ILLUSTRATED GLOSSARY

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This book touches on many technical areas and we thought the reader would appreciate definitions of often used terms. We have compiled definitions for these terms as well as graphics which may aid understanding as well. The terms are not listed alphabetically, but are listed in families of similar terms. We have provided an alphabetized index at the beginning of the glossary so the reader can find definitions for a specific term.
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AESTHETICS:
1. Evaluations and considerations with the sensory quality of resources (sight, sound, smell, taste, and touch) and especially with respect to judgment about their pleasurable qualities (U.S. Bur. of Land Manage. 1977.)
2. Pertaining to the quality of human perceptual experience (including sight, sound, smell, touch, taste, and movement) evoked by phenomena or elements or configurations of elements in the environment. (Schwarz et al. 1976.)
3. Giving visual pleasure. (Hubbard and Kimball 1917.)
4. The theory of perception of susceptibility. (Santayana 1955.)
5. Generally, the study, science, philosophy, and beauty extending to all the arts, as well as to all factors of cultural endeavor. (Wolf 1951.)

Aesthetic(s):
(a) generally, the study, science, or philosophy dealing with beauty and with judgments concerning beauty.
(b) Giving visual pleasure.
(c) The theory of perception or of susceptibility.
(d) The quality of being aesthetic is not the opposite of the qualities of “practicality” or “reality” but rather another aspect or way of experiencing the same real world phenomena. Thus blue skies, uncontaminated water, and uncluttered urban landscapes all have aesthetic value because they imply health, pleasure, and security.
(e) In terms of visual assessment, aesthetics can be thought of in three primary aspects: (1) internal, (2) rational, and (3) extended environmental aesthetics. (Blair 1980.)

Aesthetic Quality: The aesthetic significance given to a landscape determined by cultural values and the landscape’s intrinsic physical properties. (A.C.E. 1984.)

Aesthetic Resource: Those natural and cultural features of the environment which elicit one or more sensory reactions and evaluations by the observer, particularly in regard to their pleasurable effects. (A.C.E. 1984.)

AMENITY (Amenity value):
1. An object, feature, quality, or experience that gives pleasure or is pleasing to the mind or senses. (After Webster 1963.)
2. The pleasurable or aesthetic, as contrasted with the utilitarian, features of a plan, project, location, or resource. The term amenity is now used so broadly that it can refer to just about anything that makes life more agreeable—from a temperate climate to an intellectual climate. (Abrams 1971.)
3. (Amenity value). Typically used in land use planning to describe those resource properties for which market values (or proxy values) are not or cannot be established. (Schwarz et al. 1976.)
4. Quality of being pleasant or agreeable as in respect to situation, climate, disposition. (Webster 1960.)

ATTRIBUTE:
The ecological, cultural, and aesthetic properties of natural and cultural resources that sustain and enrich human life. (A.C.E. 1984.)

COUNTRYSIDE:
Widely used to designate a place apart from urban and wilderness areas, rather than a particular landscape. It connotes both physical and cultural components. Countryside is a recognizable landscape unit containing a predominance of agricultural patterns and activities and defined by both cultural interpretations and the physical setting. (Schauman et al. 1982.)

DESIGNATION:
Landscapes and special districts formally or informally recognized for their historic, educational, scientific, recreational, or aesthetic value. Designation may affect viewer expectations about these areas. (Jones and Jones 1977.)

ENVIRONMENTAL QUALITY:
1. Natural environmental quality. Heyman and Twiss in evaluating management practices on federal public lands speak of environmental quality as referring “primarily to the continuance, to the extent feasible, of the natural ecosystems existing on public lands especially as that ecosystem is important to human health and safety, the provision of direct sensory experiences, and
the continued viability of life forms and biotic communities that exist naturally on, and surrounding, the public lands.” (Heyman and Twiss 1971.)

2. In general, definition 1 must be expanded to include all environments experienced by man and include aspects of environmental psychology. Even though qualities may exist without man, it is man who makes the judgments that define qualities. The qualities are both individual and consensual. The “group” may attach some value or measure of quality to some environment, and each individual may give a somewhat different value to the same environment. “Quality” is a “separate reality” for each individual, but may contain universals for a great many individuals. Thus the environment may be a wilderness or a city street, with each person having his or her own value judgment as to the quality of the environment, but together they may reach a consensus which forms an “environmental quality” basis for planning. (Schwarz et al. 1976.)

3. U.S. Water Resources Council (WRC) usage. Enhancing environmental quality by the management, conservation, preservation, creation, restoration or improvement of the quality of certain national and cultural resources and ecological systems is one of the two main objectives for programs involving water and related land resources administered by federal agencies whose activities involve planning and development of water resources, as contained in the Water Resources Council’s Principles and Standards. An evaluation of environmental quality effects should include: (1) areas of natural beauty; (2) water, land, and air quality; (3) biological resources and selected ecosystems; (4) geological, archeological, and historical resources; and (5) irretrievable commitments of resources to future use. (After U.S. Dept. of Agric. 1974.)

4. One of the four “required accounts” for categorizing, displaying, or “accounting” the beneficial and adverse effects of each alternative plan formulation for water and related land resources planning specified in the Water Resources Council’s Principles and Standards and the U.S. Department of Agriculture’s “Procedures” for adhering to them. (After U.S. Dept. of Agric. 1974.)

5. The sum total of the forces and factors which influence people’s satisfactions with their work, leisure, living conditions, and community. (Barron 1972.)

LANDSCAPE:
1. Landform and land cover forming a distance visual pattern. Land cover comprises water, vegetation, and man-made development, including cities. (Jones and Jones 1977.)
2. An expanse of natural scenery seen by the eye in one view (Webster 1960.)
3. The natural landscape is an indeterminate object; it contains enough diversity to allow the eye a great liberty in selecting, emphasizing, and grouping its elements; and it is furthermore rich in suggestion and in vague emotional stimulus. (Santayana 1955.)
4. The surface features of an area including not only landforms, but all other objects and aspects, both of natural and human origin. (Monkhouse 1970.)
5. Countryside, the environment in which natural features dominate even though often controlled and ordered by man. (Robinson et al. 1976.)
6. An areal entity which is a composite of all of the characteristics that distinguish a certain area on the earth’s surface from other areas. (Holland 1971.)
7. An expanse of natural scenery seen by the eye in one view. (Webster 1963.)
8. An area made up of a distinct association of forms, both physical and cultural. (Stamp 1961.)
9. The sum total of the characteristics that distinguish a certain area on the earth’s surface from other areas. These characteristics are a result not only of natural forces but of human occupancy and use of the land. (U.S. For. Serv. 1973.)

LANDSCAPE, BEAUTY:
(a) When it reveals a moral or ethical truth (historical);
(b) when the energy-flow system is functioning with the unimpeded efficiency (19th–20th century);
(c) where natural environment is seen as a setting for an experience rather than experience itself, (modern). (Jackson 1984.)
LANDSCAPE CHARACTER:
1. The arrangement of a particular landscape as formed by the variety and intensity of the landscape features and the four basic elements of form, line, color, and texture. These factors give the area a distinctive quality which distinguishes it from its immediate surroundings. (U.S. Bur. of Land Manage. 1977.)
2. A mode of aesthetic organization which is a result of the operation of the forces of nature not guided by man. (Hubbard and Kimball 1917.)

LANDSCAPE COMPOSITION:
1. The arrangement of objects and voids in the landscape that can be categorized by their spatial arrangement. Some spatial compositions, especially those which are distinctly focal, enclosed, detail, or feature-oriented landscape, are more vulnerable to modifications than panoramic, canopied, or ephemeral landscapes.
2. Arrangement of the elements of a design into an ordered whole. (Hubbard and Kimball 1917.)

