# MEDIEVAL RELIGIOUS LANDSCAPE AND ITS USE IN RELIGIOUS TOURISM (CASE STUDY OF THE EARLY GOTHIC CHURCH KOSCELISKO SURROUNDINGS IN KYSUCE, SLOVAKIA)

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**Abstract:** The study presents fundamental theoretical and methodological information on individual sacral tourism as a suitable type of tourism during the COVID-19 pandemic. Individual (virtual) tourism on the example of the Koscelisko locality in Radol'a municipality (northwestern part of Slovakia) in the area of the extinct medieval sacral landscape, thanks to modern technologies, represents a relatively modern segment of the alternative - modern types of tourism. In the first step, a bibliometric method combined with content analysis of literary and archival sources was used to process the study. It was followed by a comprehensive method of historical-geographical research and field research, which generate a database of information to create a 3D model of the defunct church Koscelisko. The outputs processed in this way are available online to potential tourists via smartphones on the platform called Multimedia Guide to Geotourism (https://www.montanistika.eu).

Key words: sacral landscape, vanished sacral monuments, 3D reconstruction, virtual space, religious tourism

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#### INTRODUCTION

Christianity formed the population and territory of Central Europe, including Slovakia, from the 9th century. Its influence has shown in many places within the landscape to the degree that it has acquired a specific appearance of the religious landscape filled with religious buildings, objects, small sacral architecture, and Christian symbols accompanied by typically adjusted vegetation - gardens, trees, solitary trees. In Slovakia, two dominant religious landscaping complexes have gradually become part of the area included in the UNESCO World Heritage List (http://whc.unesco.org/en/list/), namely the Calvary in Banská Štiavnica and the Calvary near Pažica (called Jerusalem of Spiš) in Spišské Podhradie.

The territory of Slovakia is affluent in the uncountable amount of sacral sites represented by calvaries and crossroads. We can find up to 113 of them located e.g., in Košice, Bratislava, Banská Bystrica, Nitra (Jančura et al., 2011). The official pilgrimage points (http://www.putnickemiesta.sk/) registered by the Roman Catholic Church (counting 133 points) are, e.g., Mariánska Hora in Levoča, Šaštín-Stráže, Záhorská Bystrica, Staré Hory, Nivčáková, and many others. The Greek Catholic Church registers 21 pilgrimage points (http://www.putnickemiesta.sk/) including Litmanová, Chirč, Prešov, Košice, and others. Fourteen monasteries and their ruins are also located in Slovakia (based on original research), including Leles, Jasov, Červený Kláštor, Hronský Beňadik, Bzovík, Skalka near Trenčín, Zobor in Nitra. During centuries, more than 4,200 cathedrals, urban or rural churches, chapels, and other church buildings were built in the landscape (based on original research). Although these cultural and religious monuments are still actively used by believers and thus maintained in operation, many have fallen into touristic oblivion. They have not matched the expected potential during the second half of the 20th century due to the communist regime. A separate chapter among the sacral objects is represented by wayside crosses and God's Tortures whose number is dominant, certainly above 10,000 (according to own research), which belong either to nobody or only exceptionally to local municipalities or parishes. Fortunately, these objects are recently a subject of mapping (www.montanistika.eu/?kategorie=13) and gradually also landscape research of architects and religionists.

In Slovakia and the adjacent Central European countries, the Communist regime directly interfered with the science and research topics concerning the Church and Christianity. Therefore, we are observing a specific vacuum in the study of religion, the religiosity of the population, religious tourism, and pilgrimage from the 1950s so far (Bunčák, 2001; Krivý, 2001; Očovský, 1993; Matlovič, 1997, 2001). Renaissance of the research in this area occurred in the 90s of the 20th century when a strongly shaped, mainly Polish religious-geographic school in Krakow formed under prof. Jackowski (e.g.,

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1995, 2003). The current pandemic caused by Covid-19 has led us to innovative processing of religious tourism when the world's tourism decreases in all regions, and neither Central Europe nor Slovakia is an exception. This innovative approach is pointed out in using individual, modern forms of virtual tourism to discover (vanished) sacral cultural monuments. After arriving at the site, individuals or groups can view the assumed object/site appearance and condition in the selected time horizon using freely available modern technologies (smartphones). Thus, tourists can learn basic information about the visited sites through various platforms or applications and even view 3D reconstructions of non-existent monuments in the field, as if traveling in the past. The study aims to reconstruct the vanished early Gothic church of Koscelisko in Radol'a and the adjacent historical sacral landscape and subsequently create a 3D church model and point out its position in the landscape. Furthermore, propose using historical heritage in modern virtual religious tourism based on theoretical-methodological bases relating to religious tourism and knowledge of the sacral landscape.

