

Aesthetic values and the perception of suburban landscapes

AGNIESZKA ALEKSANDRA JASZCZAK^{1*}, LINDA SZŰCS²,
BEATA DREKSLER³

¹University of Warmia and Mazury in Olsztyn

²Georg-August University of Göttingen

³Warsaw University of Life Sciences – SGGW

Abstract: *Aesthetic values and the perception of suburban landscapes.* Every suburban area is individual in character, which results primarily from the location, the extent of a given town, the industrialisation processes as well as economic and social significance. The protection of landscape values, especially in those areas which are slightly changed, is an essential landscape planning issue. The main goal of this research study is to analyse the historical and current situation of the Kerstlingeröder Feld suburb in Göttingen (Lower Saxony, Germany) in the context of the protection of aesthetic values, including cultural, natural and historical ones. In order to do this, it was necessary to identify the visual landscape elements that influence the area analysed. Furthermore, the landscape preferences of visitors to Kerstlingeröder Feld were analysed using an interview based on historical pictures to find their opinions on the historical development of the landscape. The interviews showed that the preferred landscape was the one from 1940, whose natural and cultural elements could be clearly identified. The results of the study confirmed that aesthetic values (natural, cultural, historical) identified by experts and the opinions of participants about their landscape preferences are both essential factors in landscape planning issues.

Key words: aesthetic values of landscapes, landscape preference, suburban area, Göttingen

INTRODUCTION

‘»Culture« is the word we have assigned to the force that assists us in iden-

tifying which of our many sensations we should focus on and apportion value to’ [de Botton, 2010]. Landscape blends all of the visual elements in an area abounding in natural and cultural features. A visual image plays a huge role in determining the final state of this area and its components [Atik et al., 2010]. A more differentiated approach to the issue of nature and beauty is described by de Botton [2010]: ‘We each settle naturally on a fitting idea of beauty, it seems that our visual and emotional faculties in fact need constant external guidance to help them decide what they should take note of and appreciate’. This “external guidance” should be based on certain norms and guidelines that determine the appropriate relations between nature and the material that is artificially introduced into it. Only then will it help to achieve harmony between people and the environment.

But why was it important to involve historical analysis in the study? The roots of nature conservation in Germany lie in the protection and preservation of the natural and cultural values of historical landscapes which are, as with the pre-industrial ones, largely defined by natural elements. These kinds of landscape

*tel. +4889 523 41 82, e-mail: agaj77@tlen.pl

scenes are often used as guidelines (in German Leitbilder) in planning processes [Szűcs, 2012]. Since the appearance of large scale landscape conservation in the 1970s, the practice of nature protection has been dominated by these historical guidelines, which are mostly orientated towards nineteenth century landscapes characterized by more diverse habitats. However, these landscape scenes are strongly idealized. Penker [1986] calls them “high-performance ecological landscapes” with an unprecedented “ecological efficiency” [Raffelsiefer, 2000]. The next related question is this: Could the scenes of that time serve as a paradigm in landscape planning processes?

The main goal of the research is to analyse the historical and current situation of the Kerstlingeröder Feld suburb in Göttingen (Lower Saxony, Germany) in the context of the protection of aesthetic values, including cultural, natural and historical ones. In order to do this, it was necessary to identify the visual landscape elements that influence the area analysed. Then, it was important to investigate the preferences of visitors regarding the historical and actual scenery of the landscape. The questions posed by the empirical section of the research were: Do the visitors like the historical or actual landscape? Why do they like the historical or actual landscape? The other purpose of the study was to find out which elements of the landscape are valued most. The participation of respondents would appear helpful in proposing future aims and directions for the development of Kerstlingeröder Feld.

MATERIAL AND METHODS

The research and the choice of the area are a consequence of actions implemented under the C I .3. Graduate School Interdisciplinary Environmental History project funded by the German Research Funding Organisation (Deutsche Forschungsgemeinschaft).

Historical research was needed first of all to analyse the historical and cultural values of the area. This involved monographic [Lücke, 1927; Deppe and Troe, 1956; Prietzel, 1990; Meineke et al., 1993] and cartographic sources¹, as well as a photographic data collection, which helped identify unique areas and objects for sustainable use and aesthetically important visual elements of the landscape. Old photographs, paintings and copper engravings collected from the Central State Archive in Hannover and the City Archive of Göttingen were essential sources drawn on in the research. Furthermore, individual landscape units were distinguished within the structure of the area (manor area, orchard, acres and avenues) based on an actual visual analysis.

