DEFENSIVE BUILDINGS OF MONASTERY COMPLEXES LOCATED WITHIN THE TOWN AREAS OF HISTORICAL CITIES IN WESTERN UKRAINE

BUDOWLE OBRONNE KOMPLEKSÓW KLASZTORNYCH POŁOŻONYCH NA OBSZARACH MIAST HISTORYCZNYCH UKRAINY ZACHODNIEJ

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ABSTRACT

The article deals with forty defensive monasteries of the XVII-XVIII centuries in Western Ukraine. It reveals basic types of location of the monasteries in relation to the defensive perimeter within the town area. The article analyzes the peculiarities of the placement of buildings in the structure of town quarters, the regularity of the development of monastery territories. It reveals monastery complexes surrounded by their own walls and monasteries, which were defended due to town fortifications.

Key words: monastery complex defensive buildings, order, natural defence, location, defensive perimeter, within the town area.

STRESZCZENIE

W artykule zbadano 40 klasztorów obronnych z XVII i XVIII wieku w Ukrainie Zachodniej. Przedstawiono podstawowe typy ulokowania klasztorów w obwodzie obronnym śródmieścia. Przeprowadzono analizę osobliwości ulokowania obiektów w strukturze kwartałów, regularność zabudowania terenów klasztorowych. Przedstawiono zespoły klasztorne, otoczone własnymi murami oraz klasztory, które broniły siebie dzięki fortyfikacjom śródmieścia.

Słowa kluczowe: zespół klasztorny, fortyfikacje, zakon, obrona naturalna, ulokowanie, obwód obronny, śródmieście.
1. PROBLEM STATEMENT

Nowadays, the defensive buildings of monastery complexes, located within the town area, are not subject of a separate research. The typology of their location in the planning spatial structure of a town is still not enough defined. The chronology of formation and volumetric and spatial characteristics of the defensive buildings of the monastery complexes are not disclosed enough.

The article uses the method of comparative, historical, functional and morphological analysis, systematization and graphical modelling. The work is based on field researches, analysis of archival and literary sources, statistical and cartographic materials. The work is a generalization of analysis of structure, processes and resources of the historical development of defensive buildings of monastery complexes located within the town areas of historical towns of Western Ukraine.

The article analyzes the location of the monasteries, according to their orders, in the planning structure of a town: buildings adjacent to the corner of the defensive line within the town area, in the middle of the defensive line, in the middle of the defensive line at the gate, in the corner and in the corner at the gate. The scope of research includes the analysis of the location of monasteries, according to their orders, in the planning structure of the quarters: separate; part of quarter; regularity and irregularity of a monastery territory. It analyzes volumetric and spatial characteristics of defensive buildings: the usage of masonry walls within the town area; autonomy (detached buildings) of defensive masonry walls of complexes; the usage of within the town area towers; autonomy of monastery towers; the usage of ramparts within the town area; the isolation of cells and temple from the masonry walls of the complexes; the connection of the cells and the temple with the walls; the usage of bastions (outer towers) and bastions within the town area in monastic complexes. The article systematizes the usage of construction materials in the construction of defensive buildings: limestone; brick; moulding of earthworks and construction of wooden fortifications.

One of the first researchers of monasteries on the territory of Ukraine in the XIX century was monk-historian of Armenian origin Sadok Baronch. At the end of the XX century and at the beginning of the XXI century the monasteries were studied by Ukrainian historians of architecture: M. Bevz, V. Vuysyk, O. Boyko, V. Slobodian, V. Vecherskyi, P. Rychkov, V. Petryk, Y. Lukomsy, Z. Lukomska, B. Hihlach, M. Chornyi, N. Ursu, A. Plamenitska, M. Zharkikh. The peculiarities of formation of the Basilian monasteries (monastic Order of St. Basil the Great) have been highlighted in the dissertation by L. Chen. The monastic complexes of the Western region of Ukraine were studied by Polish scientists P. Krasny, M. Voichyk, A. Betley and Y. Ostrovski, whose works were included in the multivolume work titled as “Roman Catholic churches and monasteries of the Ruthenian Voivodeship”. The publications of the aforementioned authors have analyzed in detail the history of the formation of temples and administrative and economic structures, but the descriptions, classification and typology of defensive systems of monastery complexes located within the town areas remained scantily researched.

2. DEFENSIVE BUILDINGS OF THE DOMINICAN ORDER MONASTERIES

Lviv. The Dominican order monastery is located in the north-eastern corner of the within the town area, behind the town arsenal. The monastery building was built during the XV - XVI centuries. The lower part of the Rymariv Tower is preserved near the monastery (Fig. 1).

