



THE BAROQUE RENOVATION OF THE MEDIEVAL FRANCISCAN CHURCH OF JÁSZBERÉNY

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Abstract

This study discusses the Franciscan church in Jászberény, originally built in the Middle Ages. The methods of Bauforschung/building archaeology were used in the attempt to create a theoretic reconstruction of the church's former appearance, involving laser scanning and point cloud data. The re-search focused mainly on the attic space, more specifically, on the question of the former vaults of the church.

Keywords: *Baroque, Franciscan order, laser scanner, Jászberény, Gothic.*

1. The Investigation of the church

1.1. Historical background

The church that was examined in this research is the Friars' church of Jászberény, Hungary, which was originally part of the former Franciscan monastery. The town where the church is located is in the centre of the Jászkun region, which is now part of Jász-Nagykun-Szolnok county. The last part of the county's name likely comes from Ispan Szaunik (ispán), who is known as the companion of Gerard bishop in the Legend of Saint Gerard. Also, the first two components of its name could be derived from the Jász and Kun tribes, who were resettled in the area along the river Zagyva. [1] The Franciscan order supposedly began to convert the pagan people at the same time as the Dominican order. Evidence, such as the bulla of October 7th 1278 written by Pope Nicholas III supports this theory. This bulla entails the Franciscan order's work amongst the Kun tribes. Eventually, the Franciscan order achieved outstanding success in the integration of the Jász and Kun people. The construction of the church was feasible partially because of the economic growth during the reign of King Matthias I. Before starting the construction of the church, the Jász people asked King Matthias I for permission to build the church. This is proven by a copy of an authorised letter from the time. The letter is now preserved in the Vatican archives, it was sent by

King Matthias I to Pope Sixtus IV, and it was delivered in 1472 by a high-ranking figure of the Hungarian province of the Franciscan order, Fábián Igali. Although there are no direct data available related to the construction of the church, recent art historical research suggests that there was a Franciscan construction workshop in Hungary, which also enjoyed the support of the royal court of Visegrád. [2] 15–17. p.

1.2. On-site inspection of the church

1.2.1. The selection of the topic

Besides the personal connection, an important question played a main role in the selection of this church as a topic. The question came up several times in the related literature, and has not been answered in its entirety until now therefore this became the main question of my research. The question was, whether the church nave was originally vaulted, covered with a horizontal wooden slabs or had an open roof. Reviewing many of the publications related to the construction history, revealed no clear answer to this question. Therefore, it became the main starting point of this research. The research was conducted with the Bauforschung/building archaeology method, during which the building was considered the primary source of the study. The former Franciscan church of Jászberény has a single nave, with a polygonal sanctuary narrower than the nave,

with medieval walls that are supported from the outside by large stepped buttresses.

1.2.2. The medieval vaults

The most important observable trace in this regard is the plastering of the nave wall at a height of 2.15 m above the connection line of the current vault in the attic. We can treat it as a fact that in the Middle Ages, the church attics were not plastered. This leads to the conclusion, that the interior height of the nave was originally higher. This statement is also supported by the remains of a Gothic lancet window which was found on the South wall of the nave.

Moving towards the west side of the building the remains of two additional windows can be found. This makes it probable that the nave of the medieval church was illuminated by three windows from the southern side. Additionally, this makes it clear that the ceiling height of the church was indeed higher compared to its current state. Following this, a search was conducted for imposts and other signs on the wall that could indicate the past existence of vaults. However, there was no evidence to support the existence of these. Therefore, we can accept that the ceiling height of the church was 2.15 metres higher previously, but there are no indicators of former existing vaults.

In conclusion, it can be stated that the church indeed did not have vaults, there is another observation also supporting this. The space of the attic between the nave and the sanctuary is divided by a solid stone wall. This wall could have served as a firewall, to prevent the spreading of fire between the two spaces. Although when the whole body of the church is vaulted, this structure is not

absolutely necessary in this place. Since there were no remains of beams in either the North or in the South wall, the possibility of an open timber structure is more plausible. Although, there was no direct evidence to prove this assumption.

1.2.3. The examination of the western gable wall

During further examination of the attic, the building's west side gable wall was observed. It is known from the *Historia Domus* of the church, that the edges of the wall originally had a steeper angle, the top of the gable wall was blown off in the 18th century. Although the wall did not suffer major damages, the roof's angle of inclination had to be less steep, this also reduced the height of the walls.

While observing the gable wall several remarkable things can be noticed. First, there were three holes where beams might have been previously on both ends of the wall. What is more interesting, two bigger holes can be found under these. Above one of these bigger holes, a typically carved stone can be seen, which at first glance, looks like a lintel. On closer inspection, a wooden beam can be observed running through both holes in the West wall's Southern side. It is possible, that the bigger holes in the walls functioned as light sources for the attic.

