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DESECULARIZATION OF SERBIAN SOCIETY AND THE STUDY OF MONASTERY BRICKS (1981-1998)²

Summary: *Changes in religiosity that took place in Serbia in the 1980s and 1990s have been a subject of sociological studies, but they can also be reviewed by having insight into paradigmatic research literature and scientific projects of the time. In the period of scarce publications about Orthodox heritage, and the rise of religious-theological publications, researchers from the Center for Multidisciplinary Studies of the University of Belgrade (CMS) and SASA investigated the composition and structure of Serbian monastery bricks. From 1981 to 1998, several publications on the topic of monastery bricks appeared, in which the academician and head of the CMS materials science group Momčilo Ristić had a prominent role. The work of the researchers gathered around the joint venture was motivated by their desire to explore national culture, tradition and history, and inspired by the durability of building materials and their aesthetic value. Realized at the time of desecularization, this project contributed to the promotion of Orthodox heritage in Serbia. The first phase involved medieval Serbian monasteries, while the second included the monasteries of Fruška Gora. The project whose conception and context are studied in this paper, is a connection of methods and techniques used by materials science on one side, with medieval studies, archaeology and history of art, architecture, science and technology studies on the other. For the CMS researchers, it was not a one-off initiative finished at the end of the last century, as this type of research continued throughout the first and the second decade of the 21st century.*

Keywords: *Desecularization, Monasteries, Bricks, Multidisciplinary, Center for Multidisciplinary Studies of the University of Belgrade*

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DESEKULARIZACIJA SRPSKOG DRUŠTVA I PROUČAVANJE MANASTIRSKIH OPEKA (1981-1998)

Rezime: *Promene u religioznosti koje su se odigrale u Srbiji tokom 1980-ih i 1990-ih godina bile su predmet socioloških studija, ali se one mogu sagledati i uvidom u paradigmatičnu stručnu literaturu i naučne projekte tog vremena. U periodu nedostatka publikacija o pravoslavnom nasleđu i porasta broja religijsko-teoloških publikacija, istraživači Centra za multidisciplinarnu studije Univerziteta u Beogradu (CMS) i SANU istraživali su sastav i strukturu manastirskih opeka. Od 1981. do 1998. godine publikovano je više izdanja koja za temu imaju opeke srpskih manastira, u čemu je istaknutu ulogu imao akademik i šef Odeka za nauku o materijalima CMS-a Momčilo Ristić. Rad istraživača okupljenih oko zajedničkog poduhvata bio je motivisan interesovanjem za nacionalnu kulturu, tradiciju i istoriju kao i estetikom, te dugovečnošću materijala upotrebljenih za gradnju. Realizovan u vremenu desekularizacije, ovaj projekat je doprineo prezentaciji i promociji srpske kulturno-istorijske baštine. Prvu fazu projekta karakteriše istraživanje srpskih srednjovekovnih manastira, dok su drugom fazom obuhvaćeni fruškogorski manastiri. Projekat čiji se koncepcija i kontekst proučavaju u ovom radu, predstavlja vezu metoda i tehnika koje se koriste u nauci o materijalima sa jedne strane, sa medievistikom, arheologijom i istorijom umetnosti, arhitekture, nauke i tehnologije sa druge strane. Za istraživače CMS-a to nije bila jednoratna inicijativa završena krajem prošlog veka, jer se ova vrsta istraživanja nastavila tokom prve i druge decenije 21. veka.*

Ključne reči: *desekularizacija, manastiri, opeke, Centar za multidisciplinarnu studije Univerzita u Beogradu*

Introduction

The scientific significance of religious research is confirmed by their relevance in multidisciplinary research, including contemporary history, sociology, politics, theology, church history, culture, heritology, as well as research that requires their connection. The extent of the engagement and mentioned importance of the area are revealed through scientific efforts that problematize hitherto undiscussed topics. An example of this would be the networking and overlapping of religious studies with archaeology, history of science, history of architecture, and materials science. This example takes into account the engagement of the most educated individuals from various scientific fields, as part of the paradigm shift of secularization and religiosity. A joint venture of scientists from several scientific institutions, including the University of Belgrade and Serbian Academy of Sciences and Arts (SASA), as well as scientists from the USSR³, is now being considered, as well as motives for engaging in such an endeavor.⁴ The focus is

³ After the Soviet Union dissolved in 1991, the cooperation continued to exist.

⁴ The topic of connecting the materials science with the study of Orthodox heritage, and photo documenting it in the era of 1980s is conceived before (Tomić, Masliković, Tomić, 2021).

on the period from 1981 to 1998, and boundaries for this period are fixed by the research and its results that are being analyzed here.

Desecularization of Serbian Society

“Judging by some polls conducted today under communism among ‘believing’ Serbs (e.g. recently in Belgrade’s ‘NIN’ and elsewhere), it turns out that Serbs today are neither ‘faithful’ nor ‘superstitious’, but simply do not trust anyone except themselves’ and, presumably, - the only saving system of Marxism.”

Dr. Atanasije Jevtić, 1980, Ljubljana
(Atanasije, 2000: 408)

Within the study of the change of the social paradigm in the former socialist countries, a correlation between the changes in the social structure, on the one hand, and changes in religious beliefs and religious behavior, on the other, was noticed (Blagojević, 2005: 13). Reshaping of this relationship in the countries of Eastern Europe, Southeast Europe, and the Balkan Peninsula, has become prominent since the mid-1980s, and intensified after the fall of the Berlin Wall in 1989 (Blagojević, 2005: 14). An awakening of faith was taking place in the former communist societies with homogeneous Orthodox population (Radisavljević Ćiparizović, Vuković, 2020: 23).

