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LANDSCAPE ARCHITECTURE AND LANDSCAPE ECOLOGY

Anna Eplényi:
THE LANDSCAPE CHARACTERISATION OF KALOTASZEG
FINAL THESIS OF THE DISSERTATION



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I. GOALS AND OBJECTIVES OF THE DISSERTATION

The dissertation examines an emblematic region of Hungarian cultural and vernacular heritage: Kalotaszeg, located in the Romanian Republic (Cluj and Salaj County). This area has a large Hungarian minority surrounded by ethnic Romanians; it was a part Transylvania until 1920, when it became part of Romanian Kingdom. My goal was to compare the uniqueness of this landscape with its special ethnographic heritage (dance, music, folk dressing, handcraft etc.). According to F. Fodor (geographer, 1887-1962)

“ the individuality of a landscape is born, when its inhabitants recognise the distinct, special characters of their living that separates them from others, and give name for this individuality. “ My knowledge as a landscape architect and art teacher, with my graphic skill, and self-acquired knowledge of folk-art in general and the area, I feel, was an adequate background to research the local-history, ethnography and use this knowledge to analyze and follow a line of investigation in the area landscape architecture.

After reviewing and taking out the two key points from the international landscape-characterisation tendencies (historic – and development-oriented; HLC – LCA), I added graphical visualisation as well. During my PhD preparatory years (2009-to the present) under the Doctoral Council of the University I investigated this subject matter with frequent field-trips and voluntary cooperative work with student and colleagues.

The basic research-questions are: 1. “Is it possible to prove the ethnographical region of Kalotaszeg as a “landscape”? 2. How does the ethnographical aspects relate to the landscape unit analysed from the point of landscape-characterisation? What special geomorphological forms, spatial arrangements, landscape character-patterns distinguish and justify Kalotaszeg as a typical landscape? How the finer, individual character-features separate the larger landscape-region into smaller units?”

II. METHODOLOGY

Beside the 40-45 villages, which this ethnographic area contains according to former studies, I included 116 settlements (2780 km²) into the survey, in order to find the transitional areas, borders where the Kalotaszeg-landscape-character becomes different. Ethnographically Kalotaszeg is divided into 4 districts: Felszeg (~Upper part), Alszeg

(~Lower Part), Nádas-mente (Nádas-valley) and Kapus-Gyalu transitional area. Therefore the research not only wishes to recognise the “region’s common-landscape-characteristics” but also deals with the differences and changes in the “district’s individual physiognomy”.

In my research I compared two partially parallel methodological issues. – In Chapter II. I completed my visual and personal experience of the area with geological data and with the morphology of the landscape surface. Based on examining the volumes (hills-mound) and the spaces (valleys, vales) of this expansive, diverse, rolling hillside-upland I concluded “Landform-types” peculiar to Kalotaszeg and the surrounding areas. After this phase I set up the hierarchy of “landscape-character AREAS” and “landscape-character TYPES” in Kalotaszeg, and consequently I determined the concept of “landscape-character ZONES”. These are certain areas/districts with common landscape-characters (scale, pattern, texture) which relate to ethnographical factors.

On the research area 13 Zones could be differentiated which were visualized with 3D-modell sketches and described in detail with landscape aesthetical aspects, such as: spatial diversity, landscape morphology, scale of naturalness, scale of stewardship, coherence, complexity, image-likeness and symbolic values.

Chapter III. is based on the analysis of site-related landscape-character features and landscape-character patterns in nine areas. Chapter III. also includes agricultural statistics from the 19-20th century of which I could establish a self-developed landscape-evaluation method to describe the role of six factors in the landscape-characterisation : forest, arable land, pasturing, water-buffalo livestock, garden and orchard, and vinery. From these data I could conclude objective site-specific characters that are exclusive to the Kalotaszeg landscape character.

As a result of several years of my local historical, and archive-research I integrated historical images, old maps, aerial photographs, plans and field-descriptions into these topics, so this method, comparing to the earlier, is rather past and historical oriented. Some of these land-use categories also made up of distinct landscape-patterns which influenced the landscape character, therefore my paper deals with all details, (size, forms, graphical features and frequency) even if they are represented in low percent (raster-orchards, vertically divided vinery fields, mottled tree pastures, dark conifer belts or reed plot).

Patterns of forest and agricultural terraces (=lynchets) were analyzed in correlation with morphological fitting onto the terrain, and were visualized with schema-drawings. Finally, three more anthropological elements were examined having strong impacts on the landscape-character of Kalotaszeg region: 1.the settlement structure and ground-plot pattern; 2. the view-shed and spatial distance of church-towers, 3. and the influence of mining, removal, erosion, landslide to the landscape surface.

