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VISUAL LANDSCAPE PERCEPTION

Fürüzan ASLAN[1*], Edanur ASLAN[1], Atilla ATİK[1]

[1:] İnönü Üniversitesi Güzel Sanatlar ve Tasarım Fakültesi Peyzaj Mimarlığı Bölümü, 44280, Malatya.
: *Sorumlu yazar

ABSTRACT

Landscape, the way that people perceive, is described as areas the characteristics of which are made up as a result of the interaction and activity of natural and/or human factors. The composition which is formed as a result of this interaction of natural and cultural components sets forth the visual landscape conception.

In the scope of study landscape, perception, visual landscape concepts, visual design factors and visual design principles in support of related descriptions and the visuals are presented as a compilation.

Keywords: Landscape, Perception, Visual landscape, Design principles, Design elements.

GÖRSEL PEYZAJ ALGISI

ÖZET

Peyzaj; insanların algıladığı şekliyle, özellikleri doğal ve/veya insan etkenlerinin etkileşimi ve faaliyeti sonucunda oluşan alanlar olarak tanımlanır. Doğal ve kültürel elemanların bu etkileşimi sonucu oluşan kompozisyon, görsel peyzaj kavramını ortaya koyar.

Çalışma kapsamında peyzaj, algı, görsel peyzaj kavramları ve görsel tasarım ögeleri ile görsel tasarım ilkeleri ele alınmıştır.

Anahtar Kelimeler: Peyzaj, Algı, Görsel peyzaj, Tasarım ilkeleri, Tasarım ögeleri.

1. LANDSCAPE CONCEPTION

Landscape is the perspective of a piece of land setting forth together with ecologic, biological, structural and functional characteristics. In another saying landscape is the spectacle of natural and cultural elements in various character located in an environment in a body (Yücel vd., 2008).

Appleton (1980), states that landscape has not the same meaning with environment and landscape is a perceived, especially visually perceived environment. He signifies Landscape is an aesthetic object made up as a result of the interaction between the perceiver and the object (Appleton, 1980).

In accordance with the descriptions by Forman and Godron, Landscape is an heterogeneous piece of land composed of a group of ecosystems interacted one another and reproduced in the alike forms (Forman and Godron, 1980).

When viewed from a particular point landscape involves all the topographical, natural and cultural data coming into sight. It covers all the visible features of an area. Landscape meets our needs as well as our requirements (URL 1).

According to European Landscape Agreement Landscape is described as areas characteristics of which are made up as a result of the coaction and activities of natural and/or human factors in the way

people perceive (Anon., 2010).

2. PERCEPTION CONCEPT

The word of perception is derived from the word of "Percipere" in Latin (keep together, to sense, concept). Perception is the basic mechanism working up a connection between human and his environment. (Bell, 1999).

Perceiving is the act of taking form and drawing perspective of all kinds of data in the brain. In the act of perceiving a circumstance is recorded by being interpreted, not genuinely. Perceiving is a necessary process to understand everything around us, to make sense and to evaluate. The inception of perceiving process depends on the unrefined data coming from senses. These unrefined data are strained and interpreted as a result of the compare-son with the acquired data and experiences (URL 2).

The theories intended for the perception of landscape or physical environment are important in respect of environmental psychology. The theories and studies related to perception of environment are primarily interested in the processing of mental images of the individuals who attempt to understand and interpret what surround themselves better (Çakcı, 2007; Çakcı ve Çelem, 2009).

In the simplest way the perception of environment is a sensorial conscience status and prerequisite for all the other vital activities and processes. Perception is not passive, but active. However, perception is not only a physiological fact (Berleant, 1992). At the same time the past experiences and social, cultural factors of the individual play a role in perception (Çakcı, 2007).

3. VISUAL LANDSCAPE

Visuality consists of the whole of the sensual and logical expressions which are created in perceivers by the entity of perceived visions through eyesight from the field plain to the horizon plain where objects and groups of objects are located. It could be described as the psychological expression of the sensations explained by means of aesthetical theories in the visions (Temelli, 2008)

Visual landscape is the composition which is made up as a result of the interaction of natural and cultural elements (Bulut et al., 2010). The way of coming together and interaction of visual landscape values put forth the visual landscape characteristic of field. The positive sides and negative sides of visual landscape values specify the visual quality of field (Çelik, 2013).