#### THEORETICAL FRAMEWORK

#### Historical sacral landscape

A detailed overview of landscape entity perception and its definitions as understood by various scientific disciplines (from natural sciences, through historical and social science to engineering) is given by (Chrastina, 2009).

In terms of conceptualizing the scientific terms at the border of geography and history, it can be considered a complex dynamic system consisting of (quasi) natural and anthropogenically reshaped and developed components linked with bonds and mutual interaction in a particular space and time. A particular landscape is an existing part of the earth's surface forming a homogeneous entity, qualitatively distinguishable from its surroundings, i.e., from a different type of landscape. The man transformed and developed landscapes include agricultural, urban, industrial, mining, and religious (i.e., sacral, sacred, or spiritual). If a studied area contains a stabilized landscape in more than five years, we speak about a historical landscape. It is, therefore, a spatial entity in which human life took place (human activity) in the past, i.e., within the selected (examined) time horizons (Hollý and Hronček ,2017). Based on a broader understanding of a religious landscape meaning in geographical sciences, we define it as a system of relations between space and religious manifestations (in our case Christian), actions, and interactions associated with socio-cultural material transformations in space and time from local to global level (Zelinsky, 2001; Kong, 2004; Knippenberg, 2005). In the strict sense, therefore, it is a sacral landscape of a selected territorial unit (geographical area of local importance), or rather the site, which has been (or is to present) greatly influenced and transformed by religious influences and activities of different nature. The sacral landscape can be represented by groupings of religious buildings and objects and a solitary sacral landscape element that adds or creates (defines) the typical landscape character of the area (Havlíček and Hupková, 2007; 2008; 2013). Perception of solitary elements in the local historical sacral landscape space is essential in research, whether it is a small building (crosses, wayside chapels) or freestanding churches and calvaries. P. Jančura elaborated on the issue of research freestanding churches in the landscape (Jančura et al., 2011; Jančura, 2016). He did not consider them only as cultural monuments but as sacred buildings, which can change the character of the surrounding landscape as solitaires. They had and still have a specific position in space because they represent several other meanings in addition to their religious missions.

First, the church (especially Romanesque and Gothic) was built on relief predisposed by significantly higher ground to dominate the surrounding landscape visually. The nave was usually east-west oriented, with the altar located in the eastern part and the central entrance in the western part of the church. East accounted for sunrise, which symbolized rebirth and positive force. West represented dusk and the end (of life). Tall trees, either oaks or lindens, were usually left growing in the immediate surroundings of these churches (as remnants of the original vegetation). If the site had been without trees, people would have planted them artificially (Jančura, 2016; Tóth, 2020). Landscapes' spiritual value gradually began to change, and whereas it added up sacred elements, it became "religious" (sacral). Holy hills, calvaries, crossroads, and places of pilgrimage originated. Roads in the landscape were lined with smaller sacral buildings: chapels, wayside crosses, and statues of saints, well landscaped and planted with trees. In Slovakia, calvary complexes became a synonym for sacral landscape (Jančura et al., 2011). Medieval churches created places of a specific meaning in the landscape - genius loci. We understand it as a spiritual character of a specific place, hence the landscape, which can be found in different cultures and forms in history. The belief in its existence unwound throughout history with Christianity. Places considered "strong" or directly sacred are those that can change our inner state and agitate our respect. Experiencing them brings us humility and refinement, developing and changing our relationship with the world around us. Such places exist in nature (in the landscape) and have originated and deepened since prehistoric times, with a sizeable elemental force affecting our spirituality. We can include artificial areas, such as Koscelisko (end of 13th and the first half of the 14th century), among "the most sacred." Such places visually dominate the landscape and hide some mystery, mystique, and atmosphere that subconsciously attract humans and create positive experiences and feelings (Day, 2004).

During the next more than six centuries, the sacral landscape around Koscelisko became a semi-sacral and gradually semi-profane, respectively profane landscape (Gregory et al., 2009). In the middle of the 20th century, the sacrificial vanished from the landscape almost entirely and had to be uncovered through subsequent archaeological research.