Four photographs (Figs. 1–4) were chosen from the historical data collection as materials for the preference study about the research area. These pictures were selected for the following reasons: the copper engraving from 1800 (Fig. 1) and the painting from the middle of the nineteenth century (Fig. 2) represent an intensive anthropogenic use as well as the agricultural function of the area, while the picture from 1940 (Fig. 3) illustrates a pasture landscape

¹Cartographic materials obtained from Göttingen City Archive (digital orthophoto map from 1999), NLWKN in Hannover (historical Prussian map dated on 1878).

with both natural and cultural elements. Finally, the actual photograph (Fig. 4), which was taken from the same perspective as the pictures before, shows the natural character of the landscape. It was possible based on these sceneries to analyse which characteristic elements leave the greatest impression on visitors.



FIGURE 1. Copper engraving of the manor of Kerstlingeröder Feld from 1800 (Göttingen City Archive)



FIGURE 2. Painting of Kerstlingeröder Feld from the nineteenth century (Göttingen City Archive)



FIGURE 3. Picture of the research area taken circa 1940 (Göttingen City Archive)

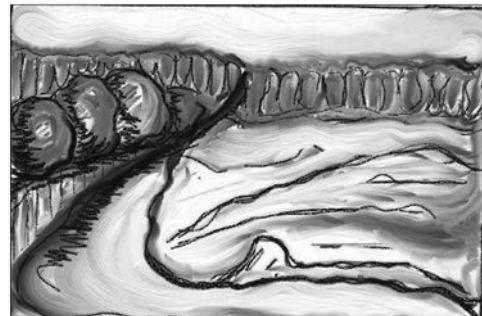


FIGURE 4. Picture of the study area in 2010 (sketches by L. Szücs)

The respondents were asked to give their opinion about the landscape on a Likert scale (very good, fairly good, average, below average, don't like it and don't know). Afterwards, they were asked to answer and justify the summary question of whether they like the landscape of today or that of the past. The data were analysed statistically using SPSS software.

RESULTS AND DISCUSSION

The significance of aesthetic experience in landscape analysis

One of the main issues in spatial planning, and especially in the planning of visual space, should be knowledge of behaviour and psychological human needs [Osikowska and Przetacznik, 2007]. Basic human needs can be assigned to specific landscapes [Lanninger and Langarova, 2010]. Landscape elements are defined as functional elements related to individual behaviour [Lanninger, 2010]. According to Myczkowski and Forczek-Brataniec [2007] it is important to work with identification of the cultural and natural heritage in the context of visual relations. These are named as visual aspects too.

Regarding the aesthetics of a landscape, the most important approach is the perception of aesthetic and non-aesthetic factors by an observer – primarily by means of the senses of sight and hearing as well as of touch and smell. According to Goodchild [2007] a landscape includes everything that is in view and that can be seen or perceived by the eye in the mind or in the imagination. It also includes everything that is related to parts

or aspects of the view. Under the special conditions related to spatial planning, properly phrased legal provisions are of particular importance. The perception of visual values with reference to natural and cultural determinants is an important issue for planning activities.

Elements affecting the perception of a landscape

One way in which the components of a landscape may be visually analysed is in terms of areas, objects and details [Goodchild, 2007]. Perception is most frequently affected by spatial forms, colours, light-and-shade effects and motion-related changes of the layout. The most highly rated elements are those that are interconnected compositionally and that harmonise with each other. Therefore, aesthetic qualities consist of features positively affecting the perception of a harmonious landscape. As regards colours, regional diversity, varied topography and different climatic, natural, cultural and social conditions may be referred to. These issues are examined according to the methods of colour geography developed by the French colourists, J.P. Lenclos and D. Lenclos. It should be noted here that the concept of colour geography has been repeatedly supported by numerous researchers, including Tarajko-Kowalska and Kowalski [2007]. In 1860 Gottfried Semper concluded that, when selecting a particular colour tone, one should be guided by the climate as well as by the customs and traditions of a given region. The colours of space – particularly extra-urban space – are affected by an area's land use and its vegetation cover.

