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REVIEW

of a doctoral dissertation by mgr inż arch. Dana Matouk
"Palmyra the Rise and Fall of the City"
at the Faculty of Architecture, Warsaw University of Technology,
under the supervision of prof. zw. dr hab. inż. arch. Andrzej Gawlikowski

The formal basis of the review is commissioned by the Dean of the Faculty of Architecture of the Warsaw University of Technology (resolution of the Faculty Council of April 26, 2019).

The substantive basis is the doctoral dissertation given at the order.

1. Topics, scientific problems taken in the dissertation, their originality and meaning for science and practice

Presented for review doctoral dissertation by MSc. arch. Dana Matouk "Palmyra the Rise and Fall of the City" was carried out under the supervision of prof. zw. dr hab. inż. arch. Andrzej Gawlikowski full prof. PW at the Department of Urban Design and Spatial Planning at the Faculty of Architecture, Warsaw University of Technology.

The dissertation was written in English and consists of nine chapters entitled:

- Introduction
- Syria - geography, demography, economy, history and cultural heritage
- Palmyra and its place in Syrian history, economy, culture and heritage
- The natural conditions factor
- Economic factor
- Communication factor
- Religion and law factor
- Summary of analyses. The rise and fall of the city

The dissertation is supplemented by chapters: "final word" and bibliography, as well as a list of tables and a list of drawings and abstracts in Polish and English.

Chapter 1 - Introduction contains:

- Justification for the choice of the topic
- Objective and research problem of the dissertation
- Delimitation of research field
- Thesis of the dissertation
- Originality of undertaken subject according to the found state of research
- Methods of work

Chapter 2 - Syria - geography, demography, economy, history and cultural heritage

contains a discussion;

- geographical factors determining: as “Syria as the heart of the middle east”
- demographic factor - people and religion
- history and cultural heritage what has happened on the syrian soil through ages.

Chapter 3 - Palmyra and its place in Syrian history, economy, culture and heritage

Chapter 4 – the impact of the natural conditions factor, in which the aspects affecting the city's development are presented positively and negatively

Chapter 5 – the impact of the economic factor including positive aspects and negative in history on the development of Palmyra over the centuries

Chapter 6 – the impact of the communication factor including positive aspects negative in history on Palmyra's development over the centuries

Chapter 7 - religious and legal factor and its positive and negative aspects of the impact on the city's development

Chapter 8 - a summary of the analyses carried out affecting the city's rise and fall, and the proposal to develop Palmyra and the surrounding area in the structure of the Syrian state after the war. The summary is an original assessment of the goals and tasks set at the outset, an indication of the original methodological elements and the main directions of further research.

The methods used at work are suitable for the thesis and the purposes of the dissertation and tasks and external restrictions. I appreciate the critical review of source materials, the so-called limited access to sources, comparative analysis and utilization in Chapter 6 - Tasks for the future (research method through design).

The choice of the topic of the work should be considered proper and extremely timely, when the whole civilized world works on establishing a lasting peace in Syria and the reconstruction of historic architectural-urban complexes of cultural heritage destroyed by military operations. The period in which we live is an extraordinary event in the history of civilization. In many religious conflicts, many goods of the civilization heritage of humanity are destroyed and their restoration to subsequent generations by reconstruction is of fundamental importance for the preservation of the human heritage. In relation with this, before scientists, planners, designers, decision-makers there is a huge responsibility to take actions to preserve cultural heritage. In these activities, a special role belongs to scientists as a group of specialists of the most conscious crimes committed on the heritage of humanity and an indication of the directions of reconstruction of damaged objects. These activities must be rational and aimed at maximizing the protection of historical heritage, so that the proposed solutions by the descendants are assessed well as being in accordance with the principles of engineering art, architecture and urban planning and conservation protection, and also to demonstrate well the level of civilization development of the times in which these activities have been developed.

This doctoral dissertation is part of this trend of research for the protection of historical and cultural heritage. It was very good that the author undertook research in her doctoral dissertation in the restoration of the heritage of the ancient city of Palmyra in Syria.

