LANDSCAPE PAINTED WITH TEA: ARCHITECTURAL COLONY IN KLINCI VILLAGE (LUSTICA)

Mirko Stanimirovic

Abstract

This paper reflects on the outcomes and implications of an architectural colony conducted in the village of Klinci, Montenegro. The colony aimed to address rural development challenges through innovative architectural solutions while fostering collaboration among students, professionals, and local stakeholders. Drawing upon the experiences and discussions from the colony, this paper examines the successes, challenges, and lessons learned.

The results indicate a remarkable quantity and quality of proposed solutions despite the extended timeframe. However, organizational shortcomings, participant motivation, and resource constraints emerged as significant challenges. Suggestions for improvement include the involvement of external support, such as investors and funds, and the implementation of photogrammetric methods for comprehensive terrain analysis.

Moreover, the paper highlights the educational value of such colonies for architecture students. Through collaborative teamwork, students develop essential skills in communication, problem-solving, and critical thinking. The colony serves as a platform for experiential learning and the cultivation of a sustainable mindset among future architects.

In conclusion, the paper emphasizes the importance of sustained efforts in promoting rural development through architecture. By addressing the identified challenges and leveraging the lessons learned, future iterations of architectural colonies can contribute more effectively to sustainable rural development initiatives.

Key words: Architectural Colony, Workshop, Klinci, Luštica

1 Dr, associate professor, Faculty of Civil Engineering and Architecture in Nis, mirko.stanimirovic@gaf.ni.ac.rs
ORCID 0000-0001-6201-5855
1. INTRODUCTION

Considering the profound themes and complex patterns explored in the novel "Landscape Painted with Tea," the name of the architectural colony carries an implicit association with mysterious destinies and invisible connections among people, characteristic of Pavič's literary oeuvre. While there may not be an apparent connection between the colony's name and the themes of the novel at first glance, it certainly invites reflection on the intrinsic meaning and symbolism that may be linked to the subject of architectural research.

Furthermore, the name of the architectural colony as "Landscape Painted with Tea" can serve as an inspirational framework that fosters imagination and creativity both in the design process itself and in the experience of visitors or residents of the colony. This association with Milorad Pavič's literary work can add depth and complexity to the perception of space and architectural solutions, providing an additional layer of meaning that transcends the mere physical aspect of architecture.

The term "colony" is predominantly associated with painting or art in general. The oldest art colony in the Balkans and within the former Yugoslavia is an institution known as Sićevo. It was established on July 30, 1905, 16 kilometers east of Niš, in the village of Sićevo, upon the initiative of the Serbian painter Nadežda Petrović. This colony continues to exist today, albeit with a hiatus of 59 years due to the period of wartime destruction in the country. Since 1991, it has had an international character and serves as a model for many art colonies established in the Balkans. During the transition period, following the change of the political system in Serbia in 1999, the term "colony" often transformed into the name "workshop," following the practice of Western countries. Following the example of painting colonies, architects organized their own gatherings for collaboration under various names (summer schools of architecture, architectural workshops). The term "workshop" seems to correspond better to the nature of architectural research, although both terms refer to a form of collaboration among specific groups of professionals. Due to the flexible nature of workshops and colonies, it is not coincidental that such platforms enable the exchange of ideas and collaboration among students from different faculties and universities. Architectural workshops constitute a vital part of the educational process, providing young architects with an opportunity to develop their skills and creativity in a real-world environment.

In Montenegro, the notable activities of the non-governmental organization known as Expeditio are well recognized. Since 1997, this association has implemented a considerable number of projects, including architectural workshops in Perast, Zagora, Podgorica, and Godinje. It can also be noted that the realization of international workshops in Perast in 1997 and 1998 spurred the author of this paper to organize similar events. The workshop "Revitalization of the City of Perast," based on gathered data, enabled students to contribute their ideas for the revitalization of Perast. The outcomes of this research workshop are documented in the publication "Three Hundred Years of Solitude," alongside exhibitions and a documentary film.