Another important factor is the composition of species. This is especially true of trees, as well as of broadleaved and coniferous shrubs. The tints of leaves and shoots are also important – if only indirectly so. Throughout the growing season trees take on particular shades of green according to the species and variety, while in the autumn their range of colours becomes diverse. The native (in this particular case, central-European) species of trees, *inter alia* those planted along avenues, turn yellow, while the leaves of alien, introduced species turn red, orange or occasionally purple [Jaszczak, 2008].

The research area

The research area of Kerstlingeröder Feld (202 ha) is situated in a forest area southeast of Göttingen (Figs. 5, 6) within the protected landscape of the Weser-Leine-Bergland in south Lower Saxony. The area, which is part of the conservation area of the Göttingen Forest, was shaped by Middle Triassic limestone and

represents a relic of a cultural landscape whose land use history goes back to the fourteenth century.

The origin of the landscape is connected to the foundation of the village of Kersthelingerode in 1346. Despite ample resources of water and wood the village was already deserted in 1387, but the fields remained in continuous agricultural use. At the beginning of the sixteenth century the village was founded a second time, with a new manor building. From then until the twentieth century the landscape was shaped by agricultural use as field and pasture [Meineke et al., 1993]. Numerous historical guidebooks and almanacs from the eighteenth and nineteenth century mention Kerstlingeröder Feld as one of the most popular recreation areas of Göttingen and also point out the aesthetic value of the landscape as perceived by students and other visitors.

In 1928 some parts of the area were transferred to a military zone and, from 1937, the whole field was used as a military training ground. From 1945–1957 it

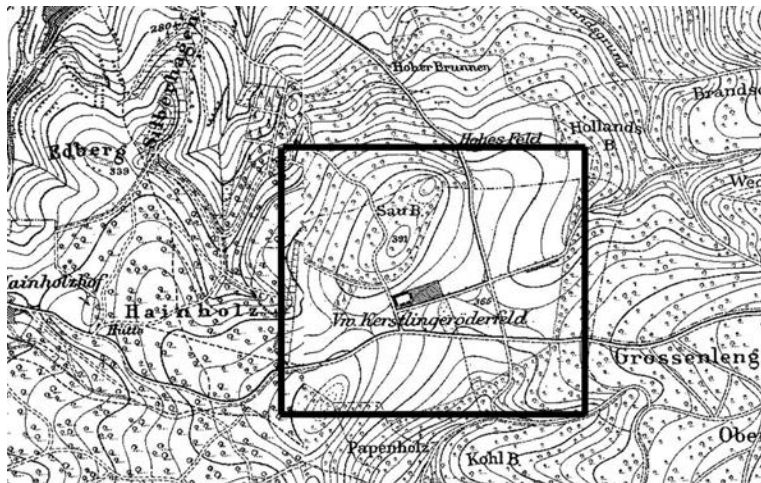


FIGURE 5. Kerstlingeröder Feld marked with a line on an historical map from 1878 (NLWKN)



FIGURE 6. Digital Orthophoto from 1999 (Göttingen City Archive)

was used by British troops and after that until 1993 by the Federal Armed Force.

By the 1990s it had already been nominated as a flora-fauna habitat conservation area [Niedersachsen No.138], which status was confirmed by the European Commission in 2004 [EU No. DE 4325-301]. In 2001 it came under the guidance of the City of Göttingen as part of the Forestry District of Göttingen. Nature conservation strategies and a management concept for the area were arranged by the BUND (Friends of the Earth Germany) and by NABU (Nature and Biodiversity Union Germany).

Landscape sketches for Kerstlingeröder Feld

Following the completion of the historical and visual analysis of the research area, characteristic landscape elements were chosen to be recorded in photographs and documented as sketches.

The analysis of a small number of significant but different landscape pictures can be more effective than examining large numbers from the same point of view. A classical graphic evaluation provides more information about the elements of a panorama and how they are related to each other [Byrski, 2007]. The role of landscape analysis, which includes the analysis of panoramas, is described by Myczkowski and Forczek-Brataniec [2007]. As regards the perception of views, distinguishing panoramic views with simultaneous division into remote and close views was of huge importance. At the same time, panoramic analyses from a number of observation points made it possible to define the conditions for the protection of visual elements of the landscape.

