THE ROLE OF OLD TOWNS IN SMALL WARMIAN TOWNS IN SHAPING THE REGION'S CULTURAL LANDSCAPE

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ABSTRACT

Motives: The historical urban layout and architectural design of old towns significantly contribute to the cultural landscape of small towns and the region. The main aim of this study was to evaluate the role of historical spatial structures in the development of the local cultural landscape. The study was conducted in small Medieval towns in the Region of Warmia in north-eastern Poland. The extent to which the architectural design of historical urban structures, in particular architectural landmarks, influences the local landscape was analyzed.

Aim: The described research goals were achieved with the use of several research methods. The study demonstrated that the Medieval spatial urban layout of old towns, including architectural landmarks, significantly influences the region's cultural landscape and contributes to a strong sense of local identity. The results suggest that historical architecture and urban layout can contribute to the economic development of small towns.

Results: The results indicate that well-preserved historical urban structures can contribute to the economic growth of small towns and effective promotion of regions.

Keywords: small towns, spatial structure, cultural landscape, historical urban centers, architectural landmark

INTRODUCTION

Small historical towns play one of the most important roles in regional urbanization processes. The distinctive identity of historical towns in the local landscape can be attributed to their low development density and the fact that they had been established in close proximity to each other. Historical towns, in particular those founded in the Middle Ages, were separated by small distances due to technical limitations. Small medieval towns are characterized by low-rise buildings and low development density, which clearly distinguishes them from large urban areas. As a result, landmark buildings and structures in historical towns have dominated for centuries and continue to dominate over the modern landscape (Matthew, 1983). These structures include church steeples, town hall towers, and monumental fortified castles. These three types of public buildings are characteristic of Medieval towns.

Historic towns have a grid layout with a regular network of perpendicular streets. Towns with a grid layout featured blocks of dense development, with a centrally located market square where most trading activities took place (Mumford, 1961; Benevolo, 1995).

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The role of historical urban design was explored on the example of three small towns in the Region of Warmia in north-eastern Poland (Barczewo, Pieniężno, and Reszel). Three out of the eleven existing Medieval towns in Warmia were selected for the study. In these towns, the elements of the original urban layout were preserved to a varied degree. These towns were selected for the study due to their similar location, spatial attributes, and history, as well as differences in the contemporary character of downtown areas. The examined towns were established in the Middle Ages when the Teutonic Knights colonized Warmia and built an urban settlement network in the region. Despite the fact that historical spatial structures have been preserved to a varied degree in the studied towns, their layout strictly follows Medieval urban design principles.

Warmian towns were established in locations that were difficult to access, and all of them featured defensive walls and fortifications. Security was a key concern in most Warmian towns which were founded as military outposts by the Teutonic Knights during their attempts to colonize this part of East Prussia. The layout of historic towns in Poland and other European countries was generally consistent with the Medieval practice of establishing urban settlements *in cruda radice* (from a "raw root") (Ennen, 1975; Mullermertens, 1987; Schofield, 2003). In Warmia, towns were created along transportation routes, and they were separated by a distance of 25–30 km. In Warmia, a settlement network was developed over a period of less than 100 years (Lewerenz, 1975). Interestingly, all Medieval towns in Warmia, excluding Olsztyn, remain small settlements with a population under 20,000. Population is one of the most popular criteria for classifying towns and cities into different size categories (Bagiński, 1998; ESPON, 2014; Servillo et al., 2017).

Historical spatial structures play a special role in the urban layout. Most old towns constitute historical town centers, and they differ from other urban districts in scale, development density, and architectural design. However, some old towns have been deprived of their historical character. In the final months of War World II, the Soviet army initiated a deliberate campaign aiming to destroy and burn down historical buildings in Warmian towns. After the war, Warmian towns were reconstructed according to socialist realism principles (Gawryluk, 2008). Poland remained under Soviet influence, and post-war reconstruction efforts based on the socialist realism doctrine were the second reason for the loss of historical identity in Warmia.

Historic urban districts are usually the only surviving witnesses of Medieval towns' rich history and regional architectural traditions. Historical spatial structures bear testimony to local identity, and they constitute living systems that adapt to local conditions and functional needs (Hoeschele, 2010). Medieval towns were developed on a much smaller scale than modern cities, and the organization of urban life differs considerably from the hustle and bustle of modern living in a rapidly globalizing world (Miele, 2008; Broadway, 2015). The functional uniqueness of historical towns contributes to sustainable development, higher quality of life, and the protection of the local heritage, including the region's cultural landscape (Mayer & Knox, 2006; Saraiva & Pinho, 2017; Torres Barchino et al., 2018; Bernat et al., 2022). Sustainable development and heritage protection lie at the heart of local policies and strategies, which is why most Warmian towns belong to the Cittaslow International movement which promotes the slow life philosophy and reconciles economic development with the preservation of historical heritage (Servon & Pink, 2011; Mallet, 2018). These towns do not feature large industrial complexes or high-rise residential buildings. As a result, old towns can be easily identified against the backdrop of modern urban development, and they set the directions for the scale and density of future development. They also act as architectural landmarks that dominate over the local urban panorama. Historical towns are increasingly popular among people who wish to live in peaceful surroundings, away from the hustle and bustle of modern city life (Zagroba et al., 2021). Historical spatial structures that testify to Medieval towns' historical identity play an important role in that process.

