000, Saransk

E-mail: vlamo@mail.ru

Abstract. The Munich example demonstrates the architectural and cultural approach to the analysis of the large cities’ planning structure. In the context of the urban planning fabric’s historical development, the main planning axes are singled out and a conceptual model of mega ensembles is built. Particular attention is paid to the city’s hydrography, the main components of which are the Isar River, the Nymphenburg canals and the Northern system of the Munich canals, which began to be formed in the 17th century and had finally been developed by the beginning of the 20th century. Munich’s northwest quadrant, formed much earlier than the other three, was chosen as the main object of study, on the territory of which the urban triptych was identified as the main system-forming mega-ensemble, formed, firstly, by the city’s historical center with two other triptych elements emanating from it Brynner Strasse and Ludwig Strasse, respectively, secondly, the Olympic Park and thirdly, the Nymphenburg Palace and Park complex, connected with the second element of the triptych by the Nymphenburg-Biedersteiner Canal.

Introduction
The full-scale introduction of the cultural component into urban planning gives the latter a very specific character. In fact, the urban structure becomes the object of a kind of artistic criticism, in many ways similar to that of which the works of fine art, music, and fiction are exposed. And here - often timidly, and sometimes even loudly - along with verified analytical assessments, the critic’s personal aesthetic preferences begin to declare themselves, his worldview, and sometimes just an accumulated supply of the life impressions.

Obviously, such an approach (we will call it in the future, with all the conventions and approximation of the term “cultural”) looks rather shocking against the background of the urban planning analysis’ purely scientific nature. But, on the other hand, this same approach often allows revealing such features of the urbanistic structure that, for one reason or another, remain outside the scope of more “solid” analytical methods. The heuristic potential of the culturological approach is particularly evident when an assessment of a particular urban structure is given from the different authors’ perspectives, just as the same symphony can be interpreted by the several conductors in significantly different keys. The kind of “stereoscopy” of perception that arises on this basis,
objectively creates the prerequisites for a deeper penetration into the conceptual essence of the corresponding urban planning artifact.

Immediately, it should be noted that this article, despite its belonging to three authors, does not at all pretend to the above-mentioned “stereoscopy”, if only for the reason that their unified, solidified point of view is stated below. However, it would be extremely desirable if other authors also gave their options for the analysis of the urban fabric of Munich in the context of its architectural and cultural interpretation, which would just allow us to form the “stereoscopy” mentioned above.

Materials and methods

Turning to the essence of the problem consideration indicated in the title of the article, let us first of all pay attention to a certain similarity of two intersecting geometric axes - abscissas and ordinates, which (in a first approximation) form the Isar channel oriented in the meridional direction on the map of Munich and a powerful beam of railway passing in the latitudinal direction paths with an accompanying exclusion zone. As a result, the entire territory of the city turns out to be divided, if we again resort to a geometric interpretation, into four quadrants (Figure 1). The clearly readable “urban autonomy” of each of them creates the prerequisites for the possibility of a sufficiently separate analysis of these sectors at the preliminary stage. (Which, however, should be crowned at the final stage of a detailed study by considering them as inextricable parts of a single urban development organism).

![Figure 1. The conceptual breakdown of the urban fabric in Munich. Into four quadrants. The authors’ scheme map](image)

Due to the relatively small volume of this article, we are forced to confine ourselves to considering only one of the four “quadrants” in Munich, namely the northwest, which includes the historical center of the city, leaving an analysis of the planning structure of the remaining three sectors, as well as the final, synthesizing stage of the study for a larger scientific project.