The individual landscape units were distinguished within the structure of the area which, as is apparent from the community interview conducted amongst selected users of the area, are of particular

aesthetic significance for the landscape. These include:

1. The manor area. This unit is separated from the area by dense woodlots and the ruins. The structure of the unit's walls is open owing to plant material, which enables the perception of expansive views, while the remains of buildings (the ruins) constitute single building shapes that accentuate the unit.
2. The areas in agricultural use (pasture). Within the space under analysis a number of units have been separated, whose boundaries are marked by the forest edge and internal roads and sometimes by a roadside avenue (fruit trees) or field shrubs. The structure of this unit is homogenous and provides extensive perceptual impressions.
3. The orchard is outlined by rhythmically repetitive stands of fruit trees, which form a uniform whole.
4. Another element which can be distinguished within the space is the road and its surroundings, namely the avenues along the internal roads. The avenues are distinctive formations within the landscape. Their origin is associated with distant times in relation to the history of culture and art. Throughout the centuries, avenues have played a significant role in the development of space and in the formation of landscape compositions not only in park complexes but also in built-up and suburban landscapes. Within the boundaries of the research area they clarify the layout and, thanks to the rhythmic pattern of plantations, prevent the landscape from becoming monotonous. As regards remote open

landscapes, the viewing links are of importance.

Determining the dominant feature, that is, the element to which all others within the structure are subordinated, required a complex analysis and in-depth knowledge of the research area.

The question related to the history of the chosen research area is that of how people now perceive the historical landscape scenes and whether they could serve as a paradigm in landscape planning. Most of the respondents indicated the attention-attracting, uniform "natural shape" in the form of a group of tree plantings in the central part of the area being researched, whereas the largest part of the remains of the barracks is thought of as the architecturally dominant feature. There are characteristic features in the form of boulders, individual trees and shrubs that are distinguished by their structure or colours, but also deadwoods and landscape elements that have been introduced, such as seats and a stone acting as a guide-post.

As regards the Kerstlingeröder Feld area, the colours are primarily related to the structure of the vegetation cover, the topography, the weather conditions, the season and the light (in the twenty-four-hour cycle). The significance of colours and light relates to both expansive and close views, since these impart the impression of either remoteness or closeness. Because it changes over the twenty-four-hour cycle, the light enables changing perceptions of a diverse range of hues and tints in the landscape.

Moreover, a landscape similar to a natural one provides a person with spiritual experiences by embodying and ex-

pressing a certain stability in the renewal of nature, the recurrent patterns of the regeneration of life, the succession of the seasons and the day-and-night cycle. Nature itself, though, expresses instability, the passing of time, and constant changes and their consequences.

Interviews on landscape preference

The interviews regarding historical and actual landscape preferences showed that the preferred scenery was that of 1940 (39.2%). It features pasture land and the manor building still in anthropogenic use. On the other hand, many of the interviewees (41.8%) judged the landscape from 1900 as “fairly good”. The agricultural landscape from the nineteenth century was assessed as “average” or “fairly

good”. In comparison with the scenery of today, the actual landscape was generally accepted as “very good” (29.4%).

To sum up 78% of the visitors liked the landscape of today more because of its natural character, open landscape and restorative function. Furthermore, 22% liked the landscape of the past that was linked to cultural values and intensive anthropogenic use of the landscape (Fig. 7).

The results confirmed that less intensively used landscape (in this case the pasture land) was the most popular because of its natural and cultural values. The pictures that showed agricultural use or in which only “pure” nature could be clearly identified were rated as either “fairly good” or “average”.