III. RESULTS

As result of the study I compared the two approaches relevant to methodology as well as to territorial issues. At first the conclusions of the geomorphologic- and spatial-based landscape character assessment integrated with historical network aspects. At second I sum up (in tables, chart-diagrams and maps) the importance of statistic-based landscape-factors which have an impact on the character. According to the final scores of the villages-list (=How much they are typical of Kalotaszeg?) I could evaluate them in increasing order, as well as in zones. Both samples showed significant correlations with the original hypothetical classification: How much they are typical Kalotaszeg-type villages? Finally I compared all those landscape character issues which either prove the “landscape-unity” of Kalotaszeg; or underlines the finer “style-distribution” of the districts. All information is summed up in a “Final Landscape Character Table” attached at the back of the dissertation. The thesis (9) of the doctoral dissertation described below, conclude the results from two approaches: (Kalotaszeg-) site-related statements and conclusion of this landscape characterisation combined with ethnographical issues.

THESIS_1: As a result of the landscape character analysis I concluded, that Kalotaszeg can be described as a unique and distinctive region with certain geomorphologic space-types, landscape-elements and landscape-patterns - which are typical and common in the whole district. Together with the folk-art and culture of Kalotaszeg exists parallel a unique “Kalotaszeg landscape” as well.

The individuality of this Kalotaszeg-landscape can be described with the following characteristics: very distributed, undulating, rolling hillside based on Eocene-limestone; the geological background resulted particular geomorphologic formations; this led to various visual diversity, view-sheds, and string dynamics in the scenery. Chalk-quarries and mines of good quality limestone give a special pattern to the landscape, while it also has historical importance in the landscape formation. Because of its open vistas the area cannot be considered as an upland; the silhouettes have a strong impact on the examined territory of the river divided-valleys. Consequently the rather distributed and low percentage of forest-land cover, the concentrated and closed forests/forest boundary turn out to be a crucial landscape-character pattern and border feature. The horizontal lines of scrubbed lynchets - (long strips which allow ploughing on the hillsides) with their strong appearance in the view - are the key-landscape character-pattern of this region. A common typical feature of the whole region is the historical importance of water-buffalo livestock (19-20th century) and the historical significance of smaller vineyards all around the villages. Finally, the last crucial man-made character element is the special wood-carved house facades from the '20-'30-ies, which influence the street and the settlement views.