Landscape Composition Types:
(a) Canopy, Canopied: Covered or bridged by the uppermost spreading branchy layer of a forest. (U.S. For. Serv. 1973.) See Figure (a).
(b) Enclosed: Enveloped or surrounded; bounded or encompassed. (U.S. For. Serv. 1973.) See Figure (b).
(c) Ephemeral: Anything lasting but a brief time. (U.S. For. Serv. 1973.) See Figure (c).
(d) Feature: A distinct or outstanding part, quality, or characteristic of something. (Webster 1960.) See Figure (d).
(e) Focal: Of or placed at a focus; as a focal point. (Webster 1960.) See Figure (e).
(f) Panoramic: A continuous series of scenes or events, constantly changing scene. See Figure (f).

LANDSCAPE, CULTURAL:
The attachment of a particular culture or historical value to a familiar local landscape. (Robinson et al. 1976.)

LANDSCAPE TYPE:
An area of landform plus land cover forming a distinct, homogenous component of a landscape, differentiated from other areas by its degree of slope plus a single pattern of land cover. A landscape type is a unique segment of the environment. This segment or portion of the environment can be separated from other segments on the basis of the land cover and the landform. Any landscape type can be subdivided into unique landscape subtypes, through definition of the desired homogeneity of the landscape type. For example, a forest is composed of different tree types, and each tree is itself made up of branches, a trunk, foliage, and so on. (Vaughn 1974.)

LANDSCAPE UNIT:
An area of volume of distinct landscape character which forms a unit spatially enclosed or partially enclosed at ground level; the extent of a landscape...
type which forms the dominant character of an area of landscape which is not spatially enclosed.

LANDSCALE VALUE (VALUE SYSTEM):
1. The particular (frequently subjective) point of view of an individual or the common point of view of a group on an issue, way of life, or concerning the worth of things or experiences. (Schwarz et al. 1976.)
2. An individual or collective conception of that which is desirable. This conception usually has both emotional and symbolic components. Values may range from those that are subjectively meaningful to a given individual to those that are shared cultural norms. They influence the selection of the means and ends of actions, and they serve as criteria by which objects or actions are evaluated. (O'Connell 1974.)

(Landscape Value):
(a) Agrarianism—A value system of rural origin typified by high values attached to independence, self-sufficiency, family farms, and the occupation of farming. (Schauman et al. 1982.)
(b) Ruralism—A value system of urban origin. A back-to-nature and anturban philosophy. (Schauman et al. 1982.)
(c) Pastoralism—It is an attitude of urbanites to the countryside. It is a romantic vision of peacefulness and retreat amid scenic beauty, and it carries none of the functional or economic attitudes that the farmer, of necessity, must hold toward the land. (Schauman et al. 1982.)

QUALITY:
A degree of excellence; superior in kind; a distinguishing attribute.

SCENERY:
The general appearances of a place; the features of a landscape (Webster 1960.)

SCENIC AREA:
1. U.S. Forest Service usage. A place which has been designated by the Forest Service as containing outstanding or matchless beauty which requires special management to preserve these qualities. (U.S. For. Serv., FSM 2362.41, June 1975). Areas of this type and all other special interest areas are identified and formally classified primarily because of their recreational values. (Schwarz et al. 1976.)
2. An area preserved primarily because of its present beauty, such as cliffs, streams, vistas, vegetation, and wildlife. (U.S. Bur. Outdoor Recreation 1974.)
3. A place which has been designated by the Bureau as containing outstanding scenic quality and requires special management to preserve or enhance this quality. (U.S. Bur. of Land Manage. 1977.)
4. An area whose landscape character exhibits a high degree of variety, harmony, and contrast among the basic visual elements which results in a pleasant landscape to view.

SCENIC CORRIDOR:
The visible land area outside the highway right-of-way and generally described as “the view from the road.” (Calif. Coun. on Intergov. Relat. 1973.)

SCENIC DISTINCTION:
An indicator of scenic quality derived from the combination of distinct elements seen in a landscape. High scenic distinction is attributed to vivid and attractive features in unified and memorable settings, or to extensive, cohesive, and visually rich landscapes. The following terms may be used to describe the range of scenic qualities exhibited by landscapes:

Scenic Qualities:
(a) Vivid: Of very high clarity and contrast; visually outstanding; making a very strong and memorable impression the senses.
(b) Conspicuous: Obviously contrasting and widely visible; a focus for attention; easily distinguished in a complex visual setting; memorable.
(c) Definite: Sufficiently contrasting to be identified in form and extent, but not particularly noticeable in its setting.
(d) Distinct: Obviously contrasting and widely visible; a focus for attention; easily distinguished in a complex visual setting; memorable; contrasting; distinguishable as to color and form; visually separable from its setting; clearly recognizable.
(e) Indefinite: Obscure, subdued, or of low contrast; concealed or partly identifiable in some settings. (Tetlow et al. 1977.)
SCENIC QUALITY:
The degree of harmony, contrast, and variety within a landscape; the overall impression retained after driving through, walking through, or flying over an area of land and/or water.

VISUAL CHARACTER:
The visual character of a landscape is formed by the order of the patterns composing it. The elements of these patterns are the form, line, color, and texture of the landscape’s visual resources. Their interrelationships can be objectively described in terms of dominance, diversity, continuity, and so on. (Jones and Jones 1977.)

VISUAL CHARACTER TYPE (Character type, visual type):
U.S. Forest Service, Visual Management System usage. A large area of land that has common distinguishing visual characteristics of landform, rock formations, water forms, and vegetation patterns. (U.S. For. Serv. 1974.)

VISUAL LANDSCAPE CHARACTER (Characteristic landscape):
1. U.S. Forest Service, Visual Management System usage. The overall impression created by a landscape’s unique combination of visual features (such as land, vegetation, water, structures) as seen in terms of form, line, color, and texture. (U.S. For. Serv. 1973.)
2. The naturally established landscape being viewed as visually represented by the basic vegetative patterns, landforms, rock formations, and water forms which are in view. (U.S. For. Serv. 1974.)
3. A visual landscape character unit usually makes up a small portion of a visual character subtype, depending upon how much of the subtype unit can be viewed at one time. (After U.S. For. Serv. 1974.)

VISUAL CORRIDOR:
A continuous succession of visually and spatially distinct experiences; series of consecutive or composite viewsheds. Each visually and spatially distinct experience. (Jones and Jones 1977.) See following figure.

VISUAL CORRIDOR. Adapted from: Yeomans, W.C., 1983.

VISUAL QUALITY:
The visual significance given to a landscape determined by cultural values and the landscape’s intrinsic physical properties. (A.C.E. 1984.) While many factors contribute to a landscape’s visual quality, they can ultimately be grouped under three headings: vividness, intactness, and unity. Analogous concepts: scenery quality rating (B.L.M.), variety class (U.S.F.S.). (Jones and Jones 1977.)

VISUAL RESOURCE(S):
Those natural and cultural features of the environment which can potentially be viewed. (A.C.E. “V.I.A. Manual” 1984.)
1. The composite of basin terrain, geologic features, water features, vegetative patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors. (Sandpoint Zone Plann. Team 1974.)
2. The land, water, vegetative, animal, and other features that are visible on all lands. (U.S. Bur. of Land Manage. 1977.)
3. The appearance of the features that make up the visible landscape. Includes the land, water, vegetative, animal, and other features that are visible on all national resource lands. (U.S. For. Serv. 1973.)

BASIC ELEMENTS:
The four major elements (form, line, color, and texture) which determine how the character of a landscape is perceived. (U.S. Bur. of Land Manage. 1977.)

