

# SOME COSMOLOGICAL ASPECTS OF CATHOLIC CHURCHES IN LITHUANIA

**RIMVYDAS LAUŽIKAS**

## Abstract

This paper presents a preliminary study of the orientation of Lithuanian Catholic churches and interactions between Christian and pagan cosmologies in Lithuanian church architecture. We can state that the Christianization of Lithuania involved an interaction of these two systems. It is already known that models of time and space in Christian Europe were reflected in the architecture of Lithuanian Catholic churches. But pagan cosmology also influenced Lithuanian Christian architecture.

Keywords: church orientations, Christian cosmology, canonical orientation, non-canonical orientation, orientation upon sacred places, Vilnius, Tauragnai, Sodeliai, Skudutiškis.

## Introduction

Baltic tribes only became acquainted with Christianity at a relatively late date, around the end of the 12<sup>th</sup> century and in the first half of the 13<sup>th</sup> century. (The earlier missions of Ansharius, St. Adalbert and St. Brunon, between the 9<sup>th</sup> and 12<sup>th</sup> centuries, were temporary and unsuccessful). The Orthodox version of Christianity did not spread in from the east, although Orthodox churches were built in Pollock and Grodno in the 11<sup>th</sup> and 12<sup>th</sup> centuries. The beginning of the Christianization of neighbouring countries such as Poland and Kievan Rus in the 10<sup>th</sup> century did not have any deep influence either.

By the 13<sup>th</sup> century, western Christian culture had already survived its tempestuous period of formation (the end of which can be considered to be the great split in 1054). It manifested itself in the obdurate tradition of using Latin script as well as in a world-view and a system of artistic images, supported by Roman Catholicism, that was orientated not to a temporary (earthly, present) reality, but to an exclusively spiritual (divine, pursued) one. On the other hand Baltic paganism had also developed, over a considerable period, into a fairly solid system which not only had a clear world-view and customs but also cult buildings with distinctive architectural features, and even a separate institution of priests (*Kriviai*).

The Christianization of Lithuania, then, was on the whole an interaction of two systems. (In saying this, we are ignoring the orders of knight-monks whose way of life and purpose were rather more knightly than religious). This interaction was not affected by the official stance of Popes, who recommended slow changes in the lands of neophytes, nor by that of the Lithuanian rulers, who were religiously indifferent and

quite tolerant provided that the various conversions of their citizens resulted in political submission. Christianity, which had existed and developed in the Roman Empire for more than a millennium, had already incorporated significant aspects of paganism, especially among the Germanic tribes, and thus it conformed to Indo-European cultural traditions, something that also contributed to the Christian-pagan interaction. In the period from the 13<sup>th</sup> to the 16<sup>th</sup> centuries we can see signs of both Christianity and paganism in many fields of Lithuanian culture, and the architecture of cult is of no exception.

Some cosmological aspects of the construction of Lithuanian Catholic churches are considered in this article. Its aims are to define the ideological attitudes of the temple builders, and to find out

- (i) how the ideas of Christian cosmology of the time are reflected in the exterior architecture of some cult buildings in Lithuania,
- (ii) how much these ideas were adapted to local (Lithuanian) conditions, and
- (iii) how much pagan cosmology influenced Christian architecture.

Most of the temples we have investigated are in rural areas. Up until the end of the 19<sup>th</sup> century there was enough space in the thoughts of a Lithuanian both for Christ and for the pagan god of thunder Perkūnas. From the written sources we know that in the 16<sup>th</sup> to 18<sup>th</sup> centuries there were many relics of pagan world-view and even rituals (BRMŠ 2005). We shall not try in this article to decide which pagan cosmological images were taken from the Roman and Teutonic nations and brought to Lithuania by Christianity and which were adapted in Lithuania. Instead, we shall limit ourselves