Staryi Kostiantyniv. The Dominican order monastery was located in the southern part of the within the town area, not far from the Medzybizh Gate. The two-storey complex was constructed in the beginning of the XVII century. The complex of the monastery included donjon (inner tower aka dungeon), which according to L. Kroschenko already ex-
isted in 1603 and was associated with the first measures of development of the within the town area. L. Kroshchenko observes that: "The multi-tiered donjon was able to accommodate a significant number of people and military supplies, while the small castle Labunsky was significantly inferior to the first in terms of defensive capability. On three sides - in the south, in the west and in the east - on the four tiers the tower had cannon loopholes. And only few cannon loopholes were in the next to the last tier on the northern side. In the upper tier all four sides were equipped with seven loops, suitable for the use of small arms. The walls were built of Quarry-faced limestone. The bricks were used in the vault between the first and second tiers, in lintel blocks of holes, and in architectural details."[1]. According to L. Kroschenko, the donjon directly imitates the tradition of the so-called "Volyn towers" of the XIII century and known from the chronicle of the Holm (Chelm) tower [2].

Chortkiv. The Dominican order monastery was funded by Stanislav Holskyi, Ruthenian voivode (governor) and owner of Chortkiv in 1640 [3]. The church and building with cells were enclosed by a high defensive masonry wall and four corner towers. The complex is located on the north-western side of the market square and next to the town gate. The monastery territory is regular and rectangular.
Zhovkva. The Dominican order monastery is located near the Lviv Gate, in the north-eastern corner of the within the town area. The complex was formed in the middle of the XVII century. The structure of defensive buildings included masonry walls with loopholes, a tower and a corner earthen bastion.

Sambir. The Dominican order monastery (Fig. 2) was founded in 1406. However, as a result of the attack of the Tatars in 1498 it was destroyed, and rebuilt only as soon as in the middle of the XVI century. During the XVI century the town of Sambir was enclosed by its own defensive masonry walls. As a result, the western flank of the walls of the monastery played the role of defence of the town [4]. After the dismantling of the monastery abode by the Austrian authorities in 1788 there were located military barracks on the monastery territory [5].

Mostyska. The Dominican order monastery is located in the southern part of the within the town area, its territory is of rectangular shape and enclosed by a masonry wall around the perimeter. The complex was formed during the XVI-XVII centuries. The cadastral map from 1852 demonstrated the combination of the church and the buildings of the monastery. There is an open courtyard in front of the monastery building, with a garden behind the courtyard.

Rohatyn. The Dominican order monastery is located in the northern part of the within the town area near the Lviv Gate. In the 40s of the XVII century the building was wooden. In the middle of the XVII century a masonry building was erected, and at the end of the XVII century it was rebuilt for military purposes [6]. The church and the monastery building are demonstrated by the cadastral map from 1846; they are separated and not enclosed by any
fencing. The street, which separates the northern side of the market square, is oriented towards the main facade of the church. The fencing of the monastery and the gate were disassembled at the end of the XVIII century due to regulatory measures. The rampart and masonry walls of the within the town area were demonstrated on the map by von Miga map in the late XVIII century; they were the main defensive buildings of the monastery.

Lutsk. The Dominican order monastery was formed during the XVII and the first half of the XVIII centuries. The old monastery was founded in the middle of the XIV century. Among the founders of the monastery were King Vladyslav II Yahaylo and Grand Duke Vytautas. The complex is located next to the lower castle, near the Roman Catholic Cathedral, on the hill shore of the river Styr. The old monastery, which functioned until the middle of the XIX century, was of defensive type and built in the Gothic style [7]. Main defence of the monastery and the new buildings of the monastery built in the classical style, at the period of the end of the XVIII century and the beginning of the XIX century, had no defensive function. Nowadays, on the former territory of the monastery, a two-story building of cells with cellars and a part of the wall of the old monastery are still preserved.

Belz. The Dominican order monastery is located in the southern part of the within the town area. The complex was built up during the XVII and the XVIII centuries. The defensive function was performed by masonry walls. On its southern side the monastery was provided with a low-lying marshland.

Belz. The female Dominican order convent (nun monastery) is located in the southeastern part of the within the town area. The complex was originally wooden; the masonry building was erected in the middle of the XVIII century. The defensive function was performed by masonry walls, and from the western side were earthworks of the within the town area. On the southern side the monastery was provided with a low-lying marshland.

Yezupil. When exploring Yezupil Alexander Cholovskyi recorded that the castle and the monastery of the Dominican order were included in the perimeter of fortifications of the settlement. The monastery was separated from the within the town area by a small but deep pond. From the side of the within the town area both could be reached by crossing arched bridges. The castle and monastery in Yezupil were independently strengthened and in case of capturing the town one and the other could still resist [8]. In 1646 the part of the monastery was already built. The whole construction lasted about 10 years [9]. The territory of the monastery was enclosed by the masonry wall along the banks of the hill, whose slopes were paved with cobblestone pavement [10]

Bohorodchany. The Dominican order monastery was built during 1691 and the end of the XVIII century [11]. It was located in the eastern part of the within the town area. Out of all the perimeter of masonry walls of the monastery to the south from the church only the entrance gate is preserved.