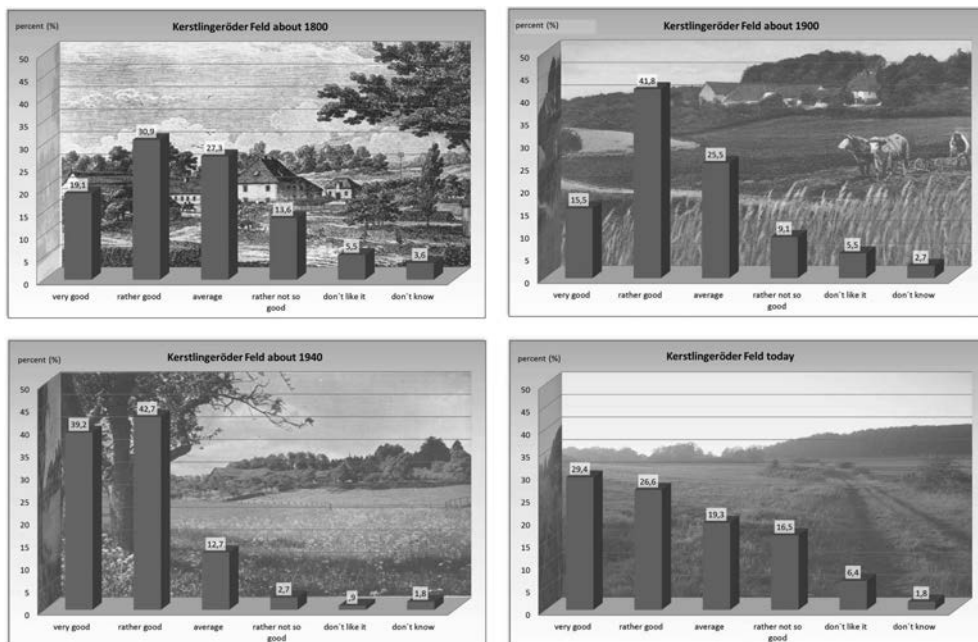


FIGURE 7. Analysis of historical and actual landscape preferences (L. Szücs)

CONCLUSIONS

Suburban areas have a combination of the functions of urban and rural zones and a range of relationships with both. It is the urban and rural zones that have changed the most in economic, social and environmental terms and this has influenced the transformation of the suburbs in between. Nevertheless, these (suburban) areas could be understood as a significant reservoir of natural elements and be used for sustainable recreation.

The main issue of the research was the identification of the landscape's character by historical analysis and analysis of the actual terrain. Historical research and visual analyses of the current state of landscape structures will enable the identification of trends and the formulation of possibilities for the further use of Kerstlingeröder Feld and will also allow comparisons to be made with suburban areas with similar issues. The second important goal was to investigate the views of visitors concerning the area that is used for recreational activities.

Kerstlingeröder Feld in the suburban region of Göttingen was chosen as a research area for the preference study because of its natural values, such as the open panorama, the forest, the flora and fauna habitats, and because of its cultural and historical values, such as the ruined manor, the orchard and the pasture.

The replies to the question asked to Göttingen inhabitants of whether they prefer past or present scenery revealed that landscapes with both cultural and natural elements were most popular.

Most of the inhabitants would like to maintain the area in its present form, while some would be interested in seeing it under anthropogenic use as it was in history. Furthermore, aspects such as the open panorama (causing feelings of freedom), diversity (increasing interest in the landscape) and closeness to nature were named as positive attributes of the area researched.

Our conclusion is that the area studied should continue to be protected because of its natural potential. On the other hand, its unique aesthetic and visual assets represent an opportunity for the development of light-recreational uses.

Taking everything into consideration, including the methods and the analysis of old photographs and sketches, it is possible to show the influence of aesthetic values on the way people perceive landscape. It is also important to define future development prospects based on environmental protection principles and on the needs of Göttingen's inhabitants. This refers to the characterization of landscape values in the field of spatial planning and to the protection of Kerstlingeröder Feld.

Acknowledgments

The authors are grateful to the City of Göttingen for the special assistance given them during the completion of materials. Thanks are also due for their institutional and financial support to the Georg-August University in Göttingen (Prof. Renate Bürger Arndt), to the University of Warmia and Mazury in Olsztyn and to the Warsaw University of Life Sciences – SGGW.