Form:
(a) The perceived aggregation of elements in which there is a consciousness of the distinc-

tion and relation of a whole to its parts (Santayana 1955.)
(b) One of the four basic elements of visual pattern (usually the strongest); the mass or shape of an object. (Jones and Jones 1977.)
(c) The mass or shape of an object or objects that appear unified, such as the shape of the land surface or pattern placed on the landscape. (U.S. Bur. of Land Manage. 1977.)
(d) In visual arts, shape, especially solid shape, as in statement that the form, color are elements in art. Also made of arranging or coordinating the factors in a work of art. As distinct from physical form of the object. (Runes and Schrickel 1946.)

Line:

(a) A very thin, threadlike mark; a border or boundary; a division between conditions, and so forth; limit; demarcation. (Webster 1960.)

(b) One of 7 elements of art: point, line, plane, texture, color, mass, space; the point is the easiest element to understand, but line is the easiest to follow; has direction as well as position. (Balduing 1960.)
(c) Geometrically, a point that has been extended, or the intersection of two planes, for example, a silhouette, or a boundary between patterns in the landscape. The second strongest is the four basic visual pattern elements. (Jones and Jones 1977.)
(d) The path, real or imagined, that the eye follows when perceiving abrupt differences in form, color, or texture. Within landscapes, lines may be found as ridges, skylines, structures, changes in vegetative types, or individual trees and branches. (U.S. Bur. of Land Manage. 1977.)

Color:

(a) Is the general name for the nonspatial component of the sensation arising from the activity of the retina of the eye and its associated nerve systems. (Runes and Schrickel 1946.)

(b) The property of reflecting light of a particular wavelength of otherwise identifiable objects. (U.S. Bur. Land Mgt. 1977.)
(c) A phenomena of light (as red, brown, pink, and so forth) or visual perception that enables one to differentiate otherwise identical objects. A hue, as contrasted with black, white, or grey. (U.S. For. Serv. 1973.)
(d) The third of the four basic elements of visual pattern; the hue (for example, red or blue) and value (for example, light or dark) of the light reflected or emitted by an object. (Jones and Jones 1977.)

Chroma: Purity of a color, or its freedom from white or grey. (Burnhart 1963.)
Hue: That attribute of certain colors which enables them to be classified as reddish, greenish, bluish, yellowish, or purplish. (Runes and Schrickel 1946.)
Saturation: The measure of the actual color content in a given sensation. (Kepes 1944.)
Tint: Any color tone which has more or less brilliance than it would have in its spectral hue. (Runes and Schirnkel 1946.)

Value: Relative lightness or darkness of a color. (U.S. For. Serv. 1973.)

Texture:
(a) The arrangement of the particles or constituent parts of any material, as wood, metal, and so forth, structure, composition. (Webster 1960.)

(b) The structural quality of a work of art; a visual “feel” of material: rough, smooth, hard, soft, and so forth. (Baldinger 1960.)

(c) Aggregate of parts so small as to register as a continuous surface and not as discrete parts or objects in a composition; an aggregation of forms. (Hubbard and Kimball 1917.)

(d) The visual or tactile surface characteristics of something. (U.S. For. Serv. 1973.)

**LANDSCAPE FEATURES:**

The land and water form, vegetation, and structures which compose the characteristic landscape. (U.S. Bur. of Land Manage. 1977.)

**Land Form:**

(a) The form of the surface of the land. The three-dimensional shape of the surface of the ground. *Land form* may have a different meaning than *landform* when used in a geomorphological context. *Landform* is always used for surface features whose origin can be attributed to particular geological processes or particular structures. (After Savigear 1965.)

(b) Term used to describe the many types of land surfaces which exist as a result of geological activity, such as a plateau, plain, basin, mountain, and so forth. (U.S. For. Serv. 1974.)

(c) A feature of the earth’s surface with distinctive form characters which can be attributed to the dominance of particular processes or particular structures in the course of its development and to which the feature can be clearly related. (Savigear 1965.)

(d) *Land form* may have a different meaning than *landform* when used in geomorphological contexts. *Land form* is sometimes used when referring only to the three-dimensional shape of the ground surface—without any reference to the processes responsible for that shape. (Savigear 1965.)

(e) A term used to describe the many types of land surfaces which exist as the result of geologic activity and weathering, for example, plateaus, mountains, plains, and valleys. (U.S. Bur. of Land Manage. 1977.)

*Morphology:* Within the subject matter of geomorphology, the meaning of *morphology* is restricted to studies of the surface form of the earth—without any reference to the processes responsible for those forms. *Morphology* is not synonymous with *geomorphology.* (After Savigear 1965.)

*Vegetative Patterns:* General plant community types in an area such as nature and exotic species, debris, and so forth.
Structures: Things which are built or constructed by man such as buildings, dams, hardtop roads, and so forth.

Water Bodies: The water of an ocean, river, stream, pond, and so forth.

LAND USE:
Various human activities which impact the landscape in a variety of ways. Examples of land use types are: industrial, commercial, residential, agricultural, recreational, and undeveloped. (A.C.E. 1984.)

LAND USE INTENSITY:
The degree to which a landscape is used by human activities. Examples of landscape intensity are: urban, suburban, rural, and wilderness. (A.C.E. 1984.)

NODE(S):
1. A point of concentration; a central point. (Webster 1960.)
2. Points, the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he or she is traveling. They may be primarily junctions, places of a break in transportation, a crossing or convergence of paths, moments of shift from one structure to another. Or the nodes may be simply concentrations, which gain their importance from being the condensation of some use or physical character. (Lynch 1960.)

LANDMARK(S):
1. Another type of point reference into which one may not enter, rather the experience of which is external. (Lynch 1960.)
2. Another type of point reference, but in this case the observer does not enter within them; they are external. They are usually a rather simply defined physical object: building, sign, store, or mountain. Some landmarks are distant ones, typically seen from many angles and distances, over the tops of smaller elements, and used as radial references. They may be within the city or at such a distance that for all practical purposes they symbolize a constant direction. (Lynch 1976.)

PATH(S):
1. Path (route) along which the observer moves. Context: urban highway. (Lynch 1960.)
2. The channels along which the observer customarily, occasionally, or potentially moves. They may be streets, walkways, transit lines, canals, railroads. For many people, these are the predominant elements in their image. People observe the city while moving through it, and along these paths the other environmental elements are arranged and related. (Lynch 1976.)

DISTRICT:
1. Medium to large sections of the city having some recognizable character (elements forming city image: district, edge, landmark, node, path).
2. The medium to large sections of the city, conceived of as having two-dimensional extent, which the observer mentally enters “inside of,” and which are recognizable as having some common, identifying character. Always identifiable from the inside, they are also used for exterior reference if visible from the outside. (Lynch 1960.)

EDGES:
The linear elements not used or considered as paths by the observer. They are the boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development, walls. They are lateral references rather less penetrable, which close one region off from another; or they may be seams, lines along which two regions are related and joined together. These edge elements, although probably not as dominant as paths, are for many people important organizing features. (Lynch 1960.) Linear elements noted or considered as edges by the observer; serve as boundaries. (Baldinger 1960.)
CONTOUR:
The outline of a figure, mass, land, and so forth. (Webster 1960.)

SKYLINE:
The line along which the sky seems to touch the earth; the visible horizon; the outline (as of a city) seen against the sky. (Webster 1960.)

SLOPE:
An area of landform surface differentiated from other areas by its degree of slope. It is a component of landforms but is not limited in place or extent, for example, cliff, gentle slope, flat plain. Analogous concept: landtype. (U.S. For. Serv. 1974.)

