

Biotechnical Faculty
Department for Landscape Architecture
PhD student
Aleksander MAGYAR

Does ecological landscape planning increase the visuality of multifunctional landscape?

The visual landscape is one of the major realms where the work of planners, designers, and managers directly interacts with public perceptions and expectations. People tend to judge things on the basis of what they can see as much as or more than on what they know, and such judgements can have major implications for the public acceptability of landscape plans. This is particularly the case when people may have preconceived ideas about the way landscapes ought to appear that may conflict with the most up to date understanding of dynamic landscapes (Bell, 2000).

Human perceptions of the landscape change due to the influence of economic, social, aesthetic and ethical factors. Often, public perceptions and understandings about landscapes are different from those of professionals, while the current state of any landscape tends to reflect priorities, understandings and functions of the past, albeit only the recent past. This is particularly true of forests and forest management. The visual effects of past practices linger on for many years, while the impact of current practices is unlikely to show up for some years into the future (Bell, 2000).

Landscape visual quality can be defined as “the relative aesthetic excellence of a landscape” (Daniel, 2001) and examined in terms of observer appreciation (Lothian, 1999). Knowledge of the elements and processes that organize landscapes is indispensable, but so too are the perceptions, opinions and valuations of the public (Kline and Wechelns, 1998). Little is known, however, about the relationships between landscape structure and perception; better knowledge of them would be clearly advantageous (Litton, 1979).

Of all the spatial metrics of the landscape, diversity and heterogeneity are perhaps the easiest to relate to human perception of the environment. Greater homogeneity increases coherence, while fragmentation decreases it. Greater coherence is generally thought to be positively related to scenic value (Kaplan and Kaplan, 1982 and Palmer, 2004). Subsequently, the fractal dimension should provide an indication of visible landscape complexity, which is thought to contribute to scenic value (Purcell et al., 2001). In summary, landcover structure plays a significant role in the visual quality of the landscape. Linking landscape structure to landscape preferences should, therefore, be of the greatest interest in landscape planning and management.

In the 21st century bio-centric philosophies will question the need for visual quality assessments, advocating that intrinsic ecological values should rein over expert or human perception-based aesthetic values in landscape management. As a practical matter, this interactive approach provides two related, but distinct means for managing the aesthetic quality of the landscape-change the objective features of the landscape, or change the subjective judgements of the viewer. Biophysical processes are accepted as appropriate instruments for changing landscape features, and human perceptual judgements are the most important indicators of visual aesthetic quality. Changing public landscape perceptions and preferences in any fundamental way exceeds the mandates of traditional landscape management, and is better addressed in a broader, explicit social-political discourse about environmental values (Tery C .Daniel).

Landscape is moving: this is a vital characteristic of landscape, that needs a solid method to look at past and future, through different spatial scales, to manage and plan landscape quality. Looking at our everyday landscape we find out that we are loosing something important, concerning our own personality, our own cultural heritage, towards a simplified equal anonymous omogeneity. This phenomenon concerns modern society in a deep way: also from the point of view of landscape ecology, we are loosing our diversity. If transformation is part of landscape, we are also part of it, and we are able to control some of the changes: our jobs, as landscape arhitects, is to understand and to know our dynamic landscape, to find correct modalities to force it in a direction towards a better balanced situation.

The industrial revolution has changed not only our technical ability to change landscapes but also our mental and spiritual perception of landscapes. One of the most important changes is that modern man is in most cases not living in the landscape he is influencing, but is a member of an urban society controlling agricultural and forested landscapes from a distance and from the outside (Voos, 2000). Nowadays the spatial scale of landscape changes is becoming broader and broader, and time scale is becoming faster and faster.

The imbalance between city and country becomes severe. The city becomes richer, the outlying areas continously poorer. This can only be halted by policies which quarantee an equal sharing resources, and economic development, across the entire region. The land which is best for agriculture happens to be best for buildings too. But it is limited – and once destroyed, it cannot be regained for centuries.

The big city is a magnet. It is terribly hard for small towns to stay alive and healthy in the face of central urban growth. Buildings must always be built on those parts of the land which are in the worst condition, not the best. What usually happens when someone thinks of building on a piece of land? He looks for the best site – where the gras is most beautiful, the trees most healthy, the slope of the land most even, the soil most fertile. People always say to themselves, well of course, we can always start another garden, put another gravel, new lawn. But it yust isn't so. Leave those areas that are most precious, comfortable, and healthy as they are, and built new structures in those parts of the site which are least pleasant now.

Soil protection has never been ranking high among the priorities for environmental protection in Europe. Soils are commonly not well known by the European citizens, particularly since only a small fraction of the European population is currently living in rural areas and having a direct contact with soils.

The majority of the urban population in Europe has only little understanding for the features and functions of soils. The most common perception is usually that soils are a good dumping site for all kind of wastes and that soils can be quite useful as surfaces for building houses and infrastructure.