Revitalization of confessional and religious identification in the Orthodox areas of the former Yugoslavia gained momentum in the late 1980s, although it began in the mid-1980s (Blagojević, 2005: 27; Blagojević, 2008: 40, 41). It coincided with major socio-political turbulences within a long-lasting social crisis (Blagojević, 2008: 41). The process of intensive desecularization, which has been occurring in the Orthodox confessional Yugoslav areas since the early 1990s, included the emergence of processes such as an increased interest in religion and inclusion of various national, age, and social groups in the religious-church complex, as documented by sociological studies (Blagojević, 2005: 234, 266). That caused significant changes in the image of “typical believer” (Radisavljević Ćiparizović, Vuković, 2020: 24; Blagojević, 2008: 44, 45). At the beginning of the 1980s, there was a relatively small number of educated men in Serbia who declared themselves religious (Blagojević, 2005: 232, 235), but by the end of the 20th century the characteristics of the believers, like their gender, place of residence, education and profession changed significantly (Radisavljević Ćiparizović, Vuković, 2020: 24).

Among the novelties which the revitalization of religion brought was proliferation of new publications, revealing to us today the prevailing research topics of those times. In addition to the volumes by the Faculty of Orthodox Theology and Serbian Orthodox Church in that context, the appearance of publications of other institutions was also noticeable. The decades-long distancing of intellectuals from the Church was suspended and transformed into a rapprochement to religion and

faith, adoption of religious teachings, ethos and modalities of life, and personal participation in the very process of revitalization of religiosity. Although during the 1960s and 1970s, Serbian monasteries, frescoes, and Orthodox heritage were set aside, they were affirmed like artistic monuments in the *“Collection of artistic monuments in Yugoslavia”* of the “Yugoslavia” Publishing House. During the 1980s and 1990s, their aesthetics, landmarks, and cultural-historical value became a current topic. This paper discusses one of the realized scientific projects from the period of the revitalization of religion in Serbia, within which the heritage of the *“Serbian nation”*⁵ in the form of monastery bricks was being studied from the early 1980s to 1998, which also publicly revealed the orientation of the research team.

Research of Serbian Monastery Bricks

The research of bricks used in building Serbian monasteries was realized within the project of the SASA Interdepartmental Committee for Multidisciplinary Study of Monuments of Medieval Culture, which included chosen academics – Vojislav Korać, Sima Ćirković, Dinko Davidov and Momčilo Ristić, i.e. presidents, and members of several SASA committees – the Committee for History of Arts, Hilandar Committee and the Committee for Study of Kosovo and Metohija. It can be said that they were excellent connoisseurs of the Serbian cultural heritage in that period, as well as distinguished researchers in natural sciences.

In addition to SASA, the key institution for the realization of the project was the Center for Multidisciplinary Studies of the University of Belgrade (CMS), and the person who connected these two institutions with the topic of examining monastery bricks was academician Momčilo Ristić. Academician Ristić was a scientific advisor at the SASA Institute of Technical Sciences, as well as a professor and the chief executive at the CMS. During the period in which the research was conducted, he was the president of the Collegiate Management Body and for a short time the acting director of the Center. Within the CMS, Momčilo Ristić organized the Materials Science program in the ‘70s, which he was also the head of, and that was just one of his many activities within the framework of organizing this multidisciplinary scientific field in Serbia.

During the 1970s and 1980s, the modern multidisciplinary scientific field of materials science was perceived as a basis of scientific and technological development (Ristić et al., 1982a: 5). It studies the relationship between the composition, structure, and properties of different materials and their behavior under the influence of chemical, mechanical, electromagnetic, and thermal influences, and belongs to the very top of science (Ristić et al., 1982a: 5). As the Center was organized in

5 The term *“Serbian nation”* was used in dedication of two publications which are the topic of this paper (Ristić, 1998; Davidov et al., 1993).

such a way that it directly cooperated with other institutions, the program council of the Materials Science program was also distinguished by direct cooperation with the SASA Committee for Physical Chemistry (Ristić et al., 1982a: 11). Within the framework of international cooperation, the CMS had continuous cooperation with researchers from the Soviet Union since the establishment of this program. A special emphasis was on the cooperation with the Institute for Problems of Materials Science of the Academy of Sciences of the USSR, Kiev, which, during the '70s, included joint work on the topic of sintering with O. I. Raichenko and G. V. Samsonov (Ristić, 1975: 99-100). The work on the project also involved cooperation with M. V. Vlasova and L. A. Klochkov.

Sitz im Leben

Examining the historical and social circumstances of this period, that is, the circumstances in which the research was conducted and published within the studied project, the publications that had marked that period were reviewed, and some that illustrated the atmosphere in society were singled out.

