THE ROLE OF NATURAL FACTORS IN SHAPING THE SACRAL LANDSCAPE OF THE ROPA AND WISŁOK RIVERS INTERFLUVE (SE POLAND)

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Summary. The contents of this thesis presents the existing relations between the natural conditions of the Ropa and Wisłok rivers interfluve and the selected sacral landscape features of this region. The analysis of temples, roadside shrines and war cemeteries was conducted with respect to particular location within the region, detailed localization, type of building material used and architecture features. Among the major natural factors under analysis were the following: land relief, climate and natural resources, including forest areas. All the analyses that were conducted concerned three areas which differed significantly with respect to their physiographic features (mountains, foothills and depressions). As a result of it, the regional diversity in the landscape was demonstrated which actually comes out of different natural features. Moreover, the above-said analyses included the age of particular objects, which proved significant changes in the influence of natural factors on erecting sacral objects in the past and in contemporary times. The results obtained enabled to formulate general guidelines concerning the issue of shaping the sacral landscape, taking into consideration the regional natural conditions – and, at the same time, following the local tradition.

Key words: sacral landscape, natural conditioning of the cultural landscape, natural building materials, the Low Beskid (Beskid Niski), the Jasielsko-Sanockie Valleys (Doły Jasielsko-Sanockie)

INTRODUCTION

First of all, building temples and other sacral objects is related to the existence of a certain community inhabiting a particular region. In fact, the actual appearance and location of a temple depends to a great extent on the nature of particular community, specific religious practices and culture, the community lifestyle, the manners of farming, wealth and the like. Moreover, natural factors, like regional diversity, are also of significant importance here, due to the fact, that within one cultural group, inhabiting various regions, we may observe completely different features of sacral landscape.
The purpose of this paper is to indicate the manner how the natural conditions influence the nature and location of sacral objects, like: churches, orthodox churches, synagogues, roadside shrines and war cemeteries. Furthermore, the diverse character and localization of particular types of sacral objects was presented herein, with respect to regions of different natural features of landscape. Conclusions concerning the shaping of sacral landscape were drawn on the basis of results obtained, taking into consideration natural conditions of the region under analysis.

REGION AND METHODS OF RESEARCH

The region selected for the analysis is physiographically diverse and covers the area of the Ropa and Wisłok rivers interfluve. This region is located along the borders of two mesoregions of the Western Carpathian Mountains (Karpaty Zachodnie) having diametrically opposite land relief. These are the Jasielsko-Sanockie Valleys (Doly Jasielsko-Sanockie) and the Low Beskids (Beskid Niski). First of the above-mentioned mesoregions is a long (100 km) and wide (15–20 km) sphere of flat-bottomed valleys separated by low foothills. The Low Beskids (Beskid Niski) is located above the Jasielsko-Sanoskie Valleys (Doly Jasielsko-Sanockie) in the form of 100 km long and over 20 km wide mountain range. The land relief here is mainly mountainous and highland. Wide arched mountain ranges of 700–850 metres are the predominant here, but also narrow and sharp mountain ridges of maximum 997 metres (Lackowa Mountain). Passes here are

Fig. 1. Location of sacral objects within the territory of the Ropa and Wisłok rivers interfluve in the background of the physiographic division [acc. to Starkel 1972 and Wójcik 2003]: 1 – rivers, 2 – mountains, 3 – foothills, 4 – depressions, 5 – Roman Catholic churches, 6 – Greek Catholic and Orthodox churches, 7 – non-existing churches
short and easily accessible [Starkel 1972]. Within the described region we can actually find three different types of landscape (depressions, foothills and mountains) which differ significantly in land relief and, as a result of it, also other natural and cultural features (Fig. 1).

Conducted analyses concerned all temples and war cemeteries located within the territory of the Ropa and Wisłok rivers interfluve where different rituals, beliefs and religions were being practiced. In order to prove the importance of natural conditions in shaping sacral landscape during the last few hundred years, all analyses were conducted with the emphasis on the age of objects. Three areas, each of which covers 6 villages together with appurtenant land, were selected for the sake of thorough analysis of spatial localization of roadside shrines. The first area, of mountainous nature, is the Pasmo Magurskie within the Low Beskids (Beskid Niski). The second area is located as a whole within the Pogórze Bieckie. The third area, of plain nature, is located within the Obniżenie Jasielskie.

Particular objects were described on the basis of analysing relevant literature and source materials. Detailed data concerning location of temples were obtained through analyses of cartographic materials (topographic maps at the scale of 1 : 10 000 in 1965) and also through conducting field work. The data obtained were prepared under the GIS system and within Arc View and Arc Info programmes.