We can create a typology of tourism forms and species based on participants' motifs (Figure 1). Religious tourism represents a substantial part of the other forms of tourism. Religion (Christianity in our geographical space) is a system of opinions (beliefs) relating to traditions explaining the world and forces that control it. In this system, beliefs reflect a person's relationship to a varietally understood "Sacrum," which acquires its expression in a religious doctrine, cult, and organization (Banek et al., 1992). We can define religious tourism (Matlovičová et al., 2015) "as all touristic journeys whose primary motive is visiting sacral and religious objects or sites." Some geographers do not recognize it as a separate

form, but they consider it a part of cultural tourism (e.g., Lochmannová, 2015; Tanaś, 2008). Economists perceive the issue similarly. According to them, it is associated with world religious traditions, and its most common manifestations are pilgrimages, for which participants, religious acts, and pilgrimage sites are characterized as features. Religious tourism varies from cultural tourism by religious motives and refers to the participants as pilgrims (Rinschede, 1992).



**Religious tourism** 

Geography of tourism (as well as any other scientific discipline) uses a conceptualized terminology, i.e., own scientific conceptual apparatus, to describe or clarify models, phenomena, tourism elements, and relationships between them.



Figure 1. Kinds and forms of tourism with an emphasis on characteristics of virtual individual religious tourism (Source: authors)

Figure 2. Relations and links between individual disciplines studying religious tourism (Source: authors)

However, we must state that cultural and religious tourism differences in the current globalizing period are vanishing; respectively, it is challenging to identify the boundaries between them (Krogmann et al., 2017). Relationships between geographical (sub) disciplines studying religious tourism are shown on the following heptagon (Figure 2). So far, experts have distinguished two types of religious tourism participants (Krogmann, 2007). The visits of a closely specified professional public at the religiously motivated conferences (most commonly priests) represent the first (minor) group. The second group is believers arriving at religious festivals (pilgrimage activity), local celebrations of the church ordinations, and religious camps or spiritual exercises. Based on our research of modern forms of tourism (Gregorová, 2019a; 2019b; Hronček et al., 2020; Gregorová et al., 2020; Chrastina et al., 2020; Hronček and Gregorová, 2021) we have to define the third category of religious tourism participants. These are motivated by visiting religious-cultural monuments (churches, chapel, monasteries) with a dual character. First of all, it is a classic visit to the monuments (or its ruins *in situl*), but currently (especially on the background of the Covid-19 Pandemic), the second (alternative) form - a virtual visit, is developing very rapidly. We distinguish visits and tours of the existing sights processed in 3D forms or the vanished religious landmarks that came to life based on archaeological, historical-geographical, geographical, or architectural research and the subsequent 3D reconstruction (our study is an example). Such types of visit motifs are significantly close to cultural tourism. Reconstructions of vanished (religious) monuments represent a new phenomenon - virtual cultural heritage creation (resources citation).

#### 3D virtual reconstructions of (religious) cultural monuments and virtual cultural heritage

In the current globalizing tourism, 3D visualization is crucial and, in many cases, irreplaceable concerning its natural development. It is used for presentation and promotion and as a virtual travel tool. Visualizing the landscape and its objects can thus significantly increase the promotion and attractiveness, potential, and visit rate of touristic destinations, including the religious landscape and its monuments. Increasing attractiveness is justified regarding physically preserved historical religious landscapes, sights, or ruins (relicts) of sacral monuments. Suppose they have vanished or are unavailable for various causes (political, economic, technical, social - protection). In that case, a 3D visualization is not only a means of their promotion and advertising but often the only tool to explore the given landscape and sight (visually) in an online space, respectively, through a shared/augmented reality in situ (see, e.g., Guttentag, 2010; Singthongchai et al., 2012; Champion, 2017; Pavolová et al., 2019; Melelli, 2019; Ualkhanova et al., 2019; Hronček et al., 2020).

Virtual technologies have changed the way people perceive the landscape and the world around them, not only in professional life but also in leisure time, including traveling. Many studies show that the entire population, not just younger generations, are generally familiar with modern digital reality computer technologies, whether virtual or extended (Yovcheva et al., 2012). Thanks to modern technologies, a significant group of users can generate a considerable amount of data usable on various multimedia devices such as computers, laptops, tablets, smartphones. This primarily visual information can be overlayed with the elements of the existing landscape (Olar, 2019), which has a wide application mainly in modern forms of individual tourism. Creating virtual images in a computer environment must be professionally correct in input data and technically correctly processed to ensure that the information created is as accurate as possible and that the final result is natural for the historical period (Kounavis et al., 2012). It applies primarily to visualizations of the vanished buildings (not

only sacral) from different architectural periods. The processing of text or spoken word accompanying the historical visual reconstruction of the landscape, respectively buildings, regardless of whether it is a static 2D or 3D reconstruction or various computer videos, shared or virtual reality, is also very important. Virtual reality is a unique tool for modern tourism (also during the pandemic) to present cultural and religious heritage (Caciora et al., 2021; Kounavis et al., 2012; Guttentag, 2010).