At the Interfaculty Theological Symposium *Spiritual Life on Our Soil - Ecumenical Study of the Spiritual Reality of Christianity in Yugoslavia today* (*Duhovni život na našem tlu – ekumensko proučavanje duhovne stvarnosti hrišćanstva na tlu Jugoslavije danas*), held in Ljubljana, September 23-25, 1980, Dr. Atanasije Jevtić, then a professor of the Faculty of Orthodox Theology in Belgrade, in his paper entitled *Basic Characteristics of Spiritual Life of Orthodox Serbs* (*Osnovne karakteristike duhovnog života kod pravoslavnih Srba*), criticized the perception that some academics presented in the media that Serbs were neither faithful nor superstitious and that they “[did] not believe in anyone but themselves” (Atanasije, 2000: 408). In the book published eighteen years later, he pointed out a special dimension of monasteries as places of religious but also political, scientific, and educational gatherings, as well as places of secret sources in the era of secularization and atheism, thus representing a kind of real refuge.⁶

In 1986, Boško I. Bojović pointed out that, regardless of the “*contemporary secularized consciousness*”, the fact is that the lives of Serbian kings and archbishops, together with the fine arts of our people, are the most valuable cultural creations of Serbian medieval civilization (Bojović, 2008).⁷

6 “During the last half century of the atheist communism tyranny... only monasteries were schools of the catechetics and morality, liturgical, church-folk, religious and cultural, Orthodox-cultural enlightenment, even though more in secret, than officially...” (Jevtić, 1998: 14, 15)

7 “Regardless of how contemporary secularized consciousness treated this, today, when in the world and in our country historiography is being increasingly directed by the studies of the history of cultures, ideas and mentalities in general, the fact that biographies of Serbian kings and archbishops, as the original creation of our Middle Ages, represent the highest achievement, and with the fine arts the most valuable creation of our medieval civilization, cannot be ignored.” (Bojović, 2008)

Examining the specificity of that moment leads to the topic of conciliarity, the fullness of which is recognized in theological discourse, but the term is not only theological.⁸ In the theological sense, this term is one of the basic characteristics of Orthodoxy, which is why the conciliarity of the Church was the topic of a symposium of theologians at the Faculty of Theology in Belgrade in 1986 (Jevtić, 1986: 5). The symposium was the occasion for the collection of twelve texts by prominent twentieth-century Orthodox theologians, entitled *The Conciliarity of the Church, Book I, (Sabornost Crkve)* which was published by the Faculty of Orthodox Theology in Belgrade that same year. It included the texts from the following authors: Aleksey Stepanovich Khomyakov (1804-1860), Nikolaj Velimirović (1880-1956), Georges Vasilievich Florovsky (1893-1979), Justin Popović (1894-1979), Vladimir Nikolayevich Lossky (1903-1958), John Meyendorff (1926-1992), John Zizioulas (1931-) and George Khodr (1927-), with Dr. Atanasije Jevtić as the editor of the volume. Theologically, conciliarity represents universality, catholicity, holiness, a call to assemble (synaxis) (Zizioulas, 1986: 139) into one community of all the people of God.

According to the analysis of Bogoljub Šijaković from 1995, the integrated community was created as a result of giving meaning and value to historical knowledge and searching for identity in tradition, which was characterized by the continuity of cultural values (Šijaković, 2002: 238).⁹

By connecting these insights, the context of the time in which certain scholars chose monasteries as places and subjects of their research during the 1980s and 1990s becomes clearer. Moreover, at the time when the research was realized, there was a lack of all kinds of publications about Serbian monasteries. Consideration of this situation, but also a warning, was expressed in the periodical issued by the Republic Institute for the Protection of Cultural Monuments in 1986, at the time when the research on monastery bricks was also being published:

“The great scarcity of books, monographs, studies, and other publications about our monuments is made more dramatic by the fact that even the largest monuments do not have a serious scientific monograph, nor any valuable book about them. Even gloomier is the fact, which is hard to believe, that one masterful monastery of Studenica does not have any serious book or a monograph study other than the tourist guide.” (Stanić, 1986)

Serbian monasteries were slowly becoming a topic of scientific research and writing. The Serbian Orthodox Church published monograph *Eight Centuries of Studenica* in 1986. SASA organized a scientific gathering for the 800th anniversary of the Studenica monastery and the centenary of SASA, called *Studenica and*

⁸ Use of the term conciliarity has been discussed lately (Knežević, 2021).

⁹ “Giving meaning and producing value in the field of historical knowledge, means integrating the community. Because of that the identity is being sought in tradition. Tradition (traditio) is a transmission (παράδοσις) of customs and norms from generation to generation, it is a continuity of cultural values, transmission of a canonized cultural entity.” (Šijaković, 2002: 238)

Byzantine Art around 1200, and in 1988 published a book of proceedings from that gathering (Korać, 1988). The monograph also contains the results of the research of monastery bricks.

Motives

At the macro level, the motives for studying the bricks of medieval monasteries could be conditionally divided into narrowly scientific, religious, and motives of identity and identification. The narrowly scientific motives would reflect the desire to know the composition of bricks and the technology of materials production throughout history (in the Middle Ages and later), and it has been noticed that there is a special significance of these studies for both historical issues and modern research (Ristić, 1986: 150; Davidov et al., 1993, 2). The factor of religiosity would be focused on the “new” idea of conducting research within the monastery, encouraged by the current revitalization of religion and respect for Orthodox ritual sites, as well as for ancestors – builders. The identity and identification motives refer to a tendency that integrates the uniqueness of the moment and the specificity of the personality. The project is a testimony to the participation of the gathered community of scientists in the current events and their interest in sacred objects, national culture, national symbols, and tradition of faith. Hence, it confirms the connection to religion and the church in the Orthodox homogeneous space. The examination of motives and within them, the connection of religion, identity, and science are in line with the notion of *conciliarity*.

In order to demonstrate the motives, three examples were selected from the publications published within the project.