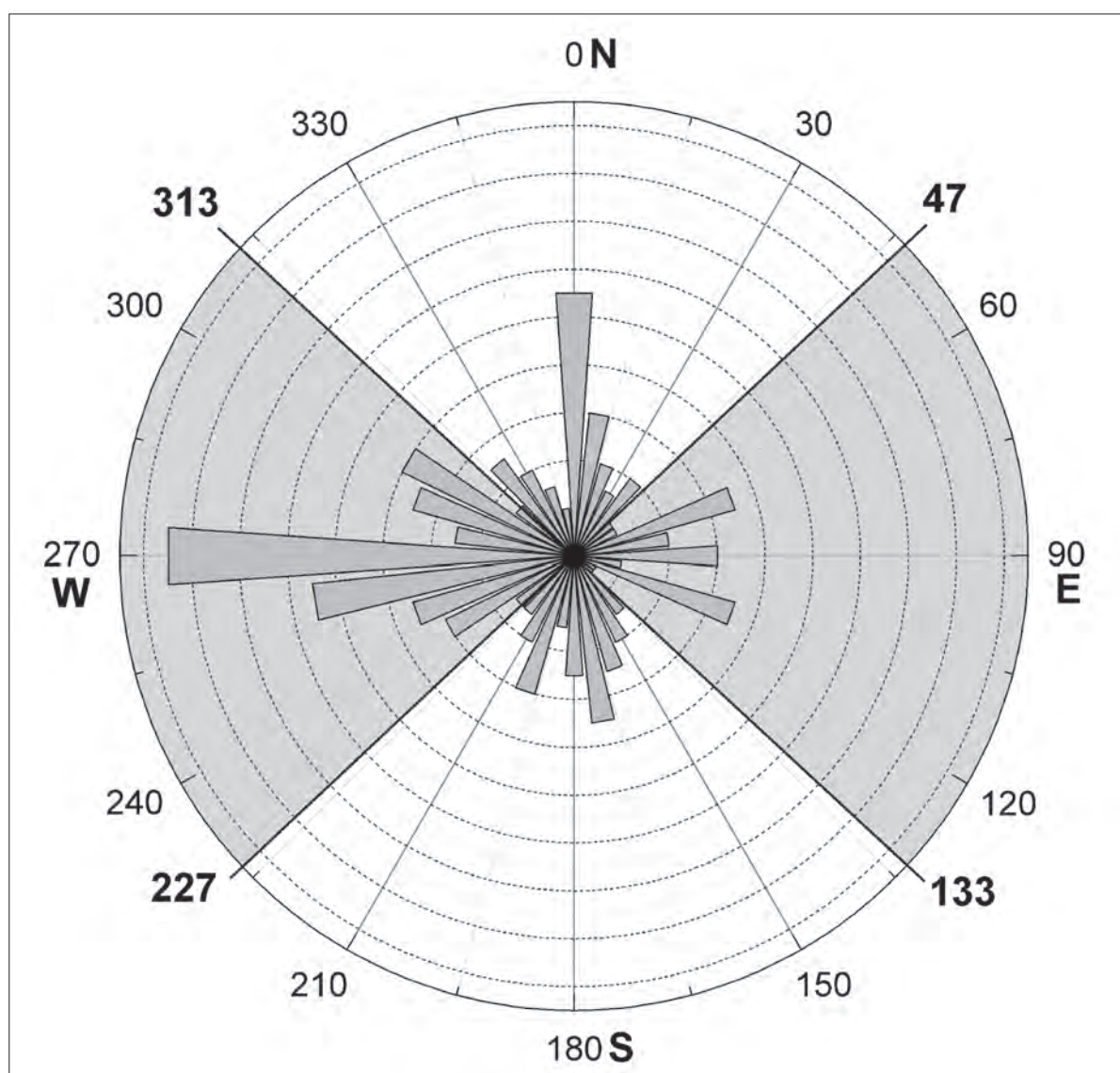


Fig. 1. The orientation of the main entrance door.

to interpreting the architecture of Lithuanian Catholic temples, based on the available written sources. We have also used data on the orientation of the main entrance door in 326 churches, built in the 14<sup>th</sup>–20<sup>th</sup> centuries. 223 of them have been measured at first hand, while the orientation of the remaining 103 buildings is known from the written sources. This number permits us to make generalizations, because the cult buildings examined make up 45.6% of all Lithuanian churches. The validity of the generalization is confirmed by the fact that the percentage of the distribution of different buildings' orientations is practically the same.

The main door of the church faces west, to the sunset point, between Christmas and St. John, 227–313 degrees

The traditional orientation of the church

A statistical analysis of the data indicates the prevailing orientation in the canonical buildings in Lithuania: they have the entrance in the west and the great altar in the east. In all, 139 Catholic cult buildings in Lithuania are orientated with their doors facing west (42.36% of all buildings examined). In early buildings (dating to the 14<sup>th</sup>–16<sup>th</sup> centuries) such orientation prevails in up

to 88% of the buildings examined, while in the buildings built later (19<sup>th</sup> century) the proportion is only 35%.