2. Assessment of sources and state of knowledge in the area related to the topic of the dissertation

Dana Matouk's doctoral dissertation consists of 174 pages, of which the last 6 are occupied by a bibliography comprising a total of 58 numbered items - published and unpublished, and 23 items, websites, a list of drawings with a total of 86 illustrations, as well as 5 tables. Bibliography (chapter 11) has: 44 positions in English and Polish and 14 items in Arabic, as well as 23 netography items, however, without reference to the dates of accessibility to these websites.

The research problem was formulated in the same way as the scope of the dissertation. The author's recognition of the state of knowledge in the subject matter is positive. It should be noted that there are very limited possibilities and difficulties in accessing source materials during the preparation of the doctoral dissertation due to ongoing military operations in Syria and the inability to make a vision of local damage caused by war activities in Palmyra and access to scientific centres in Syria and their scientific resources. Despite these unusually serious difficulties, the author has used many very valuable publications and source materials whose inclusion builds the substantive quality of the work.

The author has formulated the following research tasks:

1. Justification of the thesis on anti-urban factors, including natural, economic, communication and religious and legal conditions.
2. The need to preserve the cultural heritage - one of the cradles of world civilization - for the present and future generations and European and defining methods for securing this area that could be used in the reconstruction of other Syrian cities or their ancient ones in other countries.
3. Commemoration of the activities of the Syrian opposition and victims of fighting with Islamic State ISIS, along with an indication of the concept of honouring the fallen by the creation of the museum-mausoleum by adapting the buildings of the existing prison.
4. Determination of urban factors, which, according to the author, can give a strong impulse to the reconstruction of Palmyra and Syria.

The author presented a proposal for directions for the reconstruction of the so-called "Golden triangle" in Syria through the development of tourism, which should in future be reflected in the economic development of this area and the living conditions of the inhabitants. She also presented a fully professional concept of reconstruction of Palmyra's urban tissue.

The thesis formulated by the author is as follows: "*Preliminary analysis of urban factors – reasons which created Palmyra- pointed out, that similar or even the same factors caused its fall. This led to formulation of the thesis, that: "urban factors with "positive charge" have a creative character, and similar factors but with "negative charge" have a devastating, destructive character"*.

The research field of the reviewed doctoral dissertation was eliminated three parts:

1. The first plane of delimitation is material, meritorical. It means that the subject stems from urbanism, cultural heritage, specific importance of researched country and city.

Finally it considers present political situation, social and material impact of ongoing war and looking for solutions, for "*the way out*".

2. The second plane of delimitation refers to time. It would be easy to set the time limits say between 1947 and 2019 (since the emergence of modern Syria on the map of the Post War world to present day), with simultaneous consideration of a very rich history from ancient times and the influence of urban conditions on the transformation of the studied area.
3. The third plane of delimitation refers to geographical, physical borders. Syria will be studied as a part of big states and empires occupying Mesopotamia and Fertile Crescent which emerged and disappeared in past millennia and centuries. Finally will be studied as a contemporary, independent and sovereign country established in 1947 and modern times.

The goals of the work have been formulated correctly. The partial objectives of the dissertation are as follows:

1. The development of the theory of urban factors prof. T. Tołwiński by proving the thesis that in changing political, economic and social conditions such factors as: natural, economic, communication and religious and legal conditions can affect both the positive and negative impact on the development of the city.
2. Formulation of the methodology of reconstruction of devastated areas of cultural heritage on the example of the city of Palmyra, which could be used not only in relation to the activities in Palmyra, but also in relation to other cities.
3. Search for a way to commemorate the activities of the Syrian opposition and the victims of the ISIS Islamic State with an indication of the concept of honouring the fallen by creating a museum-mausoleum in place and by adapting the buildings of the existing prison with the transformation of this historic building into the International Archaeological Station.
4. Determination of urban factors that, according to the author, can give a strong, initiating impulse for the reconstruction of Palmyra and Syria.

The scope of work has been determined in a proper manner, application to specific partial objectives.

The description of sources presented in the paper and the current state of knowledge in the area related to the subject of the dissertation should be assessed well. I rate the most valuable for the most valuable and analysed subject sources and literature on the historic development of Palmyra.