1. That the motive belonged to the sphere of national identity becomes obvious from the first phase of the research (1989) in a bilingual dedication written in Serbian and English: *Devoted to the 600th Anniversary of Kosovo Battle*.

2. The recognition of national, religious, and cultural identity is confirmed in the dedication of the two monographs from the 1990s, which stated that the monasteries of Fruška Gora were being studied, which “*represent a special cultural and historical heritage of the Serbian nation.*” (Ristić, 1998; Davidov et al., 1993, 1993)

3. The introduction of the monograph published in 1993 implies the idea of continuity with the monastery builders and founders and the presence of reverence for those who erected liturgical and memorial places, testifying to their skill in crafts (construction) and art, while at the same time, bequeathing shrines to future generations.¹⁰

10 “Monasteries and churches are such marvelous constructions, that in our country they occupy a special place with respect to their size, importance and quality; they were built mostly by rulers, but not only them. At the same time, all of them wanted to leave permanent forms of value and signatures to their descendants that will remind future generations of their time, as well as the achievements of art and knowledge of their epoch.” (Davidov et al., 1993: 1)

The identity and identification motive should be viewed in the light of the relations between “peoples and nationalities” (*narodi i narodnosti*) in Kosovo and Metohija, which opened new questions from the mid-1980s, and the year-round celebration of the anniversary of the Kosovo Battle in 1989. The jubilee was accompanied by significant endeavors, such as returning the relics of the holy great martyr Prince Lazar to the Ravanica (*Srpski pravoslavni manastir Ravanica...*, n.d.) endowment and erecting the dome of the temple of Saint Sava in Vračar (*Spomen–hram Svetog Save...*, 2004). Furthermore, in the late 1980s and early 1990s SASA organized numerous gatherings, forums, cultural events, and publishing activities in which discussions were encouraged on subjects such as emigration of Serbs and Montenegrins from Kosovo and Metohija (Petrović, Blagojević, 1989), the relationship between Serbia and Albanians in the 19th and 20th century (Stojančević, 1990), SASA Library funds (1389-1989) (Nikić, 1990), the Kosovo Battle (Srejšević, 1989), as well as musicological (Pavlović, 1988), dialectological (Ivić, 1988), ethnological (Vlahović, 1988) and many other scientific studies of the Kosovo and Metohija area.

Project Phases

The First Phase of the Project - the 1980s

“By marking the anniversary of the Studenica monastery, which lasted throughout 1986, an undoubtedly big step forward was made when it comes to spreading the right thoughts about one of our monuments and its breach into social consciousness, that is, by showing all its values.”
(Stanić, 1986)

During the first cycle of research, results were published in the following editions: paper by the group of authors *The Composition and Structure of the Bricks of Dušan’s Endowment of the Holy Archangels Near Prizren* (*Sastav i struktura opeka Dušanove zadužbine Svetih Arhanđela kod Prizrena*), paper *The Composition and Structure of the Bricks of the Studenica Monastery* (*Sastav i struktura opeka manastira Studenice*) by academician Momčilo Ristić in the monograph *Eight Centuries of Studenica* (*Osam vekova Studenice*), monograph by the group of authors *Bricks of Serbian Medieval Monasteries* (*Opeke srpskih srednjovekovnih manastira*), and paper by the group of authors *Composition and Structure of Bricks of the Žiča Monastery* (*Sastav i struktura opeka manastira Žiče*).

The Composition and Structure of the Bricks of Dušan’s Endowment of the Holy Archangels Near Prizren from 1982 was the first paper to be published within the project. It is the result of the investigation of the wall above the Emperor Dušan’s tomb at the Holy Archangels monastery, which had first been released at the VIII meeting held on April 21, 1981 (Ristić et al., 1982b). The international group of its authors was led by academician Momčilo Ristić. In *The Composition and Structure of the Bricks of the Studenica Monastery* from 1986, the Church

of the Mother of God and Radoslav's narthex in Studenica were examined. The technological parameters of ceramic mass preparation, shaping, drying, and firing of bricks were studied, and the chemical composition, microstructure, texture, thermal expansion, and classification of clay and ceramic masses determined. In it, the expression "*Serbian spirit*" is mentioned in the best light - in the sense of the ability to harmonize the motives of different spheres of influence and possess the gift of invention to combine these motives into one whole.¹¹

The *Bricks of Serbian Medieval Monasteries* monograph was published in 1989 and it was signed by twelve authors from SASA and the CMS, the first among them academician Ristić. It included a detailed presentation of the entire research and photo documentation of bricks from 19 buildings in the period from the 10th to the 15th century. The study first presents the history of the use of bricks in prominent countries of antiquity, as well as in medieval Serbia, after which it describes the manner of conducting the research and the results that include an assessment of which brick production technique is the oldest among Serbs. The book also includes photo documentation that covers a significant number of pages, as well as descriptions of monasteries in the Serbian and English language. The bricks from the Žiča monastery were mentioned here (Ristić et al., 1989: 33), while they were further researched in the paper entitled *Composition and Structure of the Žiča monastery Bricks* (Živanović et al., 1990) which was published the next year. Although this paper chronologically belongs to the '90s, it is thematically a part of the '80s research phase, and it completes the cycle.

The value of the results published in the first phase is reflected in the fact that the authors offered a presentation of scientific knowledge about the medieval technology of brick production, their composition, structure, and texture, but also an extensive photo documentation and a brief history of each of the examined objects, both in Serbian and in English.