This practice of church orientation emerged in the early period of Christianity. It emphasizes the importance of the east (sunrise) as a sacred part of the world. The way from west to east is the way from sin to salvation. According to the *Imago Mundo* and the *Mapa Mundi*, which practically corresponded to the *Imago Mundo* before the age of the great geographical discoveries, paradise is in the east, and Jerusalem is also to the east from western Europe. This motivates the belief that Christians should pray facing east-facing the great altar (Dinzelbacher 1998, p. 248-254; Eliade 1997, p. 42-45; Tatarkiewicz 1976). The east-west axis was relevant in the pagan tradition as well. It was supposed to join the points of sunrise (birth, beginning) and sunset (death, end). It is particularly conspicuous in burial monuments. A tradition of placing the dead in an east-west orientation has been traced back to the Iron Age in Lithuania (Jovaiša 1998). The azimuths of sunrise or sunset are emphasized in practically all of the locations used for pagan calendrical observation that have been traced in Lithuania. The example that has been examined most thoroughly can be found on Birutė Hill in Palanga (Klimka 1986, p. 36-43; Daugudis 1995, p. 68-81). However, it was of greater importance in a pagan temple to have a sacred point where divine symbols contacted earthly ones. On the whole, Christianity and paganism agree on the semantic meaning of these two parts of the world. The east is identified with life (goodness?) and the west is identified with decline (evil?). However, the symbolic meaning of the way was more relevant to Christianity in the middle ages, while paganism emphasized the symbolic meaning of the point.

We can suggest that the decline of canonical orientation in Lithuania began in the 16<sup>th</sup> century, with the onset of the Reformation and the Catholic post-Tridentine counter-reformation, and progressed in the Baroque period that followed. This process was sustained not only by the relative liberalization of the Catholic church, but by the fact that most of the churches built in the 16<sup>th</sup> and 17<sup>th</sup> centuries (to say nothing of the 18<sup>th</sup> to 20<sup>th</sup> centuries) were planned to correspond to an urban city structure that had already been formed.

#### Exceptions (hypothetical approach)

As we have already mentioned, the symbolic meaning of the way is more relevant to the Christian church, while the symbolic meaning of the point is more relevant to the pagan temple. The interaction of these

two ideas made it easy to take the step of building an oblong church with the door facing a particular point in the western (sunset) horizon. The point in question could, for example, be that of sunset on the day of the patron saint of the church. In this case the Christian tradition remains unblemished while at the same time coming closer to the pagan cosmology. This principle is revealed most clearly by the orientation of the church of St. Nicolas (14<sup>th</sup> century) in Vilnius. The orientation of the main door is 235°, only 4 degrees away from the direction of sunset on St. Nicolas' day. The discrepancy may have occurred because of the difference between the mathematical horizon and the real one, as well as magnetic declination and deviation. However, it remains unclear how the rays of the setting sun entered the temple. Did they pass through the main door, or through the window above the door, or through a small round window? At present there is only a blind niche, though it seems very likely that there was originally an opening. Added to this, we do not know which object in the temple was illuminated by the rays of the setting sun. We can hypothesize that it was the great altar.

There are other similarly orientated churches in Lithuania, in Klovainiai (Pakruojis region, 18<sup>th</sup>-19<sup>th</sup> century), Tryškiai (Telšiai region, 16<sup>th</sup>-18<sup>th</sup> century), Janapolė (Telšiai region, 18<sup>th</sup>-19<sup>th</sup> century), and Žemaičių Naumiestis (Šilutė region, 18<sup>th</sup> century).