RESULTS OF RESEARCH

Location of sacral objects

There are clear differences between the three analysed areas with reference to the number of temples per area unit or per one village. Within mountainous area there are 65 temples located, orthodox churches constitute 87% of them. Taking into consideration the total area of those regions it gives one temple per 18.8 km² and per 1.5 villages on average. Before the year 1947 those ratings were much higher – there was one orthodox church per 13.3 km² on average and per slightly more than one village.

There are 35 temples located within the foothills area. There is one sacral object per 11 km² and per 1.8 villages on average. Therefore concentration of churches is larger, but in fact there are fewer temples here in relation to the number of villages than the number of temples within the Low Beskids (Beskid Niski). Within the depressions area the concentration of temples is the largest and in fact there is one church or orthodox church per 8.2 km². It is directly related to the great number of villages located there. There is one temple per 1.4 villages and it is almost as much as within mountainous area. The fact, that within the region of the Jasielsko-Sanockie Valleys (Doły Jasielsko-Sanockie) there are definitely more temples located in the depressions area than in the foothills area results mainly from earlier and more dynamic development of lower located area having less-diverse relief. Easy access of communication to villages within lower located area compensates for the smaller number of temples located within
the foothills area. Within the mountainous area the highest rate of land for one temple is related to the type of relief determining sparser settlement. The same factor, that is the land relief or more precisely communication hindrance, contributed to the fact that within mountainous area nearly every village has its own orthodox church or church. Even today, despite the destruction of many temples, their number in comparison to the number of villages is comparable to the densely populated depressions of the Jasielsko-Sanokskie Valleys (Doly Jasielsko-Sanockie).

Location of synagogues was mainly related to the former centres of Jewish population, that is with the cities. As a result of prohibition, binding till the second half of the 19th century, on the Israelites settling in within larger towns of this region (Jasło, Krosno, Gorlice), the major centres of Jewish population were small towns, like Dukla, Rymanów or Nowy Żmigród. That is where the oldest Jewish sacral objects were preserved.

Therefore, we can declare that diversity in natural conditions (mainly land relief) within particular physiographic units had an indirect effect on location and concentration of temples, mainly by means of influencing the settlement and communication. As a matter of fact, any differences in location of temples within particular regions may be considered insignificant.

Topographical location of sacral objects

Sacral objects constitute significant element of landscape increasing the level of its attractiveness and diversity. It is of crucial importance especially within mountainous areas, where temples are visible from different angles and at a great distance and panoramas from below are usually of greater number of plans [Balon and German 2005]. It is commonly believed that a typical feature of Christian temples, like in many other religions, is their location on a hill, elevation or a slope, which is a place uppermost, above the residential buildings surrounding church or orthodox church. It results from the common tradition in almost all religions according to which particular mountains and hills shall be treated as sacred places [Jackowski and Sołaj 2002].

Chwalisław Zieliński [1960] says within his handbook, concerning the rules of building, furnishing and decorating of templates, prepared on the basis of ecclesiastical laws, that: „all efforts shall be made to build a church on a hill (...) or lift basement so high as to raise a portal by a certain number of degrees” and also, that „this place shall be visible from a distance”.

Within the territory of the Ropa and Wisłok rivers interfluve the majority of churches and orthodox churches are located within areas elevated above river valleys. It is mainly related, though, to the fact that even the villages themselves are usually located significantly above the valleys level. The relative height does not correspond to the elevation above the surrounding buildings. Actually, it is very difficult to calculate the height of temples in relation to the residential buildings due to the fact that the buildings are being stretched along the big area and are located in different altitude spheres. In order to illustrate more thorough-
ly this feature of location concerning the temples it was necessary to analyse their height in relation to the closest part of the main paved road passing through the village. Majority of the residential buildings within a village are related to such road and, as a matter of fact, from that road the temple would be observed most frequently, all this contributes to the impression that the temple is being located above the surrounding landscape.

On the basis of the conducted analysis 40% of all temples from the region have been erected above the road level from 1 to 3 metres, and 22% of the temples have been located over 3 metres above the nearest surroundings (Fig. 2). The remaining 38% of the buildings have been located along the main road or below it (Fig. 3). In fact relatively small number of temples has been erected in accordance with previously presented guidelines and common beliefs despite the fact that within the area described, having significant diversity of land relief, there is a lot of area above the level of the village location. In order to demonstrate more thoroughly the relation between the location of the temple and land relief, this relation has been analysed taking into consideration the division into particular physiographic units.