However, during the longer period of Munich’s existence, its current northwestern quadrant was, in fact, a city as a whole. Recall that, like Moscow, the capital of Bavaria relates its foundation to the middle of the 12th century. (The first documented mention of it dates back to 1158). In the same XII century (more precisely, in 1180) Munich acquires the capital status, becoming the residence of the Wittelsbach dynasty. Methodically, from century to century, decorating with new significant architectural objects, the city survived the dramatic centuries of German history quite safely. The era of the religious wars of the 16th century and the Thirty Years War of 1618–1648 turned out to be quite merciful to it. Moreover, the contrast between the well-being of the city and the devastated regions of Germany surrounding it by the beginning of the 1630s became so striking that the Swedish king Gustav II, who led the Protestant army, had every reason to call Munich a golden saddle on a skinny nag.
But, paradoxically, it was this long, material prosperity of the city that was not overshadowed by the fatal upheavals that in the end began to threaten the city with serious problems. Constantly embraced by building fever, Munich year after year gasped more and more in the ring of medieval fortress walls that surrounded the Bavarian capital at the beginning of the 14th century (Figure 2).

![Figure 2. Munich before the demolition of its walls. Layout [1, p. 5].
1 - Cathedral of the Holy Virgin (Frauenkirche); 2 - Marienplatz; 3 - New Town Hall; 4 - St. Peter’s Church; 5 - Church of the Holy Spirit; 6 - Old Town Hall; 7 - Old Palace; 8 - Fortress walls; 9 - Isar River](image)

As a result, in 1791 a decision on their demolition was made, which had finally been completed by 1810. Naturally, in the historical and cultural plan of this kind of actions are regarded very ambiguously (we recall, at least, the dismantling of the medieval walls and towers of Kitai Gorod in Moscow, carried out in the first half of the 1930s). And, nevertheless, it was the destruction of the ancient fortress wall that opened before Munich new - literally - horizons of its territorial development.

In this case, two highways, respectively, going north and west (with their rotation a few degrees in the clockwise direction): Ludwig-Strasse and Brinner-Strasse (German Ludwig-strasse and Brienner-strasse, respectively; Figure 3).

![Figure 3. Fragment of the map of Munich in 1858 [2].
1 - Ludwig Strasse; 2 - Brinner Strasse; 3 - English garden; 4 – King’s Square (Koenigsplatz)](image)
The main decoration of the new northern planning axis was the so-called English Garden, unique in many characteristics, stretching between it and the Isar River (German: Englischer Garten; founded in 1789). And the role of the compositional center of the western planning axis was taken by the Royal Square (German: Königsplatz). Translating the data on the transformation of the urban planning fabric of Munich into the conceptual map’s graphic language, we get the picture presented in Figure 4.

Figure 4. The conceptual scheme of the territorial development of Munich. in the first half of the XIX century. The authors’ scheme map

If the first author of the Royal Square - Karl von Fischer (1782-1820) - tried to lay memorial symbolism in this architectural ensemble, then his successor Leo von Klenze (1784-1864) would have initially interpreted Koenigsplatz in a completely different way. For him, it was, first of all, the main entrance to the city, corresponding in its scale and grandeur to the political and cultural status of the Bavarian capital. And his Propylaea in this sense was associated not so much with the triumphal arch as with other propylaea - Athenian - preparing the viewer for the ancient Acropolis architectural masterpieces’ perception [3, 4].

However, the Royal Square ensemble, in fact, was not destined to visit as the main entrance to Munich. The fact is that when the Propylaea was just being built (from 1846 to 1860), the city was already developing, and very dynamically, in a westerly direction and in just a few decades literally swallowed up the emerging Königsplatz. As a result, the role of virtual propylaea, symbolizing the approach to the artistic and cultural treasures of Munich, clearly moved from the King’s Square to another remarkable urban ensemble. This is the palace and park complex Nymphenburg located northwest of Brinner Strasse (Schloss Nymphenburg; Figures 5, 6). And although the compositional center of this complex is, of course, the baroque building of the palace, erected in 1664–1675 according to the decree of Elector Ferdinand Maria, architect Agostino Barelli [5, 6], however, only in the frame of a luxurious water park can it play the conceptual role of the virtual Western propylaea of the Bavarian capital.

