

Warsaw, 31/01/2024

Ph.D. engineer arch. Cezary Głuszek, prof. Warsaw University of Technology

REVIEW of doctoral dissertation:

"Cultural landscape of the jurassic belt of defensive architecture – a digital model of representation in the process of heritage conservation and popularization"

Author: MSc Arch. Magdalena Wałek

Supervisors: prof. arch. Magdalena Żmudzińska-Nowak, SUT
prof. arch. Assunta Pelliccio, UNICAS

Scientific discipline: architecture and urban planning.

Silesian University of Technology, Faculty of Architecture.

The author dealt with current and developing issues, which are difficult and require quite comprehensive substantive preparation: conservation and design, including modern measurement and design tools and megadata collection. They will soon become quite common in the workshop of conservators, investors, guardians of monuments and architects - in the protection of monuments, in the design of conservation additions to monuments, and even partially in the programming of architecture.

The doctoral student made an ambitious attempt to introduce modern research tools to conservation issues and integrate them with traditional conservation activities.

In the introduction, the author writes that the cultural environment of the Jura should be protected and adapted to new functions, and contemporary architecture in the surroundings of cultural heritage should be characterized by a far-sighted vision, taking into account possible threats resulting from the need to transform existing spatial structures, of course also taking into account the natural features of the landscape. cultural - these statements by the doctoral student accurately define the idea and subject of the dissertation.

It is relatively rare for doctoral dissertations in the field of protection and restoration of historical architecture to cover such a wide spatial and substantive scope. The

reviewed study is such a rare case and it should be emphasized that the fortification belt of the Kraków-Częstochowa Upland "deserves" such a thorough study. The reviewer became acquainted with the condition of the Jurassic fortifications in the early 1990s and the changes that have occurred since then are significant, unfortunately too often negative. The way the doctoral student approached the topic and conducted her own research proves her good prior substantive preparation. The research itself has reasonably confirmed this. The courage to make this decision should be emphasized in the context of a certain want of data and diversity of views presented in the literature and studies, as well as proven methods for this type of activities. It is also worth emphasizing that the doctoral student generally does not question the current research results in relation to the analyzed cases, but creatively continues and develops them - which is an important advantage of the work.

In the summary of the reviewer's preliminary reflections, it should be noted that the dissertation is related to the author's previous interests. The doctoral student refers to her own previous research, which proves both her conviction to continue the topic and her passion for research.

1. GENERAL DATA ABOUT THE TRIAL

Characteristics of selected formal features of the work: in addition to the standard calculation, what stands out positively and should be emphasized is the high workload and scientific independence of the doctoral student.

The dissertation has 480 pages and contains 209 illustrations, including the author's own studies, with numerous diagrams and tables. Noteworthy are: "Diagram of research procedures" (p. 10), "Summary of valorization" (p. 233), "Data organization diagram" (p. 240).

The thematic bibliography includes 344 publications (a significant number of the newest ones) - an excellent overview, but they should be numbered. There is also an extensive list of studies available in conservation offices in Katowice and Kraków. In many cases, 130 publications posted on websites were used. There are also numerous original achievements of the doctoral student, especially in the field of scanning illustrations. The literature was selected according to the nature of the issues related to the subject matter: conservation theory and practice, cultural, historical, conservation, art and sociological issues. It would be advisable to supplement the

bibliography with Andrzej Gruszecki's "Bastion castles in Małopolska", Warsaw 1962 - publication of the Professor's doctoral thesis. He places there a bastion fortress in Danków, north of Częstochowa - closing the belt of the Jurassic fortifications.

Together with a rich bibliography, illustrations and an annex, the work is fully communicative. The level of the language of the dissertation is stylistically high: despite the difficult and extensive subject matter of the dissertation. An important aid in the perception of content is a list of illustrations.