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The main aim of the present study was to analyze and evaluate the role of historical spatial structures in Warmian towns in shaping the local cultural landscape (Böhm, 2011). The degree to which historical urban structures have been preserved was analyzed, and structures which should be restored and included in urban revitalization programs were identified. Historical town centers feature urban planning and architectural solutions whose role cannot be underestimated in the life of modern cities. The layout and character of old towns fulfill different social needs and aspirations, both material and spiritual, and historical districts are popular tourist destinations. The original urban layout of some towns has been transformed beyond recognition, and the resulting differences set the directions for research into the role of historical spatial structures in the local cultural landscape (Berglund, 1986; Ricci, 2007). The research aims were achieved with the use of a novel method developed by the author. Historical urban structures were evaluated in multi-criteria analyses, and the results were used to determine the role of historical urban layout and architecture in the development of urban space. The results were also used to assess the extent to which historic structures were preserved in the modern urban fabric in the context of the region's cultural landscape. These observations supported the identification of sites and structures that should be revitalized to restore spatial order and improve the functioning of the examined towns (Szarek-Iwaniuk, 2021).

An attempt was also made to determine whether historical spatial structures are the key determinants of a region's cultural landscape and which historical elements in Medieval towns exert the greatest influence on the local cultural landscape.

The present study was undertaken to address the general scarcity of research on national and international standards for comprehensive assessments of historical urban structures in small towns. Most research on the subject has been conducted in large cities, and the proposed assessment criteria have been developed based on the distinctive characteristics of large urban agglomerations (Mandeli, 2019). These attributes cannot be used to evaluate historical centers in small towns. The methodology developed in this study is dedicated specifically to small towns.

MATERIALS AND METHODS

Study areas

Warmia is situated in north-eastern Poland, and it is one of the most popular tourist destinations in the country which attracts both domestic and foreign visitors. Warmia is renowned for its unspoiled nature, scenic landscapes, undulating terrain, numerous lakes, and rich cultural heritage. Historical urban architecture, including landmark buildings such as churches, town halls, and castles, are the hallmarks of local building traditions (Kowalczyk, 2008; Jaszczak & Denekas, 2014).

The study was conducted in three out of the eleven Medieval towns in the Region of Warmia in north-eastern Poland: Barczewo, Pieniężno, and Reszel (Fig. 1). These towns were selected for the study due to similarities in their location, history, and spatial attributes. The analyzed towns had been originally built as military outposts with defensive walls and fortified castles, and they were founded in the same historical period spanning around 100 years. These military outposts were built by the knights of the Teutonic Order which colonized this part of East Prussia in the 14th century (Srokowski, 1945; Krassowski, 1990). The above small towns were also selected for analysis due to the different extent to which their historical spatial structures have been preserved. These structures were damaged by the Soviet army at the end of World War II, and the reconstruction efforts undertaken after the war differed in the examined towns (Figures 2 and 3).

The examined cities were established in the Middle Ages. The evidence for the above is provided by historical sources, in particular the research conducted in the first half of the 20th century by German scientists who analyzed the respective town charters (Bludau, 1901; Poschmann, 1937; Keyser, 1939). Over the centuries, Warmian towns developed