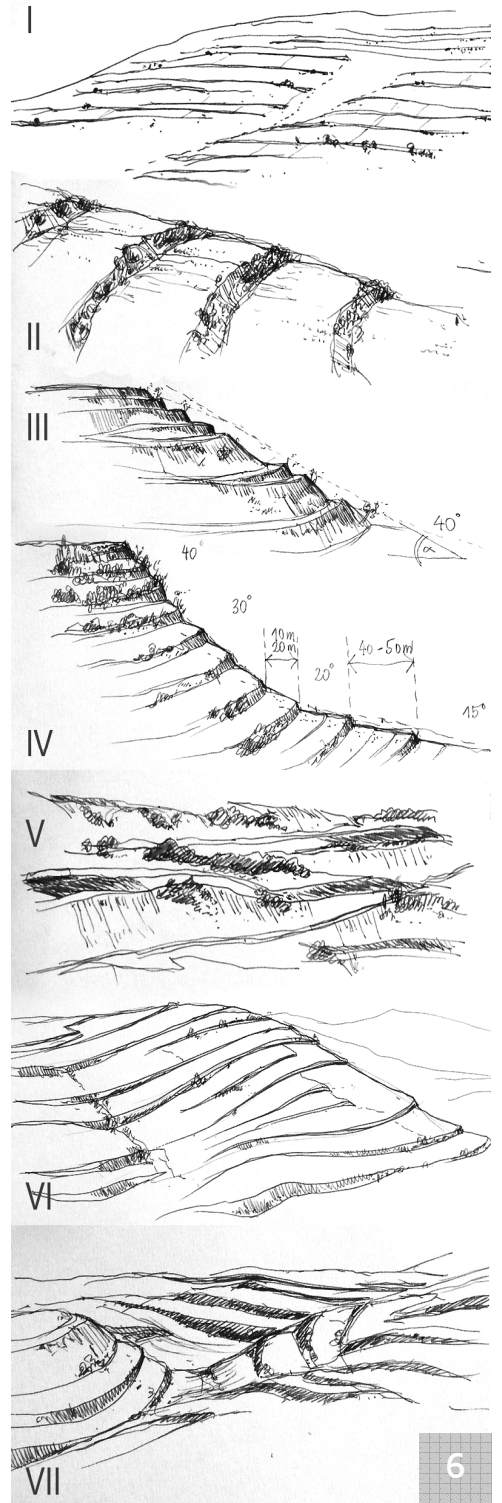
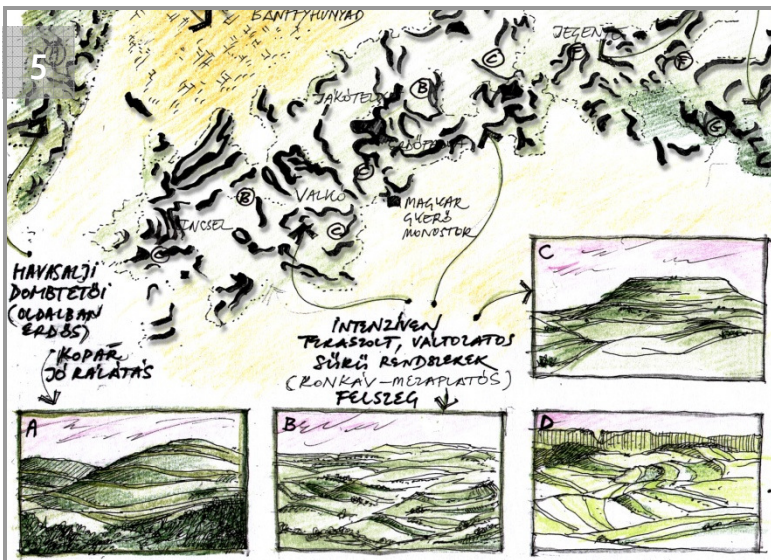
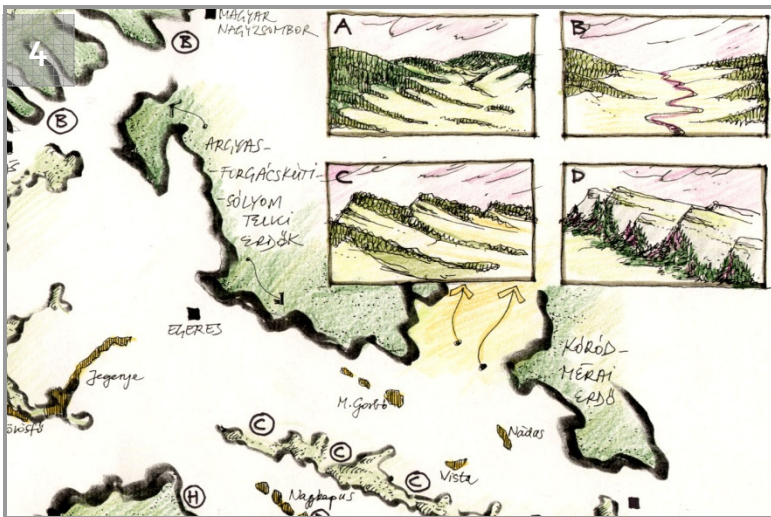
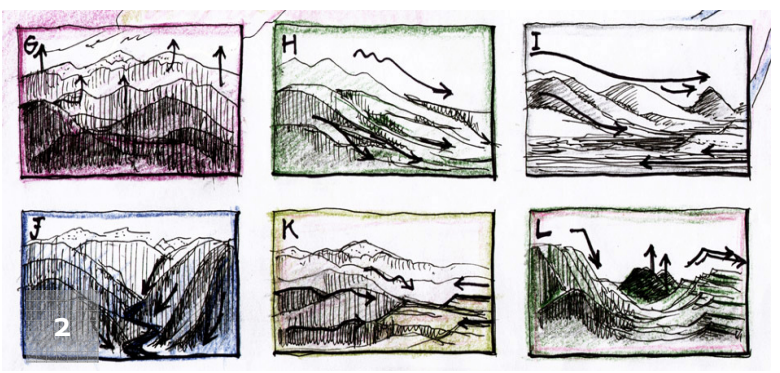
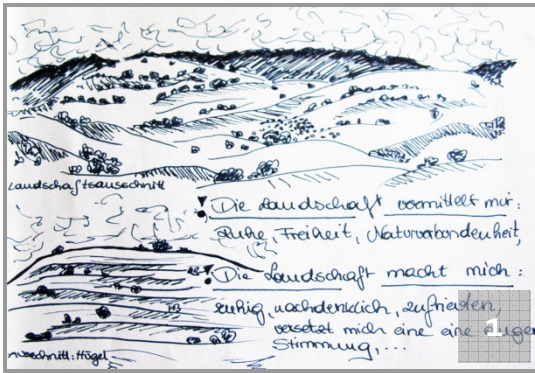
THESIS_2: The landscape-character assessment underlines and emphasises the ethnical and ethnographical distribution of Kalotaszeg (Up-land, Low-land, Nádas-valley, Kapus-Gyalu area) by highlighting the slight differences in dominant surface-morphology as well as in the diversity of landscape patterns and elements.