Visual landscape components;

- Land structure
- Flora
- Structural elements (Çelik, 2013).

4. VISUAL DESIGN ELEMENTS

In the planted spaces in architectural use the visual characteristics can be considered in secondary importance because of benefit from structural properties of plants. However, adding special details developing visual and spatial character in planting in order to get an aesthetic view, the visual features play a primary role. (Robinson, 2004).

Visuality of a successful galenic design is important in respect of the reaction degree of the observer at first blush. If a herbal design is well-done successfully for important functions such as to create a space, to clear the air and to stabilize the soil as well as not impressive in respect of visualty we can not qualify the made design fairly successful (Booth, 1990; Arın, 2010).

The visual quality of the plant compositions in single or a group are considered in respect of 1) Color 2) Form 3) Line 4) Texture 5) Size and the concepts which make up the visual characteristics of plant (Smardon, 1988; Bliven and Kelty, 2005).

4.1. COLOUR

It is an effect created on the eye by light depending on its self structure or the way of radiation from objects. It is a sense in person as a result of visual perception made by rays coming by reverberating from various objects.

When the sunlight is passed through a triangular prism it is divided into the various colours just like it is in the rainbow. These are red, orange, yellow, green, blue and purple. Red, yellow, blue are primary (basic) colours. Intermediate colours are

composed of mixing primary colours. Orange is composed of amalgamation of red and yellow; green is composed of combination of yellow and blue and purple is composed of red and blue (Güney, 1992).

To define a colour right the value, intentisity of the colour and basic colour characteristic must be known (Temelli, 2008).

There are various effects of colours in design. Dark green tones give a sense of power, heaviness, silence, peace. At the end of the field dark tones give a sense of shorter distance between the object and the perceiver. A place where dark colours are dominant looks smaller than it is. Dark green tones are used as basic materials because of their visual heaviness and it makes the design tend to the ground plane. Bright green leaves recreate an airy, broad scenery in space, and bring joy and exhilaration to the place. While giving a sense of moving away from the perceiver it makes the design route up (Booth, 1990).

Attention should be paid that the flower colours of the material taking part in the composition must be the colours which contrast with one another or complement one another. Leaf colours of some plants in certain times of a year or permanently are apparently different from normal leaf colour. The leaves of these plants are multi-coloured, always red, yellow, and grey or in seasons of spring and autumn apparently different coloured from green for a short term (Erbaş, 2003).

Two types plantal design can be made with plants; these are as follows (Öztan, 2004);

Monochromatic arrangements: Generally they are arrangements in which single colour and its derivatives are used. It is not preferred because of giving a sense of routinized uniformity and monotony in perceiver. It can be evaluated in respect of representing field in large areas (Arın, 2010; Arın; 2011; Öztan, 2004).

Polychromatic arrangements: It is aimed at using many different colours numerously and multipurpose in polychrome arrangements. This characteristic is preferably asked for not only in plantal design but also in architectural design. It is not much preferred because it could create complexity in large areas. In these type arrangements both opposite and complementary colours are available (Arın, 2010).

Figure 1. Monochromatic arrangement (Arın, 2010).

Figure 2. Polychromatic arrangement (Arın, 2010).

4.2 FORM

It is a limited and planar expression of general massive arrangement (Uzun, 1999). The formal expressions of objects can be perceived within the limits and lines becoming evident by colour and texture (Temelli, 2008).

Form can be defined as a general figure, architectural design or exterior silhouette of a plant or groups of plants. Form of plants have functions such as becoming a transportation point by making

the construction of plantal composition, forming ground-colour, and providing integrity between other design elements and flora (Booth, 1990).

Plants gain more dominant character in terms of form in design a long as growing up with regard to size. The forms of plants arise subject to the ratio between horizontal and vertical sizes. In this respect, the horizontal form has been applied at the rate of 1/10-12 height to width and the vertical form at the rate of 1/10-12 the width to height (Arın, 2010).