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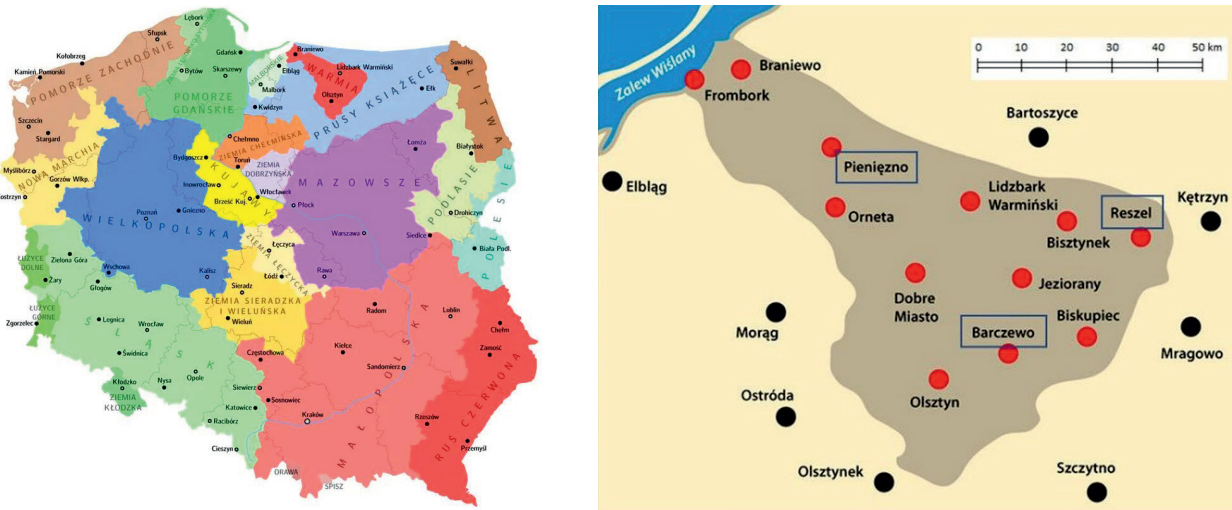
Fig. 1. Polish regions (left) and the location of small towns in the Region of Warmia (right)
Source: own elaboration based on: www.puzzlefactory.pl/pl/puzzle/graj/krajobrazy/297006-regiony-polski#5x6 (retrieved on 02.03.2023); www.encyklopedia.warmia.mazury.pl/index.php?title=Plik:Warmia_mapka.jpg (retrieved on 02.03.2023).
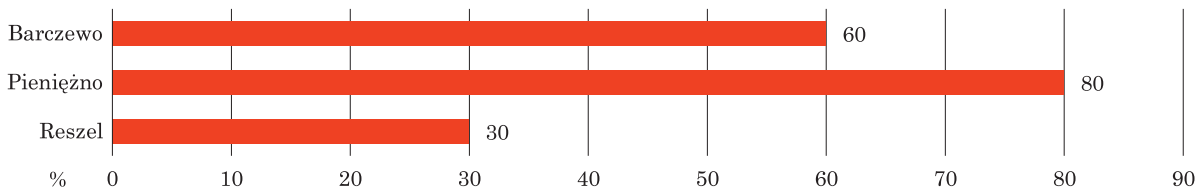
Fig. 2. Percentage of historical buildings and structures that were destroyed during World War II
Source: own elaboration based on Czubiel & Domagała (1969).
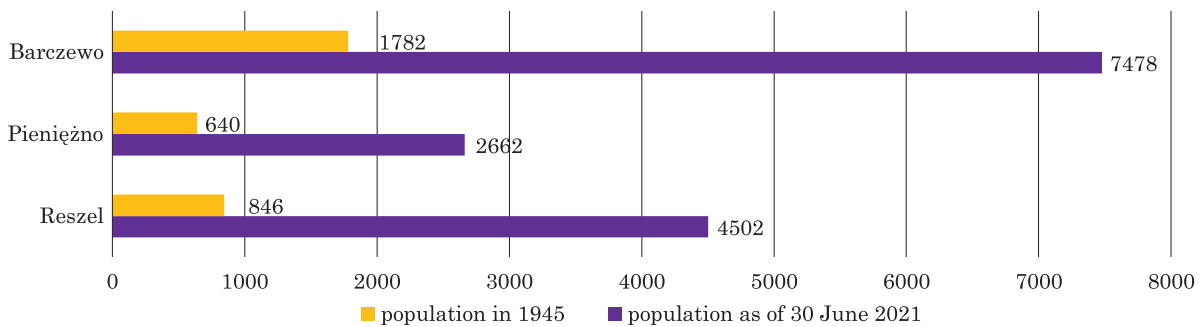
Fig. 3. Population of the analyzed towns
Source: own elaboration based on www.demografia.stat.gov.pl (retrieved on 20.06.2022).

rapidly and expanded their territory, and the greatest changes were observed in the second half of the 20th century. However, historical spatial structures in old towns still constitute the urban core in Warmian towns, which differs from other areas in the scale and density of development, as well as layout and architectural features (Figures 4–7). In most cases, the damage sustained during World War II did not affect the historical character of the analyzed towns. However, the damage inflicted on Pieniężno and the resulting depopulation were so severe that the town lost its municipality status for 28 years (1945–1973).

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Fig. 4. Barczewo – northern frontage of the old market square
Source: own elaboration.

Fig. 5. Pieniężno – western frontage of the old market square
Source: own elaboration.

Fig. 6. Reszel – aerial view of the town center
Source: own elaboration.

Fig. 7. Reszel – southern frontage of the old market square
Source: own elaboration.

It should also be noted that the Region of Warmia and Mazury in north-eastern Poland, including the region referred to as Holy Warmia (Achremczyk, 2011), boast the highest number of Polish cities that are members of the Cittaslow International movement which promotes a slow life style and living in harmony with nature. The only exception is Pieniężno, which is not a Cittaslow member, and where the historical structure of the old town has been least effectively preserved (Alexander, 1965; Zagroba et al., 2021).

Methods

The extent to which historical spatial structures have been preserved in small towns, the role of historical sites in the development of modern towns, and their influence on the local cultural landscape should be examined in multi-criteria analyses because the architecture of old towns clearly differs from modern urban design and fulfills the residents' material and spiritual needs. Similar differences are observed in contemporary towns. The examined towns differ considerably in this respect. The unique character of old towns influences the formation of a region's cultural landscape. The preservation of historical structures in the studied towns was compared with the use of analytical methods that

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have been well described in the literature and applied in research on urban management. These methods laid the ground for the development of a novel research tool supporting subjective evaluations of urban planning solutions and architectural features. This novel method was developed by the author. The proposed combination of research methods can be applied to other Medieval towns in Poland and Europe. Various criteria were applied in the analysis to evaluate different elements of historical urban structures that influence the local landscape.