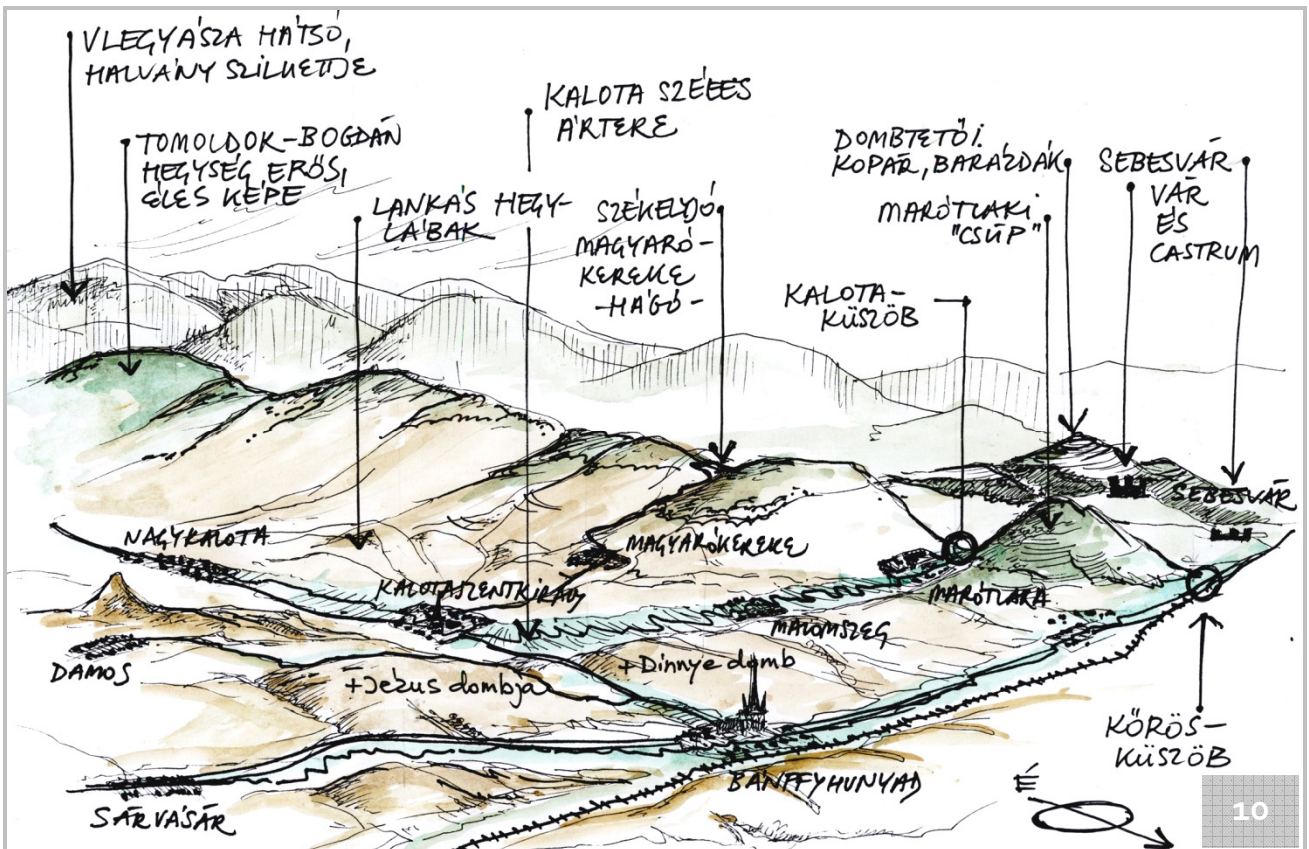
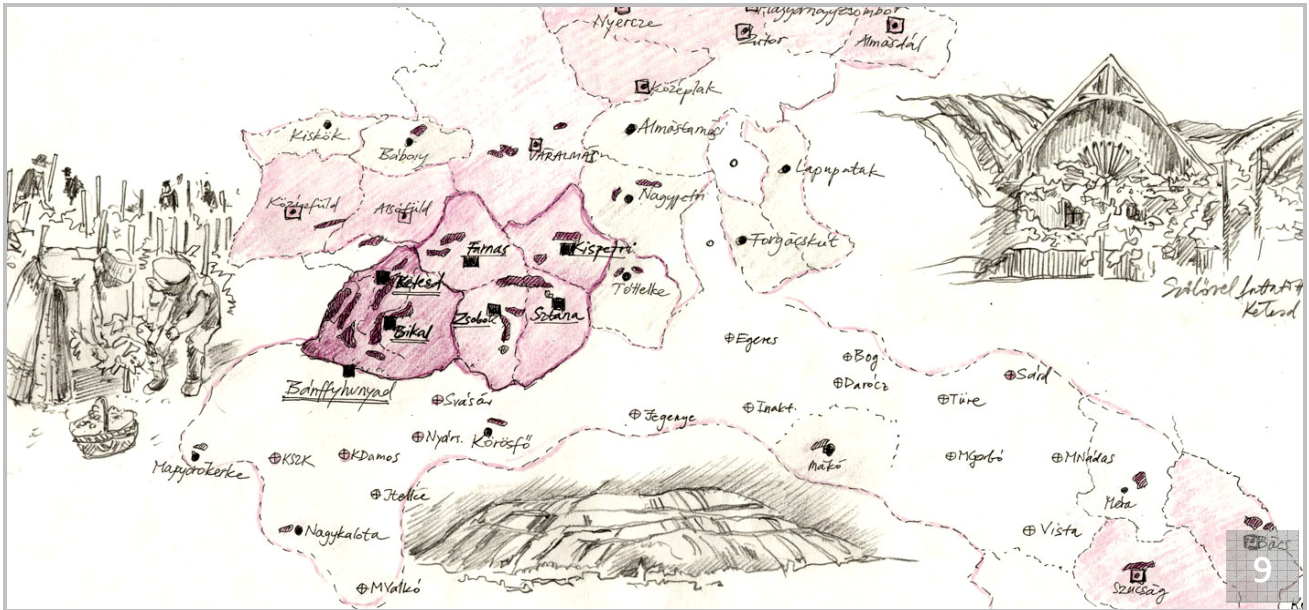
Such morphological landscape character differences are: the horizontal plateaus and concave gradient slopes of limestone strata around Felszeg, in contradiction to the Nádas-river valley, where overcast strata are leaning 10% degree slope to the northeast, creating a long, and gentle northern hillside and a south-facing steep downhill. In relation to landscape-patterns orchards and vineyards are more common on the warmer Lower-Part; while forest patches are absent in the Upper-part, therefore the silhouette of Vlegyásza-Mt. and the middle-age church towers play a more intensive role in the open