The Second Phase of the Project – the 1990s

The second phase of the project, which took place during the 1990s, included research of the monasteries of Fruška Gora and was crowned with two monographs of a smaller extent. There is a total of 17 Orthodox monasteries in Fruška Gora, most of which were founded in the 16th century, and some even earlier, all built of stone and brick (Ristić, 1998: 1-2). The comprehensive analysis of data required for the characterization of bricks and for determining the basic parameters of their production included the following analytical methods: quantitative and

11 "...in the Church of the Mother of God in the Studenica monastery, Serbian spirit is being outlined more than in any other of our old churches, which has never been left as pure blind copying, nor had it followed only the influences of one side, than it was able to bring the motives from various spheres of influences to a beautiful harmony, and to combine them into one entity by having an uncommon gift of invention " (Petković, 1924: 27; Ristić, 1986).

qualitative chemical analysis, textural and microstructural analysis, X-ray structure analysis, pore size distribution analysis, and dilatometry. In both cases, the publisher was the CMS, and the monographs were published in one of the most prolific editions of the CMS publishing, *Monographs of Materials Science*, under numbers 19 and 38.

Bricks of Serbian Fruška Gora Monasteries. 1, The Composition and Structure of the Bricks of the Monasteries of Bešenovo and Kuveždin (Opeke srpskih fruškogorskih manastira. 1, Sastav i struktura opeka manastira Bešenovo i Kuveždin) was published in 1993 by the Center, while the other monograph, *Bricks of the Serbian Fruška Gora Monasteries: Composition and Structure of the Bricks of the Monasteries of Krušedol, Novo Hopovo and Velika Remeta (Opeke srpskih fruškogorskih manastira: sastav i struktura opeka manastira Krušedol, Novo Hopovo i Velika Remeta)* was published in 1998 with participation of other domestic institutions (the Institute for Technology of Nuclear and Other Mineral Raw Materials from Belgrade, SASA Institute of Technical Sciences from Belgrade and the Faculty of Technical Sciences in Čačak), as well as one foreign institution (the Institute for Problems of Materials Science of the National Academy of Sciences of Ukraine, Kiev). When it comes to domestic cooperation the contributors were: I. Krstanović from the Faculty of Mining and Geology in Belgrade, A. M. Maričić from the Faculty of Technical Sciences in Čačak, S. Đ. Milošević from the Institute for Technology of Nuclear and Other Mineral Raw Materials in Belgrade, S. M. Radić from the SASA Institute of Technical Sciences in Belgrade, and Momčilo Ristić and Tatjana Srećković from the CMS, while the international cooperation involved contribution by M. V. Vlasova and L. A. Klochkov from the Ukrainian institute.

Academician Ristić was also among the authors of the monograph from 1993, *Bricks of Serbian Fruška Gora Monasteries 1, Composition and Structure of the Bricks of the Monasteries of Bešenovo and Kuveždin*. In the four-page introduction and historical overview of this scientific work, the emphasis was first placed on the materials used for the construction of Serbian monasteries and the history of brick. The use of bricks was recapitulated as a feature of great civilizations - Mesopotamia, ancient Greece, the Roman Empire, and Byzantium - and the reasons for their use lay in the characteristics of the bricks themselves (Davidov et al., 1993: 1). These characteristics were the correct geometric shape, consistency of dimensions and quality, and the distribution of raw materials for production. Basic data on monasteries were given: their construction, founders, builders, shape and type; the oldest mentions, who painted their interior, the style and compositions of the paintings, iconostasis, destruction and restoration, treasury, and relics were described too.

In the monograph from 1998, *Bricks of Serbian Fruška Gora Monasteries: Composition and Structure of Bricks of the Monasteries of Krušedol, Novo Hopovo, and Velika Remeta* edited by academician Ristić, 7 pages of introduction and historical review were written about the history of the monasteries, their construction, and when they were painted, characteristics of construction, appearance, parts of their temples, destruction, suffering, restoration and what had been left, treasures and valuables, about the transcription school, records, and the first travelogue in Serbian literature by Jerotej Račanin, who was a student of the transcription school of Velika Remeta.

Lecture on the Ovčar-Kablar Monasteries

This gathering of exceptional scientists was at the crossroads of religious, identity, and scientific aspirations. Inspired by tradition, it was intended to acquaint the scientific community at one specific moment, with the Serbian cultural heritage of Orthodox monasteries.

Such an idea is reflected in the lecture of academician Dejan Medaković, which was held at the II Yugoslav Conference on *Theory and Technology of Sintering*, which was held on September 7, 1995, in Čačak. The organizers of the conference, whose participants and visitors were oriented towards the narrow scientific branch of materials science, asked the academician to address the topic of the monasteries' history and in the context of art research. The lecture was entitled *Studying Serbian Art and the Ovčar-Kablar Monasteries (Istraživanje srpske umetnosti i Ovčar-kablarski manastiri)*, where sintering experts got the opportunity to hear about the Serbian Orthodox tradition, rituals, art, and heritage, along with views on religion, identity, and politics (Medaković, 1995). The history, beauty, and peculiarities of the Ovčar-Kablar monasteries Vavedenje, Sretenje, and Preobraženje, and a recapitulation of the activities of the eighteenth and nineteenth-century writer Joakim Vujić (1772-1847) were presented. The presentation was published in the form of a booklet edited by Aleksa M. Maričić and Momčilo M. Ristić.