A robust knowledge of the history of architecture and urban planning, as well as professional skills and knowledge in the area of urban management are essential for assessing the preservation of historical urban structures, identifying architectural styles and landscape components to guarantee that the results of the evaluation are not based solely on the observer's subjective perceptions.

The applied research methods were divided into three main categories, as presented below. A similar approach was used to present the results obtained in section Results.

1. An analysis of the spatial structure of small towns, including the scale of development and territorial reach in the context of the local landscape. Spatial features in the local landscape were classified based on an analysis of the following factors:
   a. time of establishment – based on an analysis of the literature and iconographic sources, in particular the research conducted by German scientists at the turn of the 19th and 20th centuries (Boetticher, 1894; Bonk, 1895). These analyses supported the identification of differences and similarities in the spatial structure of the examined towns, including the location of architectural landmarks in the urban layout and the local topography. All of the analyzed towns had a grid street plan, with some local variations (Tołwiński, 1939);
   b. local topography and urban design – based on an analysis of iconographic sources (maps and satellite images) and an inventory of old towns. The examined towns were classified in

view of urban planning solutions relative to the local landform. Topographic features, including river bends and river forks, influenced the grid street plan (Table 1). The grid street plan was less regular in towns situated at the fork of two rivers;

Table 1. Relationship between local landform and urban planning solutions

Urban planning solutions	Landform	
	River bend	River fork
Grid street plan	+	+
Rib pattern or a grid street plan	-	-
Dense urban network	+	+
Uncontrolled urban development in the direct vicinity of the river	+	+
Dense development resulting from space constraints	+	+
Spatial structure expansion in a direction opposite to the river or a water body	+	+

Source: own elaboration based on Czubiel & Domagała (1969).

   c. size and shape of the old market square – based on iconographic sources (maps and satellite images) and the results of local inventories. The size and shape of market squares in the center of Medieval towns were proportional to town area. The shape and size of old market squares and their location relative to modern transport routes were analyzed (Table 2);

Table 2. Shape and size of market squares in the analyzed towns

No.	Shape of market square	Size of market square
1.		The shape and relative surface area of a market square (ratio of market area to town area) significantly influence spatial organization. Square and rectangular markets are perceived as neutral and harmonious spaces. The relative surface area of market squares in the analyzed towns relative to other Warmian towns was classified as: average (7.5–9.0%) or large (10.5–16%).
2.		

Source: own elaboration based on Czubiel & Domagała (1969).

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d. the ratio of contemporary urban area to the area enclosed by defensive walls, i.e. the original area of Medieval towns – based on iconographic sources (historical maps and satellite images). This ratio was calculated to determine the increase in developed urban area (indicator WWPZ). The original area of Medieval towns was defined by defensive walls or natural features, such as river banks or lake shores. This area was calculated by analyzing satellite maps and comparing the results with the original layout of fortified walls. The results are purely hypothetical because historical events, such as fires, significantly altered street layout and the alignment of urban structures. Archeological surveys would be required to determine the original area with greater precision; however, such surveys fall outside the scope of the present study. The present-day area of the studied towns was determined by analyzing satellite images and conducting measurements with AutoCad software. To determine the extent to which the scale of urban development influences the regional landscape, the original and contemporary area of the examined towns was compared with the use of indicator (1):

$$WWPZ = \frac{PW}{PL} \qquad (1)$$

where:

WWPZ – increase in urban area
PW – present-day area
PL – original area of Medieval towns

e. preservation of historic architectural landmarks – based on an analysis of the literature, iconographic sources, and the results of local inventories. The degree to which historic architectural landmarks have been preserved was classified. Churches, town halls, and fortified castles are the three types of architectural landmarks that exert the greatest influence on the local landscape.

2. An evaluation of the spatial structure of the studied towns in the context of the local landscape. This part of the study involved cartographic methods.

Historical and contemporary maps were analyzed, satellite images were examined, and historical urban structures were analyzed during local inventories. The characteristic features and the unique ambience (*genius loci*) of historical town centers were assessed during local inventories, including:

a. urban layout – based on an analysis of cartographic sources and the results of local inventories. The extent to which the original urban layout has been modified throughout the centuries was assessed based on an analysis of the Medieval layout of the examined towns. Warmian towns have a strictly geometric grid street pattern. Similar planning solutions can be encountered in other European regions, but regular geometric patterns were not always the norm in the Middle Ages, as can be seen in Italian towns. Camillo Sitte, a renowned architect who ignited a new era in urban planning, observed that artistic principles had always played a very important role during the establishment of Italian towns (Sitte, 1909; Gzell, 2014), which can be attributed to the local topography and climate. The preservation of the original layout of old towns which, together with architectural features, elicit strong emotional and esthetic responses and influence the region's cultural landscape, was assessed in the examined towns;

b. architectural design of old towns – based on the results of local inventories. A robust knowledge of the history of Polish and European architecture was required to evaluate the quality of urban space and the influence of historical architecture on the esthetic appeal of the examined old towns. The architectural style of historical urban structures and the preserved architectural landmarks are distinctive elements that contribute to a sense of local identity. These attributes evoke an emotional response, referred to as *genius loci* in architecture, which denotes the unique spirit of a place. These subjective perceptions are usually associated with spaces where the form, scale, level of detail, texture, and color of historical architecture exert the greatest

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influence on the human senses (Pawłowicz, 2017; Zagroba et al., 2020). Architectural landmarks significantly contribute to our perceptions of historical urban space. Landmark buildings and structures immediately attract the observer's attention and constitute integral elements of the local landscape. They influence the local panorama and play a very important role in the development of the cultural landscape (Table 3).