	Poland	Czech Rep.	Slovak Rep.	Hungary	Slovenia
Surface (km²)	312,685	78,866	49,035	93,030	20,273
Water bodies (km ²)	8,220	1,590	931	690	142
Land (km²)	304,465	77,276	48,104	92,340	20,131
Inhabitants (1.000)	38,646	10,273	5,402	10,138	1,964
Land/inhabitant (ha/inh.)	0.79	0.75	0.89	0.91	1.03
Land use (%)					
Agricultural land	58	54	50	63	34
- arable land	45	39	30	49	25
Forest land	30	33	42	19	60
Other land areas	12	11	8	17	6
- Buildings and infrastructure	4	3	5	4	4
Degradation of soils					
Soil erosion	**	**	**	**	**
- water erosion	.	**	**	.	.
- wind erosion	.	**	.	.	**
Decline in soil organic matter	.	.	**	.	.
Contamination	.	.	.	.	.
- local contamination	**	.	.	.	.
- diffuse contamination	.	.	.	.	.
- soil acidification	**	.	.	**	.
Soil sealing	**	**	.	**	**
- urbanisation	**	**	.	**	**
- infrastructure	**	**	.	**	**
Soil compaction	**	**	**	**	.
Decline in soil biodiversity	.	**	**	**	.
Salinisation	.	.	.	**	.
Hydrogeological risks	**	**	**	**	**
- flooding	**	**	**	**	**
- landslides	.	.	.	.	**

Soil problems identified: . low intensity / local problem ** from medium to higher intensity / regional problem

Figure 1: Exploitation of soil cover and identified soil problems in Central Eastern Europe (2000) (Montanarella, 2003).

Controlling the size and rate of growth of cities is advocated in order to reduce the social disruption of migration and rapid change, improve housing, reduce pollution. To prevent migration from rural areas. To prevent, reduce social disruption and reduce the costs and improve the adequacy of housing, to improve the balance between various regions. Space is stabilizer of behavior and serves to bind human beings together. Modern traffic, modern buildings are dissolving the classical spatial texture, and have created a second spatial type.

Multifunctionality of landscapes ?



Sketch: Aleksander Magyar

What makes the visuals appropriate?

The interpretations people give to a place, can reinforce its responsiveness at three different levels:

- by supporting its legibility, in terms of form and use,
- by supporting its variety,
- by supporting its robustness, at both large and small scales.

Design for all senses:

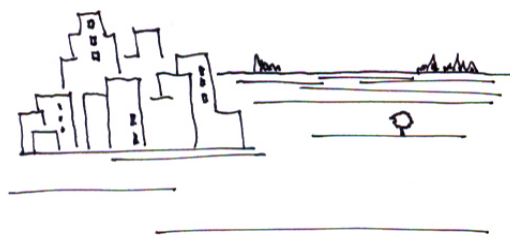
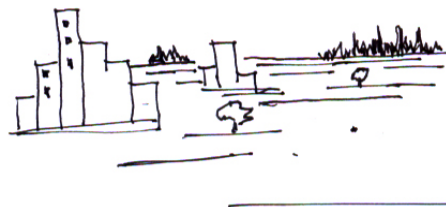
For most people sight is the dominant sense. Most of the information we handle is channelled through our eyes, so a large part is concerned with visual richness.

But richness is not a purely visual matter: other senses also have design implications:

- the sense of motion,
- the sense of smell (cherry blossom),
- the sense of hearing (the whispering of leaves),
- the sense of touch (of plants).

Why is visual richness a problem?

After many years of neglect the principles of designing for visual richness have been forgotten.



Sketch: Aleksander Magyar

Landscape is a difficult thing to manage. The perceivable landscape consists of numerous pieces of land owned by many people, all of whom have peculiar interests, which seldom correspond. Land is private property and it is very difficult to accept that someone else tells the owner what to do with his property. Land ownership is determined by well-defined borders. Landscape transgresses these boundaries into a greater concept. Landscape is considered as a common value of the whole society. Landscape is not something to be used only by the landowners, but also by temporary visitors: recreants, tourists, and neighbours. Landscape is multifunctional. Planning of landuse cannot be restricted to the determination of the uses of each field or land parcel. The design of the whole must be taken in account as well.

Literature:

Bell S. 2001. Landscape pattern, perception and visualisation in the visual management of forests. *Landscape and Urban Planning*, Volume 54, Issues 1-4, pp. 201-211.

Daniel T. 2001. Whither scenic beauty? Visual landscape quality assessment in the 21st century, *Landsc. Urban Plann.* 56 (2001), pp. 267–281

Kline J., Wechelns D. 1998. Measuring heterogeneous preferences for preserving farmland and open spaces, *Ecol. Econ.* 26 (1998), pp. 211–224.

Lothian A. 1999. Landscape and the philosophy of aesthetics: is landscape quality inherent in the landscape or in the eye of the beholder?, *Landsc. Urban Plann.* 44(1999), pp. 177–198.

Purcell T., Lamb R., Mainardi E., Falchero S. 1994 Preference or preferences for landscape, *J. Environ. Psychol.* 14 (1994), pp. 195–209.

Terry C. Daniel. 2001. Whither scenic beauty? Visual landscape quality assessment in the 21st century. *Landscape and Urban Planning*, Volume 54, Issues 1-4, pp. 267-281.

Voos, W. 2000. Future Landscapes: Between the Devil and the Deep Blue Sea, p. 187 – 192. In: Pedroli, B. (ed): *Landscape – our home. Essays on the Culture of the European Landscape as a Task.* Freies Geistesleben, Stuttgart, 222 p.