Letychiv. The Dominican order monastery was formed in the first half of the XVII century. The complex is located in the north-eastern part of the within the town area on the former castle place. The monastery is enclosed by a high defensive masonry wall with a preserved circular tower.

Vinnytsia. The Dominican order monastery is located in the northern part of the within the town area. During the XVII and the middle of the XVIII century the monastery was wooden. During the 1750s-65s, a church and a monastery building were erected. The monastery is enclosed by brick walls, with located on the corners towers with buttresses.

Kamyanets-Podilskyi. The female Dominican order convent (nun monastery) is located in the northern part of the within the town area. The complex originally had a different location near the Ruthenian Gate, however, at the beginning of the XVIII century it settled down at the walls of the Franciscan order monastery. The defensive function of the mon-
Astery was carried out by the masonry walls of the town and the Smotrych river with its canyon.

Analysis of location of the Dominican order monasteries in the planning structure of the within the town area allowed the following results to be established: eight of the complexes were located in the middle of the defensive line (Belz (2), Bohorodchany, Lutsk, Mostyska, Staryi Konstantyniv, Kamyanets-Podilskyi, Vinnytsia); three of the complexes were located in the middle of the defensive line near city gate (Rohatyn, Sambir, Chortkiv); two of the monasteries were located in the corner near city gate (Zhovvkva, Letychiv); one monastery was located in the corner (Lviv); one complex was adjacent to the corner of the masonry walls of the within the town area (Yezupil).

Analysis of location of the Dominican order monasteries in the planning structure of quarters allowed to establish the following results: 12 of the complexes functioned as separate quarters (Lviv, Staryi Konstantyniv, Chortkiv, Zhovvkva, Sambir, Mostyska, Rohatyn, Belz (2), Yezupil, Bohorodchany, Letychiv); three of the complexes were parts of a quarter (Lutsk, Vinnytsia, Kamyanets-Podilskyi); twelve of the complexes had regular monastery territory (Kamyanets-Podilskyi, Lviv, Staryi Konstantyniv, Chortkiv, Zhovvkva, Sambir, Mostyska, Rohatyn, Belz, Bohorodchany, Vinnytsia); three of the complexes had irregular monastery territory (Yezupil, Lutsk, Letychiv).

Analysis of volumetric and spatial characteristics of the defensive structures allowed establishing the following results: four of the complexes used masonry walls of the within the town area (Lviv, Zhovvkva, Rohatyn, Kamyanets-Podilskyi); eight of the complexes had their own defensive masonry walls (Staryi Konstantyniv, Chortkiv, Belz, Yezupil, Lutsk, Letychiv, Vinnytsia); two of the complexes used towers of the within the town area (Staryi Konstantyniv, Lviv); three of the complexes had detached towers (Chortkiv, Letychiv, Vinnytsia); three of the complexes used earth shafts of the within the town area (Bohorodchany, Yezupil, Zhovvkva); ten of the complexes had their own cells and church separated from masonry walls (Lviv, Belz, Zhovvkva, Mostyska, Rohatyn, Bohorodchany, Yezupil, Letychiv); five of the complexes had their cells and church connected with masonry walls (Lutsk, Staryi Konstantyniv, Chortkiv, Vinnytsia, Sambir). The usage of bastion and towers of the within the town area was discovered in three of the complexes (Kamyanets-Podilskyi, Zhovvkva, Lviv (bastion)).

The following building materials were used in the process of construction of defensive buildings: limestone in five of the complexes (Lviv, Staryi Konstantyniv, Chortkiv, Yezupil, Zhovvkva, Kamyanets-Podilskyi); brick in nine of the complexes (Lviv, Belz, Lutsk, Sambir, Rohatyn, Mostyska, Letychiv, Vinnytsia); Earthen fortifications in two of the complexes (Bohorodchany, Yezupil); almost all of the complexes had wooden fortifications at their first stage of formation.

### 3. Defensive Buildings of the Bernardine Order Monasteries

Hrystynopil. The Bernardine order monastery was founded in 1695 by Felix Casimir Potocki. It is known that originally the church was wooden with masonry crypts. In 1692 Potocki began to develop a town on the territory of the New Courtyard and names it Krystynopol after his wife Kristina Lubomirska [12]. Potocki had not fully implemented the intended spatial image of the town as on May 15, 1702 he died and was buried in the church of Bernardine Fathers [13] (originally it was a wooden building with a brick corps [14]), the one he founded in 1695. In 1702 the new owner of the town became the son of Felix - Joseph Pototsky [15]. Actually, he continued and completed the construction of a brick church in 1703 and, eventually, the monastic corps [15] He died in 1723 and was also buried in the crypts of the church.