ASPECT:
The side or surface facing a given direction. (Am. Coll. Dict. 1963.)

AERIAL PERSPECTIVE:
Concerning the effects of distance from the viewer upon the color and distinctness of objects—especially as due to the transparency of the intervening air. Typically objects become bluer, greyer, edges less distinct, and there is less contrast of light and shade with increasing distance from the viewer. (After Runes and Sehrickel 1946.)

ANGLE OF OBSERVATION:
The vertical angle between a viewer’s line of sight and the slope or object being viewed. (U.S. Bur. of Land Manage. 1977.)

ANGLE OF VISION:
About 20 degrees. The pictorial compositional relation within this angle can be perceived well without being distracted by the necessity of turning the eye or head. (Hubbard and Kimball 1917.)

ATMOSPHERIC CONDITIONS:
Fog, precipitation, pollution, and so forth which affect the visibility of an object or objects. These conditions can greatly impact the visual contrast of form, line, color, and texture.

   Atmospheric Conditions:
   (a) Absorption: The wavelengths of light are selectively absorbed or “taken up”; as a result, different colors are seen. They can also have a uniform shift which results in a contrast change.
   (b) Reflection: Light is often redirected or “cast back”; as a result, changes in color or intensity are seen.
   (c) Refraction: the change of direction of a ray of light in passing obliquely from one medium into another in which its speed is different.
   (d) Diffraction: A modification that light undergoes when it passes by an edge of an opaque body, or is sent through small apertures, resulting in the formation of a series of light and dark bands, prism colors, or spectra. (Burnhart 1963.)

BACKLIGHTING:
A situation where the light source is coming from behind the object being viewed; objects are generally in shadow with highlighted edge. See figure Lighting Direction on page 320.

BACKGROUND LIGHTING:
This is the distance in the landscape where elements lose detail distinctions. Emphasis is on the outline or edge of one land mass against another with a strong skyline element. See figure Lighting Direction on page 320.

BRIGHTNESS:
1. Brightness, that is, the sensation that one color appears lighter or darker than another, governs the value of the color. (Kepes 1944.)
2. The amount of reflected light of an object relative to its field (Arnheim 1954.)

COLOR CONTRAST:
Value and hue tend to be the more significant subelements of color in determining visual contrast between colors.
CRITICAL VIEWPOINT:
The point(s) commonly in use or potentially in use where the view of a management activity is the most disclosing. (U.S. Bur. of Land Manage. 1977.) See figure Viewpoints on page 320.

CROSS-SECTION (X section):
1. Graphic methods usage. A two-dimensional pictorial representation method which shows the characteristics and relationship between land (and/or water) characteristics that would be observed in a vertical slice through that portion of the earth. (After Durrenberger 1973.)

2. In land use planning, cross-sections frequently only show land surface conditions (soil, soil moisture, vegetation type distributions, elevation, slope steepness, and so forth), though they may also be used to illustrate subsurface geological structures, groundwater relationships, and so forth. The vertical scale of projection is frequently exaggerated in relation to the horizontal to emphasize topographic relationships, for example, while the scale of horizontal projection may be 1 in. = 10 ft, the vertical projection scale may be 1 in. = 1 ft. Thus slopes will appear steeper and elevation changes more rapid than they truly are. This geographical method is frequently used to analyze or show the impacts that would result from potential land uses or use practices on an area, by superimposing over the natural profile the changes in land surface (and/or subsurface) conditions that would result. (Schwarz et al. 1976.)

DISTANCE:
The spatial separation between an observer and subject (that is, visual); categorized as foreground, middleground, and background. (A.C.E. 1984.)

DISTANCE ZONES:
1. The area that can be seen as foreground-middleground-background, or seldom seen (see previous definitions). (U.S. Bur. of Land Manage. 1977.)
2. Three conventional terms in painting—foreground, middleground, background—which can be helpful in describing distance relationships. (Jones and Jones 1977.)

Distance Zones:
(a) Foreground (0 to ¼–½ mile): That area which can be designated with clarity and simplicity not possible in middle and background because the observer is a direct participant. The observer can have the impressions of immediate details—bark, pattern, boulder forms, or degraded parts. This is a zone of important linkage because it sets a tone of quality or its absence. Intensity of color and its value will be at a maximum level, lacking the effect of color diminution due to atmospheric scattering of light rays. At greater distances, the intensification of aerial perspective becomes an important means of discrimination. (Jones and Jones 1977.)

(b) Middleground (¼–½ to 3–5 miles): A critical area for two reasons: This is where the parts of the landscape can be seen to join to-


Distance Zones. Adapted from: Yeomans, W.C., 1983.
together, where hills become a range or trees make a forest. This is also where man-made changes may be revealed as sitting comfortably upon the landscape, or where conflicts of form, color, shape or scale show up. Colors will be unmistakable, but they will be more blue, softer than those of the foreground. Some of the sharpness of value contrasts will be reduced. (Jones and Jones 1977.)

(c) Background (3–5 to infinite miles): That area where distance effects are primarily explained by aerial perspective. Surfaces of landforms will lose detail distinctions, emphasis will be on outline or edge, with background becoming an effective foil against which foreground or background is more clearly seen—a figure-ground relationship. Silhouettes and ridges of one land mass against another are the conspicuous visual parts of the background with skyline the strongest line of all. (Litton 1972.)

**INTERVISIBILITY:**
The principle that from any point visible to an observer, the observer can also be seen. (Jones and Jones 1977.)

**KEY OBSERVER POSITION (K.O.P.):**
One or a series of observer positions on a travel route or at a use area or a potential use area. (U.S. Bur. of Land Manage. 1977.)

**LIGHTING DIRECTION:**
*Backlighting.* A viewing situation in which sunlight is coming toward the observer from behind a feature or elements in a scene. (Jones and Jones 1977.)

*Front Lighting:* A situation where the light source is coming from behind the observer and falling directly upon the area being viewed. (Jones and Jones 1977.)

*Sidelifting (Side Lighting):*
(a) A viewing situation in which sunlight is coming from the side of the observer to a feature or elements in a scene. (Jones and Jones 1977.)

(b) A situation where the light source is coming from one side of a scene or object being viewed, usually the most critical for displaying contrast. (U.S. Bur. of Land Manage. 1977.)

**LANDSCAPE CONTROL POINTS:**
A network of permanently established observation sites which provide the means of studying the visual impact of alternatives to the landscape (Similar terms: observation points, observer viewpoints). (Litton, 1972.) See figure above.

**OBSERVER POSITION:**
1. The placement and relationship of a viewer to the landscape which is being perceived. (U.S. Bur. of Land Manage. 1977.)
2. A term employed to describe the observer's elevational relationship between himself or herself and the landscape he or she sees. It is used...
to indicate whether the observer is essentially below, at the same level, or above the visual objective. Three specific terms are used: (a) observer inferior—viewer below object; (b) observer normal—viewer on level of object; (c) observer superior—viewer above object. (Jones and Jones 1977.)

**SEEN AREA:**
That portion of the landscape which can be viewed from one or more observer positions. The extent of area that can be viewed is normally limited by land form, vegetation, or distance. (U.S. Bur. of Land Manage. 1977.)

**SHADE:**
1. Darkness of certain areas on objects caused by those parts being faced away from the source of light. (Runes and Sehrickel 1946.)
2. Any hue moved in the direction of black. (Baldinger 1960.)