1.2.4. The structural reinforcements of the walls

In the attic space tie rods can be observed, connecting the church's northern and southern walls and the transverse arches of the vault, to prevent the further outward shifting of the walls. On July



Figure 1. *The remains of the walled-up Gothic lancet windows located in the attic.*



Figure 2. *The three smaller holes and one bigger hole with a stone functioning as a lintel in the attic's gable wall.*

21st 1868 an earthquake caused immense damage to the building, then later in July, August and September further earthquakes shook the church.

According to contemporary descriptions, the building was on the verge of collapse. On the basis of the contract signed by the Franciscan order with the architect József Szódy, the installation of the tie rods began in October 1868, so repair of the suffered damages could begin with the contraction of the walls. These reparations were finished by the 10th of October.

1.2.5. The southern portal

A Gothic portal was discovered in the Southern wall of the nave in 1925. The portal's bottom is located 1.4 m deeper than the current floor level of the church. Later inspection revealed that the portal did not serve as an entrance to the crypt, as was originally assumed. Instead, the portal provided access from the monastery to the nave. [2] 35–51. p. The floor level had to be raised presumably because of its proximity to the Zagyva river. Since the monastery was built on a swampy area by the river, it had to be protected from groundwater, which might have been the reason for the raising of the floor level. In the issue of Jász Hírlap published on 30th December, 1939, József Komáromi published an article about the church. In that, he mentions that the newly discovered gate, which was found in good condition, was plastered by an enthusiastic painter working in the confessional corridor of the church. As a result, the gate suffered damages that could not be repaired even with restoration methods. [3]



Figure 3. *The tie rods connecting the walls, the vaults and the roof structure.*

1.3. The history of the church

1.3.1. The historical background of the Baroque renovation

Following the Ottoman conquest of Hungary and the Rákóczi War of Independence, the population of the Kingdom of Hungary did not show a large decrease - compared to the growth of other European countries it remained stagnated. Nationalities spread throughout the country during the resettlement policy of Leopold II Holy Roman Emperor and King of Hungary and Maria Theresa. However, an important aspect of the resettlement was that all the settled nationalities were Christian. This led to the growth of church communities, which entailed the need to expand churches.

1.3.2. Baroque reconstruction

The reconstruction of the church began in the 18th century. The reconstruction was influenced by the 95 theses nailed on the gate of the All Saints' Church of Wittenberg by Martin Luther on 31st October 1517. This act served as an indicator in the development of the reformation movement which swept across Europe. From an architectural point of view an important part of Luther's teachings was the preservation of medieval Puritan values. As a response, the Catholic Church launched a counter-reformation movement, which in its values was closer to the luxury represented by the Baroque. The transformation of the medieval parts of the church was mainly due to its ruin and destruction, but some elements were transformed due to integration into the Baroque style. Three respectively two large windows were installed on the North side of the nave and of the sanctuary, to let more light in. The importance of light played a major role in the new Baroque period, but because the interior's height was reduced due to the vaulting, the three Gothic windows on the south side of the nave had to be walled up. Smaller oval windows were installed in their place. The Gothic portal was walled up because the floor level had to be raised. In order to allow access, a new gate was built between the 2nd and 3rd pillars of the South wall facing West. According to the Historia Domus, the reconstruction of the tower started at the same time as the construction of the organ loft before 1715. The Baroque tower, built on medieval foundations, was probably completed in 1720, as the baroque tower spire was put on it at that time. Finally, the most characteristic Baroque transformation was

the creation of the organ loft, because the organ played an important role during ceremonies. The design of the organ loft is parallel to almost all medieval churches still in use today. In 1769, the vault of the sanctuary was replaced with a barrel vault, similar to that of the nave. In 1780, it attained the imposing baroque appearance expected by the Counter-Reformation. [2] 65–72. p.

1.4. The examination of the church

1.4.1. Laser scanner survey

3D laser scanning was conducted on the interior of the church building. This inspection was done with a Stonex laser scanner owned by the University of Debrecen Department of Civil Engineering. The scans were recorded from two positions in the sanctuary and from two positions in the nave, each of these produces recordings in 360° around the device.

During this process the scanner is mounted to a levelled stand, the device then emits laser beams around itself to its surroundings. These beams are projected back from the surface of the surrounding objects. From the time of the rebound, the device calculates the distance of the points, from which it can create a point cloud. Therefore, it is important to take scans from several different locations, because the system cannot obtain points from objects covered by others. These blind spots would lead to empty holes in the created point cloud. Following this, the recorded points are converted into PTX. format by using the scanner's system. After that a complete point cloud is created by piecing together the four partial point clouds in the software, CloudCompare. Further modifications were performed on the point cloud with the software Meshlab. Lastly, the completed model was cut in half with the use of the software Blender 3D, and the church interior's negative image was placed into a right prism to be prepared for 3D printing.



Figure 4. A three-dimensional model created by merging the points recorded with the scanner into a point cloud.

2. Conclusion

Based on the observations, the Baroque transformations of medieval churches can be divided into two groups: the transformations resulting from restoration, and those resulting from modernization. In addition, we can also talk about additive transformations, which involve expansion. Possibilities for research include the examination of other similar churches using the methodology developed here.

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