Near the monastery of the Bernardine Fathers, on the northern side of the within the town area there were a gate with a bridge. The monastery was built on the island as in Yezopol
and was adjacent to the corner of the within the town area. In the XVIII century, after the reorganization of the town, the monastery was included in its perimeter. This hypothesis is based on the study of the surviving remains of a segmental street and the boundaries of the monastery garden, which were recorded on the measured steps around Khristinopol in 1854 [17].

Leshniv. The Bernardine order monastery is located in the northern part of the within the town area, near the gates and ramparts (Fig. 3). The monastery was built up during 1629-1697. The monastery was funded by the Belz castellan and by the owner of Leszniv by Maciej (Mateusz) Leshniowski. Initially, the church was masonry and cells were wooden. The founder obliged his descendants to build a monastery of a defensive type, and, due to frequent raids of the Tatars, to fill it with the necessary weapon. In 1648, as a result of the national liberation struggle, the monastery was robbed and burned. The reconstruction of already masonry buildings lasted until 1697 [18]. An interesting fact is the presence of loopholes in the upper tier of the church of the monastery, which made it possible to defend additionally the Northern Gate of the within the town area.

Sambir. The Bernardine order monastery is located in the southern part of the within the town area. It was formed in several stages: the first stage in 1472-1476 years; at the end of the XVI century the village elder rebuilds it [19]. In 1498 all the buildings of the monastery were burned by the Tatars. In 1514 the governor of Sandomierz and Sambir together with the Bernardines began to build a new monastery and church on the model of a fortress stronghold with strong masonry walls. All the buildings were enclosed by strong high stone and brick walls, which had an irregular course, adapted to the shape of the territory of the monastery. From the west side there was a gate, and from the south – a quadrangular tower with a wicked gate. The monastery had additional natural defence – the Mlynvika River.

Husiatyn. The Bernardine order monastery was formed at the beginning of the XVII century. It was located in the south-western corner of the middle of the within the town area not far from barbican. The monastery is enclosed by defensive masonry walls and connected to the masonry wall of the within the town area. The territory of the monastery is regular, rectangular and without corner towers. In the middle of the XVII century it was destroyed and during 1690 - 1723 it was rebuilt at the expense of Adam Jeronim Sennyavsky [20]. On the cadastral map from 1827 there were recorded a masonry fence of the complex, a church and scattered buildings of the monastery. The monastery was provided with the rocky riparian land of the Zbruch River from the south side, and with a ditch and a high wall of the within the town area from the west side.

Zbarazh. The Bernardine order monastery is located in the southern part of the within the town area near the gate. It was built during the XVII - mid XVIII centuries. On the background of the map by Miga the territory of the complex is enclosed around by a masonry fence. There are no fortifications of the monastery on the cadastral map from 1830. The church and monastery building are connected. There was a closed courtyard inside the monastery complex. From the south and west the monastery was provided with the territory of the pond.

Dubno. The Bernardine order monastery is located next to the Lutsk Gate, in the western part of the within the town area. It was built up during the first half of the XVII century. On the map from the beginning of the XIX century the church and the monastery are connected. The territory of the complex is enclosed by a masonry wall. The complex is provided with a ditch, a rampart and masonry walls of the within the town area from the west and with a shallow swampy area from the north.

Berezhany. The Bernardine order monastery was built up during the XVII century and enclosed by a defensive masonry wall in the middle of the XVIII century. It is located on the highlands in the north-western part of the within the town area. The complex of de-
fensive buildings consisted of masonry walls with loopholes, ditches and earthen bastions.

Lviv. The Bernardine order monastery is located in the southern part of the within the town area, is adjacent from the outside to its walls in the corner (Fig. 4). The wooden abode of the Bernardine Fathers complex existed in the Halych suburbs in the fifteenth century. Since the monastery suffered from frequent fires during the XVI century, the buildings of new convent are erected from half-timbered structures [21]. However, the present-day appearance of the monastery abode was already presented in the XVII century. Since the monastery was in a strategically important place for the defence of the within the town area, the monastery was enclosed by detached defence system from the south-eastern and south-western flanks. The complex of defensive buildings of the monastery included masonry walls, a gate, a bastei (outer tower), a ravelin and fosa (ditch).

Analysis of location of the Bernardine order monasteries in the planning structure of the within the town area allowed the following results to be established: no complex was located in the middle of the defensive; two of the complexes were located in the middle of the defensive line near city gate (Zbarazh, Sambir); three of the monasteries were located in the corner near city gate (Berezhany, Dubno, Leshniv); no monastery was lo-
located in the corner; three of the complexes were adjacent to the corner of the masonry walls of the within the town area (Lviv, Husiatyn, Hrystynopil).