**SHADOW:**
Darkness due to light being cut off by some intercepting material. (Runes and Sehrickel 1946.)

**SIGHTLINE:**
The unobstructed line of sight between an observer and viewed object. (Jones and Jones 1977.)

**SIMULATION:**
1. The realistic visual portrayal which demonstrates the perceivable changes in the landscape features of a proposed management activity through the use of photography, artwork, computer graphics, and other such techniques. (U.S. Bur. of Land Manage. 1977.)
2. An abstraction or simplification of a real-world situation. In its broadest sense, any model is a simulation since it is designed to represent the most important features of some existential conditions. (U.S. Gen. Account. Off. 1969.)

**Simulation Types:**
(a) Real-world prototype: Simulation method which uses field testing to portray changes in the environment such as balloons representing a tower structure.
(b) 2-D iconic: Simulation method which uses graphics, such as perspective sketches to represent a change in the environment, a two-dimensional representation.
(c) 3-D iconic: Simulation method which uses a three-dimensional representation of the environment such as a model.
(d) Digital/math: Simulation method which uses formulas and/or computers to represent the environment.
(e) Analog: Simulation method which uses phenomena which behaves in the same way as another yet are based on different energy systems in representing the environment.
(f) Hybrid: Simulation method which combines two or more of the aforementioned methods.

**VIEW:**
Something, especially a broad landscape or panorama, that is looked toward or kept in sight; the act of looking toward this object or scene. (U.S. Forest Service 1977.)

**VIEWER ACTIVITY:**
The extent of a viewer’s ability to perceive the landscape and its detail may be heightened or decreased by the visual requirements of his or her current activity and past experience of the landscape. (Jones and Jones 1977.)

**VIEWER AWARENESS:**
A viewer’s receptivity to the visual character of the landscape can be affected by elements and relationships in the landscape setting itself or by expectations about the setting. Visual experience contrary to expectation may be suppressed or heightened, depending on the degree of disagreement. (Jones and Jones 1977.)

**VIEWER EXPOSURE:**
The degree to which viewers are exposed to a view by their physical location, number of viewings and duration of view. (Jones and Jones 1977.)
VIEWER SENSITIVITY:
The viewer's variable receptivity to the elements within the environment that he is viewing, affected by viewer activity and awareness. A person cannot readily notice every object and all the attributes of the objects that compose the total visual environment. Analogous concept: sensitive level. (U.S. For. Serv. 1974; U.S. Bur. of Land Manage. 1977.)

VIEWING ANGLE:
The angle at which an object is seen. This angle may affect the perception of that object by: (1) perspective foreshortening when seen obliquely or at a low viewing angle, thereby reducing apparent sizes of surfaces or areas, (2) increasing the object's relative scale when seen perpendicularly.

VIEWSHEDS:
1. All the surface areas visible from an observer's viewpoint.
2. Surface areas from which a critical object or viewpoint is seen. Analogous terms: seen area, visible area. (Jones and Jones 1977.)

Viewsheds, Existing and Topographic:
(a) Existing viewshed: The area normally visible from an observer's viewpoint, including the screening effects of intermediate vegetation and structures.
(b) Topographic viewshed: The area which would be visible from a viewpoint based on landform alone, without the screening effect of vegetation and structures.

Viewsheds Composite: Composite of overlapping areas visible from a continuous sequence of viewpoints along a road; or a network of viewpoints surrounding a road (or object).

VISIBILITY:
The geographic extent of a resource and legibility of its features which can be seen by an observer(s), determined by his or her location. (A.C.E. 1984.)

VISIBILITY MODEL: See figure below.
ACCESSIBILITY:
General proximity in terms of time of all points in the region to a given kind of activity or facility (elements of spatial pattern: grain, focal organization, accessibility). (Lynch 1961.) The degree to which a resource can be approached. (A.C.E. 1974.)

ENVIRONMENTAL PSYCHOLOGY:
That area of psychology which deals with environmentally induced behavior or mental states of individuals or groups, for example, whereas psychoanalysis probes for subconscious motivations derived from past experience, or behavioral psychology attempts to alter self-concepts through operant conditioning, environmental psychology seeks to determine how the everyday physical environment affects human behavior. Also, the study of human perception of elements in the environment or of different types of environmental settings. Perception in this context is understood to mean not only direct sensory knowledge but also cognitive discrimination expressed in terms of preferences rated on a scale of desirability versus undesirability. (Schwarz et al. 1976.)

EXPERIMENTAL PSYCHOLOGY:
1. The investigation of psychological phenomena by experimental methods.
2. The methods and the results obtained by experiment, systematically set forth (often arbitrarily limited to the psychology of the laboratory).

OBSERVER SET:
The tendency of the observer to perceive a landscape in a manner conditioned by his or her education, habits, psychological state, and previous experience. (Tetlow et al. 1977.)

USER ACTIVITY:
Human behavior which can be evaluated in terms of kind (the variety of activities), use (the number of participating people), and degree (the frequency of the activity).

VIEWER ACTIVITY:
The extent of a viewer's ability to perceive the landscape and its detail may be heightened or decreased by the visual requirements of his or her current activity and past experience of the landscape. (Jones and Jones 1977.)

VIEWER AWARENESS:
A viewer's receptivity to the visual character of the landscape can be affected by elements and relationships in the landscape setting itself or by expectations about the setting. Visual experience contrary to expectation may be suppressed or heightened, depending on the degree of disagreement. (Jones and Jones 1977.)

ASSOCIATION:
The mental connection or bond existing between any sensations, perceptions, ideas, or feelings that to an observer have a relational significance with one another. (U.S. For. Serv. 1973.)

COGNITIVE:
The mental operations involved in the receiving, storing, and processing of information; includes sensory perceptions, memory, thinking, and learning.* (*Differs from usual definition which does not include sensory perception.) (Arnheim 1969.)

IMAGEABILITY:
That quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, color, or arrangement which provides a strongly identified, powerfully structural, highly useful mental image of the environment. (Jones and Jones 1977.)

LEGIBILITY:
Ease with which (a city's) parts can be recognized and organized into a coherent pattern. Urban context. (Lynch 1960.)

PERCEPTION:
1. To become aware of, and grasp mentally through primarily sight, but also hearing, touch, taste, and smell. (U.S. Bur. of Land Manage. 1977.)
2. From sensations, we come to be able by experience and habit to perceive the existence of objects in the world, and to attribute to them the characteristics which our senses discover to us; and also, building from our memories of real objects, we may imagine objects which have their characteristics related differently from any which we have actually known. (Hubbard and Kimball 1917.)
VISUAL PERCEPTION:
The visual thinking, the active performance of focusing, scanning and exploration of visual information. (Arnheim 1969.)

ACUITY:
The sharpness or acuteness of vision. (Burnhart 1963.)

FIXATION:
The eye movements that help to select the targets of vision that direct the eyes in a way that the area of the visual field to be scrutinized comes within the narrow range of sharpest vision. Sharpness decreases at a deviation of 10 degrees from the axis of fixation, where it is at a maximum. Retinal sensitivity is so restricted that the eye can and must single out some particular spot, which becomes isolated, dominant, central. This means taking up one thing at a time, and distinguishing the primary objective from its surroundings. (Arnheim 1969.)

FIXATION, OCULAR:
A move from tension to tension reduction by shifting an eccentric stimulus to the center of the visual field. (Arnheim 1969.)

FOCUS:
The point where rays of light and so forth come together, or from which they spread or seem to spread; any center of activity, attention, and so forth. (Webster 1960.)

FORESHORTENING:
The apparent diminution of intervening spaces because they are seen from an acute angle. (Runes and Sehrickel 1946.)

MOTION PERSPECTIVE:
As with an observer riding in an open car, the horizon and stars (upward) field of view are motionless, whereas the world and the ground below flow past in a continuous stream.

