

Trends of the methods of landscape presentation in the landscape appreciation test from 1967 to 1987

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Trends of landscape presentation method until 1987

Peterson (1967), who used psychometric measurements, evaluated 23 slides by projecting them onto a 50x50 cm screen. The slide evaluation method is an easy way to obtain data for many evaluators at once, and has since become widely used. Canter (1969) experimented with 20 black and white slides on a 2x2m screen. Carr and Schissler (1969) experimented with 10 scenes per second by video. Zube (1973) explored the effects of landscape changes using slides and line drawings. Law and Zube (1983) examined foreground effects in 19 pairs of slides. Hull, Buhyoff and Daniel (1984) conducted an evaluation experiment with a maximum of 134 slides.

Before using the slides, experts visited the site, scored it according to certain criteria, and decided on the quality of the landscape in the area (Fine 1968). Although such a method is laborious and costly and there are not many studies have been carried out, but Penning-Rowse (1977) reported two people evaluated 269 km². Aoki (1981) conducted the field experiment at 21 sites with 40 subjects and Nasar et al. (1983) examined the effects of observations and widening and narrowing at four locations. Stewart et al. (1984) confirmed the association with 50 slides and field experiments. Nasar (1987) explored the observation directions at 20-point interview.

Carls (1974) began an experiment using photographs that were easier to experiment with than slides. He used 100 color photographs of 8x10 inches. Propst and Buhyoff (1980) performed 100 slide experiments. Schroeder (1982) rated the green on 35 5x7 inch photographs. Shuttleworth (1980) examined the differences between black-and-white and color photographs at six locations. Dearden (1984) conducted an evaluation experiment with 12x18 cm 30 color photographs. Benayas, Lucito and Belnaldez (1987) gave an environmental assessment with 72 pairs of photographs.

However, it was immediately a matter of whether the photos matched the site evaluation. Dun (1974) examined the differences between the six-point rating and the photo rating. Although his experiments concluded that they were roughly the same, I examined the correlation analysis of the results and found no significant correlation. Dearing (1979) examined the differences between the 20 slides and the field evaluation. Kane (1981) examined the difference between the site and the slide at 10 points and found a correlation of 0.96. However, Coetier (1983) examined the five scenery sites and photographic evaluations and found a correlation of 0.39-0.68. Latimer et al. (1981) examined the effects of sky, morning, snow, and clouds. Malm et al. (1981) examined the effects of climatic conditions from 15-150km on 80 slides and on site. Kellomaki and Sabolainen (1984) conducted field and indoor evaluation

experiments at 34 locations. Shelby and Harris (1985) examined the relationship between a 5x7inch photograph and the description on the scene. Trent, Neumann and Kvashny (1987) examined differences between on-site and color photography at five locations.

Pogacnick (1976) experimented with a method of creating a montage photograph and evaluating the plan. He also used 20×30 cm black and white 36 photographs, and pointed out the project objects on the photographs (Pogacnick1979).

Myklestad and Wagar (1977) attempted to present landscapes with computer graphics. Killee and Buhyoff (1983) examined the difference between eight CP drawings and sketches with an 8-second presentation.

As for the panorama scenery, Banerjee (1977) tested a 360-degree coastal panoramic view on 16mm film. Clamp and Powell (1982) presented 40 panoramas with six slides. Nassauer (1983) examined the difference between a 140-degree panoramic view and a 65-degree wide-angle view on a 100 x147cm screen with 17 pairs of slides.

Ulrich (1984) examined the effect of the 182 x 122 cm window on postoperative recovery in a hospital.