Analysis of location of the Bernardine order monasteries in the planning structure of quarters allowed to establish the following results: 8 of the complexes functioned as separate quarters (Khrystynopil, Leshnov, Sambir, Gusyatin, Zbarazh, Dubno, Berezhany, Lviv);
no complexes were parts of a quarter; 3 of the complexes had regular monastery territory (Leshnov, Gusyatin, Zbarazh); three of the complexes had irregular monastery territory (Khrystynopil, Dubno, Berezhany, Sambir, Lviv, Sambir).

Analysis of volumetric and spatial characteristics of the defensive structures allowed establishing of the following results: two of complexes used masonry walls of the within the town area (Dubno, Berezhany); six of the complexes had their own defensive masonry walls (Lviv, Zbarazh, Gusyatin, Sambir, Leshnov, Khrystynopil); none of the complexes used towers of the within the town area; none of the complexes had detached towers; one complex had its own basteya (Lviv), bases of the city used one complex (Sambir), the bastions of the city used three complexes (Berezhany, Dubno, Leshnov), three of the complexes used earth shafts of within the town area (Leshnov, Berezhany, Dubno); two of complexes had their own autonomous shafts (Lviv, Khrystynopil), eight of the complexes had their own cells and church separated from masonry walls (Lviv, Khrystynopil, Leshnov, Sambir, Gusyatin, Zbarazh, Dubno, Berezhany).

The following building materials were used in the process of construction of defensive buildings: limestone in two of the complexes (Gusyatin, Lviv); brick in six of the complexes (Lviv, Sambir, Gusyatin, Zbarazh, Dubno, Berezhany); Earthen fortifications in four of the complexes (Lviv, Khrystynopil, Sambir, Zbarazh); almost all of the complexes had wooden fortifications at their first stage of formation.

4. DEFENSIVE BUILDINGS OF THE FRANCISCAN ORDER MONASTERIES

Lviv. The Franciscan monastery was located in the western part of the within the town area near the defensive masonry walls, southward of the low castle. The monastery complex was formed during the XV - XVII centuries. In the middle of the XIX century it was disassembled. The Poltva River served as natural defence.

Kremenets. The Franciscan Monastery is located on the eastern side of the market square. It was built in the first half of the XVII century. The church and the monastery buildings were united. There were masonry walls around the complex. The walls in the eastern part were a part of the defence perimeter of the within the town area. The Irva River played the role of natural defence.

Mezhirich-Ostrozyk. The Franciscan monastery was built on the site of the castle at the end of the XVI century. Around the perimeter the monastery is surrounded by high masonry walls with an attic, hexagonal towers with loopholes completed by the attic. Two monastery buildings adjoin the church and in the corners each of the two has two round towers with loopholes. The complex is located in the north-eastern part of the within the town area and is additionally fortified by earthworks (Fig. 5). Floods around the town played the role of additional natural defences.

Kamyanets-Podilskyi. The Franciscan Monastery was founded in 1400 and was formed during the XV - XVII centuries. It is located in the eastern part of the within the town area near the defensive masonry walls. From the east, the monastery is defended by a cliff and canyon of the Smotrych River. Initially, the monastery was wooden and destroyed by fire in 1616. The masonry buildings of the monastery were erected from 1617 to 1717 with a break during the Turkish occupation. In 1781, the Polish King Stanislaw-August decided to build a fortification on the site of the monastery. For this purpose the monastery was transferred to the town of Horodok (district centre of Khmelnytskyi region) in 1787, but fortifications were not built. In 1799 it was transformed into Podillya regional residence of Orthodox bishops.
Analysis of location of the Franciscan monasteries in the planning structure of the within the town area allowed the following results to be established: all of the complexes were located in the middle of the defensive line (Lviv, Kremenets, Mezhrych-Ostrozky, Kamyanets-Podilsky).

Analysis of location of the Franciscan monasteries in the planning structure of quarters allowed to establish the following results: two of the complexes functioned as separate quarters (Lviv, Kremenets); two of the complexes were parts of a quarter (Mezhrych-Ostrozky, Kamyanets-Podilsky); three of the complexes had regular monastery territory (Lviv, Mezhrych-Ostrozky, Kamyanets-Podilsky); one of the complexes had irregular monastery territory (Kremenets).
Analysis of volumetric and spatial characteristics of the defensive structures allowed establishing of the following results: one of the complexes used masonry walls of the within the town area (Lviv); three of the complexes had their own defensive masonry walls (Kremenets, Mezhyrich-Ostrozyk, Kamyanets-Podilsky); one of the complexes used towers of the within the town area (Lviv); one of the complexes had detached towers (Mezhyrich-Ostrozyk); one of the complexes used earth shafts of within the town area (Mezhyrich-Ostrozyk); three of the complexes had their own cells and church separated from masonry walls (Lviv, Kremenets, Mezhyrich-Ostrozyk); one of the complexes had their cells and church connected with masonry walls (Kamyanets-Podilsky).