OPTICAL FIELD:
The combination of forces of visual attraction—a point, a line, an area—and the background. (Kepes 1944.)

ORIENTATION:
The necessary information and opportunities to see significant features indicating location, direction, and progress.

Orientation Needs:
(a) Sense of location: The driver's awareness of his or her location in the environment at any point during travel.
(b) Sense of direction: The driver's sense of travel direction, both compass direction (north-south) and geographic direction (for example, along the shore).
(c) Sense of progress: The driver's sense of making progress from his or her origin to his or her destination.

Orientation Satisfiers:
(a) Landmark feature: A prominent or conspicuous object in the landscape that serves as a guide.
(b) Landmark areas: An area having distinctive characteristics and definable boundaries that are useful to the traveler in determining where he or she is.
(c) Linear elements: Features in the landscape with directional characteristics because they lie on a perceived axis and/or connect other features. (Hornbeck et al. 1975.)

PERSPECTIVE:
That which suggest the effects of distance upon the appearance of objects. (Runes and Sehrickel 1946.)

PICTURE PLANE:
1. The theoretical transparent surface of the picture. Perspective reference. (Runes and Sehrickel 1946.)
2. The two-dimensional surface when a view is enclosed by four borders. The two-dimensional picture plane assumes the center of the spatial field and every optical event appears to advance or recede from it. A point, a line, or a shape on the picture surface is seen as possessing spatial qualities. (Kepes 1944.)

RETINA:
The innermost coat of the posterior part of the eyeball consisting of a layer of light-sensitive cells connecting with the optic nerve. (Burnhart 1963.)
Cone: One of the cone-shaped cells of the retina used in color vision.

Rods: Rod-shaped cells in the retina which are thought to be the specific structures for the reception of light for vision at the lower intensities. Rod vision is achromatic—in shades of grey.

SERIAL VISION:
While moving at uniform speed, the environment is often revealed to us in a series of jerks or revelations; such vision is dependent upon contrasts, physical or imagined; two elements: emerging view and existing view. (Cullen 1961.)

TRANSPARENCY:
Mutual overlapping of two objects in different planes so that the overlapped area is made paradoxically to belong to more than one object as if one object were a plane made of glass. (Arnheim 1954.)

VISUAL FIELD:
The boundaries of the visual field are 180° laterally and 150° up and down.

  Binocular Field: The field of vision seen by two eyes at one time.

  Monocular Field: The field of vision seen by one eye at one time.

CLOSE-ENDED QUESTION:
Any question which is structured in such a way that the person must respond in a prescribed form. (Rubin and Elder 1980.)

Does your office ever get warm enough to make you feel uncomfortable?

( ) often
( ) sometimes
( ) only occasionally
( ) never


DEPENDENT VARIABLE:
The variable whose value changes as a result of the experimenter’s changes in another variable, the independent variable. (Rubin and Elder “Building” 1980.)

INDEPENDENT VARIABLE:
1. A variable that can be observed and assessed as a determinant of behavior. (Rubin and Elder 1980.)
2. The variable that is altered independently of any other variable, usually by the experimenter. (Rubin and Elder 1980.)

OPEN-ENDED QUESTION:
Any question which allows the person answering flexibility of form and substance in his response. (Rubin and Elder “Building” 1980.)

What do you think of your environment?


OPERATIONALISM:
The doctrine that scientific concepts secure their meaning from the relative set of operations involved. (Burnhart 1963.)

PSYCHOPHYSICS:
The branch of psychology which investigates the relationships between physical stimulus magnitudes, or the differences between stimuli and the corresponding sensory experiences. (Rubin and Elder 1980.)

RELIABILITY:
The degree to which results are consistent upon repetition of an experiment or test.

SAMPLE:
A part of a larger set, usually selected deliberately, to investigate the properties of the parent population. (Rubin and Elder 1980.)

Random Sample: A sample selected by using a random selection procedure. Each individual or object in the population must have a known (for example, equal) chance of being included. Selection of one individual or object should not affect the selection of another.
Stratified Sample: A sample selected from a population which has been divided into parts, a portion of the sample coming from each stratum.


SAMPLING:
To select a number and type of individual or object members from a class. (Rubin and Elder 1980.)

VALIDITY:
The degree to which a research study or test can predict performance in a realistic situation—that is, where the problem investigated actually exists.

ENVIRONMENTAL DISPLAYS:
The researcher must define the environment to be assessed. This may be a clearly defined geographical area (for example, Manhattan Island, Yosemite National Park) or a general environmental type (for example, metropolitan environments, wildlands). In either case, it is unlikely that observers will be able to comprehend the whole environment from one viewpoint. The researcher must select those views that best represent the environment. Three strategies are commonly used: (1) random selection, (2) rational selection, and (3) public selection.

OBSERVERS:
It is normally not possible to ask every potential user’s opinion. Total user populations are frequently very large and difficult to identify. Therefore researchers must find their observer group by sampling (1) randomly, (2) according to availability, or (3) by proposing a surrogate group.

PRESENTATION MEDIA:
The visual quality of landscape must be simulated if potential visual impacts are going to be assessed. Among the media available for simulation are: (1) sketches, (2) models, (3) computer graphics, (4) photographs, and (5) graphic montages. The use of simulations raises questions concerning the validity of such techniques.

RESPONSE FORMATS:
It is necessary for the researcher to establish a method to elicit observer descriptions and perceptions of the landscape. While there are well-established and widely recognized methods available, a host of conceptual and methodological issues are associated with their use. (Craig and Feimer 1979; Daniel 1976; Wohllwill 1976.) These issues include: (1) the reliability that the results can be replicated; (2) the validity that the method measures what it purports to measure; (3) the sensitivity of the method to distinguish actual differences; (4) the generality of the method’s application across diverse environments and observers; and (5) the utility of the method for the landscape planners and managers needing to assess visual quality and impacts. These issues have not been comprehensively addressed for any visual assessment response format. However, the past decade has seen repeated use of several methods without any obvious difficulties that would eliminate them from further consideration. These methods for quantifying visual qualities include: (1) rating scales, (2) Q sorts, (3) rank ordering, and (4) checklists. They also include more holistic cognitive methods for systematically describing visual qualities such as: (5) similarity sorts, (6) observer-employed photography, and (7)
cognitive maps. This list should not be considered exhaustive.

**LANDSCAPE ATTRIBUTES:**
Qualities, characteristics, or properties pertaining to the landscape.

**Closure:** Forces of organization driving toward spatial order, toward stability, tend to shape optical units into closed compact wholes. Confronted with a complex optical situation, the beholder searches for the form with the most stable unity, or with the least disturbed relationships to the environment. (Kepes 1944.)

**Discontinuity:** Lack of continuity or cohesion. (U.S. For. Serv. 1973.)

**Distinct:** A resource or activity which is considered unique and as an asset of an area. It is typically known as a visual/aesthetic draw and/or has many distinctive attributes. Diversity and compatibility are characteristic in such a resource. (A.C.E. 1980.) Clearly marking a landscape or landscape feature as different from others.

**Diversity:** The number of pattern elements as well as the variety among them and edge relationships between them. (Jones and Jones 1977.)

**Dominant:**
(a) Ruling; governing; predominant; exercising influence. (Webster 1960.)
(b) One of two contrasting elements must clearly dominate the other. One is the feature, the other the supporting backdrop. (Simonds 1961.)

**Harmony:** The representation of all opposed elements (in a work of art) in such a way as to become a pleasing unity; generally the task of art is to bring the distinct parts into a unified whole, or to demonstrate them as components of one unified law and thus excite aesthetic satisfaction—harmony is the main requirement of every art. (Runes and Sehrickel 1946.)