REFERENCES

- ATIK M., ORTABAHÇE V., İŞIKLI R.C., YILDIRIM E. (2010). Landscape character analysis [LCA] for cultural landscapes; side case in Antalya Region, Turkey, "Cultural landscape" ECLAS Conference Proceedings, Istanbul, p. 779.
- BYRSKI P. (2007). Analizy krajobrazowe panoram w nauczaniu projektowania nowych form. *Czasopismo Techniczne* 104, 5-A: 195–197.
- De BOTTON A. (2010). *Architektura szczęścia*. Wyd. Czuby barbarzyńca, Warszawa.
- DEPPE A., TROE H. (1956). *Der Göttinger Wald und seine Umgebung – Ein landschafts- und siedlungskundlicher Überblick mit Hinweisen für heimatkundliche Wanderungen* Book. Heinz Reise Verlag, Göttingen.
- GOODCHILD P. (2007). Landscape: a suggested primary definition. *Czasopismo Techniczne* 104, 5-A: 131–133.
- JASZCZAK A. (2008). Droga krajobrazowa jako produkt turystyczny. *Nauka Przyr. Technol.* 2 (4), 42.
- LANNINGER S. (2010). *Theorien und Muster der Landschaftswahrnehmung – Landschaft aus der Sicht von Migranten*. Dissertation at the University of Freiburg/Breisgau, p. 15.
- LANNINGER S., LANGAROVA K. (2010) *Landschaft und Identität – Theoretische Überlegungen zur Weiterentwicklung der Landschaftsbildbewertung*. *GAIA* 19 (2): 129–139.
- LÜCKE H. (1927). *Zum Besitzwechsel des Kerstlingeröder Feldes seit dem Ende des 15. Jahrhunderts* [Book Section]. Ed. An den Ufern der Garte.
- MEINEKE T., BRUNKEN G., MENGE K. (1993). *Landschaftsökologische Bestandsaufnahme Kerstlingeröder Feld* (Report). Göttingen: Umweltbiologische Studien [ubs].
- MYCZKOWSKI Z., FORCZEK-BRATANIEC U. (2007). Wizualne aspekty tożsamości miejsca – konflikty. *Czasopismo Techniczne* 10 (104): 150–152.
- OSIKOWSKA W., PRZETACZNIK J. (2007). *Problemy percepcji i oceny wartości krajobrazowych*. *Czasopismo Techniczne* 10 (104): 155.
- PENKER G. (1986). *Leitbilder der Landschaft Garten und Landschaft* 11 (86): 23–27.
- PRIETZEL M. (1990). *Wüsten-Kerstlingeroode - hoc desertum - Der spätmittelalterliche Wüstungsprozess aus der Sicht von Betroffenen* [Book Section]. Ed. Göttinger Jahrbuch, p. 38.
- RAFFELSIEFER M. (2000). *Perception, evaluation and comprehension of nature in the German nature conservancy – a study of perceptual geography under special consideration of the case of nature reserve Ohligser Heide*. Doctoral Thesis at the University of Duisburg, Department of Humanities.
- SZÚCS L. (2012). *Changes of landscape sceneries since the end of the 18th century in the City of Göttingen*. *Acta Nova Leopoldina* (in print).
- TARAJKO-KOWALSKA J., KOWALSKI P. (2007). *Kształtowanie harmonii wizualnej między krajobrazem, architekturą w oparciu o kolor*. *Czasopismo Techniczne* 104, 5-A: 147–149.

Streszczenie: *Walory estetyczne oraz percepcja krajobrazów podmiejskich.* Każda strefa podmiejska ma swój charakter zależny przede wszystkim od lokalizacji, zasięgu danego miasta, procesów industrializacji, znaczenia gospodarczego i socjalnego. Ochrona wartości krajobrazowych, zwłaszcza na obszarach mało przekształconych, jest ważna z punktu widzenia planowania krajobrazu. Głównym założeniem pracy jest analiza historycznego i aktualnego stanu terenu podmiejskiego Kerstlingeröder Feld w Getyndze (Dolna Saksonia, Niemcy) w kontekście ochrony warto-

ści estetycznych, włączając elementy kulturowe, przyrodnicze i historyczne. Aby tego dowieść, istotna była identyfikacja elementów wizualnych mających wpływ na analizowany teren. Ponadto wykonano badania ankietowe dotyczące odbioru krajobrazu przez odwiedzających Kerstlingeröder Feld, przy czym wykorzystano historyczne obrazy. Badania ankietowe pokazały, że najlepszy

odbior krajobrazu dotyczył jego stanu od 1940 r., gdzie przyrodnicze i kulturowe elementy były jasno zidentyfikowane. Wyniki potwierdzają również, że wartości estetyczne (przyrodnicze, kulturowe i historyczne) są niezbędnymi czynnikami w planowaniu przestrzeni, niezależnie od zdania ekspertów czy respondentów odwiedzających badany teren.