landscape. (These features are lacking on the eastern part). Open forest woodlands are more common in the eastern Nádas-valley.

THESIS_3: The lynchets not only have historical importance in traditional land-use, but with their organic forms and fitting to the landscape-morphology they are crucial pattern-characteristics in the scenery. Their occurrence is typical for Kalotaszeg, therefore this pattern is appropriate to create border around it. With their variegation (morphology, size, forms, lights) and more-and-more scrubby natural appearance it bear with special aesthetic value.

The terraces cover the rolling landscape as a veil with their waving, linear-clusters and high diversity of edge-effects. Their deeper study unravels further details about landscape-historical aspects. (For example: the strong correlation of land strips with ownership.) According to the micro morphology of the area 4 types can be separated: declivous, even, sleep, and broken. All of which were demonstrated with images and model-sketches in my paper. The pattern marks the borders of Kalotaszeg, and they are typical in high-density area in the eastern part of Upper-Part, and Nádas-valley. The lower alpine zone they occur on the declivous hilltops rather than on very steep hillsides. They are also rare in the Lower-Part, where the drainage basin is sensitive for erosion. Consequently in my the landscape aesthetical study it became clear that the fascinating and grandiose effort, through time and space, created a local dynamic in this terrain-formation which would be hard, if not impossible, to occur in the same style anywhere else. It's complexity and coherence derive from its rhythm and various light- and form effects. Its natural harmony originates from the fact that the goal wasn't to create "beauty", although it created artistic magnificence. Because its complexity in landscape history, landscape scenery and aesthetic I conclude lynchets should be a landscape heritage for future protection.