Impact and Further Research

In the most comprehensive research *Bricks of Serbian Medieval Monasteries* from the '80s, concepts such as technical achievements and the Middle Ages, rarely treated at the same time in our literature, mutually supported and permeated each other (Ristić et al., 1989: 1). Using an analogy from dramaturgy, we can say that the setting for the research was monastery, while the main character was medieval engineer. *Homo faber*, literally a "blacksmith man", is in focus, in the context of technology – as one who subjugated the world around him and

transformed natural matter, having the advantage (Ristić et al., 1989: 1). Locating of the man-technician in the monastery implicitly suggests that this research connects the separate (and often opposed) concepts of *Homo faber* and *Homo religiosus*. The unification of the concepts is achieved, therefore, at the level of disciplines, level of positions (*Homo faber* vs. *Homo religiosus*), and anthropological level.

In all these publications, there was a comparative presentation of topics such as historical significance, founding of the monasteries, their demolition and restoration, treasures and the like, as well as modern chemical, physical, and technological research by prominent scientists and academics. Atypical determinants, such as innovations, inventions, and discoveries, were included in considerations which involved religious topics (Ristić et al., 1989: 101). A multidisciplinary analysis which elaborates on the topic of the relationship between natural sciences and archaeology, particularly the relationship between materials science and archaeology, was also published (Ristić, Živanović, 1992).

Dealing with natural, mathematical, and technological scientific and religious topics is still relevant among researchers in Serbia. After the completion of the project of testing monastery bricks among the associates of the CMS, as well as within SASA, engagement with topics from that domain continued. From the first decade of the 21st century, one can single out the research by Panta (Pantelija) Nikolić, an associate of the CMS/IMSI¹² and SASA Institute of Technical Sciences, who co-authored a study in 2006, where he examined the frescoes of the Mileševa monastery, in cooperation with his Greek colleagues, utilising micro-analytical techniques (Zorba et al., 2006). In the following decades, a series of works by other authors were created, covering topics ranging from the phenomenon of light in iconography and modern approaches to icon analysis (Tomić, 2011; Tomić, Tomić, 2013; Tomić, 2012; Tomić, 2010; Tomić, 2015; Milovanović, Tomić, 2016; Tomić, Tomić, 2020; Peptenatu et al., 2022), to the acoustics of medieval monastic churches (Đorđević, Penezić, Dimitrijević, 2017; Đorđević, Novković, 2019).

Conclusion

The fact that the motives within the project that dealt with the systematic study of bricks in the medieval Serbian monasteries, primarily from the perspective of the science of the materials, had a religious and identity note, was confirmed by finding paradigmatic examples in the publications issued within the project, and determining historical and social circumstances in which the project took place. In Serbia, during the 1980s and 1990s, there was an ongoing revitalization of religion

12 In 2007 Center for Multidisciplinary Research changed its name to Institute for Multidisciplinary Research (IMSI).

and national identity, participated by members of SASA and the CMS associates. As a part of that idea, scientific research of the monasteries' heritage was initiated. The research concerning the bricks of Serbian monasteries was published in several publications, composed of expertly written introductory parts, historical parts, and appendices, which, in the period when literature on Serbian monasteries was scarce, presented basic information about the monasteries, their history, method of construction, condition at that time, valuables, photo documentation of the monasteries, as well as the history of brick production. The research was realized within the project of the SASA Interdepartmental Committee for Multi-disciplinary Study of Monuments of Medieval Culture, while the CMS was the basis for research on materials, i.e. bricks, and was involved in publishing.

References

- Atanasije, 2000: Atanasije, episkop ZHP 2000. *Bog otaca naših: rukoveti sa njive Gospodnje*. Sveta Gora Atonska: Manastir Hilandar.
- Blagojević, 2005: Blagojević, M. 2005. *Religija i crkva u transformacijama društva*. Beograd: Institut za filozofiju i društvenu teoriju, IP "Filip Višnjić".
- Blagojević, 2008: Blagojević, M. 2008. Desecularization of Contemporary Serbian Society. *Occasional Papers on Religion in Eastern Europe*, 28 (1): article 4.
- Bojović, 2008: Bojović, B. I. 2008. *Istorija i eshatologija: iz istorije i književnosti južnoslovenskog srednjeg veka*. Vrnjačka Banja: Bratstvo sv. Simeona Mirotočivog.
- Davidov et al., 1993: Davidov, D., Živanović, B., Krstanović, I., Miletić, S., Radaković, A., Ranogajec, J. I., Ristić, M. M. 1993. *Opeke srpskih fruškogorskih manastira. 1, Sastav i struktura opeka manastira Bešenovo i Kuveždin*. Beograd: Centar za multidisciplinarnu studije Univerziteta u Beogradu.
- Đorđević, Novković, 2019: Đorđević, Z., Novković, D. 2019. Archaeoacoustic Research of Ljubostinja and Naupara Medieval Monastic Churches. *Open Archaeology*, 5(1): 274–283.
- Đorđević, Penezić, Dimitrijević, 2017: Đorđević, Z., Penezić, K., Dimitrijević, S. 2017. Acoustic vessels as an expression of medieval musical tradition in Serbian sacral architecture. *Muzikologija*, 22: 105-132.
- Ivić, 1988: Ivić, P. 1988. Dijalektološka ispitivanja srpskih govora Kosova i Metohije. in: *Zbornik Okruglog stola o naučnom istraživanju Kosova*, Ivić, P. (ed.). Beograd: Srpska akademija nauka i umetnosti, 115-119.
- Jevtić, 1986: Jevtić, A. 1986. Predgovor. in: *Sabornost Crkve, knjiga I*, Jevtić, A. (ed.). Beograd: Bogoslovski fakultet SPC, 5-6.
- Jevtić, 1998: Jevtić, A. 1998. *Živo predanje u crkvi: rukoveti sa Njive Gospodnje. U spomen 2000-godišnjice Hrišćanstva i 800-godišnjice Manastira Hilandara*. Vrnjačka Banja: Bratstvo Sv. Simeona Mirotočivog; Trebinje: Vidoslov Tvrdoški.
- Knežević, 2021: Knežević, V. 2021. *O čemu govorimo kad pričamo o sabornosti: Zagušljivi prostori puni istorijske memle*. RTS, Oko, <https://www.rts.rs/page/oko/ci/story/3202/politika/4438669/o-pojmu-sabornosti.html> (accessed 23.08.2021)
- Korać, 1988: Korać, V. (ed.) 1988. *Studenica i vizantijska umetnost oko 1200. godine: međunarodni naučni skup povodom 800 godina Manastira Studenice i stogodišnjice SANU*. Beograd: Srpska akademija nauka i umetnosti.