2. STRUCTURE OF THE TREATISE

The structure of the dissertation has been developed in the classic scientific form "introduction-development-conclusion" and meets the basic formal requirements of a standard doctoral dissertation. A bit beyond the norm for doctorates, the thesis is a bit too broad in terms of the area scope (the large area of the Kraków-Częstochowa Upland) and the thematic research - which resulted in the size of a doctoral dissertation exceeding the standard size. As a plus for the author, it should be emphasized that she completed this task to a high standard. The author's own extensive research is included in chapters on specific thematic issues, logically ordered and necessary to formulate subsequent assessments and recommendations.

General layout of a doctoral dissertation:

I. Introduction, II. State of knowledge, III. General research, IV. Detailed research, V. Proposals for digital recording of the structures of the Jurassic Belt, VI. Summary, VII. Bibliography, VIII. Index of illustrations, IX. Index of tables, X. Summary, XI. Annex/attachments.

The detailed content of the chapters shows a logical structure, clearly integrated with the specificity of the subject matter. This is a legitimate, positive feature of the dissertation, consistent with convention. In total, the dissertation contains seven main chapters.

At the beginning, the doctoral student presented the idea of the topic, the subject of research, the scientific problem, formulated a hypothesis and research questions. The hypothesis assumes that *"supplementing and organizing knowledge, combined with the digitization of objects in the Jurassic belt, will contribute to the creation of a unified information system. Such a system can serve a dual purpose: protecting this unique cultural heritage and facilitating its availability for popularization purposes.* It is based

on the assumption that nowadays the dynamically changing needs of cultural heritage users force the existing structures to be given new functions. Changes are often impossible to implement due to many conditions, e.g. inadequate technical condition. Awareness of this phenomenon increasingly obliges us to develop and design not only for "now", but "in advance", taking into account future changes.

An important and necessary element in all scientific discourses is establishing the definition of the concepts we use. In accordance with this unwritten standard, the doctoral student developed/quoted definitions of terms used in the dissertation - which undoubtedly facilitated further reading and prevented unintentional misunderstandings. These were included on pp. 73-80 as types of objects in the Middle Ages and partly in the glossary, unfortunately at the end of the study (pp. 477-480).

The genesis of the trial. Purpose, theses and scope of the work - contains standard elements of doctoral dissertations: from the origins and motivation of taking up the topic, through stating the purpose, scope, theses of the research work, to determining the research methods.

In Chapter 2 "State of knowledge", in accordance with the common rules of a scientific dissertation, the current state of knowledge related to the research issues is characterized, with reference to previous research. Numerous examples of medieval fortifications were analyzed - as the basis for subsequent, original considerations.

In the historical context, the author went back to the early Paleolithic settlements - the adaptation of natural field hiding places - through the first, primitive defensive forms, up to the architecture of the medieval fortifications of the Jura, known as *the Trail of the Eagles' Nests* from the times of King Casimir the Great.

Chapter 4 **directly** refers to the topic of the doctoral dissertation - *Cultural landscape - a digital model of heritage presentation/representation in the process of conservation and popularization*. The author presented the characteristics of her own extensive, comprehensive research - a very strong element of the presented dissertation.

The substantive part of the work ends with considerations and final reflections, verification of research on the subject matter and concluding remarks.

At the end there is a bibliography, a list of illustrations and tables, as necessary elements of the dissertation and supplementing the base for considerations.



The adopted structure of the work enabled a comprehensive look at the essence of the examined issue, which is difficult, extensive and multi-threaded. This confirms the maturity in the author's development of a scientific dissertation.

3. DETAILED NOTES

Detailed comments in the review were formulated based on the analysis and assessment of the core elements of the dissertation, mainly in chapters IV and V, as a method to check the logic of the arguments and the validity of the author's assumptions. This was dictated by the above-mentioned multi-threadedness of her research and considerations.

In *The current state of knowledge in the field of research on the fortification heritage of the Jura*, the author referred to the basic/substantive aspects of this issue: the formal structure of medieval fortification structures, the contemporary approach to their protection and use used in this methodological process. She comprehensively illustrated these issues with numerous examples of existing solutions - Polish and foreign - and provided her own comments. Foreign examples are particularly important because they characterize cultural heritages that are different from Polish ones and derived from different social experiences. Therefore, they constitute a useful base of comparative knowledge with the heritage of the Krakow-Częstochowa Upland - an aspect used by the doctoral student.