THESIS_4: To determine the “Landscape characteristics of Kalotaszeg” the following particulars have priority : (1) first is the terrain-morphological aspect and form-typology because of its waving, open, rolling spatial experiences (silhouettes, hill forms and Drainage basins. (2) Second is the importance of forms, pattern, and borders of forests because it’s middle-low percent in land-use and open woodland, parkland style. (3) The third crucial factor is to recognise the main landscape patterns that have special shapes, outlines, rhythms (exp.: waving lynchets, quadratic alpine enclosed-fields and pastures, raster orchards, vertical vineyards). (4) Finally, it is necessary to take the view sheds of focuses (=point-like features) into account in the characterisation process.

THESIS_5: Some landscape-patterns in spite of their small extension in land-use distribution (1-3-5%) play much larger and more important role in the visual characters. These derive from their special forms, shapes, individual rhythm, colour or their intensive exposure on the hillside.

In contradiction its low rate in land-use the vineyard in the Lower-Part, the vertical fan-tail-like grape grooving pattern, opening on the bottom of the hillside, give strong visual individuality for the region. The tetragonal-raster fruit-tree-orchards led to a strong distinct geometrical effect in the natural landforms. The dark, band-like conifer-plantation on the south facing cliff-tops and the dotted open woodland-pastures are recognisable from the distance. This fact draws the attention to the fact that “small” land-use categories (seem to be inessential) should be examined deeply in character-assessment, and special attention should be paid during field-trips because their small shapes and forms are rarely marked on maps.

THESIS_6: The evaluation methods of land-use categories proved that the landscape-characterisation cannot be done based only on statistical data, because identifying the spatial experiences, distance views, and land-morphological aspects

can play more crucial role in the “scene” of landscape. This is particularly true on rolling uplands or highlands (500-800m) where climatic effect (chill, frost, wind, the number of hours of sunshine) can led to diverse land-use proportions in neighbouring villages even if their landscape-character are the same or similar.

If the cadastral boundary of the village does not fit to the “organic/natural” border, the measured data can be misleading (exp.: land-use distribution of villages with large areas into the hill-side are absolutely visual impression of the border does not correlate to physical data of the village border.). Generally, the statistical size of a forest, orchard, and vineyards reflect their objective role visually; but the large statistical rates of pastures, meadows and arable land do not correlate to their visual prominence. Therefore it is advised to start the characterisation in-situ and then support it with background studies.

In spite the difficulties of statistical evaluation; the properly ordered and weighted database can confirm local characteristics. My evaluation, based on agricultural statistics, verified that, where the data correlates more to the examined landscape character-zones, the settlements will fit to their natural landscape borders better; consequently they form a coherent land-use unit as well as identifiable landscape style.

73	Nmv	Bogártelke	6	16	15	16	9	6	11,8
79	Nmv	Magyarvita	9	9	14	19	13	6	12,0
82	Nmv	Nádasdaróc	8	15	14	16	11	6	12,0
76	Nmv	Jegenye	7	16	13	13	18	6	12,1
81	Nmv	Méra	21	5	13	15	14	6	12,2
74	Nmv	Egeres	8	13	16	14	17	6	12,4
83	Nmv	Szucság	7	13	13	13	21	9	12,5
77	Nmv	Magyargorbó	12	13	14	16	17	6	13,0
78	Nmv	Magyarnádas	8	18	14	17	14	6	13,1
75	Nmv	Inaktelke	12	18	12	17	18	6	13,8
80	Nmv	Mákófalva	12	14	15	16	19	7	13,8
84	Nmv	Türe	18	13	15	18	15	6	14,2
58	H	Szamosfő	4	0	5	4	6	6	4,1
53	H	Tarányos	3	3	7	4	6	6	4,9
57	H	Havasnagyfalu	2	1	9	4	8	6	5,1
52	H	Havasrogoz	13	0	5	4	6	6	5,4
54	H	Viság	18	2	6	6	6	6	7,1
56	H	Győrőfidongó	5	12	13	5	7	6	8,2
55	H	Felsőszamos	20	8	9	4	6	6	8,5
65	Hv	Melegszamos	4	0	6	5	6	6	4,5
59	Hv	Havasrekettye	9	0	5	4	6	6	4,8
64	Hv	Hidegszamos	9	2	7	5	10	6	6,3
60	Hv	Kissebes	4	14	9	5	6	6	7,5
63	Hv	Székelyó	11	7	8	8	7	6	7,8
61	Hv	Nagysebes	15	8	10	5	6	6	8,2
62	Hv	Sebesvár	6	13	11	11	6	6	9,2

The Nádas-valley-ZONE is highly coherent, and the Alpine ZONE similarly correlates less to “How-much the Kalotaszeg characters are represented?”