The main door of the church faces east, to the sunrise point, between Christmas and St. John, 47-133 degrees

Contrary to the traditional orientation - main door faces east

The statistical analysis also drew our attention to a significant group of buildings that were orientated in the opposite direction to the traditional, canonical one. The entrances of these churches were in the east while the great altars were in the west. The main door in 63 Catholic cult buildings in Lithuania faces east. Such churches comprise 19.32% of all the buildings examined. This orientation practice emerged in the early Christian period (Filarska 1983p. 214) and highlights the importance of the east (sunrise) as a particularly sacred part of the world. The east, as well as the importance of the orientation of the churches, is also emphasized in the written sources of Christian authors (Eusebius 1993, p.125-127; Gulielmus 2008). Similarly orientated churches also exist in other European countries (Barlai 1997, p. 149-155; Erdmanis 1984, p. 58-60; Heilbron 2001; Surdin 1999, p. 65-70; Koberl 1984, p. 24-28). The east (the sunrise point) is

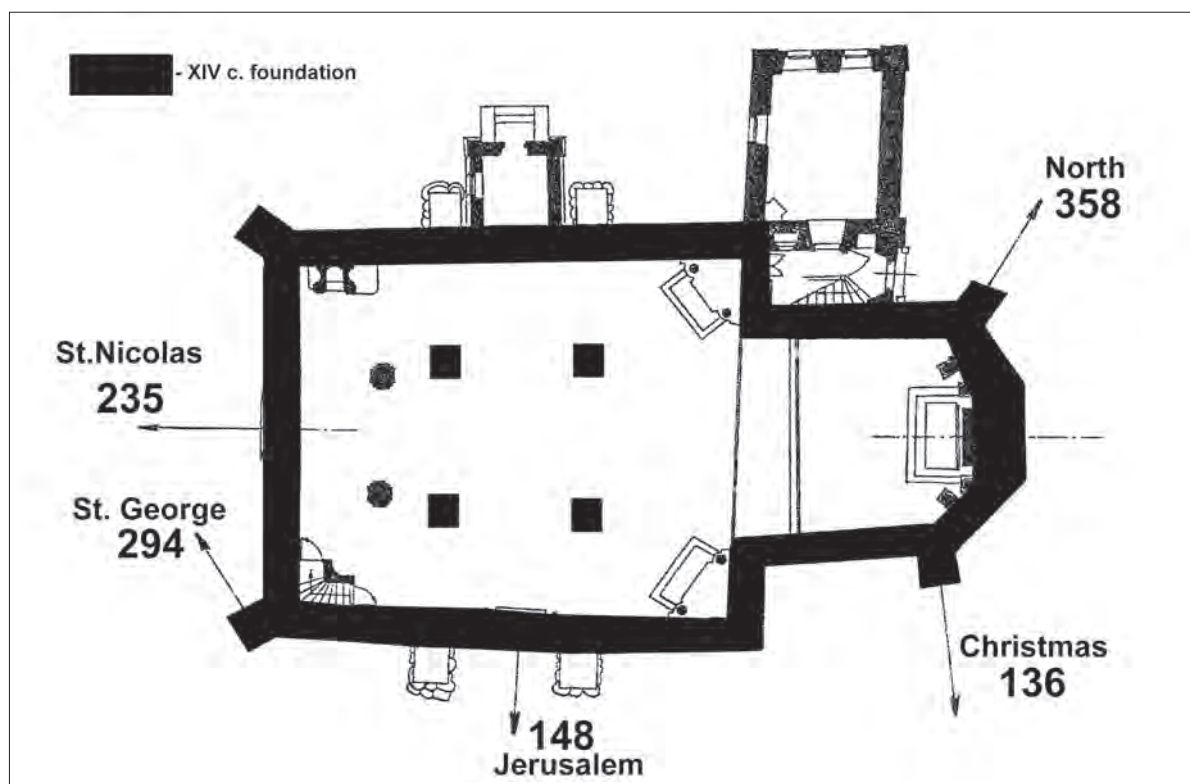


Fig. 2. The orientations of St. Nicolas church in Vilnius.

equally important in the Lithuanian pagan tradition, where solar cults were particularly significant. So here again we see a perfect basis for the interaction of both world-views. One possible variant of this interaction is the orientation of the main door of the church to sunrise on the day of the patron saint of the church. This might have had huge symbolic significance, with the first rays of the rising Sun touching the great altar and blessing the patron of the church on his festival day. The idea is not just that art is presenting the Gospel for illiterates; it is also possible that a deeper semantic meaning existed, with the Sun (the light), the highest deity of the pagan religion, welcoming the Christian saint.

This orientation practice in a Lithuanian church has been revealed most successfully in Tauragnai (Utena region). The church of St. George was built in the first half of the 15<sup>th</sup> century and its main door faces an azimuth of 71°. This is only 1 degree away from the direction of sunrise in Tauragnai on St. George's day.