3. Comments and substantive evaluation of the dissertation

As regards the content, I state as follows:

1. The subject is a very important issue of contemporary urban planning and protection of historical cultural heritage.
2. The work contributes to the knowledge of the problem and is a material to be used in designing the reconstruction of destroyed ancient cities.
3. The thesis of the dissertation, according to the reviewer, is innovative, develops the theory of urban factors prof. T. Tołwiński, proving the example of the city of Palmyra

that urban factors can have both a positive and a negative impact on the development of the city depending on the changing conditions of a natural, economic, communication and religious-legal nature.

4. I consider the inclusion of a dissertation in the historical conditions of the territory of present Syria and the city of Palmyra as valuable, as the developmental conditions of the studied area have changed, had, have and will have a fundamental influence on the development and functioning of Palmyra in the future. In accordance with the principles of spatial planning and urban planning, it is indispensable to consider a much larger spatial context than the area covered by more detailed analyses, as the author did in her doctoral dissertation.
5. I find it extremely interesting and valuable in the methodological aspect to use the research method by designing and indicating the development opportunities of the historical city of Palmyra, taking into account the development assumptions made previously for the entire Syrian area. The author aptly formulated the development goals of the city and the use of the unusual location of the city of Palmyra at the top of the "golden triangle" Aleppo-Damascus-Palmyra.
6. As a very useful for the whole picture of the work, I think about the history of civilization development in Syria and Palmyra on the timeline (*Timeline of Palmyra*, Figs. 17-21), where the author showed the development of Palmyra and their influence on urban factors against the background of historical events natural (Fig. 37, 39) economical (Figs. 45 and 49), communication (Figs. 54 and 62), religious and legal (Fig. 71). The presentation of events on the timeline significantly organizes the presentation of the sequence of events and indicates the nature of their impact (positive or negative), and thus increases the readability of the entire doctoral dissertation.
7. I consider the concept of commemorating those killed in fighting to be very interesting for the protection of Palmyra in the war against Islamic State ISIS. The creation of a museum-mausoleum of the fallen in place of the former prison with the transformation of this object to the International Archaeological Research Station, I believe that this is a model concept showing the humanistic approach of the architect to such sad tragic events that have taken place in Palmyra in recent years.
8. As an accurate and rational way, I think that Palmyra will develop as a tourist centre that, after reconstruction and proper development, can attract many dozens of tourists from around the world interested in both the historical heritage and the contemporary history of this area. The author, using the method of "*research through design*", with an extremely straightforward knowledge of local conditions and the specificity of the functioning of Syrian cities, in a proper way proposed the concept of Palmyra development after reconstruction.
9. From the point of view of the country where this extremely interesting doctoral dissertation was created, I consider it valuable to present the achievements of Polish archaeologists, architects, urban planners and spatial planners in the preservation of cultural heritage and urban development and Syrian agglomerations, including the city of Palmyra. A very large contribution of Polish specialists in the above areas indicates that their participation can be very valuable in the reconstruction of Syria after the end of the war.

4. Evaluation of the dissertation's editorial aspects.

The evaluation of the editorial aspects of the dissertation leads to the following observations:

- The layout and structure of the work are presented very logically. The following chapter follows from the previous chapter. The construction of individual work sections is very transparent, which makes it easier to study and evaluate.
- The work is edited in the right way. The author has adopted the principle of placing signatures under tables, while the generally accepted principle is to place the title of the table above the table, because it is much more readable than placing the title under the table.
- There is a reservation about the form of the bibliography. There is a lack of the name of the publishing house or institution that has signed a given publication or publication or place of publication.
- The author refers to a number of publications in English. Arabic, which are practically inaccessible to those who do not speak Arabic, including the reviewer. It is a pity that in chapter 11 - bibliography there are no translations into English, especially since the bibliographic data of a significant part of the publication in this Arabic language was published in the subchapter on the originality of the subject. I consider this consideration necessary in the preparation of a dissertation for publication.
- The author left out in the bibliography and in the captions under the pictures, or in full footnotes, full addresses about websites and web portals that she used. It also omitted the dates of access to these pages, which is an indispensable element in the bibliographic data. I consider this consideration necessary in the preparation of a dissertation for publication.
- Corrections for possible publication also require some footnotes, which are identical in the following immediately - just replace them with the word *ibidem*. I also consider it necessary to take this remark into account when preparing a dissertation for publication.