The following building materials were used in the process of construction of defensive buildings: limestone in two of the complexes (Lviv, Kamyanets-Podilsky); brick in six of the complexes (Mezhyrich-Ostrozyk, Kremenets, Lviv, Kamyanets-Podilsky); Earthen fortifications in one of the complexes (Mezhyrich-Ostrozyk); almost all of the complexes had wooden fortifications at their first stage of formation.

5. DEFENSIVE BUILDINGS OF THE CARMELITE ORDER MONASTERIES

Bilshivtsi. The monastery of the Carmelite order was founded in 1625, built up during the XVII - early XVIII centuries. The church of the Annunciation of the Virgin Mary was consecrated in 1725. The monastery is defensive building surrounded by a masonry wall with loopholes [22]. The Hnyla Lypa River created additional protection from its eastern flank.

Drohobych. The monastery of the Carmelite order was formed during the end of the XVI and in the XVIII centuries. It is located near the gate in the south-western corner of the within the town area. The church and the monastery are united into one building. The monastery has its inner closed courtyard. External defence was carried out at the southern and eastern sides of the building. Natural defences were formed by streams near the town.

Berdychiv. The castle was converted into the Carmelite order monastery with the use of masonry defensive structures. The complex was formed during the XVII - XVIII centuries. It is located near the gate in the north-western corner of the within the town area. The complex of defensive buildings includes masonry walls with loopholes, bastions, bastes (outer towers). On its western side the monastery is provided with the Hnlyopat River.

Kamyanets-Podilskyi. Until the conquest of Kamyanets the monastery of the Carmelite order was located on the highest rocky terrace at the entrance to the Old Town from the side of the Castle Bridge. In the period of 1672-1699 it was disassembled by the Turks. Being located at the northern masonry wall of the town and the Jesuit monastery the new monastery continued the so-called "Catholic façade" of Kamyanets-Podilsky. At the beginning, the architect of the complex was Wilhelm Rippe, and later on his architect was his successor - Jan de Witte. The defensive masonry wall of the town and the monastery were divided by the Carmelite battery in the form of an earthen bastion, which is noticeable from the old maps of the town [23].

Analysis of location of the Carmelite order monasteries in the planning structure of the within the town area allowed the following results to be established: one complex was located in the middle of the defensive (Kamyanets-Podilskyi); one of the complexes were located in the middle of the defensive line near city gate (Bilshivtsi); two of the monasteries were located in the corner near city gate (Drohobych, Berdychiv).

Analysis of location of the Carmelite order monasteries in the planning structure of quarters allowed to establish the following results: four of the complexes functioned as separate quarters (Bilshivtsi, Drohobych, Berdichev, Kamyanets-Podilsky); none of the complexes were parts of a quarter (Mezhyrich-Ostrozyk, Kamyanets-Podilskyi); three of the complexes had regular monastery territory (Bilshivtsi, Drohobych, Kamyanets-Podilsky); one of the complexes had irregular monastery territory (Berdychiv).
Analysis of volumetric and spatial characteristics of the defensive structures allowed establishing of the following results: two of the complexes used masonry walls of the within the town area (Drohobych, Kamyanets-Podilsky); three of the complexes had their own defensive masonry walls (Bolsheviki, Berdychiv, Kamyanets-Podilsky); one complex had its own basteya and bastion (Berdychiv), three of the complexes had their own cells and church separated from masonry walls (Bilshivtsi, Drohobych, Berdychiv); one of the complexes had their cells and church connected with masonry walls (Kamyanets-Podilsky).

The following building materials were used in the process of construction of defensive buildings: limestone in none of the complexes; brick in four of the complexes (Bilshivtsi, Drohobych, Berdychiv Kamyanets-Podilsky); almost all of the complexes had wooden fortifications at their first stage of formation.

6. DEFENSIVE BUILDINGS OF THE JESUIT ORDER MONASTERIES

Lviv. The Jesuit order monastery was located in the western part of the within the town area near the wicket gate. The complex was built up during the XVII - XVIII centuries. According to the painting-diorama by V. Dolinskyi “Lviv before the Austrian dismantling” and in accordance with the plastic reconstruction of Lviv by Janusz Witwicki, the Jesuit wicket gate was like a three-tier hexagon in the plan tower with an open top. Across the ditch the wicket gate was combined with the third defensive line via a mural bridge, where there was another defensive building, a two-tier tower, covered with a pear-shaped dome. It is also an interesting fact that the church of the Jesuit order monastery had one of the highest towers, which served as an observation position.