Table 3. The role of historical buildings in the development of local space and landscape

No.	Criterion	Perceptions of space
1.	Individual architectural structures	– form, scale, building materials, color – architectural style – positive/negative esthetic experience
2.	Frontage buildings, urban blocks	– diverse architectural forms and styles – form, scale, division, rhythm, roof patterns, building materials, facade color – enhanced/reduced esthetic experience – *genius loci* – architectural identity
3.	Architectural landmarks	– form, scale, architectural style – architectural composition – closure of urban axes – enhanced/reduced esthetic experience – spatiotemporal patterns – "experiencing" the urban fabric

Source: own elaboration.

3. The preservation and role of historical urban elements in the development of the local landscape was evaluated with the use of a novel method proposed by the author. This method was designed to analyze the emotional responses associated with perceptions of historical structures in old towns. The proposed approach was developed based on the concept of Wejchert's impression curve (Wejchert, 2008) as a set of subjective perceptions (Zonneveld, 1990; Myga-Piątek, 2012). Subjective assessments of landscape features were evaluated on a scale of 1 to 10 points, based on a landscape valorization

model that best reflects the unique attributes of old towns. The following attributes were included in the subjective assessment model:

a. age – the historical age of the assessed landscape. The older the landscape components, the more valuable the entire landscape;

b. historicity – a landscape is an element of the cultural heritage and a source of historical knowledge that embodies local traditions;

c. authenticity – originality and preservation of landscape components (highly transformed landscapes are not authentic);

d. esthetic value – the esthetic value of historical landscapes strongly influences human senses and emotions, and it is a highly subjective criterion;

e. harmony – spatial order is the dominant attribute in landscape perceptions;

f. uniqueness – the spatial attributes of unique and exceptional landscapes are rarely encountered in other landscapes;

g. emotional value – a landscape evokes strong emotional responses and contributes to a sense of local identity and attachment.

The choice of the above criteria was dictated by the fact that landscape should be regarded as a source of information, meaning, symbols, emotions, and esthetic values (Myga-Piątek & Nita, 2005).

RESULTS

The historical structure of the studied towns and its influence on the cultural landscape were assessed with the use of the described methods. The results section has the same structure as the Materials and Methods section to ensure the legibility of the presented findings.

Multi-criteria analysis of the spatial structure of small towns

a. The analysis involved three out of the eleven Medieval towns in the Region of Warmia, which were founded in the same historical period. Two of the analyzed towns were established in the 14th

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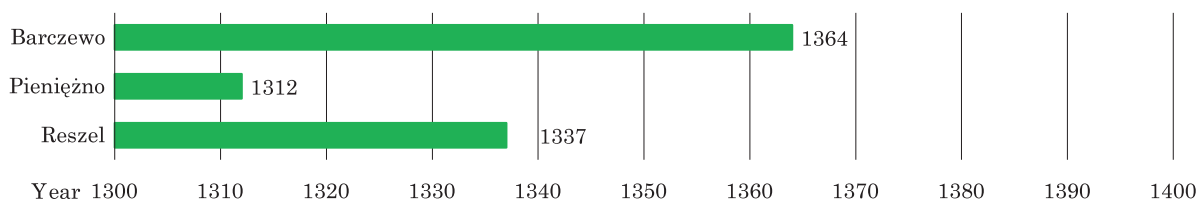
Fig. 8. Establishment of small Warmian towns
Source: own elaboration based on Czubiel & Domagała (1969).

century. In turn, Braniewo was a Hanseatic town that was founded in the 13th century (Fig. 8);

b. The spatial structure of the studied towns was affected mainly by the local landform. Topography was responsible for variations in the grid street plan and the location of architectural landmarks in the analyzed towns. Natural obstacles that offered protection against enemies, including rivers, lakes, and steep hills, played an important role during the establishment of Medieval towns. Two of the examined towns (Pieniężno and Reszel) were founded in a river bend, whereas the third town (Barczewo) was built in a river fork. Minor departures from the strict grid street pattern can be observed only in peripheral areas due to the proximity of water bodies;

c. The market square played a special role in Medieval towns. The market square was the focal point and the main area of trading activity in the Middle Ages. The three main categories of architectural landmarks, i.e. the church, the town hall, and the fortified castle, were built in the immediate vicinity of the market square. Most Medieval towns had regularly shaped market squares, although trapezoid or even triangular markets can also be encountered. Pieniężno and Reszel have square-shaped markets, whereas the market in Barczewo is rectangular;

d. The size of Medieval market squares was proportional to the town's area. The ratio of market area to town area was 10.6% on average in the studied towns, and it was estimated at 9.4% in all Warmian towns. The exact values for each town are presented in Table 4. Pieniężno is a clear outlier in this respect, probably because the size of urban

development in that town had been adapted to local needs, as well as the fact that Warmian towns had been established *in cruda radice*. Medieval towns were highly similar in size, which could be attributed to similarities in their economic status and the level of technological advancement in the Middle Ages. The average area of Medieval towns in Warmia was 6.1 ha. The average area of the examined towns was similar (5.5 ha), ranging from 4.5 ha in Pieniężno to 6.0 ha in Barczewo and Reszel.