5. Evaluation of the substantive side of the dissertation

The work should be evaluated very well. The following should be considered as original methodical elements of the work:

- Undertaking research in the restoration of the heritage of the ancient city of Palmyra in Syria.
- This dissertation contributes to the knowledge of this issue and is a material for use in the design of reconstruction of ancient cities.
- Proving the thesis about the existence of urban factors with a negative charge, kind of anti-urban factors, which is the contribution of Dana Matouk in the development of urban planning theories.

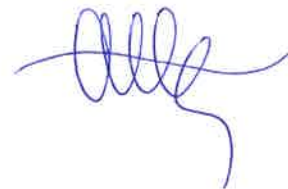
- Application of the "research by design" method and presentation in a professional manner with a great knowledge of local conditions of specific planning and urban planning and architectural solutions such as:
 - the concept of a golden triangle connecting the most attractive tourist cities in Syria, and
 - for the Khaled Al Asa'ad Memorial Park project in Palmyra with adaptation and transformation of the prison destroyed by ISIS in Palmyra into the International Archaeological Research Station. I consider this concept a model solution showing the humanistic approach of the architect to the tragic events that have taken place in Palmyra in recent years.

Reviewed doctoral dissertation by mgr inż. arch. Dana Matouk with its accuracy of analyses of spatial and economic-social development, assessments of urban planning and planning processes, proposals for directions of historical reconstruction of the civilizational heritage area of the world is part of the peace process that should be initiated in the war-stricken Syria and the city of Palmyra.

6. Final remarks

I conclude that reviewed doctoral dissertation by mgr inż. arch. Dana Matouk pt. "Palmyra the Rise and Fall of the City" fully meets the requirements set for doctoral dissertations in the field of engineering and technical sciences, in the discipline of architecture and urban planning in accordance with the Law on academic degrees and academic title and degrees and title in the field of art from March 14, 2003. (Journal of Laws No. 65 of 16 April 2003 item 595) and in its current form may be allowed for public defence.

I am also asking for the distinction of the dissertation (justification attached).



Warsaw, 7 of May 2019

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**Justification for the application for distinction
of doctoral dissertation Ms. M.Sc. Eng. Arch. Dana Matouk
untitled "Palmyra the Rise and Fall of the City"**

made at the Faculty of Architecture of the Warsaw University of Technology,
under the guidance of full prof. Ph. D. D.Sc. Hab. Eng. Arch. Andrzej Gawlikowski

This doctoral dissertation deserves recognition because:

- It is developed at a high substantive level and contains innovative elements. The dissertation undertakes research in the restoration of the heritage of the ancient city of Palmyra in Syria. It contributes to the knowledge of this issue and is a material for use in the design of reconstruction of ancient cities.
- It proves the thesis about the existence of urban and negative factors as a kind of anti-urban factors, which is the PhD student's contribution to the development of urban planning theories.
- In the dissertation the "research by design" method was used and presented in a professional manner with a great knowledge of local conditions of specific planning and urban planning and architectural solutions such as:
 - the concept of development of the "golden triangle" connecting the most attractive cities in Syria and
 - the Khaled Al Asa'ad Memorial Park project in Palmyra with the adaptation and transformation of the prison destroyed by ISIS in Palmyra to the International Archaeological Research Station. I consider this concept a model solution showing the humanistic approach of the architect to such tragic events as they had last years in Palmyra.

Doctoral dissertation Ms. eng. arch. Dana Matouk with its accuracy of spatial and economic-social development analyzes, assessments of urban planning and planning processes, proposals for directions of historical reconstruction of the world's civilization heritage area, the peace process to be initiated in the war-stricken Syria and the city of Palmyra.