**Intactness:** The integrity of visual order in the natural and man-built landscape, and the extent to which the landscape is free from visual encroachment. (Jones and Jones 1977.)

**Monotony:** Complete repetition; tedious sameness. (U.S. For. Serv. 1973.)

**Seasonal Change:** Change brought about by seasonal variation (that is, vegetation color, density of foliage) which may affect aesthetic perception of an area. (A.C.E. 1984.)

**Sequence:**
(a) Units arranged that motion of attention from unit to unit is easiest in a certain direction. Progressive change of at least one characteristic in a series of objects. (Hubbard and Kimball 1917.)
(b) A succession of perceptions or experiences having continuity. (Simonds 1961.)

**Similarity:** A physiographic area of land which has common characteristics of ecoregions, land use, land use intensity and water resource. Similarity zones are assigned a specific management classification. (A.C.E. 1984.)

**Uniqueness:** A resource-oriented criterion: a visual resource, visual character, or visual quality which is rare or uncommonly found at a regional or national scale. (Jones and Jones 1977.)

**Unity:**
(a) Harmony of the total scene. (Simonds 1961.)
(b) The degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern. Unity refers to the compositional harmony or intercompatibility between landscape elements. (Jones and Jones 1977.)

**Variety:** An intermixture of succession of different things, or qualities. (U.S. For. Serv. 1973.)

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[Diagram: Monotony/Variety. Source: Grinde, K., 1984.]
(a) Relief from monotony; not a principle of organization, but the pleasure of its perception is a principle of the organization of the human mind. (Hubbard and Kimball 1917.)
(b) The state or quality of being varied and having the absence of monotony or sameness. (U.S. Bur. of Land Manage. 1977.)

Vividness:
(a) The memorability of the visual impression received from contrasting landscape elements as they combine to form a striking and distinctive visual pattern. (Jones and Jones 1977.)
(b) The quality in a landscape which gives distinction and makes it visually striking. (Litton et al. 1971.)

FORMAL AESTHETIC ATTRIBUTES:

Accent:
(a) A detail or area emphasized.
(b) Emphasis laid on a part of a design or composition.
(c) A small detail or area emphasized.
(d) An object used for emphasis.

Asymmetry: (See Balance, asymmetrical).

Axis:
(a) A main line of direction, motion, growth, or extension.
(b) A straight line with respect to which a body, figure, or system of points is symmetrical.

Balance:
(a) Stability produced by even distribution of masses.
(b) An aesthetically pleasing integration of elements; harmony.

Balance (symmetrical or formal): An imaginary line drawn vertically through the center of the arrangement will divide it into two equal parts, and each part will appear as the reverse of the other.

Symmetry/Asymmetry. Adapted from: Jones and Jones, 1977.

Balance (asymmetrical): Occult balance. Disposition of objects neither similar nor similarly placed but still so chosen and arranged that the sum of the attractions on one side of the vertical axis is equal to the sum of the attraction on the other side.

Compose: To form by uniting two or more things; to put together; to form, frame, or fashion; to create.

Composition: The putting together and organization of components in a work of art; the product of such organization.

Continuity: Uninterrupted connection, succession, or union.

Mass: A quantity of matter cohering together so as to make one body, usually of indefinite shape.


(a) A quality of matter forming a body of indefinite shape and size, usually of relatively large size; a lump. (Webster 1960.)
(b) One of the elements of art: bulk or quantity of matter. (Baldinger 1960.)

Axis. Adapted from: Yeomans, W.C., 1983.
Order:
(a) The manner in which one thing succeeds another; arrangement, sequence, or succession in space or time. (b) The totality of arrangements composing some sphere of action or being.

Pattern: An arrangement of parts, elements, or details that suggests a design or somewhat orderly distribution.

Proportion: The relation of one part to another or to the whole with respect to magnitude, quantity, or degree.

Repetition: Units all the same in interest and ability to attract attention, or at least the same throughout in some characteristic.

Rhythm: Harmonious or orderly movement, fluctuation, or variation with recurrences of action of situation at fairly regular intervals.

Shape:
(a) Spatial aspects of appearance. (Arneheim 1954.) See figure on bottom page 328.
(b) Perceived relation of an object’s parts. (Hubbard and Kimball 1917.)
(c) The grasping of structural features found in, or imposed upon, the stimulus material. Perception of shape consists in fitting the stimulus material with templates of relatively simple shape, visual concepts, or categories. (Arneheim 1954.)

Silhouette: Any dark shape or outline seen against a light background.

Silhouette. Adapted from: Yeomans, W.C., 1983.

Space:
(a) Distance, interval, or area between or within things; extent, room. (Webster 1960.) See figure on bottom of page 328.
(b) That which in three dimensions corresponds to “background” in two dimensions. (Rasmussen 1959.)
(c) A limited extent in one, two or three dimensions; a volume.

Symmetry: Balanced proportions; the correspondence of parts in size, shape, and relative position, especially on opposite sides of a dividing line or about an axis.

Transition: A passing from one state, stage, place, or subject to another, especially without abruptness.

VISUAL IMPACT ATTRIBUTES:

Absolute Scale: Absolute size; relation of the size of any given object to a definitely designated standard (generally in relation to man). (Hubbard and Kimball 1917.) The absolute size of an object obtained by relating the size of the object to definitely designated (that is, measured) standard. (A.C.E. 1984.)


Codominance: Two dominating features of relatively equal visual importance in one scene. (U.S. For. Serv. 1973.)


Congruence: Agreeing or harmonious in character of the landscape.
Contrast:
(a) Diversity of adjacent parts, as in color, tone, or emotions.
(b) The closer the juxtaposition of two dissimilar perceptions, in time or space, the more powerful the appeal to the attention. (U.S. For. Serv. 1973.)

Disability Glare: Glare resulting in reduced visual performance and visibility. (Rubin and Elder 1980.)

Discomfort Glare: Glare which results in a feeling of annoyance. It does not necessarily interfere with visual performance or visibility. (Rubin and Elder 1980.)

Dominance: Dominance of components or specific features in a scene may be dominant because of prominent positioning, contrast, extent, or importance of pattern elements. (Jones and Jones 1977.)

Dominant:
(a) Ruling, governing, predominant; exercising influence. (Webster 1960.)

Fragility: A judgment of the landscape's ability to accept development without diminishing visual quality. (Schauman et al. 1982.)

Intrusion: A feature (land and water form, vegetation, or structure) which is generally considered out of context with the characteristic landscape. (U.S. Bur. of Land Manage. 1977.)

Landscape Compatibility: The degree to which landscape elements/characteristics are unified with their setting. (A.C.E. 1984.)

Landscape Compatibility. Source: Jones and Jones, 1977.

Landscape Control Points: A network of permanently established observation sites which provide the means of studying the visual impact of alterations to the landscape (similar terms: observation points, observer viewpoints). (Litton 1972.)

Relative Scale: The apparent size relationship between landscape components and their surroundings. (A.C.E. 1984.)

**Scale:**

(a) Visual scale is the apparent size relationships between landscape components or features and their surroundings. (Jones and Jones 1977.)

(b) A system of grouping or classifying in a series of steps or degrees according to a standard of relative size, amount, importance, perfection, and so forth; progressive graduated series. (Webster 1960.)

(c) The amount of open space around an object creates a factor called scale. Scale, too, is a matter of relationship. (Baldinger 1960.)

(d) Relative size of objects. (Hubbard and Kimball 1917.)

(e) Graphics usage. The proportional relationship (ratio) between the reduced size at which something is being represented on a map or other type of drawing and its true distance or size relationships. (Schwarz et al. 1976.)