#### Other similarly orientated churches

There are more churches in Lithuania whose main door faces east (sunrise) on their patron saint's day. These are the chapel of the Holy Spirit in Sodėliai (Panevėžys region, 18<sup>th</sup> century), Vaiguva church (Kelmė region, 16<sup>th</sup>-19<sup>th</sup> century), and Buivydžiai church (Vilnius region, 18<sup>th</sup> century). The orientation of Sodėliai chapel is particularly interesting. The day when the Holy Spir-

it descended, Pentecost, is a variable festival whose date is related to that of Easter. The door of Sodėliai chapel was orientated towards sunrise on Pentecost in 1746 when the chapel was being built. St. George's church in Buivydžiai was orientated in a similar way. On the other hand, at St. John's church in Vaiguva an apse faced the point of sunset on the feast of St. John the Baptist.

The changing tradition in church orientation from the 18<sup>th</sup> century onwards was led by two factors, neither of which was related to the perception of deep symbolic meaning. On the one hand, conservative thinking led people to orientate a new cult building in the same direction as the previous one. This is clearly observable in Tauragnai where a series of four churches built between the 15<sup>th</sup> and 19<sup>th</sup> centuries are all orientated in the same direction. On the other hand, purely technical considerations arose since new sanctuaries most often stood on the foundations of previous ones. A new and bigger church was often required to be built around an existing smaller one without destroying it. Only after the new building had been finished was the old one disassembled. The new building usually had to follow the townscape tradition.

Speaking of technical considerations, we should mention a group of cult buildings with their main door orientated towards sunrise. These buildings are orientated upon azimuths between 47° and 90° degrees, a range

#### V

V. REFLECTIONS OF ASTRO-NOMICAL AND COSMOLOGICAL KNOWLEDGE IN MONUMENTS, LANDSCAPES AND ARCHITECTURE

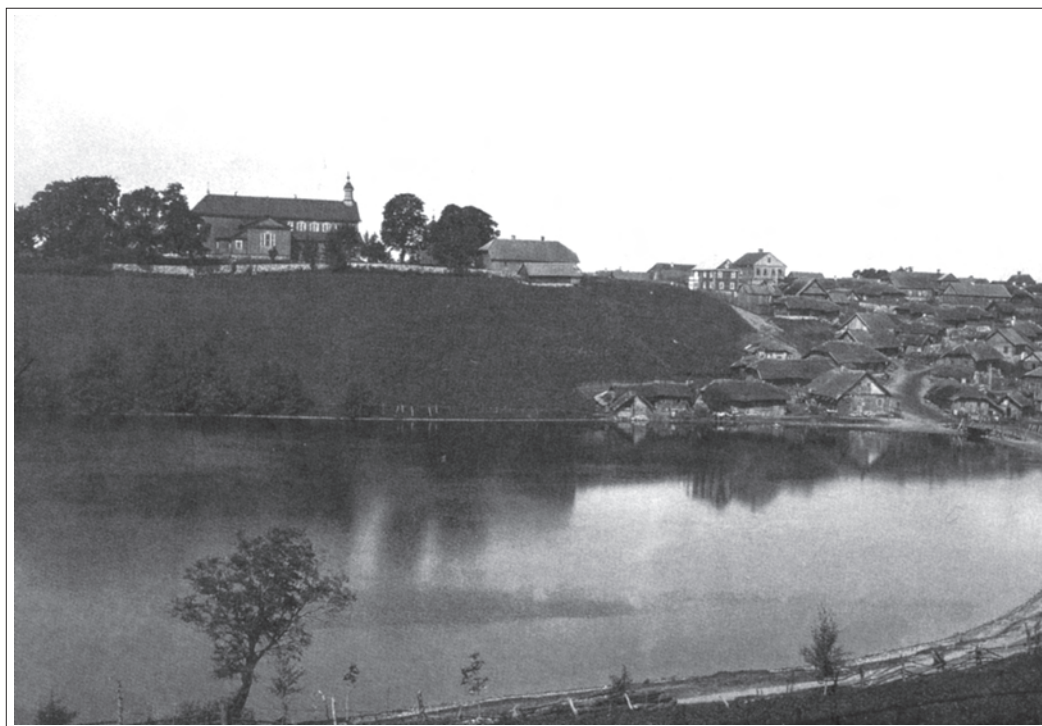


Fig. 3. Tauragnai (Utena region) church of St. George, 1939.