Figure 3. Format sample (Arın, 2010).

Figure 4. Format sample (Arın, 2010).

Trees are divided into four groups; these are as follows;

- Wide crested (round form) trees
- Spiry crested (pyramidal form) trees
- Column shaped trees
- Drooping (pendulous) shaped trees (Yıldızcı, 1988).

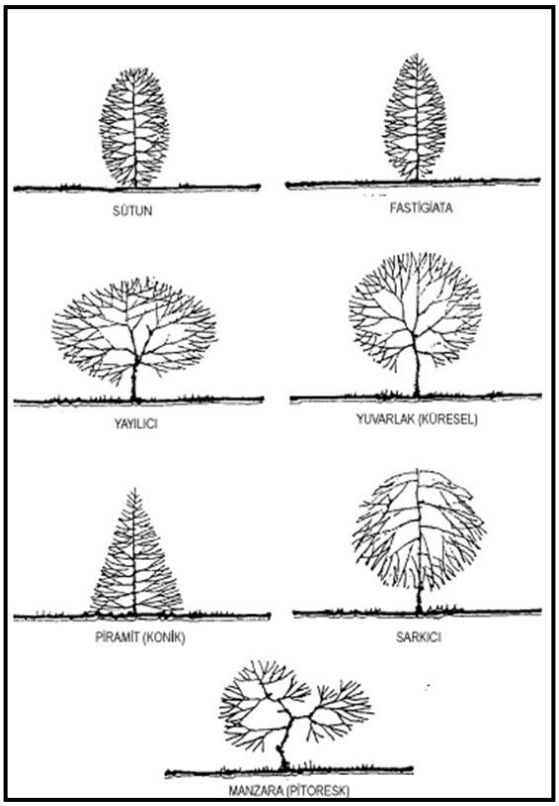

Figure 5. Plant forms (Arın, 2010).

4.3. LINE

Line “sides” designates the shape and form. Line is available everywhere. All the materials both natural and man-made form the source of line. Branches, the side of a flower bolster (support), a line formed of plants or the silhouette line of a group of plants may be a linear unit (Ayaşlıgil, 1998).

Line is the basis of all the design formations. In landscape arrangement each element to take part in the project is marked by taking form of the lines. The type and thickness of line change the effect of the project (URL 3).

In line there are motion, direction and expression power. Lines can be in different shapes according to continuity and moving; with regard to the connection to a point they can be vertical, horizontal, oblique, and divided into different types such as interpenetration. Lines can put forward open or closed figures (Uzun, 1999). The shape of line and the connection one another leave different impressions (motion, stagnancy, deepness etc.) (Arın, 2010).

In an organisation volumetrical expression which lines generate without losing their characteristics gives the linearity (URL 3).

Figure 6. Mobility which the wavy lines in continuity add to the design (Arın, 2010).

The straight lines are efficient and fixed, diroreer fect the observer's eyes to one point. Crooked and free lines are fluent, attractice and relaxing; they arouse natural feelings (Arın, 2010).

Horizontal lines give a sense of stillfness, stableness and relaxation. They are in peaceful and passive character. Planting made with the strong horizontal lines forms a supportive basis to more active elements in design (Arın, 2010).

Figure 7. Mobility which the wavy lines in contuinity add to the design (Arın, 2010).

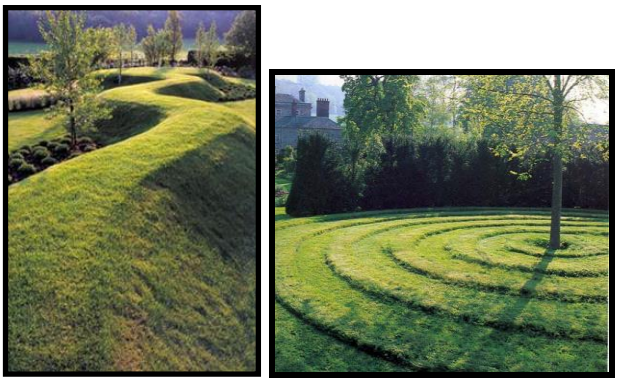

Figure 8. Use of round (curved) and wavy lines (Arın, 2010).

