Greenery as Element of Historical Market Squares in Context of Sustainable Development and Cultural Heritage Protection Conditions (Podlaskie Voivodship, Poland) †

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Abstract: The presence of greenery in the space of historic markets was conditioned depending on the historical era: function, aesthetics or ecological needs of the city. The purpose of the work is to show the contemporary functions of greenery in the space of historic markets in the context of conditions for sustainable development (ecological, social, economic and ethical) and their relationship to the latest conservation doctrines (document from Nara—1994, Cracow Card—2000, orthodox creation). The paper analyzed 52 cases of town and city markets in the Podlaskie Voivodeship (Poland), which allowed conclusions to be drawn regarding the treatment of greenery in public spaces of markets. The results of the work may be helpful in the process of designing and modernizing the markets in the Podlaskie Voivodeship and in Poland, and more widely used for further research on the use of greenery in public space and assessing the effects of its presence.

Keywords: market square; sustainable development; greenery; revaluation; Cracow Charter 2000

1. Introduction

Historical market squares are often the main public spaces in cities, especially small ones. Markets constitute their significant cultural value of these centers, testify to their identity. Currently, the main doctrines affecting the shaping of market space in Poland are conservation conditions and broadly understood principles of sustainable development.

Greenery in the space of historical market squares was conditioned depending on the historical era: function, aesthetics or ecological needs of the city. As an element of furnishing the market spaces (Podlaskie Voivodeship, Poland) it began to be used relatively late, since the 19th century. The treatment of greenery in the contemporary process of cultural heritage protection of historical market spaces raises controversies, contradictions and even conflicts between conservation, design and city communities.

The issue of sustainable development is widely described in the literature. In relation to the conducted research, the studies were based on studies on sustainable architecture [1] and in its context the development of methods for optimized architectural design, emphasizing the need for continuous industry training [2]. An important element of the studied issues concerns the protection of architectural and urban heritage in theory [3,4], in examples from the world and Poland [5] and examples representing the area of the Podlaskie Voivodeship [6,7].

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economic and ethical) and their relationship to the latest conservation doctrines (document from Nara—1994, Cracow Charter—2000, orthodox creation).

2. Materials and Methods

The research was carried out on a sample of 52 cities and towns with an urban origin (40 towns − 2 with no market squares + 14 villages with city roots = 52) from the Podlaskie Voivodeship (Poland) in relation to changes in the development of market’s greenery after World War II. A comparative method was used to present changes. Particular attention was paid to the reevaluation of market squares after 1989 (change in Poland’s political and economic system).

For the purposes of the study, an understanding of the main conditions for sustainable development was adopted after L. Kamionka [1] (pp. 20–25) as ecological (sustainability), social (beauty), economic (usefulness) and additional ethical conditions. The research problem results from ecological and ethical conditions, because greenery was not an element of intentional furnishing of the markets’ space in all historical periods. The sustainability criteria are complemented by the Leipzig Charter on sustainable European cities (2007) indicating the need to create and ensure high-quality public spaces.

Therefore, it was justified to trace changes in the understanding of cultural heritage protection presented in following conservation doctrines of the 20th century [3,4] from those referring only to architectural objects and connected with them urban spaces (Athens Charter—1931, Venice Charter—1964), historical gardens complementing them (Florence Charter—1981), concepts of authenticity related to heritage (document from Nara—1994), to protect the heritage ensuring its preservation and duration (Cracow Card—2000) using the “orthodox creation” method [3] (p. 219). Properly shaped greenery can become an element building the durability and life of a historic space, lead to integration with contemporary society and future generations.

3. Results

3.1. Analysis of Cultural Values of Market Squares in the Context of Greenery

The analysis of the cultural values of the market squares of the studied cities, which are part of the ecological conditions in the sense of sustainable development, has allowed the formulation of the following groups of features related to the history of those cities:

- Concerning the presence of greenery in the functional program of the market squares.

  The space of markets has always been multi-functional in nature, conditioned by the needs arising from the civilizational development of a given era. In individual cases, greenery in the form of a park (Augustów—19th century) or circumferential plantings dictated by the hygienic needs of cities in the interwar period was an element of the historical functional program. Numerous marketplaces were turned into squares after World War II. A recreational function was introduced in place of the dominant commercial, administrative and symbolic ones.