that corresponds to the positions of sunrise from the spring to the autumn equinoxes. Forty-nine such buildings constitute 15.03% of all those examined and as much as 77.77% of all those whose main door faces east. We might guess that there was a custom of placing the keystone of a building so that the door faced sunrise on the first day of construction. Latvian examples (Erdmanis 1984, p. 58-60) and certain Lithuanian customs of construction have implicitly proved this. Such a practice could easily explain the range of orientations upon sunrise during the warm half of the year, which would be the most suitable time for construction work.

### The main door of a church faces other sacred points

#### The door faces south

Praying Europeans turned their heads towards the east, using their geographical knowledge to face the direction of Jerusalem. This fact might have engendered an interesting orientation tradition in Lithuania. Historians of architecture have noticed that most of the Gothic churches in Lithuania have south-facing entrances (Minkevičius 1989). While examining church orientations we found that 124 examples (38.03% of all the buildings examined) were orientated in the north-south direction. Let us try to find reasons for such an orientation. On the whole, the spatial model would not be sufficient if two important parts of the world, the

north and the south, were not reflected in it. The importance of these parts of the world in pagan solar cults is beyond doubt. The south is where the Sun reaches its highest point above the horizon and the north is where there is no Sun at all. These azimuths are emphasized in the orientation of Iron Age tombs, in the observatory on Birutė Hill in Palanga, in the arrangement of stones near the castle hill in Purmaliai (Klaipėda region), and in other pagan calendar and astronomical observation sites in Lithuania (Klimka 1986, p. 36-43; Jovaiša 1999; Žiemys 1981, p. 5-26), as well as Vilnius Perkūnas temple which is described in Rivijus' chronicle (Rivius 1637). The south direction is important in Christian cosmology as well. The actual geographical situation of a country can result in a particular spatial model being adjusted. Returning to the sacred image of Jerusalem and the Imago (Mapa) Mundi, we see that in reality this city is not eastward from Lithuania, but southward; and this was of course known to the people of the time. However, it is difficult to say whether it was this that motivated the builders of Lithuanian Gothic churches to install southern entrances. Moreover, the observation of other heavenly bodies and their reflection in the cosmology might have also motivated particular corrections: thus, the north is important as the direction of the Pole Star (Polaris), the only star in the sky that does not "rotate".

St. Nicolas' church in Vilnius, already mentioned, makes sense in the context of the north-south cosmology. It was built in the second half of the 14<sup>th</sup> century.



Fig. 4. The orientation of Skudutiškis church.

In the foundation plan of the church we can clearly see that the brick wall is somewhat lopsided. Perhaps an attempt was made to orientate the entrance door to the south in the direction of Jerusalem. If so, then the builders' error was very small. The azimuth of Jerusalem from Vilnius is approximately  $160^\circ$  and the orientation of the entrance door of the church is  $148^\circ$ . What is more, the wooden churches found in rural areas are orientated in the north-south direction. One of the oldest buildings of this type was discovered in Kernavė during archaeological excavations: it dates back to the beginning of the 15<sup>th</sup> century (Jankauskas 1990). It seems likely that south-facing buildings reflected a need to pray facing Jerusalem.

#### Orientation to local sacred sites

In some cases a church may have been built to face nearby sacred places. Near Skudutiškis in Molėtai region there are a sacred spring and sacred stones apparently of pagan origin. According to a local legend, during the years of the plague St. Mary appeared on these stones (there are traces of her feet on one of them) and stopped the disease. Everyone who was on Skudutiškis Hill was saved. After that miracle, a church was built on the hill. Historical evidence shows that all the surviving temples built from the 17<sup>th</sup> century onwards in Skudutiškis are orientated in the same way, with their main door facing the sacred spring (the place where St. Mary manifested herself).

#### Conclusions

1. In summary: the architecture of Lithuanian Catholic churches in the 14<sup>th</sup>–16<sup>th</sup> centuries reflected

models of time and space that prevailed in Christian Europe at the time. However, in pursuit of wider Christian missionary aims, Christian sacred architecture also incorporated aspects of pagan cosmology, reflecting the particular beliefs held in a local area (in this case Lithuania).