- Medaković, 1995: Medaković, D. 1995. *Istraživanja srpske umetnosti i Ovčar-kablarski manastiri: saopšteno na II jugoslovenskoj konferenciji "Teorija i tehnologija sinte-rovanja"*, 7 September 1995. Čačak: Tehnički fakultet.
- Milovanović, Tomić, 2016: Milovanović, M., Tomić, B. M. 2016. Fractality and self-or-ganization in the orthodox iconography. *Complexity*, 21 (S1): 55-68.
- Nikić, 1990: Nikić, Lj. 1990. *Kosovo 1389-1989: izbor iz fondova Biblioteke Srpske akademije nauka i umetnosti*. Beograd: Srpska akademija nauka i umetnosti.
- Pavlović, 1988: Pavlović, M. 1988. Kosovska tematika kao inspiracija u jugoslovenskoj muzici. in: *Zbornik Okruglog stola o naučnom istraživanju Kosova*, Ivić, P. (ed.). Beograd: Srpska akademija nauka i umetnosti, 163-182.
- Peptenatu et al., 2022: Peptenatu, D., Andronache, I., Ahammer, H., Taylor, R., Liritzis, I., Radulovic, M., Ciobanu, B., Burcea, M., Perc, M., Pham, T. D., Tomić, B. M., Cîrstea, C. I., Lemeni, A. N., Gruia, A. K., Grecu, A., Marin, M., and Jelinek, H. F. 2022. Kolmogorov compression complexity may differentiate different schools of Orthodox iconography. *Scientific Reports*, 12 (1), 10743.
- Petković, 1924: Petković, V. R. 1924. *Manastir Studenica*. Beograd: Izdavačka knjižarnica "Napredak".
- Petrović, Blagojević, 1989: Petrović, R., Blagojević, M. 1989. *Seobe Srba i Crnogoraca sa Kosova i iz Metohije: rezultati ankete sprovedene 1985-1986. godine*. Beograd: Srpska akademija nauka i umetnosti.
- Radisavljević Ćiparizović, Vuković, 2020: Radisavljević Ćiparizović, D., Vuković, A. 2020. (De)Secularization in the XXI Century: Empirical Verification of the Revitalisation of Religiosity in Serbia. in: *Contemporary Religious Changes: From Dese-ccularization to Postsecularization*, Todorović, D., Blagojević, M., Đorđević, D. B. (eds.). Niš: Yugoslav Society for the Scientific Study of Religion, Faculty of Mec-hanical Engineering at the University of Niš, Belgrade: Institute of Social Sciences.
- Ristić, 1975: Ristić, M. M. (ed.) 1975. *Science of Sintering: journal of the International Institute for the Science of Sintering*.
- Ristić et al., 1982a: Ristić, M. M., Dužević, D., Gramatikov, D., Živanović, B., Krstano-ović, I., Pantović, V., Pavićević, M., Raspopović, M., Uskoković, D. (eds.) 1982. *Na-uka o materijalima i tehnologija materijala*. Beograd: Centar za multidisciplinarne studije Univerziteta u Beogradu.
- Ristić et al., 1982b: Ristić, M. M., Arsenijević, S., Vlasova, M. et al. 1982. Sastav i struktura opeka Dušanove zadužbine Svetih Arhandela kod Prizrena. *Glas, SANU, Odeljenje tehničkih nauka, SSSHHHII* (20): 26-42.
- Ristić, 1986: Ristić, M. M. 1986. Sastav i struktura opeka manastira Studenice. in: *Osam vekova Studenice*, Stefan, episkop žički, Durković-Jakšić, Lj., Jevtić, A., Kašić, D. Lj., Mandić, S., Trifunović, Đ. (eds.). Beograd: Sveti arhijerejski sinod Srpske pravoslavne crkve.
- Ristić, Ćirković, Korać, 1989: Ristić, M. M., Ćirković, S. M., Korać, V. R. 1989. *Opeke srpskih srednjovekovnih manastira*. Beograd: Srpska akademija nauka i umetnosti.
- Ristić, Živanović, 1992: Ristić, M. M. i Živanović, B. M. 1992. Nauka o materijalima i njen značaj za arheologiju. in: *Arheologija i prirodne nauke: naučni skup Srpske akademije nauka i umetnosti i Vojvođanske akademije nauka i umetnosti*, D. Srejić (ur.), SANU, 129-132.
- Ristić, 1998: Ristić, M. M. (ed.) 1998. *Opeke srpskih fruškogorskih manastira: sastav i struktura opeka manastira Krušedol, Novo Hopovo i Velika Remeta*. Beograd: Cen-tar za multidisciplinarne studije Univerziteta u Beogradu, Institut za tehnologiju