- Concerning the presence of greenery in the aesthetic program of market squares.

  Composed space is a feature of markets (Podlaskie Voivodeship) established since the 16th century, e.g., Renaissance (e.g., Wasilków, Czyżew), Baroque (e.g., Białystok, Choroszcz, Tykocin, Bielsk, Siemiatycze), Classicist (e.g., Zabłudów), from the 19th century (e.g., Supraśl, Michalowo). Greenery was an element of avenues leading to representative spaces of those market squares. The greenery building the aesthetic program of the enclosure of the market squares is an example of the city park in Augustów only (19th century) and rows of trees planted along the frontages of the markets in the interwar period. Numerous marketplaces were turned into squares after World War II. A recreational function was introduced in place of the dominant commercial, administrative and symbolic ones.

  Greenery building the aesthetic program of the enclosure of the market squares is an example of the city park in Augustów only (19th century) and rows of trees planted along the frontages of the markets in the interwar period. Squares on the marketplaces established after World War II often arose in the system of social acts, often devoid of pre-design documentation or often based on spontaneous decisions, limited availability of building materials and greenery. The greenery of the squares founded in the 1950s and 1960s has grown to modern times to the form of concentrated parks,
which limited the readability of the compositional values of earlier eras. This situation was partly changed by modernization of market squares after 1989 (more intensive after 2000).

3.2. Analysis of the Contemporary Presence of Greenery in the Spaces of Market Squares

The analysis of the contemporary presence of greenery in the spaces of markets has allowed the determination of its function not arising from historical conditions, but consistent with the principles of sustainable development.

- Ecological conditions (durability).

Contemporary greenery elements have gained the significance of a place distinguishing feature in the form of a historical park in Augustów, testimonies of the period 1945–1989 in the form of squares in the marketplaces (e.g., Zambrów, Gródek, Knyszyn, Goniądz), as well as recalling historic architectural objects—a symbol of the former town hall in Siemiatycze (Figure 1a). Greenery plays an important role in landscape, affecting the perception of the space of market squares. The leading modern function of the analyzed greenery is recreation and relaxation.

![Figure 1](image1.jpg)

**Figure 1.** Siemiatycze market square: (a) rows of trees as symbol of former town hall in Siemiatycze (photo by D. Gawryluk, 2018); (b) Green bus stop on Siemiatycze market square (photo by D. Gawryluk, 2018).

- Social conditioning (beauty)

Elements of greenery associated with social conditions mainly respond to improving the quality of life in the city. The greenery located on the markets here performs the functions of protection against noise, limiting the heat island, reducing dusts and CO2, improving the quality of life through the availability of playgrounds, outdoor gyms (e.g., Gródek, Czarna Białostocka, Suchowola, Korycin), educational functions, e.g., history and ecology theme (Siemiatycze—green stops Figure 1b). Public consultations regarding the modernization of the space of market squares in cities are a special value in this area. The successfully considered conclusions of public consultations changed the administrative and design decisions in Suwałki, Łomża, Sokółka, and Knyszyn.

- Economic conditions (usefulness).

The use of greenery in the markets for retaining rainwater or limiting heat islands affects savings in building the city’s technical infrastructure. Renewable energy sources used to equip green elements reduce energy consumption.

- Ethical conditions.

Appropriate use of existing and designed greenery elements based on broad, updated multidisciplinary knowledge has a positive effect on shaping the hierarchy of goals and tasks in the design process.
4. Conclusions

The use of contemporary greenery composed in the space of historical market squares, in accordance with the principles of sustainable development and the latest conservation doctrines is proposed in the following groups:

- On market squares with historical urban composition (established from the 16th century)—inspiration with this architectural and urban composition while maintaining its readability (e.g., Tykocin, Choroszcz, Siemiatycze, Bielsk, Supraśl, Michalowo). Indication to correct the readability of the composition of the markets in which it was blurred by the dominant post-war greenery (e.g., Zabłudów, Boćki, Kleszczele, Janów) by limiting its accordingly.

- On markets of medieval origin—the use (adaptation and design) of contemporary greenery to build a modern functional market program while maintaining the legibility of the scale of its historical space (e.g., Zambrów, Knyszyn, Goniądz, Wizna).

Mentioned guidelines will allow preservation an appropriate amount of greenery in its many contemporary functions and forms.

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