The plants having vertical lines are assertive, efficient and emphatic. They draw attention with their total opposite side of gravity. Their views like a column the plants coplanar grown perpendicularly express vertical lines better (Arın, 2010; 2011).

The drooping lines create panoramas giving a sense of calmness, tranquillity, relaxing and peace. Drooping branches having a position containing minimum energy draw attention to the ground.

These plants can create an melancholic mood in some people (Arın, 2010; 2011).

Figure 9. Example of composition having horizontal lines (Arın, 2010).

Figure 10. The plant samples having vertical lines (Arın, 2010).

Figure 11. The plant samples having drooping lines (Arın, 2010).

4.4 TEXTURE

The smoothness degree of any object surface is called as the texture of that object. Notwithstanding the physical stiffness of surface smooth ones are defined as soft or fine-textured, rough ones as hard or coarse-textured (Çelik, 2013).

In landscape, texture depends upon the distance of the plant observed by the observer. A plant group composed of different textures seems to be more interesting and more vivid to the observer; however so much diversity gives a sense of complexity and more mobility effect (Robinson, 2004).

Texture is closely related to seasonal changes. The leaved trees look infertile and sparse in winter, but in summer they have got a coarse-textured view. In summer when leaved a plant having a fine texture may give the impression of having a coarser texture because of embranchment structure when leave fall down in winter. The flower and fruit size, form and colour composition affect seasonal texture view. Therefore, in composition studies seasonal periodic changes must be taken into consideration (Arın, 2010; 2011).

The surface quality and texture of leaves can be altered by means of pruning. In figure 12 while pruned hedge plant mass is exhibiting an isolated around and dark appearance, the uncut (not pruned) mass has got a softer and light coloured view (Arın, 2010; 2011).

Figure 12. View differences which pruned and not pruned hedge plants create on the texture (Arın, 2010).

Texture certainly has got a psychological and physical effect on the observer. In plantal design the improvement from coarse textured plant toward fine-textured plant creates a distance and deepness impression. Texture fact in plants is important in

terms of the light reflection. The light coloured plants with shiny leaves reflect the light; they create shiny and luminous space (Yıldızcı, 1988).

Texture is also related to scale. In small areas fine-textured plants in large areas coarse textured plants must be used. In small area a coarse textured plant will look rough and diminish the apparent size (Yıldızcı, 1988).

The objects with soft texture creates sedative, relaxing and slackening effects. The coarse textured objects have refreshing, rousing and remarkable properties (Arın, 2010; 2011).

Plants are generally classified as “fine”,”coarse” and moderate” textured in three groups (Arın, 2010; 2011).

Texture which must be used in a balanced manner in plantal composition is supposed to balance one another among different groups making the design. When a coarse textured plant is used the plants with moderate and fine texture must be added to the design in certain proportions and where fine texture is intensively used it must be balanced with moderate and coarse textures (Booth, 1990).

4.5. SIZE

It covers the differences among sizes of visual objects interaction one another. The sizes of objects which are used in the design must be coherent (Güney, 1992).

Size perception is made according as comparison among places.In place size unit is human. Size is taken as a balance element in respect of functional use in the design (URL 3).

Wrong dimensioning put forth either physical or psychological problems. Narrow roads, a flat roof, a very large terrace, a courtyard not dimensioning according to human can abolish beauty effect of space (Uzun, 1999).

Design principles are directive in the stage of planning of works of art. It also plays a role how art works are planned and resolved (Bozkurt, 1992). Artists design their works controlling and arranging the elements of arts in a way. They use these design principles to make a whole as organized state of these different elements (Dinçer, 2011).

The design principles according to Güney (1992);

- Repetition
- Harmony-harmonization
- Contrast
- Unity
- Mastery/emphasis
- Balance
- Koram/Order/Hierarchy
- Mass/space

4.5.1. Repetition

Repetition is the qualification and character, colour, texture, form, line of a renewed object (Karaşah, 2006).