e. The territorial reach of Warmian towns increased over the centuries due to technological progress and economic growth. The urban area spilled outside defensive walls. The increase in the size of Warmian towns and their present area are shown in Table 4. Only data on urban areas are presented; undeveloped areas, such as forests, water bodies, and agricultural land, were not taken into consideration in the analyzed towns. Measurements were conducted with the use of orthophotomaps, and the applied measurement methods were described in point 1d of subsection Methods.

Table 4. Size of the studied towns

No.	Town	Relative area of the market square [%]	Developed area enclosed by fortified walls [ha]	Present developed area [ha]
1.	Barczewo	8.5	6.0	458
2.	Pieniężno	16.0	4.5	383
3.	Reszel	7.5	6.0	382

Key: present developed area – urban area (built-up area with urban green spaces)
Source: own elaboration based on orthophotomaps (www.google.com/maps, retrieved on 19.04.2022).

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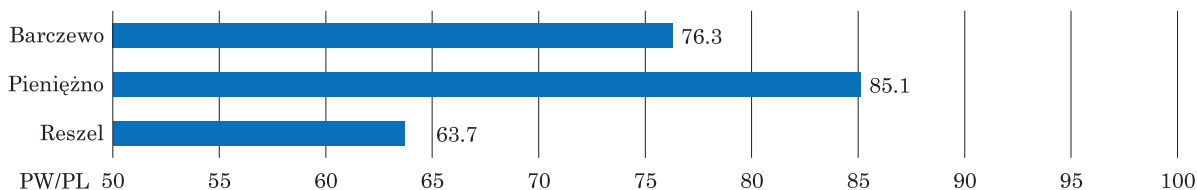
Fig. 9. Increase in the developed area of the studied towns
Key: PW/PL is the ratio of contemporary town area to the town's area upon establishment.
Source: own elaboration.

The character and density of urban development changed as Medieval towns expanded their territorial reach. The most notable changes took place in the 19th and 20th centuries when European urban planning standards and architecture were revolutionized. The data presented in Figure 9 indicate that built-up area in the examined towns increased several dozen times since their establishment. The developed area of the examined towns increased 75-fold on average.

f. The degree to which historical architectural landmarks were preserved in the analyzed towns was largely influenced by historical events, mostly wars and fires. These events were responsible for the extent to which historical churches, town halls, and castles survived to this day. Reszel deserves special attention in this respect, because all three types of architectural landmarks have been preserved in its panorama. Churches and town halls have been preserved in Barczewo and Pieniężno, whereas fortified castles were completely destroyed during the towns' turbulent history.

Evaluation of the development of the cultural landscape based on the spatial structure of the studied towns

Historical spatial structures in small towns are unique carriers of cultural heritage. They shape the local identity and the region's cultural landscape. For this reason, the components of the urban layout and the architectural features of old towns were used as the criteria in the applied research method (subsection Methods, point 2, subpoints a and b; Table 3). The historical structure of the urban core and architectural landmarks play a special role in this context. The scale and density of development in historical urban centers dominate over other town districts (Table 5).

Table 5. Preservation of the original spatial structure of the studied towns

Criteria for evaluating the preservation of historical spatial structure	TOWN		
	Barczewo	Pieniężno	Reszel
Urban layout	🟩	🟧	🟩
Historical architecture	🟧	🟥	🟩
Identity of the old market square	🟩	🟥	🟩
Architectural landmarks	🟩	🟧	🟩

Key: green – preserved, red – not preserved, yellow – partially preserved
Source: own elaboration.

Role of historical spatial structures in the development of the cultural landscape

Historical spatial structures in small towns have timeless value due to the specificity of the local cultural heritage and the unique identity of old towns. These values were reflected in the criteria used in the presented analysis (subsection Methods, point 3), which are closely related to perceptions of space, as well as esthetic and emotional experiences. As a result, the analyzed spatial structures differ considerably from the remaining urban areas in terms of the scale and density of development, as well as their distinctive architecture. These attributes and architectural landmarks significantly influence the local landscape. In the adopted valorization model, landscape attributes were evaluated on a scale of 0 to 10 points (Fig. 10). The analyzed towns differed considerably in the