Many of the sacral monuments in Slovakia are irreversibly destroyed or maintained only in the form of ruins. Thus the restoration is almost exclusively possible in a computer environment following the UNESCO Charter on the Preservation of Digital Heritage. The conditions of creating and maintaining a digital heritage were approved at the 32nd meeting of the UNESCO General Conference in Autumn 2003 in Charter on the Preservation of Digital Heritage (http://unesdoc. unesco.org/images/0013/001331/133171E.pdf#page=80). The Charter describes, among other things, the most important provisions concerning the creation and preservation of sacral digital heritage and its subsequent use in religious tourism. Digital heritage is a unique source of human knowledge and includes cultural, educational, scientific, administrative, technical, medical, or other types of information created digitally. Charter distinguishes two types of digital heritage - created by digitizing existing monuments and then new ones born in a digital environment (such as 3D reconstructions of vanished sacral monuments). Computerized "materials" include texts, databases, still and moving images, sound, graphics, software, or web pages of different formats. They often have an ephemeral nature and require purposeful production, maintenance, and administration. Many of these resources have a long-term value and importance for human society, whether on a regional or global scale, so it is necessary to create and store/protect them (https://www.infolib.sk/).

#### **RESEARCH METHODOLOGY**

To fulfill the aim of our study, we chose a methodological procedure consisting of multiple steps in which we have applied several interdisciplinary methods. Research procedures logically followed and often consisted of simultaneously realized stages (Figure 3). Systematic work has led not only to fulfill the research aim but also to form the original scientific study using final geographical syntheses (Michaeli and Ivanová, 2015). The primary step was a heuristics of the information database, respectively, a critical analysis of archival and literary sources. Subsequently, we assessed the research on the investigated issue using the bibliometric method and worked in two levels (Krištofičová, 1997; Carrizo-Sainero, 2000; Ondrišová, 2011). At first, the work focused on the historicalgeographical reconstruction of the Koscelisko church and the adjacent landscape. Then we focused on religious tourism. These analyzes are included in the Theoretical Framework section. The methods of historicalgeographical research were also used, which we applied to critical analysis of historical sources, professional reports, and historical literature. An essential stage in the topic processing was comprehensive field research of historical landscape relics in the Koscelisko surroundings/space (Demek, 1987; Ivanička, 1983; Butlin



Figure 3. Methodological procedure scheme (Source: authors)

and Dodgshon, 1998; Chrastina, 2009; Semotanová, 2002), during which we have also made photographic documentation and morphometric and morphological mapping in addition to detailed topographical site sketches (Figures 4a, 4b, 7a, 7b, 8).



Figure 4a, 4b. The present state of the Koscelisko site. Identification of stones from the church during field research in summer 2020 (Source: authors)

Simultaneously with field research, we also used Light Detection and Ranging (LIDAR) imaging results analysis. LIDAR digital terrain model can provide detailed information about relief microforms (sizes from 10 cm) otherwise imperceptible in the landscape, possibly covered by vegetation. Classification and filtering of point clouds obtained by air scanning can create high-quality materials for a detailed digital model of relief (DMR) (Gojda et al., 2011; Hofierka et al., 2018; Hronček et al., 2019). The information obtained through LIDAR systems is effectively used in researching the historical medieval landscape of Koscelisko and its surroundings. LIDAR map is available online at: https://zbgis. skgeodesy.sk/. Based on historical-geographical research of the medieval religious landscape of Radola (Koscelisko) with an emphasis on the church's building, we have acceded to its 3D modeling and reconstruction in a computer environment. As the background, we used both scanned, georeferenced, and interpreted orthophotos that we generated using UAS TRIMBLE UX5 (Unmanned Aerial System). The data obtained were interpreted using Agisoft PhotoScan (see Hronček et al., 2020). The position and dimensions of the church ruins were verified and compared to the data of Selucký (2016) and Majerčíková et al. (2015). The result is a 3D visualization of the model and surroundings of this important medieval sacral location. The accurate dimensional and volumetric model was created in Sketchup Pro2017. Because of the distinctive character of today's church's surroundings with marks of significant secondary planation of the peak platform, was its model set into a digital terrain model in the VOXLER4 software environment (available online: http://www.goldensoftware. com/products/vuxler), also to 2D Google StreetView screenshot and then to pseudo-3D Google Earth model. For virtual (religious) tourism purposes, the 3D model was placed in Google Earth and the free online platform Multimedia Handbook of Geoturism (https://www.montanisti.eu) in the section Churches and bell-towers. The last step of the study was the final synthesis of scientific knowledge and research results (Pružinský et al., 2011; Hendl and Remr, 2017). The final synthesis aimed to create a debate and conclusions and complete the study's finalization applying a generally adopted model of the research procedures organization in the research of tourism (also religious), which has a systemic character (Matczak, 1992).