In turn, another of the highways mentioned above, Ludwig Strasse, as if not content with the proximity to the English Garden located to the east of it, in the 20th century on the other, the western side was by no means less “compositional balancer” in the urban aspect “In the form of an Olympic park” (Olympiapark; Figures 7, 8). As it is known, Munich received the status of the owner of the XX Summer Olympic Games six years before they were held in 1966. The main question immediately became the search in a densely populated city for those several hundred hectares of land that needed to be allocated both to the complex itself and to its surrounding infrastructure.
Figure 5. The Nymphenburg Palace and Park Complex in a Conceptual Role virtual Western propylaea Munich. The authors’ scheme map

Figure 6. A fragment of a painting by Giovanni Antonio Canaletto (1761), depicting the Nymphenburg Palace and Park complex. West side view

Fig. 7. Munich Olympic Park in a conceptual role “Compositional balancer”. The authors’ scheme map
After considering all possible options, the choice fell on the abandoned wasteland Oberwiesenfeld, located relatively close to the center of Munich (about an hour and a half by leisurely step in a north-westerly direction). Until the 1930s there was an airfield, and later on - a huge landfill, which collected household waste from all over Munich. As a result, over the several years course, the former landfill has become one of the most popular and visited attractions in the Bavarian capital.

At its creation, landscape architect Gunter Grzimek was guided by the slogan, which later became the official slogan of the entire sports event, “Olympische Spiele im Grünen” (Olympic Games in nature). Huge piles of debris were covered with soil, which in turn was covered with grassy lawn. Already in 1968, almost three-hundred-meter television tower (Olympiaturm) with two viewing platforms (at an altitude of 178 and 189 m, respectively) rose above the park.

The Olympic complex itself was inaugurated on May 26, 1972. The following structural elements stand out in it: the sports facilities themselves and the infrastructure directly related to them: Olympic Village; Olympic Press Center; Olympic Park with Olympic Mountain (Olympiaberg) and Olympic Lake (Olympiasee) with an area of 8 hectares. The latter became, in fact, not only geometric, but also the compositional center of the entire park (despite the fact that the largest depth is only 1.4 m in it).

However, the Nymphenburg-Biedersteiner Canal, linking the Olympic Lake with the eastern, so-called Needle, Nymphenburg Canal (Nymphenburger Stichkanal), had been existing long before the creation of the Olympic Park. In fact, it is an integral part of the so-called Northern System of the Munich Canals (Nordmünchner Kanalsystem), which started being formed in the 17th century and had finally been developed by the beginning of the 20th century.

In our conceptual framework, this channel plays a very significant role. The fact is that in addition to exclusively visual contact between Nymphenburg and the Olympic Park (which is realized, first of all, due to the presence of a television tower; Figure 9), another, much more tangible connection arises between the two named complexes. On the map, the Nymphenburg-Biedersteiner canal can be represented as the base of an equilateral triangle, the adjacent peaks of which are the Nymphenburg palace and park complex and the Olympic Park, and the historical center of Munich is the opposite peak (Figure 10). In this case, the sides of this triangle are symmetrically flanked by the pairs of linear objects: from the south - by the railway and Brinner Strasse, and from the east - by Ludwig Strasse and the Isar River.

Figure 8. Plan of the Olympic Park in Munich. The authors’ photo, September 2016
Summary
As a result, we see a city-planning structure almost crystalline in its correctness, a unique mega-ensemble [7, 8], which we can rightfully call the “urban triptych”. Moreover, it is quite obvious that the map presented in Fig. 10 does not at all exhaust its content and a small fraction of the entire urban specificity of the Bavarian capital. Nevertheless, we believe that our work may become the starting point for further theoretical research devoted to the Munich urban planning structure study and its public spaces [9 – 12]. In addition, in our opinion, this article may also be useful for widespread use in the tourism industry when developing the tour operators’ specific routes, depending on the organized excursions’ topics.

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