In Serbia, there are several architectural workshops and events specifically designed for architecture students. In Niš, at the Faculty of Civil Engineering and Architecture of the University of Niš, several workshops for architecture students have been held. The "Turres Architectural Workshop" was organized by the Niš faculty at the Museum of Ponišavlje in Pirot in 2013.
Architecture," organized by the Balkan-Architrave association from Dimitrovgrad and the Niš faculty, has been held annually since 2014 in the villages of Poganovo and Senokos, as well as in Veliko Tarnovo in Bulgaria [13]. The architectural colony "Luštica: A Landscape Painted with Tea," organized by the Faculty of Civil Engineering and Architecture of the University of Niš, the village of Klinci, and A Production from Belgrade, was conducted in 2022 in the village of Klinci, Montenegro [14,15]. The workshop titled "15x100" was carried out in 2023 under the auspices of the Niš Society of Architects, the Faculty of Civil Engineering and Architecture, and the Urban Planning Cluster [16]. In a series of workshops for students, the Faculty of Civil Engineering and Architecture and the Institute for the Protection of Cultural Monuments collaborated this year under the title "Preservation of Architectural Heritage: The Old Bazaar of Vlasotince" [17]. Besides the colony in the village of Klinci in Montenegro and the workshops in Vlasotince, the products of architectural collaborations have not been publicly presented. Additionally, according to the author's knowledge, the documentation of these events has not been published in scholarly literature, requiring researchers in this field to analyze newspaper archives and social media posts. To establish a research foundation for architectural workshops in Niš, the aim of this paper is to comprehensively present the colony in the village of Klinci. To achieve a scholarly format, the position of this colony in academia has been examined in relation to relevant literature. Furthermore, improvements for future gatherings and the enhancement of the Klinci village concept according to scientific and professional guidelines comprising the topic of diffuse hotels in literature have been proposed.

The concept of a diffuse or scattered hotel first emerged in Italy in the early 1980s, specifically in the Friuli region following an earthquake, as an innovative idea during the phase of reconstruction and revitalization. The project was later implemented in 1989 in the municipality of San Leo in Montefeltro. The primary objective of such a tourist offering was to emphasize hospitality, encourage short stays, promote cultural experiences, and provide guests with a better opportunity to immerse themselves in the local culture [21]. A diffuse hotel differs from traditional hotels in that guests have the option to stay in individual accommodation units. Each of these units can have its unique design and characteristics, making them distinct from one another. However, the hotel's common reception area serves as a central hub for managing all accommodation units. Currently, there are about 60 diffuse hotels operating in Italy [22,23] and while this topic was relevant during the pandemic, the issue of the carbon footprint for hotels is now emerging [24]. It is evident that from an environmental standpoint, it is better not to build at all if we only consider the impact of construction on the surroundings. However, if construction is necessary, it should be done using local and natural resources to create buildings with low energy demands over their lifecycle [25]. While the criteria for sustainable architecture are known in literature, sustainable business faces challenges if it does not determine the extent and manner in which hotel capacities should be developed [26]. It has been shown that hotels should be built in an environmentally friendly manner [27], because guests positively recognize the hotels' environmental commitment, significantly influencing satisfaction and loyalty. Moreover, staying at green hotels leads guests to develop specific loyalty toward hotels implementing green practices. It can be said that attention to nature conservation is quite decent, unlike the period before the pandemic [25] and the crisis in Ukraine.
2. METHODOLOGY

This paper presents the architectural colony "Luštica: A Landscape Painted with Tea," which took place in the village of Klinći in Montenegro. The aim of the paper is to document the outcomes of the colony, beginning with an overview of its organization. Subsequently, specific solutions within the scope of the project's three components are depicted and described. These results are analyzed in accordance with contemporary theory and practice in sustainable architecture. Through a comparative analysis of specific examples from literature relevant to this topic, the proposed solutions are evaluated. Based on the conclusions drawn during the discussion phase, measures for improving architectural colonies are proposed, emphasizing the significance of architectural colonies or workshops in the education of young architects.

