and sanitary facilities) are set out in the Regulation on the abatement of harmful noise levels (applying soundproofing measures during the building design stage), and in the rules and standards for noise emitted during construction activities at building sites.

Several conclusions can be drawn from this study:
1. A school building should be located away from constant noise sources – first-class streets and highways, business enterprises, playgrounds, amusement parks/areas
2. Select an appropriate layout of the various teaching rooms, self-study areas, sports areas, dining halls, music rooms, rooms for industrial arts/arts
3. Use various materials to reflect or absorb sound, as appropriate, to ensure a good acoustic environment.
4. Use environmental components to reduce noise levels entering the learning spaces.

REFERENCES

4. Naiden Chakarov, PhD, Zhecho Atanassov, PhD, History of Pedagogy, 1975;
5. G. D. Pirgov, St. Zhelev, Children's Educational Psychology

SPATIAL DEVELOPMENT SCHEMES IN BULGARIAN MONASTERY COMPLEX ON THE EXAMPLE OF SAMOKOV MONASTERY

Ph.D. Landscape Architect Veselin Petrov Rangelov

University of Forestry, "Ecology and Landscape Architecture", Department of "Parks and Landscape Design", mailing address: Sofia, bul. "Kliment Ohridski", №10, et. 4 room

Abstract. The development of the spatial schemes in monasteries in Bulgaria is largely influenced by the socio-economic conditions in the country. In periods of rising development schemes evolve to many-spatial solutions and conversely, in a hard times it is noticed regression and shrinking contours to one-space schemes. A number of authors consider this process for completed by the end of the Renaissance formulating five development phases. Samokov Convent "Shroud of Holy Mary" is evidence that this process is not complete and even today the spatial schemes follow the natural course of time and develop adequately the socioeconomic situation, which makes the definition of a new reference development period.

Keywords: monastery courtyard, composition, space, schedule, period

Object of study: Reasons for variations in the spatial patterns of Bulgarian monasteries

Model: Samokov convent

A number of authors believe that the process of development of spatial schemes in Bulgarian monastery complex was finished with the end of the Renaissance.

Based on Bulgarian history, professor Ivan Bozhilov classified monasteries in Bulgaria and their structure formulating five final development stages:

I period – the monasteries of the First Bulgarian kingdom (681-1018). At that time the Bulgarian country is on its rise in spiritual, cultural, educational and in economic terms. Most cloisters were from "urban" type, located within the city.
**II period** – monasteries from the time of Byzantine bondage (1018-1186). In mature medieval Byzantine bondage requires contraction of spatial schemes and construction mainly fortifications (monasteries- fortresses).

**III period** – monasteries of the Second Bulgarian Kingdom (1186-1396). At that time, the socio-political situation in the country imposed a more reticent way of life, but at the same time in this period was the largest rise of Bulgarian culture and spiritual life, accompanied by vigorous development of donation and philanthropy.

**IV period** – monastery complexes of Ottoman bondage to the Renaissance (1396-1762). The beginning of Ottoman domination have a significant negative impact on monasteries structure formulating, this were centuries that there were no conditions for the development of architecture and decorative arts. Massive construction almost completely disappeared and been replaced by wooden - construction systems.

**V period** – Renaissance monastery complexes (1762-1878). During the Renaissance monasteries regained their spiritual strength by increasing their ideological, political and social functions, which gradually turned them into the most important public buildings of its time.

**Discussion.** As can be seen from the brief historical overview, the spatial development schemes in the monastery complex in Bulgaria largely depend directly on the socio-economic conditions in the country at that time. In periods of rising development schemes evolve to multi spatial solutions, and conversely, in difficult times, there is a regression and shrinking of the contours to one - space schemes. While cited five periods, factors affecting the development of spatial schemes are similar – upturns and linger economic periods , today we have a new, radically different reason for compositional variations, namely changing the value system and withdrawal of the Bulgarian from the spiritual life.

The cultural revolution, scientific progress and the overall change in the socio-economic conditions in the last century led to a significant reduction in the number of monks and nuns in the Bulgarian monasteries. This process has also affected Samokov Monastery (Figure 1), in which the nuns today are only 5 in over 100 century ago. This has led to reduced maintenance of buildings, especially residential wings inhabited today.

![Fig. 1. Scheme of Samokov Monastery before 2013. by N. Tuleshkov](image)


Depopulation of the monasteries and the lack of resources to maintain and restore their architectural volumes inevitably leads to the removal of part of them. Confirmed tendency to reduce the number of monks and nuns in the Bulgarian monastery complexes imposes rethinking the yard space and spatial schemes. In Samokov Monastery, after removal of the damaged and deserted residential wing in 2013 (Figure 2), is open north courtyard (till soon entirely with manufacturing functions), and for pilgrims and tourists and manufacturing functions are reduced by 65-70% for account of the pilgrimage.

The reduced number of monks undermines largely the species monastery farmyards and makes it extremely difficult to maintain the buildings, especially the abandoned residential buildings.

The measurements and s research in the monastery showed that today the spatial parameters are as follows:

- total area of the property: 3071 m2
- built area: 990 m2 or 32.24% of the total area
- paved areas: 538 m² or 17.52% of the total area
- green areas: 1543 m² or 50.25% of the total area

The distribution of the areas of the latest development stage can be defined as optimal, and the proportions between the different elements here are similar to the typical Renaissance 1: 2, 1: 3.

The ratio between the areas of individual yards today is as follows (Figure 3):
- pilgrimage yard: 640 m²
- monastic yard: 974 m²
- farmyard: 374 m²

Fig. 2. Scheme of Samokov Monastery after 2013 by V. Rangelov

Fig. 3. Area distribution after 2013
I. Pilgrimage yard II. Monastic yard IIIa. Farmyard (livestock breeding) IIIb. Farmyard (vegetable)

In the past it has been (Figure 4):
- pilgrimage yard: 244 m²
- monastic courtyard with mixed functions: 1212 m²
- farmyard: 536 m²
Fig. 4. Area Distribution by 2013 I. Pilgrimage yard II. Monastic yard III. Farmyard

Fig. 5. Comparison chart of the area distribution in the past and today

The graphic (Fig. 5) shows that the sizes of the manufacturing and monastic courtyard are diminished on account of pilgrimage, which logically has increased almost 3 times. A relationship between pilgrimage and monastic yard (1: 1.52) is getting close to the "golden section" (1: 1.62).

Samokov Convent "Shroud of Holy Mary" is proof that the process of development of spatial schemes is not finished - even today they follow the natural course of time and develop adequately to the socio-economic situation, which requires study of the causes of changes in these schemes and defining a new reference monasteries development period, namely:

VI period: After Renaissance period (1878 till today)

REFERENCES