Repetition diminishes sense of complexity caused by extreme diversity, adding an explanation and meaning to variety of elements in design, and arouses a sense of an order in the perceivers who perceive landscape (Arın, 2010; 2011).

Repetition is the simplest method of design. The reiterated forms create a sense of rhythm and provide a wholeness in design (Edirne, 2004).

Figure 13. Rhythm in nature (Dinçer, 2011).

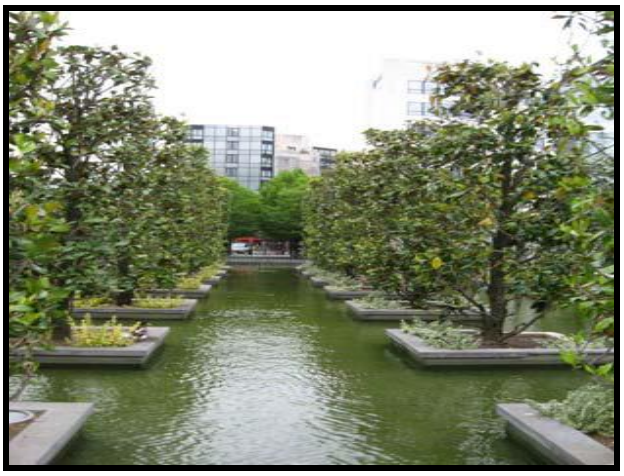

Figure 14. Composition formed of single plant repetition (Arın, 2010).

4.5.2. Harmony/harmonization

The case of availability of common and comparative characteristics of the object is named as conformity principle. The conformity can be provided by any or most of characteristics of visual object such as form, size, colour, tone and texture. Direction and space can also be made. In other words harmoniousness is between repetition and contrast. In repetition there is not similarity at all in the same contrast each other in objects. However, there are similar characteristics between them in the conformity (Çelik, 2013).

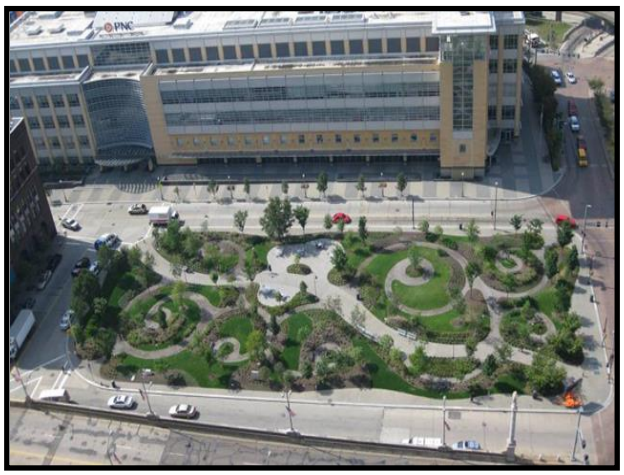

Figure 15. Conformity of the forms (Çelik, 2013).

4.5.3. Contrast

When objects have no physical, visual and teleological similarities it means that there is contrast among them. In an harmonious environment contrasting elements draw attention; it gives a sense of vivacity and mobility. However, the arrangement of environment with the contrary elements routinely gives a sense of disorder and restlessness (Çelik, 2013).

Contrast is a method which the designers use to avoid monotony, and draws attention of persons or amazes them (Çelik, 2013).

Figure 16. Contrast (Çelik, 2013).

4.5.4. Koram (Hierarchy)

In the visual expression of design priorities must be defined and put in order. Therefore, the designer put forth the priorities in visual design and put them in order according to importance degree (URL, 3).

It is to make a directory with the design elements such as form, size, space, colour, tone, texture, brightness equal or close to equal differences. If the contrast among the first three values and the supply values in order break down such an arrangement is not named koram. Koram can be made of any or a few of design elements. For example colour, tone and size koram can be made as well as only form koram can be made (Temelli, 2008).

Figure 17. Koram-hierarchy. A view from Public Park (Çelik, 2013).