Ostroh. The Jesuit order monastery is located in the north-eastern corner of the within the town area near the Tatar gates. It was founded in 1624. Such architects as S. Braun, Giacomo Briano and Benedetto Molly took part in its development. Reconstruction of the complex was carried out in 1659 - 1736. The structure of defensive buildings included earthworks of the within the town area and the wall of the monastery.

Polonne. The Jesuit order monastery is located in the western part of the within the town area on the bastion. The complex was formed in the XVII century.

Vinnytsia. The Jesuit order monastery is located in the north-western part of the within the town area. It was formed during the XVII century and reconstructed in the XIX century. The territory of the complex is enclosed by brick masonry walls with loopholes and corner towers.

Kamyanets-Podilskyi. The Jesuit order monastery was founded at the beginning of the XVII century. The complex was located in the north-western part of the within the town area. The church and monastery structures were dismantled in the 1680’s, and in 1773 the monastery was completely abolished.

Analysis of location of the Jesuit order monasteries in the planning structure of the within the town area allowed the following results to be established: two of the complexes were located in the middle of the defensive (Lviv, Kamyanets-Podilskyi); none of the complexes were located in the middle of the defensive line near city gate, three of the monasteries were located in the corner near city gate (Polonne, Vinnytsia, Ostroh).

Analysis of location of the Jesuit order monasteries in the planning structure of quarters allowed to establish the following results: four of the complexes functioned as separate quarters (Lviv, Ostrig, Polonne, Kamyanets-Podilsky); one of the complexes were parts of a quarter (Vinnytsia); four of the complexes had regular monastery territory (Lviv, Polonne, Vinnytsia, Kamyanets-Podilsky); one of the complexes had irregular monastery territory (Ostrig).

Analysis of volumetric and spatial characteristics of the defensive structures allowed establishing of the following results: three of the complexes used masonry walls of the
within the town area (Lviv, Ostrig, Kamyanets-Podilsky); two of the complexes had their own defensive masonry walls (Polonne, Vinnitsa); one of the complexes used tower of the within the town area (Lviv); one of the complexes had detached towers (Vinnitsia); three of the complexes used earth shafts and bastion of within the town area (Polonne); five of the complexes had their own cells and church separated from masonry walls (Lviv, Ostrig, Polonne, Vinnitsia, Kamyanets-Podilsky); none of the complexes had their cells and church connected with masonry walls.

The following building materials were used in the process of construction of defensive buildings: limestone in two of the complexes (Lviv, Kamyanets-Podilsky); brick in five of the complexes (Lviv, Ostrig, Polonne, Vinnitsia, Kamyanets-Podilsky); earthen fortifications in one of the complexes (Polonne); almost all of the complexes had wooden fortifications at their first stage of formation.

7. DEFENSIVE BUILDINGS OF THE PIARIST ORDER MONASTERIES

Variazh. The Piarist order monastery is located in the southern part of the within the town area. Westwards of the complex there was located the castle, and eastwards of the complex there was located the gate. The southern part of the monastery was provided with a pond. The complex was formed in the late XVII - first half of the XVIІІ centuries.

Analysis of location of the Piarist order monasteries in the planning structure of the within the town area allowed the following results to be established: none of the complexes were located in the middle of the defensive; one of the complexes were located in the middle of the defensive line near city gate (Variazh), none of the monasteries were located in the corner near city gate.

Analysis of location of the Piarist order monasteries in the planning structure of quarters allowed to establish the following results: one of the complexes functioned as separate quarters (Variazh); none of the complexes were parts of a quarter; one of the complexes had regular monastery territory; none of the complexes had irregular monastery territory.

Analysis of volumetric and spatial characteristics of the defensive structures allowed establishing of the following results: none of the complexes used masonry walls of the within the town area; one of the complexes had it’s own defensive masonry walls (Variazh); one of the complexes had their own cells and church separated from masonry walls (Variazh); none of the complexes had their cells and church connected with masonry walls.

The following building materials were used in the process of construction of defensive buildings: limestone in none of the complexes; brick in five of the complexes (Variazh); earthen fortifications in none of the complexes.

8. DEFENSIVE BUILDINGS OF THE CAPUCHIN ORDER MONASTERIES

Mariyampil. The Capuchin order monastery is located in the south-eastern part of the within the town area. The complex was formed in the XVIII century. The monastery is surrounded by a masonry wall and on the eastern side it is provided with a broad marshy terrain.