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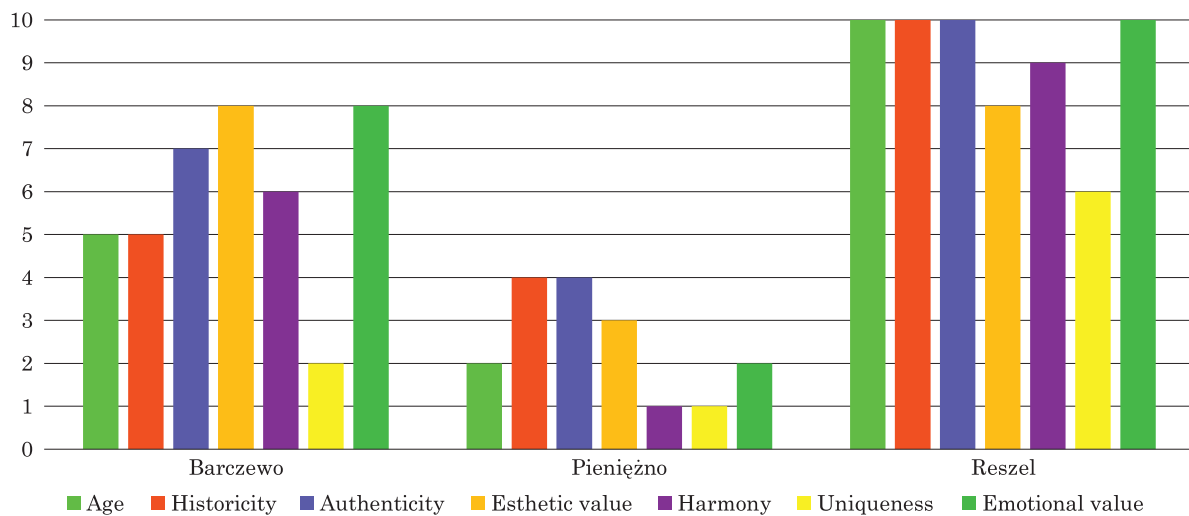
Fig. 10. Landscape attributes of the historical spatial structure of the studied towns
Source: own elaboration.

evaluated attributes, i.e. age, historicity, authenticity, esthetic value, harmony, uniqueness, and emotional value. The highest scores were noted in towns where historical spatial structures were most effectively preserved. The evaluated attributes received the lowest scores in Pieniężno, average scores in Barczewo, and the highest scores in Reszel.

DISCUSSION

Historical spatial structures, in particular old towns, evoke the strongest emotional responses in assessments of urban management. These unique urban structures create a strong sense of local identity and have a positive social impact by integrating local community members (Durrel, 1969). Historical architecture has a unique ambience, which is undoubtedly influenced by the characteristic *genius loci*, which is why old towns are eagerly visited by both local residents and tourists. Despite similarities in local topography, urban layout, and development patterns, the analyzed towns differed considerably in the analyzed spatial attributes. For example, the main transportation routes in Pieniężno are located further away from the historical town center, and the buildings facing the old market square are used solely for residential purposes. As a result, the old town has

been deprived of its commercial functions, and the town center was relocated to another district.

Historical urban and architectural structures are the essence of spatial organization in old towns. These solutions bear testimony to the local cultural heritage, urban planning traditions, technical skills, sensitivity to beauty and harmony, and attachment to local engineering and architectural traditions. The results of local inventories and analyses of iconographic materials revealed that old towns play a vital role in shaping the local landscape. This is particularly true in small towns whose inhabitants feel more attached to their place of residence and feel more responsible for their towns than the inhabitants of large metropolitan areas (Canter, 1977). Small town residents have a strong sense of local identity, and they are more likely to refer to their place of residence as "my town" or "our town". In contrast, large cities are characterized by higher levels of social anonymity, and social bonds are more difficult to build. In this study, the choice of research methods supported the identification of the relationships between the quality and value of the cultural landscape and the presence of historical elements in downtown areas of small towns. These relationships are visible in the scale of urban development, the local panorama, as well as on the regional scale. The applied research methods were

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also highly useful in explaining why historical spatial structures make a key contribution to the quality of the cultural landscape, and why historical town centers attract both local inhabitants and tourists, and promote social integration.

The studied towns have a similar urban layout which testifies to Medieval building and planning traditions. In each town, the urban layout was influenced by local factors, and the observed differences can be attributed to variations in hydrographic (river) and topographic conditions. Historical urban layouts have been preserved to this day, and they have been effectively adapted to modern functions (Figliuolo, 2015) and smoothly incorporated into the existing pedestrian and traffic routes in downtown areas. However, certain adaptations are needed to convert old towns into pedestrian thoroughfares and minimize the impact of vehicular traffic (roads, car parks). In turn, the original architecture of the analyzed towns was less successfully preserved. The extent to which the Medieval urban layout of the examined towns was preserved is directly associated with the severity of damage sustained during World War II. The preservation of the original urban fabric was not the main objective of post-war reconstruction efforts, and the examined town centers were largely rebuilt in the spirit of the socialist realism doctrine which dominated in Central-Eastern Europe at the time.

Warmia is a region with gently undulating terrain, and it abounds in lakes and rivers. These topographic features had military significance, and they played an important role during the establishment of Medieval towns. Towns were nested in river bends or river forks which provided effective protection against potential aggressors on two or three sides of the settlement. Medieval town planners took advantage of geographical surroundings and natural obstacles to protect European towns in this era of lawlessness and violence (Jedwab et al., 2022).