#### Site location and definition of the territory

The studied Early Gothic Church with the adjacent religious landscape was found in the residential area of Radol'a village in Kysuce. Radol'a is located in the district of Kysucké Nové Mesto (1 km southeast of the district town) and 9 km north of the regional capital of Žilina (Korec et al., 1996). Koscelisko is situated on the southern edge of the residential area of Radol'a village, on the distinctive river terrace at the mouth of the Radoľa Creek (Vadičovský Creek) to the Kysuca River (Figure 5). The historical region of Kysuce has completed the northwestern part of Slovakia near the border with the Czech Republic and Poland. Although Kysuce has a strictly defined territory boundary, it never became a separate administrative unit and always belonged to Trenčín County (Hronček et al., 2016). The naming of the



in Radol'a within Slovakia and Europe (Source: authors)

region was first written in 1244 (Fejér, 1829) and is derived from the then naming of the Kysuca River (Cussus) (Vancsa, 1905).

#### RESULTS

## Reconstruction of Early Gothic Church Koscelisko and the adjacent landscape

Based on archaeological research findings from the mid-20th century, the emergence of the Early Gothic Church on Koscelisko can be dated around 1270 (Petrovský-Šichman, 1963). After performing more archaeological works in the 1980s (Ďurišová, 1992) and above all in 2012 - 2013 (Samuel et al., 2014), this date seems even more likely. Based on the medieval paper material review, we can assume its construction in the 60s of the 13th century, as there already was a parish in this region (Dvořák, 2003). Based on archaeological research, we know that at the turn of the third and fourth decade of the 15th century, there was a sudden, rapid, and particularly catastrophic end of the church's existence. Its destruction by fire confirms a distinctive layer of charcoals and burnt clay found in the object's interior and exterior. The burnt clay layer of red-black color inside the building bases includes burned wood pieces and melted metal cakes (Samuel et al., 2014). We are most likely to combine this catastrophic event with the Hussite's campaign from Moravia, respectively, from Silesia through Jablunkov Pass. The Hussites got up to Budatin Castle, located in Žilina and destroyed in September 1431 through the valley of Kysuca (Marsina, 1986) (Figures 7a, 7b, 8). The church building was standing on the oval platform of the leftbank river terrace (395 m a. s. l.) above the floodplain of Kysuca River. The terrace was created during the post-tertiary when the in-depth, especially the side river erosion, carved into an easy-to-erodible bedrock. This distinctive geomorphological element has created the ideal conditions for locating a building with a similar character. Natural protection was provided by steep, almost perpendicular slopes of the terrace. The western and southwest slopes rise 30 m above the floodplain. The height of the northern slope is approximately 10 m lower because the Vadičovský Creek has shaped one 15 m high intermediate terrace. The nearly natural perfection of the location for the building is multiplied on the south by a deep ravine of Besný Creek, which cuts the terrace from the northern foot of Veľký Vreteň (821 m a. s. l.).



Figure 6a, 6b. Heaps (left – south heap, right – north heap) of construction stone from Gothic church Koscelisko are the last evidence of its past existence (Source: authors)

Church foundations were set almost to the edge of the terrace in its narrowest, northwestern jut. Foundations were on platform situated а terrace approximately 50 m in diameter, closed by an earth wall from the southeast. The building was a simple single-nave with a rectangular floor plan with a length of 15.13 m, a width of 8.65 m, and an anticipated height of 11.8 m. The entrance to the main nave of the church was located on the western side. respectively, on the northwest side, because the long axis of the church is deviated by 34 degrees (Figures 7a, 7b).



Figure 7a, 7b. Computer model of the church Koscelisko based on archaeological and historical-geographic research. View of the church from the northwest (left) View of the church from the west (right) (Source: authors)

In the first stage of construction, a slightly narrowing quadratic shrine was built on the eastern side (internal dimensions  $4.53 - 4.80 \times 4.50$  m) along with the central nave (outer dimensions 9.30 - 9.70 m  $\times 8.65$  m). Square adytum was built on the northern side (internal dimensions of  $3.45 \times 3.45$  m). Archaeological research has confirmed the uniformity of the masonry of these church parts, so it is clear that they were built during the first phase of construction (Samuel et al., 2014).