Analysis of location of the Capuchin order monasteries in the planning structure of the within the town area allowed the following results to be established: none of the complexes were located in the middle of the defensive; one of the complexes were located in the middle of the defensive line near city gate (Mariyampil), none of the monasteries were located in the corner near city gate.

Analysis of location of the Capuchin order monasteries in the planning structure of quarters allowed to establish the following results: none of the complexes functioned as sepa-
rate quarters; one of the complexes were parts of a quarter (Mariyampil); one of the complexes had regular monastery territory (Маріямпіль); none of the complexes had irregular monastery territory.

Analysis of volumetric and spatial characteristics of the defensive structures allowed establishing of the following results: none of the complexes used masonry walls of the within the town area; one of the complexes had it’s own defensive masonry walls (Mariyampil); one of the complexes had their own cells and church separated from masonry walls (Mariyampil); none of the complexes had their cells and church connected with masonry walls.

The following building materials were used in the process of construction of defensive buildings: limestone in none of the complexes; brick in five of the complexes (Mariyampil); earthen fortifications in none of the complexes.

9. DEFENSIVE BUILDINGS OF THE BASILIAN ORDER MONASTERIES

Zhovkva. The Basilian order monastery is located in the northwest corner of the within the town area. The complex was built up during the XVII-XVIII centuries. The structure of the defensive buildings included masonry walls with loopholes and a corner earthwork bastion.

Shargorod. The Basilian order monastery was built up in the first half of the XVIII century. It is located in the northern part of the within the town area, at the gate and opposite the built up in the XVIII century church of St. Florian. The monastery complex consisted of: a masonry church, cellars, a school, a hospital, a masonry kitchen, a stable; and it is surrounded by a high masonry wall [24]. In the south-eastern corner of the wall there was constructed a tower.

Analysis of location of the Basilian order monasteries in the planning structure of the within the town area allowed the following results to be established: none complex was located in the middle of the defensive; none of the complexes were located in the middle of the defensive line near city gate; two of the monasteries were located in the corner near city gate (Zhovkva, Shargorod); none monastery was located in the corner; none of the complexes were adjacent to the corner of the masonry walls of the within the town area.

Analysis of location of the Basilian order monasteries in the planning structure of quarters allowed to establish the following results: two of the complexes functioned as separate quarters (Zhovkva, Shargorod); no complexes were parts of a quarter; two of the complexes had regular monastery territory (Zhovkva, Shargorod).

Analysis of volumetric and spatial characteristics of the defensive structures allowed establishing of the following results: one of the complex used masonry walls of the within the town area (Zhovkva); one of the complexes had their own defensive masonry walls (Shargorod); one of the complexes used towers of the within the town area (Zhovkva); one of the complexes used earth shafts of within the town area (Zhovkva); the bastions of the city used one complex (Zhovkva); two of the complexes had their own cells and church separated from masonry walls (Zhovkva, Shargorod).

The following building materials were used in the process of construction of defensive buildings: limestone in two of the complexes (Zhovkva, Shargorod); brick in two of the complexes (Zhovkva, Shargorod); Earthen fortifications in one of the complexes (Zhovkva); almost all of the complexes had wooden fortifications at their first stage of formation.
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<th>Tab.1. Summary results of the study</th>
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<td><strong>Graphic scheme</strong></td>
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10. CONCLUSIONS

Monastery complexes at the beginning of their foundation were poorly fortified and had wooden defensive structures. In the middle of the XVI century, along with the development of defence capacity, the quality of defensive structures changed. In the XVIII century, the phase of some co-ordinated modernization of the defensive structures of the monastery complexes and the within the town areas continues. The territory of the monasteries is enclosed by masonry walls with loopholes and corner towers. In the XVI and the XVII centuries the defence of the within the town areas of Western Ukraine was carried out mostly by the male orders: the Dominicans and the Bernardines; and in the XVIII century by the Jesuits. It was revealed that in the formation of three monastery complexes were used the defensive structures of the former castle. The results of complex analysis have demonstrated the five main types of location of monastery complexes in the defence system of the within the town area: adjacent to the corner of the defensive line (3 complexes); in the middle of the defensive line (16 complexes); in the middle of the defensive line and at the gate (7 complexes); in the corner (1 complex); in the corner at the gate (13 complexes)(Tab.1).The most numerous were the Dominican order monasteries (15 complexes). They were located in the middle of the defensive line of the within the town areas; and they were as well as such complexes that had their own defensive structures. The second largest in number were the Bernardine order monasteries (8 complexes). Ones of the oldest monasteries in historic towns of Western Ukraine were the Franciscan order monasteries (4 complexes). The Jesuit order monasteries (5 complexes) not only functioned as educational establishments but also defended parts of the within the town areas.

It has been revealed that the monastery territories had predominantly regular planning and were the important components of the defence system of the within the town areas.

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