- nuklearnih i drugih mineralnih sirovina, Institut tehničkih nauka Srpske akademije nauka i umetnosti; Kijev: Institut za probleme nauke o materijalima Nacionalne akademije nauka Ukrajine; Čačak: Tehnički fakultet.
- Spomen-hram Svetog Save...*, 2004: *Spomen-hram Svetog Save na Vračaru*. 2004. *Tehnologija*. <http://www.hramsvetogsave.com/Hram/ser/Izgradnja/Tehnologija.htm> (accessed 23.08.2021)
- Srpski pravoslavni manastir Ravanica...*, n.d.: *Srpski pravoslavni manastir Ravanica Eparhija braničevska*. n.d. *Mošti sv. kneza Lazara*. <https://ravanica.rs/o-manastiru/mosti-sv-kneza-lazara> (accessed 23.08.2021)
- Stanić, 1986: Stanić, R. 1986. Obeležavanje osam vekova Studenice. *Saopštenja*, 18: 279-298.
- Srejski, 1989: Srejski, D. (ed.) 1989. *Bitka na Kosovu 1389. godine* [katalog izložbe]. Beograd: Srpska akademija nauka i umetnosti, Istorijski muzej Srbije.
- Stojančević, 1990: Stojančević, V. (ed.) 1990. *Srbija i Albanci u XIX i početkom XX veka: ciklus predavanja 10-25 November 1987*. Beograd: Srpska akademija nauka i umetnosti.
- Šijaković, 2002: Šijaković, B. 2002. *Pred licem drugog: fuga u ogledima*. Beograd: Službeni list SRJ; Nikšić: Jasen.
- Tomić, 2011: Tomić, B. M. 2011. Ekspertiza u umetnosti i ekspertiza u teologiji na primeru projekta o svetlosti za ikonopisce. *Crkvene studije*, 8: 405-412.
- Tomić, Tomić, 2013: Tomić, B. M., Tomić, M. M. 2013. Multidisciplinarna istraživanja o crnom i belom: granice, paradoksalnosti i umetnička (ikonopisačka) inspiracija. *Crkvene studije*, 10: 375-388.
- Tomić, 2012: Tomić, B. M., 2012. Osnova problematike paradoksa crnog i belog: astrofizičko, fiziološko, teološko i ikonopisačko stanovište. *Crkvene studije*, 9: 527-537.
- Tomić, 2010: Tomić, B. M., 2010. Svetlost u Novom Zavetu: hemijska, fizička i teološka predrazmatranja. in: *Ikonografske studije (Izabrani radovi sa 3. Simpozijuma posvećenog teoriji crkvene umetnosti)*, 3: 51-64.
- Tomić, 2015: Tomić, B. M., 2015. *Svetlost kao konstituent ikonopisa: hemijski, fizički, fiziološki i teološki aspekti*. Univerzitet u Beogradu (doktorska disertacija).
- Tomić, Tomić, 2020: Tomić, B. M., Tomić, M. M. 2020. Tradicija istraživanja svetlosti i nov potencijal. u: *Vizantijsko-slovenska čtenija 3: zbornik radova sa Međunarodne naučne konferencije održane 23. novembra 2019. godine na Univerzitetu u Nišu*, Bojović, D., Mitić, K. (eds.). Niš: Univerzitet u Nišu Centar za vizantijsko-slovenske studije, Međunarodni centar za pravoslavne studije, Centar za crkvene studije, 201-206.
- Tomić, Masliković, Tomić, 2021: Tomić, B. M., Masliković, D., i Tomić, M. M. 2021. Istraživanje i foto-dokumentovanje srednjovekovnih spomenika kulture saradnika CMS-a i SANU. in: *Vizantijsko-slovenska čtenija IV*, D. Bojović, K Mitić (eds.), Niš: Centar za crkvene studije, Centar za vizantijsko-slovenske studije Univerziteta u Nišu, Međunarodni centar za pravoslavne studije, 201-212.
- Vlahović, 1988: Vlahović, P. 1988. Etnološko proučavanje Kosova i Metohije. in: *Zbornik Okruglog stola o naučnom istraživanju Kosova*, Ivić, P. (ed.). Beograd: Srpska akademija nauka i umetnosti, 127-139.
- Ziziulas, 1986: Ziziulas, J. D. 1986. Evharijska zajednica i katoličnost (sabornost) Crkve. in: *Sabornost Crkve, knjiga I*, Jevtić, A. (ed.). Beograd: Bogoslovski fakultet SPC, 131-161.

- Zorba et al., 2006: Zorba, T., Pavlidou, E., Stanojlovic, M., Bikiaris, D., Paraskevopoulos, K. M., Nikolic V., Nikolic, P. M. 2006. Technique and palette of XIIIth century painting in the monastery of Mileseva. *Applied Physics A*, 83: 719–725.
- Živanović et al., 1992: Živanović, B., Ranogajec, J., Komljenović, M., i Jovanović, M. 1990. Sastav i struktura opeka manastira Žiće. *Hemijski pregled*, 31 (6): 119-123.