Foundations of the church walls were laid in depth from 40 to 100 cm. While the ossuary walls had a thickness of only 50 - 55 cm, the main nave with the shrine had a width of 90-100 cm. Adytum walls were a bit thinner, 80 - 90 cm. In several places were the foundations of the main nave wider than the walls of up to 20 cm. The stone used was partly worked as the flysch sandstones have the advantage of being flat from two sides thanks to its layering. Large worked stone blocks were used for the corners. Only the stones used for the face side of the wall were worked.

Based on the exact dimensions of the building foundations and the expected building height, we also calculated the volume of the stone used for the church's construction in the computer modeling. The volume of walls, i.e., the estimated stone consumption for the church's main nave construction, was approximately 266 m<sup>3</sup>, and the volume of the sanctuary was determined at 54 m<sup>3</sup>. The mass of sacristy on the north side of the shrine and the ossuary represents an additional 38 m<sup>3</sup> of aggregate, estimated at 358  $\pm$  2.5% m<sup>3</sup> of construction stone and aggregate.

According to archaeological research, the entire church had plastered interior and exterior. It was stained white, but the window lining was likely brick-red. Color residues indoors indicate that it could be decorated (frescoes) from the inside.

The church hill also included a cemetery used from mid-13th to mid-15th century (Ďurišová, 1992). A minimum of two graves lay under the foundations, so it is clear that there was a burying on the site before the church's construction.



Figure 8. Computer reconstruction of the church location in "natural landscape", in a filtered 3D relief models (view from the northwest) (Source: authors)

The exact 3D model of the Early Gothic church Koscelisko based on archaeological and field historical-geographic research offered us the opportunities to analyze the derived building characteristics. We could compute volume of relocated the construction material and define predicted character its and properties. Figures 8 and 9 show the predicted layout of the building on the edge of the terrace and that its character and location significantly affected the landscape image's perception. The dominant single-nave building has significantly been mystical, perceived from a further distance (see Discussion). The view of the terrace was also impressive for the medieval man (Figure 10).

# Availability of the 3D visualization for virtual religious tourism

The extensive use of the internet and new technologies as information media in tourism is not always a matter of course in Slovakia. Many organizations and municipalities still rely on classical access to tourist information through stationary



Figure 9. Computer reconstruction of the church location in "natural landscape", in a LIDAR image (view from the northwest) (Source: authors)



Figure 10. The position of the church on the terrace edge embedded in the present land (Source: authors)

boards or educational trails in situ, and Radol'a is not an exception. The educational trail with eight stops was set up by the municipal office in 2014. Koscelisko is its part as stop no. 7 (http://naucnechodniky.eu/). It is a classical information board with several methodological errors that annoy tourists instead of attracting (Weis et al., 2019), and what is most important, a blackboard does not show any visualization of the vanished church (Figures 11, 12).



Figure 11. Noticeboard on the Koscelisko (left) Figure 12. The Koscelisko site (yellow ring) in present landscape (right) (Source: authors)

For visualization, promotion, and accessibility of 3D models and computer videos complemented by a suitable populartechnical text based on our research applied to the general public (religious tourists), we have chosen a verified multimedia internet application known as a Geoturism Multimedia Guide. The map portal, available from 2011 at http://www. montanistika.eu/, offer the opportunity to interactively present the results of mapping a wide range of geotourism objects structured into information layers, as well as research results methods applicable in modern forms of tourism in regions of Slovakia in a multimedia form, within a single imaging environment - map server (Weis, 2012a; Weis, 2012b). The most important advantage of the application is that it can be triggered and used on portable multimedia devices such as laptops, tablets, or smartphones. Since the display window automatically adjusts the device's screen size, the application can be used anywhere the internet is available. The application system allows browsing the embedded items by clicking the appropriate pictogram on the map. Individual sites are visually presented through photos, maps or models, texts, and audio records (audio) or video sequences of different formats (video). So far less used is the launch of the audio commentary with the possibility of simultaneous view of graphics and other shared content. Items are displayed in interactive windows that can be changed according to the user's interest. The website presents essential factual data in information windows, such as accurate position, brief history, current characteristics, attractions, availability, and contacts. Whereas there is internet available at the Koscelisko site, we have used the Quick Response Code (QRC), which was placed in the corner of the board no. 7 of the educational path. After loading the QR code by a multimedia device, the user gets the main menu of www.montanistika.eu centered at the specific site with a pictogram showing. By placing the cursor over the pictogram, the name of the site (Koscelisko) is displayed, and simply clicking the pictogram will open the location window (object) (Figures 13, 14a, 14b).