4.5.5. Mastery (Emphasis)

One or a few objects taking part in the design establish superiority on the others in respect of the elements such as colour, size, texture etc… or location (Çelik, 2013).

The emphazied element is the element attention of which is preferably drawn first. Although many elements take part in the background the first outstanding element is the emphazed one; this is the basic idea creating the focal point (Edirne, 2004).

Figure 18. Emphasis effect created by color and form differences in the composition (Çelik, 2013).

4.5.6. Balance

In the simplest expression of balance concept under the name of dual symmetry it is plantal composition taking part on both sides of the main axis (Robinson, 2004).

In equilibration equal distribution in visual weight is the basic intent of composition. The balanced forms as one design principle give a sense of relaxation (Dinçer, 2011).

Formal (symmetric) balance; It is a plan pattern coming from arrangements of similar structural elements in order equidistant to two sides of an axis (URL, 3). Informal (asymmetric) balance: It is provided with arrangements of objects having no similar size and form on both sides of the axis, but drawing equal attention (URL 3).

Figure 19. Balance. Hatley Park (Çelik, 2013).

Figure 20. Planting sample divided into symmetric parts (Arın, 2010).

4.5.7. Unity

In any design while elements having various visual efficiencies' are being come together in consideration of the design principles it is attempted to create unity (integrity) (Uzun, 1999).

Completion in human spirit created by unity and sense of integrity compose of emphasis created by the interaction of elements forming composition, regular space lines and planting with the location in where to be and a plantal composition scale intercommunicating human scale (Arın, 2010).

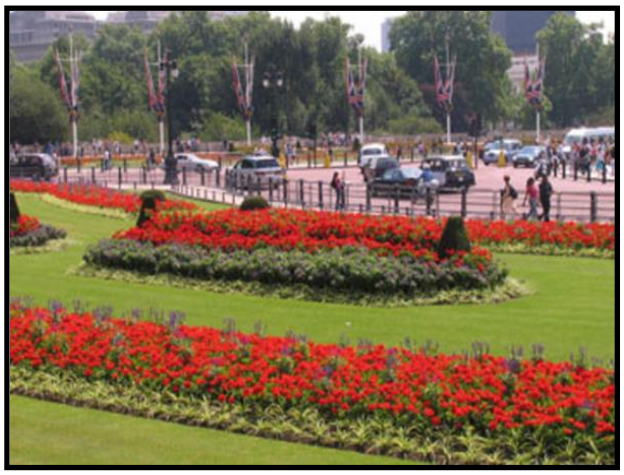

Figure 21. Unity formed in respect of color (Arın, 2010).

4.5.8. Diversity

Diversity as an organization element having a lot of alternative in landscape design has got an important place in arrangement. A lot of interesting points can be produced in point of view applied in details rather than the whole of design, and used in new arrangements of forms, colours and textures (Çelik, 2013).

Diversity is a change and contrast in line, form, texture and colour to keep the observer's attention and draw attention of his eyes. It must be refrained from monotony and stillness to provide diversity (Çelik, 2013; Arın, 2010).

Figure 22 Diversity (Çelik, 2013).

4.5.9. Series-Rhythm

Series is an order to provide the observer to follow the objects from start to end and to come through (Çelik, 2013).

Rhythm requires a clear repetition of elements the same or very little differently. Rhythm is an expression of repetitive motion; it is use of visual elements as harmonious and regular repetitions (Edirne, 2004). Rhythm provides order and harmony effect (Dinçer, 2010).

Figure 23. Sequential rhythm (Dinçer, 2010).

4.5.10. Mass (massif) – Space balance

A landscape place is a composition created by denseness in proportion between mass and space. For this purpose balance and proportion among design elements play an important role in adjustment the proportion between mass and space. Mass and space are opposite concepts. For example natural rock mass or an intense mass of trees no enter is a place element having no space. An area where there is no single tree on or only if covered with grass it arouses a space effect (Çelik, 2013).

Figure 24. Mass (massif) – Space balance. A view from Buckingham Palace (Çelik, 2013).

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