3. RESULTS

The call for participation in this architectural workshop was published on October 11, 2022. An announcement was posted on the faculty's website, directing individuals to the colony's website [18]. The landing page prominently featured the organizers of the colony: the Faculty of Civil Engineering and Architecture, A Production from Belgrade, and Klinći Village Resort, with the latter serving as the host. All final-year students of the Faculty of Civil Engineering and Architecture at the University of Niš were invited to participate in this colony. The names of the application selectors were disclosed: Dr. Mirko Stanimirović from the Faculty of Civil Engineering and Architecture, and Dr. Vladan Zdravković from A Production in Belgrade. The application portal remained open until November 1, 2022. Applicants were required to submit a brief biography and a maximum of 5 architectural works illustrating their competence in architectural design. A total of six students applied for participation, and upon review of their drawings, all candidates were accepted as participants in the colony. The initiator and author of the colony, also the author of this paper, designed the website and visual identity of the colony. Additionally, the author drafted a memorandum of cooperation among the mentioned institutions, which remains unsigned to this day due to missing institutional data in the header. However, this technical issue did not affect the realization of the colony, and the first phase took place from November 17th to 21st, 2022, as announced to the public through the faculty's portal [19]. Besides the author, two students, Nemanja Randelović and Vukašin Vasić, participated in the residency program during this period. It was agreed during the preparatory phase that the participants of the colony would not develop conceptual designs during their stay due to issues with computers and software. While visiting the host, participants engaged in the construction of the project task, drone and camera terrain mapping, and the formation of initial architectural concepts. The host set the program very liberally, only requesting that participants "think outside the box", without providing precise instructions that might influence the solutions. The aim was to obtain fresh ideas without being burdened by funding or legal constraints on construction. During the first phase, the old structures in the area were mapped, and measurements of certain newer structures were taken. To better understand the slope of the entire area, the host prepared a cadastral plan of the area around the main threshing floor. The choice of filming
location itself highlighted the imperative to preserve traditional architectural values in the Bay of Kotor region and Montenegro as a whole.

Figure 1. Part of the poster with the visual identity of the colony

Following the visit to the village of Klinci, the development of conceptual designs was organized in cabinet 501, the Drawing Studio at the Faculty of Civil Engineering and Architecture in Niš (second phase). The team name (A501) was chosen based on the name of the studio, comprising Dr. Mirko Stanimirović, an associate professor, and students Nemanja Ranđelović, Vukašin Vasić, Boris Rančev, Mihajlo Petrović, Vukašin Stefanović, and Anđela Stevčić. Although it was expected that the conceptual designs would be presented in the following months, due to difficulties in terrain reconstruction, the team surpassed all agreed deadlines, and it was not until October 20, 2023, that 24 panels were installed on the colony’s and the faculty’s website [20]. As of the writing of this paper, the exhibition of these works (third phase) has not yet been organized, likely due to the very late submission of conceptual designs. Additionally, the second iteration of the colony did not take place, as the development of solutions from the first iteration extended over more than a year. This significantly hindered the traditional maintenance of the colony in the village of Klinci.

The project scope within the framework of the first iteration of the colony’s solutions is divided into three parts. The first part includes, in addition to existing structures, a new reception area, spa center, new apartment buildings, and a wedding hall. The second part examines the development of the village towards the north, with variously shaped new apartments (ranging from completely new structures to renovated and expanded old ones). The third part is entirely dedicated to the wedding hall, which is accessed from the north.

A total of 24 posters displayed multiple solutions for the same functions. Two distinct concepts for the wedding hall within the third section were proposed. A completely new concept for a multifunctional hall was suggested at the southernmost part of the area, in direct proximity to the existing structures within the first section. In the heart of the current settlement, reception, spa center, and two variations of apartment units were proposed on the foundations of older structures. New and reconstructed buildings were redesigned, considering the traditional roof concept as a better solution compared to discordant terraces. Within this section, two discreet methods for covering the threshing floor, used as a platform for weddings, were proposed. The second section represents a logical progression of the settlement towards the north, as ascending towards the top of the hill improves the sea view. In case of continued development from the southern side, new facilities would entirely
lose desirable vistas due to the slight slope of the terrain. Apartments in the second section were designed in three different ways, each with two to three variations within a distinct group of solutions. Interior designs of the first group of solutions were particularly emphasized, presented in the form of hyper-realistic renders.

Figure 2. Situation - three parts (sectors)  
Figure 3. Interior of the Apartment: part 2

Figure 4. Reception Area: part 1
Figure 5. Wedding hall in the southern part of the settlement: part 1