Figure 13. Input pictogram (yellow circle) of the church in Koscelisko in the Geoturism Multimedia Guide platform (https://www. montanistika.eu) in the Churches and bell towers category. Clicking the pictogram opens the information window (Source: authors)

The application can also free search by cadastral category of objects or any text string (also incomplete) during regular use. Search results can be displayed as a list or in a new window as a map composition. Window contents belonging to the religious site Radol'a Koscelisko contain detailed information on our research processed to make them understandable and attractive to the general public. The displayed window Radol'a Koscelisko (based on the structure that applies to the entire application) contains the site's name, its exact location, location in the cadastral territory, and links to other attractive websites. However, the primary source of information is the text (description of the site) in Slovak and English languages and the accompanying field research photos,



Figure 14a, 14b. View of the Geoturism Multimedia Guide (https://www.montanistika.eu), global view on locality (left). Detail of Churches and bell towers category on a smartphone directly at the Koscelisko site (right) (Source: authors)

especially reconstruction drawings and 3D computer models of the church. The website shows the reconstruction videos made by the Archaeological Institute in Nitra that present in detail and very realistically the likely form of the church in the Romanesque and Gothic versions.

#### DISCUSSION

The chosen location is only an example (case study) in terms of religious tourism, and its use is simple and economically available to any other location or form of tourism. Currently, almost every cultural object or artifact (even in the narrowest sense) is "touristic-able," i.e., transformable into a product that can be consumed by potential tourist clientele as experience, authenticity, exoticism, or image. Any landscape area or point can become an attraction through a correct presentation and advertising (Wang, 2000), including vanished religious landscapes and monuments.

At present, the use of computers and digitization is an unstoppable phenomenon that has penetrated all spheres of our lives. It becomes an integral part of the cultural and historical heritage and tourism. Classical forms of information are converted into digital formats, making them generally affordable. The situation is different regarding vanished (religious) monuments that have been preserved only in documents or archaeological findings, as is the case of the Koscelisko church. We, therefore, have to use multidisciplinary scientific research to obtain information about these monuments and computer modeling to generate new, previously unknown knowledge. Modern computer technology allows us to virtually visit places that would otherwise remain inaccessible and see objects that would otherwise remain invisible. This advantage can benefit tourism because it allows "virtual" movement in space and time. However, essential quality internet networks and active knowledge of "smart devices" are needed. Although currently, up to 85% of Slovaks are actively using the internet (https://www.internetworldstats.com/), its use in tourism is minimal, mainly for stay reservations and payments.

First virtual tour exhibitions in museums are finally beginning to emerge, notably accelerated by the Covide-19 pandemic. There are a plethora of 3D visualizations online, which, however, lack expert commentary and methodical use and accessibility for tourism. The presentation of the site Koscelisko was realized only through "classic" elements used in tourism (Weis et al., 2019) via the educational trail (http://naucnechodniky.eu/naucno-historicky-chodnik-v-radoli/). However, the board on the trail does not have a visualization of the church, whether artistic or professional, in the form of reconstruction drawings. At the time of the trail construction, such materials already existed in the archives of the Kysuce Museum in Čadca. Even though a professional drawing and 3D computer reconstruction were created in 2018 (Hronček et al., 2020), these were not included on the board to increase the attractiveness and document the entire site. Some professional websites, e.g., Portal of medieval churches in Slovakia (https://apsida.sk/), the official website of the Kysuce Museum in Čadca (https://www.kysuckemuzeum.sk/sk/) or the website of nature trails in Slovakia administered by the Department of Physical Geography and Geoinformatics of the FNS at the Comenius University in Bratislava (http://naucnechodniky.eu/) pay marginal and fragmented attention to the Koscelisko church. The village Radoľa also promotes the site on its website (http://www.radola.sk/). However, all the abovementioned websites are opaque, and searching is nonconceptual, tedious, and discouraging in terms of tourism.

Not only must the illustrated parts of the presented vanished sacral objects be professionally correct and visually attractive, but the text part must have the correct range, form processing, and attract visitors (Weis et al., 2019). Therefore, we had processed the text that should reach out to the religious tourism participants and draw them into the Middle Ages when the church existed in the contemporary landscape of Kysuce. Such text must be based on several levels and meet multiple attributes (Hronček et al., 2017):

• The first is visual information, i.e., a description of the physical existence of some object, place, and location. In our case, the Early Gothic Church of Koscelisko stood here in the Middle Ages. At the same time, we perceive a site in the context with its surroundings, relief, and landscape character.