THESIS_7: The landscape character ZONE is a certain landscape character area (with local name), which is not to be divided into further types or areas. ZONES are essentially based on spatial experiences with homogeneous landforms; they have one borderline around them and adjacent with each other, and do not overlap. These ZONES generally contain 7-15 villages, and they reflect the traditional

ethnographical district, so therefore are proper in comparing landscape – and vernacular units.

All methods (the spatial- geomorphologic description, the landscape-character-pattern study, and the statistic evaluation) prove that ZONES having strong visual character-features, similar spatial experiences, analogous patterns and related land-use categories will create a “more typical, more unique zone” than others. These more individual landscape characters show correlation with the cultural values, ethnical relations, economic-networks and ethnographical importance of the same region.

THESIS_8 As a result of the landscape-characters of Kalotaszeg and the surrounding alpine zone (especially in which the Upper-Part is embedded), it became clear, that in consequence of the rising elevation, all parameter of the landscape will change resulting to a significantly different landscape character. Land-use (based on soil and weather conditions) will be shifted to larger pasture/meadow scale; forest-size will increase and get denser; lynchets will either move to the hilltops or disappear; settlement-structure will be more dispersed and segregated. As a result a square-shaped, enclosed field system will appear with wooded field boundaries. Vistas will open and their landscape-based sources will form different economical networks. All of these factors manifest themselves in another landscape character, which create a sharp change beyond the Kalotaszeg-landscape-style.

THESIS_9: During the process of landscape-characterisation, subjective/individual experiences and qualitative aesthetical descriptions in the area/site have indispensable importance in recognising the distinctiveness of an area (*spatial diversity, geomorphologic attributes, nature “as it is,” and stewardship, sense of coherence and complexity, visual impression, and importance of symbolic, historic values*). Freehand drawing, field-sketches with different purposes are not only more

personal, but are more complex in emphasizing all the visual effects. Sketches, model-drawing give a good opportunity for the analyser to highlight, exaggerate or emphasise certain features, therefore they are indispensable tools of a landscape architect.

During the landscape-characterisation I used the following sketching/drawing-styles:

(1.) The ASSOCIATIVE-DRAWING made on site can combine the real view with personal marks, words, comments and inspirations which can help to identify symbolic meaning and values of the landscape. (1, 3, 7, 8)

(2.) SPACE-TYPE IMAGES: These small pictures with basic landforms, silhouettes and arrows of power-dynamic sum up the geological background and the typical morphological landforms of an area or zone (2).

(3.) SHEMATIC IMAGES: small simplified sketch-series in the same style about a landscape pattern which emphasises it's fitting with the landform/terrain (4, 5).

(4.) MICROMORPHOLOGICAL analysing-drawings: a detailed section-like sketch putting emphasis on forms and structure of an element (6).

(5.) FREEHAND DRAWN MAPS: inspired by historic manuscript maps, I added small, typical images to the land-use-evaluation-maps, which demonstrate the result of the statistic analyse in four categories. Its advantage is to represent a more complex effect in the importance of a certain landscape-pattern, but its disadvantage is that the layers cannot be combined or laid on one another (9).

(6.) Three dimensional MODELL-DRAWING (Terrain-models) were used to visualise the landscape-character-ZONE's morphology (hills and valleys), vistas, patterns, focus points and other symbolic features. Instead of copying real eye-level photography, these model-drawings are drawn from an imaginative bird's view, therefore they can better reconstruct the spatial dimension and with smoother exaggeration it can highlight key features (10).

IV. CONCLUSION

Several site-visits, field-trips during the last 8-10 years and deepening knowledge in local-historical-studies made it possible to work out this characterisation process which highlighted the fact that recognising the key individual features of a landscape requires proper, deep knowledge and committed attitude. We can conclude that Kalotaszeg is an individual landscape unit, which has a strong parallel with its famous, well-known cultural-ethnographical heritage. Different phases in the methods of landscape characterisation can be used in case of another region as well.