The urban layout of Medieval cities was effectively incorporated into the local environmental conditions. The market square in the town center was a hub of trading activity, and it fueled the economic growth of Medieval towns. The size and shape of the market square were adapted to the town's area and local planning solutions (Fusch, 1994). The market was directly linked with town's transportation routes, and major roads led from town gates to the market square. The shape of the market square also accentuates the regular and geometric urban layout of historic towns.

The function of market squares evolved gradually throughout the centuries. Historical buildings in market squares still host commercial and service outlets, but old town markets took on representative and recreational roles. These downtown areas became the hallmarks of local culture and identity, and they are popular destinations that attract both tourists and investors (Haas, 2009). These observations confirm that old towns have considerable economic significance. The size of market squares was directly influenced by the area occupied by Medieval towns.

Defensive walls and fortifications protected town residents against aggressors and enemies, and they directly determined the original size of Medieval towns. These structures were largely responsible for the compact of urban layout and the grid street pattern of Medieval towns (Hardt, 2000). Fortified structures limited the territorial expansion of Medieval towns for centuries. These urban developments began to spread outside defensive walls only in the 19th century when the construction of railway lines fueled local economies and contributed to population growth in Warmian towns (Czubiel & Domagała, 1969). The 19th century also witnessed the establishment of local workshops and production plants, including breweries, flour mills, lumber mills, and brick factories, which played an important role in the regional economy. As a result, Warmian towns expanded significantly beyond their defensive walls, and rapid urbanization processes have continued into the present.

The landscape of Warmian towns is largely shaped by the historical layout of their old towns. Architectural landmarks, including fortified castles, church steeples, and town hall towers, play a special role in this regard. These structures bear testimony to the region's architectural and civil engineering traditions. Architectural landmarks elicit strong emotional responses, and they provide Warmian

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towns with a unique ambience (*genius loci*) and a spirit of time (*genius saeculi*). These subjective perceptions are largely shaped by historical urban and architectural solutions in old towns (Bravo, 2010). Architectural landmarks have been preserved to a varied degree in the studied towns; therefore, they exert a different impact on the development of the local landscape. A valorization model based on seven criteria was applied in this study to evaluate landscape attributes that are shaped by historical architecture and its components, including architectural landmarks. The highest score was obtained in Reszel, where the historical urban fabric, including the three main types of architectural landmarks, have been most effectively preserved. Historical urban structures were moderately well preserved in Barczewo which received an average score. Pieniężno ranked last in the evaluation because its old town has been largely deprived of historical character and identity.

CONCLUSIONS

Planning and architectural solutions that have been preserved in the urban fabric of old towns constitute unique examples of European cultural heritage. In most cases, old towns continue to play the role of central public spaces. They have been effective adapted to serve modern urban functions, and they make the greatest contribution to the urban panorama. Historical urban centers play a key role in the structure and life of small towns. Unlike large metropolises, historical old towns in small towns contribute to a sense of attachment. Inhabitants who strongly identify with their place of residence are more likely to use the phrases "my town" or "our town". As a result, cultural heritage protection is an easier task in small towns because community members are more inclined to participate in local initiatives than big city dwellers.

The extent to which historical spatial structures shape the cultural landscape of small towns was evaluated with the use of seven criteria: age, historicity, authenticity, esthetic value, harmony, uniqueness, and emotional value. These criteria were directly correlated with the extent to which the original urban layout and architecture had been preserved in Warmian towns. The analyzed criteria received the highest scores in towns whose historical attributes have been most effectively preserved.

The study demonstrated that old towns shape the identity of Medieval towns in Warmia and influence the quality of local life. The cozy ambience of old towns, small-scale development, historical architecture, and the presence of architectural landmarks are responsible for the unique character of old towns relative to other urban districts. These historical components are largely responsible for shaping the local cultural landscape. For this reason, modern urban planning solutions and construction permits in historic towns should be carefully analyzed to ensure that new projects, such as high-rise apartment buildings, silos, or antenna masts, do not exert a negative impact on the local panorama.

The study also revealed that effective management of historical urban centers accentuates the prominent character of these structures in the broader spatial context. New buildings and structures that could compromise the unique ambience of old towns and the local panorama are unlikely to be introduced in these areas due to small-scale development and the existing spatial constraints. Old towns do not feature vacant land plots or major transportation routes; therefore, large development projects, such as multi-story buildings, are unlikely to be commissioned in historical urban centers. Therefore, the spatial structure of old towns in itself offers the best protection against modern development. The presence of intrusive elements in the cultural landscape would have negative implications for regional promotion and tourism.

One of the greatest strengths of this study is that the results have numerous practical applications. Above all, the presented findings provide valuable inputs for territorial governments in the process of planning local and regional promotional campaigns. The results can also be used by the local authorities to exchange experiences relating to the implementation of development policies and promotional strategies.

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The adopted research methods are universal tools that can applied in small towns in other Polish regions, in other European countries, and in other parts of the world. The obtained findings make a meaningful contribution to the knowledge about the role and significance of historical spatial structures in the functioning of modern towns.

In the future, the proposed method for evaluating the quality of urban space in small towns will be verified based on expert surveys and the opinions of local community members who are the main users of these public spaces. The results will be used to modify the proposed approach. The present study was motivated by the general scarcity of research on international standards for assessing historical urban structures in small towns.

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