Within the depressions of the Jasielsko-Sanockie Valleys (Doły Jasielsko-Sanockie) objects situated at the level of the road (49%) dominate. There are also numerous temples erected at the height from 1 to 3 metres above the level of the road (41%) and only 10% of the temples have been erected over 3 metres above the road, the churches in Zręcin and Trzcinica located at the highest level above the surroundings (Fig. 2) have been erected respectively 7 metres and 5 metres above the main road in the village. Along the foothills area only 26% of temples have been built at the level of the road. However, those sacral objects, which have been erected at the height from 1 to 3 metres above the level of the road clearly dominate here (44%), also those located above 3 metres are quite numerous in this area (30%). Moreover, maximum height of the location of churches in
relation to the road within foothills is considerably higher than those within the depressions. Among the most exposed churches are the one in Tarnowiec located at the height of 14 metres above the road and the one in Wietrznio located at the height of 10 metres. Therefore, on the basis of the above said data we may conclude that the type of land relief may have a significant influence on the location of temples in a particular region. This conclusion, however, is not that obvious in case of mountainous area. The number of orthodox churches and churches located at the level of the road or below it is in fact higher than within foothill area and constitutes 37% of all temples. Temples erected at the height from 1 to 3 metres also constitute 37% of objects and the temples located over 3 metres above the level of the road constitute only 26% of objects, which means less than within foothills. Among the temples with the highest location are the orthodox church in Desznica (12 metres above the road) and in Wołowiec (9 metres above the road). Thus the temples within mountainous area may be located quite high, as expected. However, there are also surprisingly many objects located on the level of the road or even below it, like orthodox churches in Męcina Wielka, Świątkowa Wielka and Chyrowa (Fig. 3). One of the reasons may be the height difference in land surface – greater within mountainous area than within foothills. However, in case of rural buildings and their surroundings diversity in land relief and even height differences are more significant within foothills, where villages are located both within valleys and hill-sides, as well as, on the top parts of land. To sum up, we may conclude that the type of land relief in many cases influences topographic location of a temple, although this rule does not apply to all objects.

It is also worth mentioning, that, especially in case of the Jasielsko-Sanockie Valleys (Doly Jasielsko-Sanockie), visible location of temples on hills
is typical for the oldest churches, like the churches in Trzcinica, Rogi, Wietrznio, Tarnowiec and in Zręcin which during the Middle Ages was the official seat of deanery. Among the newly-built churches within the region under analysis only 10% of objects are located at the height of over 3 metres in relation to road while in case of historic objects it is over 25%. Usually in case of newly-built objects exposed location on hills is applied only when there is an old church nearby (e.g. church in Rogi – located 8 metres above the road) or when the new church is being erected to replace an old one being destroyed (e.g. a new wooden church in Łubienko was erected to replace the old one which was burned during the war – location 20 metres above the road). In other cases location of a temple is conditional upon property relations, the price of plot and accessibility or existing technical infrastructure. On the other hand, old churches or orthodox churches, specially wooden ones, despite their location on a hill are still not very visible above the neighbouring high buildings and greenery surrounding them, unlike the new temples, which, due to bigger cubic volume and high towers, are much more visible and dominate the surrounding landscape even if their location is not that much exposed [Balon and German 2005].

Location of the Jewish synagogues to a great extent was conditional upon legal regulations binding during the period they were built. If possible, synagogues were located nearby running water both for the sake of fire protection and for sacral reasons. In fact water was used during various religious rituals, like Tashlich, which means casting off of sins into flowing water. Jewish synagogues were built so that the level of the floor was one step below the grand level. This tradition originates from the lyrics of Psalm 130 „Out of the depths I cry to you, O Lord” [Erecińska-Baumann 2003].

From among all the Jewish synagogues preserved within the territory of the Ropa and Wisłok rivers interfluve only synagogue in Biecz is being located directly on the town square. The remaining ones were located at side streets, always below the level of the town square. The level of their floors, according to the tradition, is always below the ground level. As far as location in relation to flowing water is concerned, actually it is difficult to notice any rules.

In fact, natural conditions had little influence on location of roadside shrines. Only in case of St. John Nepomucene's statues, located on the points of crossing rivers and streams, we can notice a relation to natural conditions. Any influence of land relief onto the location of the above-said objects is insignificant.

However, while building cemeteries during the First World War, such cemeteries are numerous within this region, natural conditions had a significant meaning. Sometimes architects perfectly combined arrangement and architecture of the cemetery with local topographic conditions, shaping, at the same time, the unique sacral landscape (Fig. 4).