• The second attribute of the site are associations and feelings that the presence of church could invoke in a conventional person in the past (today in a tourist). We can imagine its original form and architecture. Proportions and beauty of its shapes or its setting in the surrounding landscape. The overall perception creates an individual sensation (different for each individual).

• The third attribute is a symbol the church represents - Christian faith and God's presence, hence, something that exceeds our existence. Even if the church will vanish (which is the case), the response remains as the atmosphere of the place. The atmosphere itself is further illustrated by minor specific but perceptible symptoms of its existence, ruins, embarkments, stone wall residues. These features are also impressive and vital for the perception of the importance of the place.



Figure 15. Computer reconstruction of Koscelisko church location in the historical-cultural landscape as it would look in the second half of the 18th century (left)

Figure 16. Computer reconstruction of church in 3D model in present country (right). Views from the northwest (Source: authors)

The setting of the medieval sacral building in the landscape of Radol'a is relatively significant (Figures 15, 16). It stands on a high terrace, with a far outlook of the medieval cultural landscape, above the confluence of the Kysuca River and Radol'a Creek (Vadičovský Creek) confluence. It is surrounded by an attractive, a little rough (Flysch) landscape, near Kysucká gate and a massive peak of Ladonhora, in the undulating relief of Kysucká vrchovina. The location gives the site another unique charm. It was the last place with a church (as a distinctive stone building) north of Žilina, on the southern edge of Kysuce. When seen from below, it was a landscape dominant, in his historical context, that could not be overlooked (Figure 17).



Figure 17. The location of the church on the edge of the terrace embedded in the present landscape (Source: authors)

Based on research, it is clear that this stone church building, which dominated the given space, was more than 11 m and more than 15 m long, towering on the edge of an imposing 30 m high left-bank terrace of Kysuca River. The building has impressed the medieval traders, pilgrims, and passengers passing along the old road on the right bank of the Kysuce River and the domestic peasant and shepherd population. Even though it did not reach large dimensions in the present scale, its magnetizing position in the medieval landscape has been multiplied by the contrast of the white wall (yellowish, similar to the Church in Kopčany) and brick-red color of windows and doors linings with the surrounding country. Another element of its uniqueness in the medieval landscape of the Kysuce region was that the closest comparable stone building was standing behind the Kysucká gate 12 km from Žilina. Based on the current state of research, we know that the traditional buildings in Kysuce were small and wooden in this period, including houses in the town of Kysucké Nové Mesto and its fortifications. These simple wooden buildings covered with shingle roofs harmonized naturally with the environment. The natural broad, often relocating channel of Kysuca laid under the almost vertical foot of the Koscelisko terrace. Across the river, a ford crossing led probably from Kysucké Nové Mesto to Radol'a. The right and much broader part of the valley ascending above the river channel created a space for the medieval town of Kysucké Nové Mesto. Based on the reconstruction of the medieval sacral landscape of Koscelisko and its closest surroundings, we can at least partially combine 3D modeling and text descriptions to draw the current (modern religious) tourist into the feelings and thoughts of a simple medieval man. We can at least partially mediate the perception of this attractive Christianity-influenced/created genius loci of the Koscelisko medieval landscape.

#### CONCLUSION

Based on the general definition of tourism (Horner and Swarbrooke, 2003; Zelenka and Pásková, 2002), we can conclude that when religious tourism focuses on a particular religious landscape (site) or building, it is a short-term transfer of people related to religious inheritance (also in combination with virtual), aiming at pleasant and exciting experiences. Within the religious tourism, aimed at less known or forgotten historical objects and sites or scattered sacral relics and small architecture in the landscape, a more practical application of individual and family (unorganized) religious tourism expected primarily in the short-term day trips is observed. Such types and forms of tourism are justified primarily in the current pandemic situation caused by Covid-19. In the individual and family forms of religious tourism, the diversity of interests is expected from participants. Based on our field research, the frequent visitors of such sites are tourists, families with children, scientists, students of various sciences and historical unions, who are interested in the writing of final works, and random travelers or mountain cyclists. Furthermore, just the availability of information on individual sites online obtained mainly by computer modeling aimed at various aspects is a suitable solution of such sites "accessibility" that can offer visitors only very limited or no monuments except for outlooks. Therefore, as long as the situation allows, an optimal solution is the combination of information boards (also on educational trails) supplemented by either QR code or other types of internet information management with additional and, in particular, updateable information with the possibility of their rapid repair, exchanging or supplementing. Finally, we can say that the object of tourism in a broad sense may be any landscape (and religious), where recreational activities can be realized and in the narrower sense all objects and elements that can become the goals of our visit (Pichlerová and Benčať, 2009), but they must be adequately accessed and presented to the visitors.

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