It was difficult to keep the mainstream and interweave the topic of this complex landscape-approach, which pays attention simultaneously to the spatial experiences, aesthetic and historic aspects, but on the other hand this is how the approach can truly “reflect the complexity of the landscape based on its individualities” (Teleki). All landscape contains lot of special, singular, local characteristics, so to recognise them I believe it is important to invite local-people or local-experts who are very familiar with the region. The joy of the field-visits should derive from the landscape-architectural attitude and a more intensive connection with the landscape can be supported with new methods of aesthetical description and graphical visualization.

PUBLICATION OF THE AUTHOR IN THE TPOIC OF THE DISSERTATION

- 1 Eplényi Anna: Kalotaszeg táj-lélek-rajza
In: Fekete Albert (szerk.): *Az Erdélyi táj kérdései*. Kolozsvár, 2005. pp. 20-28.
- 2 Eplényi Anna, Fekete Albert, Kabai Róbert:
Örökségvédelmen alapuló vidékfejlesztés a Sztánai Völgyben
In: *Regionalitás, közösségépítés, szórványgondozás, Nemzetközi összefogás a szórványkérdésben*, 2006. MTA – Etnikai-Nemzeti Kisebbségkutató Intézet, pp.65-74.
- 3 Eplényi Anna – Szani Zsolt:
“Kalotaszegi gyümölcsösök” – Híd a település és a táj között
In: Fülek György (szerk.): *A táj változása a Kárpát-medencében: Település a tájban – V. Táj történeti Konferencia kiadványkötete*, Gödöllő. 2006. pp.51-56.
- 4 Eplényi Anna – Kardeván Lapis Gergely:
Tájköltészet: Kalotaszegi Elégia – Irodalmi kert Magyarvalkón
In: *4D – Tájépítészeti és Kertművészeti Folyóirat*. 2008. (12.sz.) pp.2-14.
- 5 Eplényi Anna: Tájakapuk Kalotaszegen
In: *4D – Tájépítészeti és Kertművészeti Folyóirat*. 2008. (12.sz.). pp. 34-43.
- 6 Anna Eplényi, Erwin Frohmann:
Methods for landscape architects to analysis open-space
In: *Book of Abstracts* (ed: N.,Müller, D. Knight, P. Werner), “Urban Biodiversity and Design” – 2007. Erfurt, 2008. p.67.
- 7 Eplényi Anna: The history of regional landscape linkages and gates in the region of Kalotaszeg, Transylvania
In: *Workshop on Landscape History – Proceedings*. (ed.: Balázs Pál és Konkoly-Gyúró Éva) Sopron, 2011. pp. 59-74.
- 8 Eplényi Anna: Historic landscape pattern and land-use in Kalotaszeg
In: *Workshop on Landscape History – Proceedings*. (ed.: Balázs Pál és Konkoly-Gyúró Éva) Sopron, 2011. pp. 45-58.
- 9 Eplényi Anna – Kardeván-Lapis: Gergely:
The beauty of lynchets – Traditional agricultural terraces in vernacular landscapes and contemporary landforms as representation of high aesthetical value
In: *ECLAS Conference: Ethics/Aesthetics Absztrakt kötet*. Sheffield, 2011. pp.165-166.
- 10 Eplényi Anna – Frohmann, Erwin:
Lynchets – Ackerterrassenlandschaften in Rumänien – Die landschaftsprägenden Ackerterrassen in Kalotaszeg, In: *Zoll+ Österreichische Schriftenreihe für Landschaft und Freiraum* (21), 2011. pp. 62-66.
- 11 Eplényi Anna – Oláh Brigitta:
Tájrajzolatok – Kétnyelvű illusztrált segédlet a tájépítészeti rajzoktatáshoz
BCE, Tájépítészeti Kar – Egyetemi jegyzet. Budapest, 2011.
- 12 Eplényi Anna: A kalotaszegi agroteraszoknak –mint a tájmintázat legjellemzőbb karakterelemének–, mikrodomborzati, tájesztétikai és tájtörténeti vizsgálata
In: Fülek György (szerk.): *A táj változása a Kárpát-medencében: Történelmi emlékek a tájban*, IX. Táj történeti Konferencia kiadványkötete, 2012. in-press
- 13 Eplényi Anna: Egyedi tájértékek és reliktum tájelemek változásainak retrogresszív táj analízise – Kalotaszeg példáján
In: Fülek György (szerk.): *A táj változása a Kárpát-medencében: Történelmi emlékek a tájban*, IX. Táj történeti Konferencia kiadványkötete, 2012. in-press