Building material of sacral objects

While building wooden temples in Poland mainly all types of conifers were used, like pine, spruce, fir, larch [Brykowski 1981]. Selection of building mate-
rial for a particular church depended to a great extent on the natural resources within the area. Within the region of the Jasielsko-Sanoskie Valleys (Doly Jasielsko-Sanockie) in the Middle Ages apart from wooden temples also stone temples were built. It resulted not only from the wealth, in towns especially, but also from less amount of wood than within mountainous area. In the Low Beskids (Beskid Niski), where almost exclusively orthodox churches had been built till 1947, in fact up to the end of 18th century the only building material used was pine. From the beginning of second half of the 18th century orthodox churches made of stone appeared. They became more popular in the second half of 19th century, however tradition of building wooden temples still continued till the 20th century [Czajkowski 1994]. Typical for this region is also the fact that stone buildings were erected mainly from sandstone blocks, which is the only one building material, except for wood, available within the area. This natural resource is most easily available also within the territory of the Beskids, therefore all stone objects of this area were built of sandstone. Within the region of the Jasielsko-Sanoskie Valleys (Doly Jasielsko-Sanockie) there are somewhat less quarries so additionally other building materials were used (brick), although among historic stone temples here those made of sandstone dominate. Objects built within the area of interfluve, even if they have been completely constructed from sandstone, had their entry ports and window openings as well as walls finishes made of brick, which was a better finished material, easy to process (frames, hinges) and more stable.

Taking into consideration location of wooden and stone temples within the territory of the Ropa and Wisłok rivers interfluve it is clearly visible that wooden buildings dominate within the region of the Low Beskids (Beskid Niski). Within the mountainous area even 63% of all temples are made of wood. Yet even higher percentage of wooden buildings is in relation to the orthodox churches and Greek-Catholic churches, among which the majority are built before the Second World War. As far as churches are concerned, among which many were erected during post-war period, 38% were built of wood. Within foothills the number of wooden temples is considerably smaller and constitutes only 19%. Similar situation is within the depressions, where wooden buildings constitute 18% of all temples.

According to the source materials both churches and orthodox churches were mainly covered with shingle. It concerns first of all wooden objects [Brykowski 1981, 1987, Czajkowski 1994]. As there are no precise data concerning all temples it is not possible to conduct spatial analyses with reference to this feature, although it seems that this material was mainly related to mountainous area, where there were big centres producing shingle and exporting it to the foothills [Ślawski 1968b]. In 19th century within mountainous area domes of orthodox churches were covered with sheet metal [Czajkowski 1994], however till today roofs of many orthodox churches are still being covered with shingle.

Good example of the manner of using natural resources in the sacral landscape is also selection of material used to build fences around temples. These are the elements of small architecture of much less significant importance than the temple
itself or than other related buildings (bell tower, presbytery). They have been usually built from the most easily available and the cheapest material in a given region.

Within mountainous regions wooden fences constitute 48% of all fences. Among them the so called zręby dominate, these are structures made of horizontal beams with roofs covered with shingle. The same percentage (48%) refers to fences made of stone blocks or more often made of river stone taken from nearby stream, which is a cheap and easily available building material. Those stone fences as well usually have small roof covered with shingle. The remaining 4% of fences are metal fences.

Within the region of the Jasielsko-Sanockie Valleys (Doly Jasielsko-Sanockie) stone fences clearly dominate constituting 75% of all fences surrounding temples. The remaining 25% of fences are mainly wooden fences and a few wrought iron fences. This case demonstrates how smaller amount of forests influenced the amount of wooden fences within the region of the Jasielsko-Sanockie Valleys (Doly Jasielsko-Sanockie).

Yet, even higher percentage of stone objects exists among analysed shrines and war cemeteries (Fig. 4 and 5). Within the territory of Łemkowszczyzna, where many people have been displaced from their villages, small number of shrines and wooden crosses may be explained by the fact that they have not been preserved until the present times. Popularity of stone buildings is typical for the whole area under analysis – mainly due to the availability of the material and its usefulness for that type of small architecture, where thermal properties are not of significant importance, but solidity of buildings is the most essential feature. As a result of the use of local materials shrines and war cemeteries, as well as churches and orthodox churches, constitute very typical elements of sacral landscape which differentiate this region from the rest of the country.

Fig. 4. War Cemetery in Mięcina Wielka (photo. D. Soszyński)
Architectural elements of the temples

Relation between architecture of temples and natural conditions is visible especially in relation to historic wooden buildings. Numerous solutions have been applied in most of the buildings aiming at protecting their structure against effect of adverse weather conditions. In case of stone temples, especially those built not long ago, influence of natural conditions and particularly of weather conditions is not that significant.