4. DISCUSSION

The dispersed hotel in the village of Klinci is inspired by the pioneering Italian concept known as "albergo diffuso," which involves integrating a full hotel into various buildings of a largely abandoned village. Most old villages in Montenegro suffer from depopulation as residents move to larger cities in search of employment. This is the same issue that has inspired many Italian villages to sell houses at symbolic prices. Enterprising hoteliers have taken over these deserted villages and transformed them into often luxurious accommodations, where guests can stay in their own buildings, then dine in a restaurant or perhaps visit a spa located in another part of the village [29]. During the pandemic, many tourists preferred accommodation that offered the possibility of physical distancing. This is where dispersed hotels come into play. If we add the condition of preserving rural areas [30] and sustainable construction, we get new forms of dispersed hotels [31-33]. The situation in the village of Klinci is interesting for another reason. Its clientele consists of foreigners, wealthy businessmen, and celebrities who are looking for hidden experiences. Klinci village is located on a hill above the sea, and the beach is accessible by car or taxi. Therefore, there are no typical coastal crowds, allowing clients to peacefully stay in old cottages dressed in modern comfort. The road to the village is unremarkable, so anyone who wanders may think they are lost. This minimizes the problem of uninvited guests, which of course also suits the clients who value guaranteed privacy.
Some exemplary enhancement solutions for the village of Klinci include La Colombe d'Or Hotel and Restaurant (located at the threshold of the village of Saint-Paul de Vence; France) [34], Reschio Estate (Perugia, Italia) [35], San Canzian Hotel & Residences (Mužolini Gornji, Croatia) [36]. These examples represent highly exclusive tourist destinations with tastefully appointed cottages, both inside and out. Achieving such a goal is certainly feasible for the village of Klinci, considering its already exclusive status and reputation for its exceptional local cuisine, which relies on healthy and locally sourced food such as pomegranates, oranges, and olives. Additionally, Klinci village boasts the lowest carbon footprint, utilizing smart heat pumps for heating and cooling, as well as wood biomass for heating sourced from the estate. It can be said that the path taken by the hotel in this village in Montenegro aligns with contemporary trends. This is in line with a study that provides a bibliometric analysis of smart hotel research to examine scholarly trends and developments in this dynamic field. Smart hotels, characterized by the integration of advanced technologies such as AI, IoT, cloud computing, and big data, aim to redefine customer experiences and operational efficiency [37]. In the era of sustainable tourism, guests are no longer passive consumers but active participants in sustainable practices who value transparency and authentic experiences. From the same study, it follows that smart hotels that combine technology and sustainability will shape the future of the tourism industry.

Smart hotels are modern forms of accommodation that integrate advanced technologies to enhance guest experiences and streamline property management. These features of smart hotels provide guests with a more enjoyable stay while helping hotels improve operational efficiency and deliver better service [38], [39]. Some of the key features of smart hotels include automation (smart lighting and various types of sensors), smart rooms (utilizing devices that enable personalized experiences for each guest), and sustainability (smart hotels often employ technologies that help reduce energy and water consumption, as well as waste, contributing to more sustainable operations).

The mentioned characteristics of modern technology do not inherently influence the form of buildings, as they are typically installed similar to electrical wiring, within structures. However, in the case of utilizing heat pumps, solar panels, and collectors, such external installations must be integrated into the architectural composition. Only in the case of district heating and cooling, installation blocks are not located in the immediate vicinity of buildings and therefore do not affect their form. Conversely, a solar farm would undoubtedly alter the environment, which may be protected by laws preserving nature and inherited architecture. For these reasons, in protected areas, reducing carbon footprint is achievable by utilizing green energy derived from facilities located outside the protected area and from renewable sources such as solar, wind, or hydro energy.

The integration of these renewable energy sources requires careful planning and design to achieve harmony between technology and the environment. For example, solar panels can be incorporated into urban spaces, while wind turbines can be integrated into rural landscapes. In protected areas, special attention should be paid to preserving natural beauty and historical value, but this does not preclude the use of green energy. On the contrary, proper planning and the use of renewable energy sources can contribute to the preservation of nature and cultural heritage while simultaneously reducing the ecological footprint.
In the literature, sustainable development has been proposed for protected areas in Montenegro [40] and globally [41,42]. Without delving into potential issues related to fire protection [43] or internal insulation [44], let us focus on the architectural composition problem, as additional insulation for rural buildings has been shown to be necessary [45]. The specific form of a stone house with a gable roof, covered with stone or clay tiles, does not align with the installation of solar panels over the roof covering. Another unresolved issue is the additional insulation of stone houses, which is directly linked to green construction and the energy required for heating and cooling. Without added insulation, the desired thermal comfort is not achieved, and this layer needs to be covered externally with a new stone wall, thereby increasing the carbon footprint. An attempt to reconcile these two conditions is illustrated in a study dedicated to the Karuč house [40]. Sun rays are utilized in the winter for passive heating, while during the summer, glass surfaces of the roofs and walls are covered with horizontal slats. While such a method of shaping the house may be questionable, it can be concluded that the internal organization is well-resolved, as carefully positioned openings contribute to natural ventilation within the house.