(f) The proportionate size relationship between an object and the surroundings in which the object is placed. (U.S. Bur. of Land Manage. 1977.)

**Scale Contrast:** The difference in absolute or relative scale in relation to other distinct objects or areas in the landscape. (A.C.E. 1984.)

**Spatial Dominance:** The prevalent occupation of a space in a landscape by an object(s) or landscape element. (A.C.E. 1984.)

**Subordinate:** Inferior or placed below another in size, brightness, and so forth; secondary in visual impact. (U.S. For. Serv. 1973.)

**Visual Absorption:** The physical capacity of a landscape to screen proposed development and still maintain its inherent visual character. The degree of visual penetration and the complexity of the landscape affect this capacity. (A.C.E. 1984.) Two major factors affecting the absorption capacity of a landscape are: (1) the degree of visual penetration, and (2) the complexity of the landscape. The degree of visual penetration (that is, the distance into the landscape that you can see from a vantage point) is affected both by vegetation and topography. The higher the visual penetration, the lower the ability of the landscape to visually absorb development and still maintain its existing visual character. Also, the higher the visual complexity within a landscape, the greater the visual absorption. (Vaughn 1974.)

**Visual Compatibility:** The degree to which development with specific visual characteristics is visually unified with its setting. (A.C.E. 1984.) Visual compatibility can be evaluated with reference to pattern elements and pattern character. Analogous concepts: contrast rating (B.L.M.), visual absorption criteria (U.S.F.S.), external harmony. (Tunnard and Pushkarev 1963.)

**Visual Contrast:** The difference in appearance between two (or more) elements and/or an element and its background. (A.C.E. 1984.)

**Visual Dominance:** That visual object(s) which exerts the greatest influence on the visual character of the landscape. (A.C.E. 1984.)

**Visual Impact:** The significance and/or severity of visual resource quality change as a result of anticipated activities or land use that
are to take place (or have taken place) on or adjacent to the landscape. (A.C.E. 1984.)

(a) A contrasting intrusion in the unified order of landscape, seen and appreciated as a misfit in appearance or function. A visual impact contributes to a reduction in scenic values. (Tetlow et al. 1977.)
(b) The degree of change in visual resources and viewer response to those resources caused by highway development and operations. (Jones and Jones 1977.)

*Adverse Visual Impact:* Any impact on the land or water form, vegetation, or any introduction of a structure which adversely changes or interrupts the visual character of the landscape and disrupts the harmony of the natural elements. (U.S. Bur. of Land Manage. 1977.)

*Visual Sensitivity:* The degree of observer interest in visual quality and concern for existing conditions and/or proposed changes in the landscape. (A.C.E. 1984.)

*Visual Sensitivity Level(s) (Sensitivity level):*
(a) U.S. Forest Service, Visual Management System usage. A three-level rating system used to delineate areas receiving different amounts of exposure (present or potential) to user groups with differing attitudes towards changes in scenic quality (such as might occur as a result of management activities). The system initially classifies all travel routes, special interest areas, and water bodies into areas of primary and secondary aesthetic management importance on the basis of their national importance, number of users, duration of use, and area size. The system next uses the assumption that aesthetic users and minor concern to functional users of forest areas (such as daily commuters and loggers) as the other basis for classifying the entire planning area into the three sensitivity levels. (After U.S. For. Serv. 1974.)
(b) An index of the relative degree of user interest in scenic quality and concern for existing or proposed changes in the landscape features of that area in relation to other areas in the planning unit. (U.S. Bur. of Land Manage. 1977.)

*Visual Vulnerability:* An evaluation of a landscape’s ability to accept change without diminishing visual quality. (A.C.E. 1984.)
(a) Measure of the degree to which a given landscape is capable of absorbing man’s impacts without significant modification of its positive visual qualities. High vulnerability indicates that natural conditions are easily disturbed, and that such disturbances would be highly visible in the event of development; low vulnerability conditions permit development to be absorbed with less evident alteration to the landscape. (Tetlow et al. 1977.)
(b) The degree to which man-made changes might be seen in the landscape and their potential for degradation (of scenic quality); in essence, the landscape’s resistance or susceptibility to visual changes. (Litton 1974.)
(c) The susceptibility of an object or changed condition to critical evaluation as a consequence of its location in a position where it can be readily seen by the public. As applied to landscapes, it means their susceptibility to criticism (pro or con) as a consequence of their availability to public observation. (Schwarz et al. 1976.)

**AESTHETIC ZONING:**
Zoning which regulates property in the interest of protecting aesthetic values. The U.S. Supreme Court, in the 1954 Berman vs. Parker case, upheld this extension of the original legal justification for zoning powers with its finding that “It is within the power of the legislature to determine that the community should be beautiful as well as healthy.” (After Abrams 1971.)

*Mitigation:* A method or procedure designed to reduce or lessen the impacts caused by development in visual activities on the environment.

*Rehabilitation:* A short-term management alternative which returns existing adverse visual impacts, through modification or elimination, to a desired scenic quality. (U.S. Bur. of Land Manage. 1977.)

*Visual Resource Management Class (VRMC):* The degree of visual change acceptable within a designated portion of the characteristic
landscape; based upon the physical and sociological characteristics of any given homogeneous area and serving as a management objective.

CARDINAL VALUE (Cardinal unit):
The numerical values assigned to a variable which relate directly with some physical property (height, weight, and so forth). Each number has some meaning by itself about the measured property. Also see Ordinal Values. (Schwarz et al. 1976.)

*Interval Scale:* A type of scale which does not have an absolute zero point but possesses equal intervals and differences. (Rubin and Elder 1980.)

*Ordinal Value:* Numerical values assigned to a variable which represents a ranking only. The numerical values have meaning only when compared to one another. Because of this, mathematical operations performed on the value (means, modes, differences, and so forth) will not necessarily be valid, and the results of such operations must be carefully interpreted. Also see Cardinal Value. (Schwarz et al. 1976.)

*Ratio Scale:* A type of scale consisting of magnitudes with an absolute zero point, for which both intervals (differences) and ratios can be calculated. All statements of ratio must be based on this scale. (Rubin and Elder 1980.)

*Weighting:*
(a) Assigning numbers to express the relative importance of items in a group or series under consideration. (After Webster 1963.)
(b) The assignment of numerical values to resource yields when their values cannot be directly compared by existing techniques for quantification on some measurement scale. The assigned numerical values are usually referred to as “weights” or “multipliers.” As a technique, weighting is usually done according to some more or less objective sense of the relative importance of the different types of resource yields. While weightings are usually added (that is, additive weighting) to obtain a measure of the total social value of resource uses or resource yield mixes for planning areas, they may also be multiplied or divided (or some combination of these processes) to facilitate decision making. (Schwarz et al. 1976.)

SIMULATION:
The realistic visual portrayal which demonstrates the perceivable changes in the landscape features of a proposed management activity through the use of photography, artwork, computer graphics, and other such techniques.

*Accuracy:* To be in exact conformity to a truth, standard, rule, or model.

*Photomontage:*  
(a) A combination of several distinct photographic pictures so they often blend with or into each other to produce a composite picture which may or may not appear to be made up of separate pictures. (Webster 1963.)
(b) A composite picture or edited film in which contrasting shots or sequences are juxtaposed or blended for the purpose of suggesting a total idea or impression, or developing a theme. (After Webster 1963.)
(c) A composite picture or edited film in which contrasting shots or sequences are placed side by side or blended for the purpose of suggesting a total idea or impression. (U.S. Bur. of Land Manage. 1977.)

*Representativeness:* The depiction or description of something as having a particular character.
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