Example of adjusting sacral architecture to the weather conditions is determining steepness of a roof (Fig. 2 and 3). It was difficult, though, to notice spatial diversity of that feature within the region under analysis. Undoubtedly the biggest diversity in steepness of roofs is conditional upon the use of particular material covering roof. Therefore much bigger angle of depression is more typical for the roofs of old buildings covered with shingle than for those originating from the 20th century, covered from the beginning with sheet metal.

One of the most frequent elements of architecture concerning churches and orthodox churches existing within the Ropa and Wisłok rivers interfluve, relating to weather conditions, is the use of aprons protecting the foundations against destructing effect of humidity originating from precipitation. Those aprons have been applied in the majority of wooden temples and sporadically in stone objects.

Similar function to apron, but developed to a greater extent, was performed by zachaty and soboty. These are roofs surrounding tower or the whole temple, the sizes of which enabled people, who had arrived the day before from very distant places and waited for opening of the temple, to shelter. Zachaty, being an additional room, protect the most important structural elements of temples against precipitation.

Timbering of walls by means of boards or covering them with shingle (Fig. 2 and 3) is the way to protect the walls against raising damp. It is also re-
lated to numerous forests within this area enabling for the more frequent use of shingle than within woodless areas. Typical feature of the region under analysis is the use, for the sake of covering the walls of tower being more leaning and thus more exposed to precipitation than the walls of nave and presbytery, of timbering only by means of boards.

CONCLUSIONS

Type of building material applied during erection of any kind of sacral objects is that feature of sacral landscape, which is related to the natural conditions to the greatest extent. Spatial diversity of particular types of buildings, being conditional upon materials available, is clearly visible. It is significant to keep this diversity so as to preserve the unique character of landscape of each region under analysis and it should be continued in modern sacral buildings. In fact it may not be that difficult, as in most cases both using wooden and stone structures would mean following the tradition – therefore it is possible to choose and combine those two materials depending on needs and functions of a particular building.

Another feature distinguishing this region in comparison to the whole country is application of architectural solutions resulting from an attempt to protect buildings against adverse weather conditions. Therefore it would be advisable to consider those features while creating new buildings, despite the common use of new more resistant materials. It is essential, however, to apply the above-described solutions when using traditional materials – related to local natural resources.

Relation between location of sacral objects and land relief is often clearly visible, although this factor in most cases was not that crucial while building temples and shrines. As a matter of fact, in the past the land relief was used to a greater extent in order to make the object more exposed. It is clearly visible especially in case of location of oldest churches, orthodox churches as well as war cemeteries. Nowadays more practical factors are of significant importance for location of temples, these are proximity of hardened road, property relations and the price of land. To conclude, in case of sacral landscape being shaped nowadays, location of sacral objects and their architecture is in fact often random and is not conditional upon landscape qualities. It results in interrupting continuity in following of tradition and has an adverse effect upon landscape qualities of described area, in which sacral objects have always constituted significant elements of landscape having strictly defined function in landscape creation and its essence.

REFERENCES


ROLA CZYNNIKÓW PRZYRODNICZYCH W KSZTAŁTOWANIU KRAJOBRAZU SAKRALNEGO MIĘDZYZRZECZA ROPY I WISŁOKA (POLSKA PŁ.-WSCH.)

Streszczenie. W pracy przedstawiono zależności pomiędzy warunkami naturalnymi międzyrycza Ropy i Wisłoka, a wybranymi cechami krajobrazu sakralnego tego obszaru. Analizę poddano świątynie, kapliczki przydrożne i cmentarze wojenne pod kątem ich rozmieszczenia w skali regionu, szczegółowej lokalizacji, rodzaju budulca i cech architektury. Głównymi czynnikami przyrodniczymi, jakie przeanalizowano były: rzeźba terenu, klimat i surowce naturalne, w tym powierzchnia obszarów leśnych. Wszystkie analizy przeprowadzono dla trzech obszarów znacznie zróżnicowanych pod względem fizjograficznym (góry, pogórza i obniżenia). W ten sposób ukazano zróżnicowanie regionalne, które w wielu przypadkach wynika właśnie ze zmiennych uwarunkowań przyrodniczych. W badaniach uwzględniono również wiek poszczególnych obiektów, wykazując w ten sposób znaczące zmiany w znaczeniu czynników naturalnych w powstawaniu obiektów sakralnych dawniej i współcześnie. Uzyskane wyniki pozwoliły na sformułowanie ogólnych wskaźników dotyczących kształtowania krajobrazu sakralnego z uwzględnieniem lokalnych warunków naturalnych – a tym samym miejscowej tradycji.

Słowa kluczowe: krajobraz sakralny, przyrodnicze uwarunkowania krajobrazu kulturowego, naturalne materiały budowlane, Beskid Niski, Doły Jasielsko-Sanockie