Figure 6. Karuč house - Summer day and night impact analysis [40]

The unresolved issue of additional insulation is also present in the village of Klinci. However, conceptual solutions are aligned with the need for sustainable development in specific cases. The terrain slope and surroundings favor the concealment of external units of heat pumps, while the presence of solar panels is justified only in the case of the upper wedding hall. Specifically, access to the parking area is from the upper side, and guests descend to the hall through vertical communication from the parking lot. If the panels are installed above a section of the parking area and the building on the parking lot, they will not dominate the architectural composition.

Figure 7. Wedding hall - cross-section: part 3 Figure 8. Renovation of old houses in sector 2.

The idea of protecting the rural landscape is also supported by the unobtrusive integration of new apartments into the terrain, with green flat roofs used as accessible terraces offering open views towards the sea. Furthermore, the renovation of derelict houses in sector 2 and their connection via terraced platforms and stairs to the center of the old settlement aligns with the concept of a diffuse and
sustainable hotel. This approach also highlights the historical value of the circular walls comprising the threshing floor, as their platforms serve as shared open spaces between individual and authentic buildings transformed into modern apartments. According to this conclusion, the conceptual solution in sector 2, spanning from the church to the wedding hall (Fig. 2), should fully adhere to the goal of sustainable rural development. This entails the transformation of both newer and existing buildings (Fig. 9) towards the architectural form outlined earlier in this paper.

Figure 9. Village Klinci - Sector 1 and 2

Based on verbal feedback from the host Bogdan Kaludjerović, among all the solutions proposed during this architectural workshop, the wedding hall structure on the southern side below the old part of the village has attracted the most attention (Fig. 5). This concept is justified by the client access from the southern side, as the terrain below the village has a gentler slope compared to the northern part. On the other hand, the green flat roofs and the tree-filled surroundings will aid in integrating this structure into the landscape, but only to a certain extent. In fact, tackling the issue of vehicular access in such rugged terrain is quite challenging. This is linked to the positioning of the new structures, which are justified in terms of the needs of this diffuse hotel, but their complete rural integration is unfeasible due to their size. This conclusion also represents the main theme for future iterations, as further consideration is needed on how to form a large hall within the confines of small stone houses with gable roofs.

5. CONCLUSION

If we were to measure the success of the colony based on the time taken to propose solutions, we would obtain a negative value. On the other hand, if we were to measure the quantity and quality of solutions, we would achieve outstanding results. There is no need to delve into precise accounting (project costs, residency program costs, etc.) because the idea of the colony transcends material expenses. From the presented solutions and discussions, conclusions can be drawn to enhance future iterations.

Firstly, the "one-man organization show" is unsustainable, and the initiator of the colony needs assistance in terms of organization. Secondly, participant motivation is crucial, and feedback from students on what would help enhance their engagement should be obtained. Thirdly, the host's resources are finite, so involving investors and funds in planning further collaboration is necessary. Fourthly, the terrain should be surveyed using photogrammetric methods in its entirety to enable the reconstruction of an optimized 3D model. The significance of this tool in research is immense, especially when drawings are realized outside the Klinci village. Only in
that case will participants be able to obtain all necessary information about constructed objects and their surroundings (slope, vegetation, elevation points, etc.). Lastly, future research topics should be exclusively linked to sustainable rural development.

Furthermore, it is important to emphasize that maintaining an architectural colony or workshop is highly beneficial for architecture students. This investment in knowledge and skills of young individuals will make them more competent and competitive in the dynamic market in the future. During their participation in the colony, students become acquainted with the benefits of teamwork, achieved through good communication, coordination, and combining different perspectives to reach more efficient solutions to set tasks. Activities that connect the team include sharing responsibilities, a common purpose of action, and a focus on finding the best solution. Additionally, teamwork stimulates individual learning within the group and strengthens interpersonal relationships. Simultaneously, this approach fosters creative and critical thinking, as workshops are creative and challenging environments that encourage students to develop their problem-solving skills.

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