Detailed research in the doctorate includes primarily the author's field research, which is very extensive, thorough, analytical and probably constitutes the greatest scientific contribution of the doctorate. First of all, they required the definition of a well-thought-out methodology, and then hard work and proper recording of the effects. The author used, among others: performing 3D scanning of selected objects and illustrating the results graphically. Ultimately, it presented a valuable catalog of the Jurassic Belt fortifications.

Then she discussed other basic elements of the work, regarding the contemporary use of objects and changes in their functions.

The presented method of research on objects of the Kraków-Częstochowa Upland in the field of heritage protection is based on own research, especially field research, which, according to the reviewer, is the basis for further independent scientific considerations.

With Chapter V "Proposals for the digital representation of structures in the Jurassic Belt", the doctoral student entered the area of conservation considerations on the issues of contemporary conservation activities regarding the preservation of cultural heritage for future generations. From the point of view of a modern architect-conservator, this is probably the most important chapter - **introducing the issues of using modern measurement, design and megadata collection tools**. What features are representative, how to protect them and, as a result, how to proceed in the design of contemporary structures in a historic context, now and in the future. As technically resistant, economical, safe objects - and at the same time integrated with the surrounding space, cultural and even historic context. An ideal that creators have been striving for since ancient times. The doctoral student included them in subsequent thematic parts.

The doctoral student included her own assessments and recommendations in Chapter VI "Summary: considerations, final thoughts and final conclusions". These are structured recommendations developed by the author - algorithms of conduct: methodical, urban, architectural, technical... In the final remarks, the author summarizes the work with the statement: **"Places in their surroundings should be digitized as one of the most appropriate methods of protection"**. The changes that will occur in these places over the last few years are significant and important. By turning on digitization technologies, you can continuously monitor ongoing work and document all modifications and changes...

The whole thing was closed with a synthetic Summary in English and Polish.

Referring to the above statements, the following questions arise regarding the use of the presented model in the presentation and popularization of the defensive architecture belt of the Kraków-Częstochowa Upland:

- where should the obtained data be collected?
- how should the collected data be made available to future users - in the context of finance, copyright, compatibility of the digital programs used?

At the end of the work, a catalog with carefully prepared "object cards" containing synthetically collected information about the objects is attached. Importantly, they were made in connection with the proposed data organization model. 6 groups were distinguished according to a proprietary scheme:

photographs, objects and attributes, morphology, events, intangible heritage, inventory and research.

4. FINAL CONCLUSIONS

- Comprehensively assessing the whole, the dissertation is a clear and logical record of the author's approach to the topic "Cultural landscape of the Jurassic belt of defensive architecture - a digital model of representation in the process of conservation and popularization of heritage."
- The assumed goals were achieved and the hypothesis was confirmed.
- The doctoral student demonstrated outstanding ability to use scientific equipment.
- The independence of the doctoral student is worth emphasizing, expressed in a significant number of her own studies in the dissertation - especially her own illustrations, diagrams and tables, in relation to summarizing individual stages of considerations. According to the reviewer, this is an **outstanding work in this respect**.

Taking the above into account, I believe that

Doctoral thesis of M.Sc. Eng. arch. Magdalena Walek

entitled: "*The cultural landscape of the Jurassic belt of defensive architecture - a digital representation model in the process of conservation and popularization of heritage*", developed under the supervision of Prof. arch. Magdalena



Żmudzińska, at the Faculty of Architecture of the Silesian University of Technology and prof. arch. Assunta Pelliccio, UNICAS in 2023, meets the requirements set out in the Act of March 14, 2003 on scientific degrees and degrees and titles in the field of art, as well as recognized quality standards for doctoral dissertations and may be the subject of further proceedings on the way to awarding the degree of doctor of sciences technical.

Cezary Górecki