2. The general (canonical) orientation model for Lithuanian churches is traditional, with the main entrance door to the west (42.36% of all buildings examined).
3. Some interesting alternatives are orientation of the main entrance door (i) to the point of sunset on the feast day of the patron of the church (e.g. St. Nicolas' church in Vilnius); (ii) to the point of sunrise on the feast day of the patron of the church (e.g. St. George's church in Tauragnai and the Holy Spirit chapel in Sodeliai); (iii) to the south – the direction of Jerusalem from geographical locations within Lithuania (e.g. Kernavė church); and (iv) to local sacred places (e.g. Skudutiškis church).

#### References

- BARLAI, K., 1997. Archaeoastronomia "Ancilla" monumentorum. In: C. JASCHEK and A. BARANDELA, eds. *Actas del IV congreso de la SEAC "Astronomia en la cultura"*. Salamanca: Universidad de Salamanca, 149-155.
- BRMŠ – VĖLIUS, N., compil., 2005. *Baltų religijos ir mitologijos šaltiniai*. IV: XVIII amžius. Vilnius: Mokslo ir enciklopedijų leidyklos institutas.
- DAUGUDIS, V., 1995. Die Eisenzeitlichen Kultstätten in Litauen. In: V. KAZAKEVIČIUS, general ed. *Archaeologia Baltica*, Vilnius, 68-81.
- DINZELBACHER, P., 1998. *Europos mentaliteto istorija* (orig. *Europäische Mentalitätsgeschichte*). Vilnius: Aidai, 248-254.



V. REFLECTIONS OF ASTRO-NOMICAL AND COSMOLOGICAL KNOWLEDGE IN MONUMENTS, LANDSCAPES AND ARCHITECTURE

- DURANDUS, G., 2008. *The Rationale Divinorum Officiorum*. Louisville: Fons Vitae.
- ELIADE, M., 1997. *Šventenybė ir pasaulietiškumas* (orig. *Sacrum i profanum*). Vilnius: Mintis, 42-45.
- ERDMANIS, G., JANSONS, A., 1984. Seno celtnu orientacija. *Zvaigžnota debess*, 4, 58-60.
- EUSEBIUS CAESARIENSIS, 1993. *Bažnyčios istorija* (orig. *Historia ecclesiastica*). Vilnius: Lumen, 125-127.
- FILARSKA, B., 1983. *Początki architektury chrześcijańskiej*. Warszawa: TN KUL, 214.
- HEILBRON, J.L., 2001. *The sun in the church*. Harvard: Harvard university press.
- JANKAUSKAS, A., 1990. *Senųjų Kernavės bažnyčių 1989 m. archeologinių tyrimų ataskaita. Senųjų Kernavės bažnyčių 1990 m. archeologinių tyrimų ataskaita*. Handwriting documents. Library of Institute of Lithuanian history. N. 1661, 1804 A,B.
- JOVAIŠA, E., 1999. *Lietuva iki Mindaugo*. CD-ROM, Vilnius: Elektroninės leidybos namai.
- JOVAIŠA, E., 1998. *Žvilgsnis į "Aukso amžių"*. CD-ROM, Vilnius: Elektroninės leidybos namai.
- KLIMKA, L., 1986. Apie astronominę Palangos alko statinio paskirtį. *Lietuvos istorijos metraštis 1985*, 36-43.
- KOBERL, L., 1984. On the astronomical orientation of St. Vitus cathedral. *Bulletin of the Astronomical Institutes of Czechoslovakia*, 24-28.
- MINKEVIČIUS, J., ed., 1989. *Lietuvos architektūros istorija*. T.1. Vilnius: Mokslas.
- RIVIUS, J., 1637. *Cronika ist aus einer anderer Cronicer ausgezogen und alter Geschichte ausgeschrieben*. Handwriting document. Library of Lithuanian Academy of Sciences, F.9, b.3156.
- SURDIN, V.G., 1999. Gotičeskij chram kak solnečnaja observatorija. *Zemlia i Vselennaia*, 5, 65-70.
- TATARKIEWICZ, W., 1976. *Historia estetyki*. Krakow: Zakł. narod. im Ossolińskich.
- ŽIEMYS, E., 1981. Astronominis užtemimų kalendorius Zapyškyje. *Mokslas ir gyvenimas*, 12, 25-26.

Received: 1 November 2007; Revised: 5 March 2008

## KAI KURIE KOSMOLOGINIAI LIETUVOS KATALIKŲ BAŽNYČIŲ ASPEKTAI

**Rimvydas Laužikas**

Santrauka

Šiame straipsnyje nagrinėjami kai kurie kosmologiniai Lietuvos katalikų bažnyčių pastatų aspektai. Disponuojama duomenimis apie 326 bažnyčių, statytų XIV–XX a., didžiųjų durų (pagrindinio įėjimo) orientaciją. Iš jų 223 dabar tebestovintų pastatų orientacijos matuotos vietoje; kitų 103 – žinomos iš rašytinių šaltinių.

Kanoniškai durimis į vakarus yra orientuoti 139 Lietuvos katalikų kulto pastatai (42,63 proc. visų tirtų

pastatų). Kanoninėje orientacijoje taip pat galime išskirti vienokių ar kitokių krikščionybės inkultūracijos aspektų ir gilesnių nei vien „kelio nuo nuodėmės link išganymo“ idėjų išraiškų. Krikščioniškojoje bažnyčioje aktualesnė kelio, o pagonių šventykloje – taško simbolinė reikšmė. Sąveikaujant šioms idėjoms visiška nesudėtingas tampa tolesnis žingsnis – pailgą bažnyčią durimis pastatyti į ypatingą tašką vakariniame (saulėlydžio) horizonte. Tas ypatingas taškas galėtų būti saulėlydžio azimutas per bažnyčios šventojo globėjo dieną. Tokios orientacijos pavyzdžiai gali būti Šv. Mikalojaus bažnyčia Vilniuje (XIV–XVI a.), Klovainių (Pakruojo raj., XVII–XIX a.), Tryškių (Telšių raj., XVI–XVIII a.), Janapolės (Telšių raj., XVIII–XIX a.), Žemaičių Naumiesčio (Šilutės raj., XVIII a.), Vaiguvo (Kelmės raj., XVI–XIX a.) bažnyčios.

Statistinė duomenų analizė taip pat išryškino gana didelę pastatų grupę, orientuotą priešingai, nei reikalavo kanonas. Šių pastatų įėjimai buvo rytuose, o didieji altoriai – vakaruose. Durimis į rytus yra orientuoti 63 Lietuvos katalikų kulto pastatai, tai sudaro 19,32 proc. visų tirtų pastatų. Tokia bažnyčių orientacija atsirado jau ankstyvojoje krikščionybėje. Rytai, kaip bažnyčių orientavimo kryptis, akcentuojami taip pat krikščionių autorių raštuose. Rytai (saulėtekio taškas) ne mažiau svarbūs ir lietuvių pagoniškajai tradicijai, kurioje soliariniai kultai užėmė ypatingą vietą. Vienas galimų tos sąveikos variantų – bažnyčios orientavimas didžiosiomis durimis į saulėtekį šventojo globėjo dienos rytą. Tokios orientacijos pavyzdžiai gali būti Tauragnų (Utenos raj., XV–XIX a.), Buivydžių (Vilniaus raj., XVIII a.) bažnyčios, Sodelių (Panevėžio raj., XVIII a.) Šv. Dvasios koplyčia.

Geografinės žinios ne tik nukreipė besimeldžiančiųjų Vakarų europiečių veidus į rytus, Jeruzalės link, bet ir galėjo paskatinti įdomią orientacijos tradiciją Lietuvoje. Architektūros istorikų yra pastebėta, kad daugelis gotikinių mūrinių Lietuvos bažnyčių turi pietinius įėjimus. Tiriant bažnyčių orientacijas, nustatyta, kad net 124 bažnyčios (38,03 proc. tirtų pastatų) orientuotos šiaurės–pietų kryptimi. Kiekvienos šalies reali geografinė padėtis gali atitinkamai pakoreguoti kiekvieną konkretų erdvinį modelį. Realiai žiūrint iš Lietuvos Jeruzalė yra ne į rytus, kaip Vakarų Europoje, o į pietus. Tai, be abejo, nebuvo naujiena to meto žmonėms.

Pavieniais atvejais bažnyčios galėjo būti orientuojamos į sakralius artimesnės aplinkos objektus. Tokios orientacijos pavyzdys gali būti Skudutiškio (Molėtų raj., XVIII–XX a.) bažnyčia.