Keywords: presentation of landscape, landscape appreciation, 1967-1987

Table1 List of interesting papers

Presentation tools	Name of authors	Year	Title of paper	Name of journal
50x60inches screen, 23 color slides	Peterson, G. L.	1967	A predictive model of preference: Quantitative analysis of the perception of the visual appearance of residential neighborhoods.	J. of Regional Science, 7(1), 19-31.
on-site appreciation by respondents: 773 square miles, 90 days	Fine, K. D.	1968	Landscape evaluation: a research project in East Sussex.	Regional Studies, 2, 41-55.
20 photos: 2x2m screen, b and w	Canter, D.	1969	An intergroup comparison of connective dimensions in architecture.	Environment and Behavior, 1, 37-48.
observation by city trip: 106Ameas, 5 minutes, 40mph	Carri, S. and Schissler, D.	1969	The city as a trip: Perceptual Selection and Memory in the View from the Road.	Environment and Behavior, 1, 7-36.
landscape type: 15 slides, 3 min	Calvin, J.G., Deeringer, J.A. and Curtin, M.E.	1972	An attempt at assessing preferences for natural landscapes.	Environment and Behavior, 4(4), 447-470.
preference: 58 slides, 20seconds	Kaplan, S., Kaplan, R. and Wendt, J.S.	1972	Rated preference and complexity for natural and urban visual material.	Perception & Psychophysics 12(4), 354-358.
scaling: 15 slides, 50 voices	Ackling, C.A. and Sofie, G.J.	1973	How do we verbalize what we see.	Landscape Architecture, 64, 470-475.
personality: 27 slides, 18 photo, 9 drawing	Zube, E.H.	1973	Rating everyday rural landscapes of the Northeastern U. S.	Landscape Architecture 83, 370-375.
predictive model: 100 color photos, 8x10inches	Carls, E.G.	1974	The effects of people and man-induced conditions on preferences for Outdoor recreation landscapes.	J. of Leisure Research, 6, 113-124.
companion of on-site and photograph: 6 sites	Dunn, M.C.	1974	Landscape evaluation: A further perspective.	The Planner 60(10), 935-936.
personality: 2.25miles, 5 areas, car	Zube, E.H.	1974	Cross-disciplinary and intermode agreement on the description and evaluation of landscape resources.	Environment and Behavior, 6(1), 69-89.
8 view on-site fields, 58 station photographed in color	Zube, E.H., Anderson, T. and Pitt, D.	1974	Measuring the landscape: Perceptual responses and physical dimensions	Landscape Research 1(6), no page.
spatial sampling of landscape: survey line from avoiding major towns, 170 locations, 8 directions	Clamp, P.	1975	Evaluating English landscapes - some recent developments.	Environment and Planning A, 6, 75-92.
validation: b and w photos, 8 on-site	Dunn, M.C.	1976	Landscape with photographs: Testing preference approach to landscape evaluation.	J. of Environmental Management, 4, 15-26.
predictive model: 86 slides, label, imagery	Herzog, T.R., Kaplan, S. and Kaplan, R.	1976	The prediction preference for familiar urban places.	Environment and Behavior, 8(4), 627-646.
for planning: photo montage	Pogacnik, A.	1976	Visual-aesthetic components in the cybernetics of urban planning.	Computer Aided Design, 8(1), 41-48.
video: 16mm sound film, 128 seconds, 350 panorama	Banerjee, T.	1977	Who values What? audience reaction to coastal scenery.	Landscape Architecture 67(3), 240-243.
presentation uses computer graphics	Wynne, S. and Weger, J.A.	1977	Preview: Computer assistance for visual management of forested landscapes.	Landscape Planning, 4, 313-331.
predictive model: on-site evaluation, 6 man-days, 299km2, 2 people	Penning-Roswell, E.C.	1977	The Manchester Landscape Evaluation Method: A Critical Appraisal.	Landscape Research 2(3), 6-11.
predictive model: b ad w photo, 8x10inches	Shaffer, Jr., E.L. and Brush, R.O.	1977	How to measure preferences for photographs of natural landscapes.	Landscape Planning, 4, 237-258.
nationality: 53 photos, 30-40degree alignment, b and w	Ulrich, R.S.	1977	Visual landscape preference: A model and application.	Man-Environment Systems 7(5), 279-293.
effect of professional experience: 9 color slides, 36 pairs	Buhyoff, G.J., Wellman, J.D., Harvey, H. and Frasier, R.A.	1978	Landscape architects' interpretations of people's landscape preference.	J. of Environmental Management, 6, 255-262.
analysis: 20 slides, 5 sec	Ootendorp, A. and Barmine, D.E.	1978	Dimensions in the perception of architecture: III. Multidimensional preference scaling.	Scandinavian Journal of Psychology 19, 145.
validation: 46 slides and color sketches, 0.74, 15 b and w sketches, color photo, 0.68	Schomaker, J.H.	1978	Measurement of preferences for proposed landscape modifications.	Landscape Research 3(3), 5-9. College of Forestry, Idaho.
Description: 6 photos	Byrne, S.M.	1979	Perception of the Landscape in the Lands End Peninsula	Landscape Research 5(1), 21-24.
difference between on-site and photograph: 20 slides, 2 min.	Dearinger, J.A.	1979	Measuring preferences for natural landscapes.	Journal of the Urban Planning and Development Division, ASCE, 83-80.
photo interpretation: 35 photos, 40x30cm, b and w	Pogacnik, A.	1979	Environmental public preferences as obtained by the method of photointerpretation in the Louisiana Region.	Urban Ecology, 4, 45-51.
information: pre slide after slide, 50slides	Ulrich, R.S.	1979	Visual Landscapes and Psychological Well-Being	Landscape Research 4(1), 17-23.
information, label affected: 127x176mm photo, label 10x65mm	Hodgson, R.W. and Thayer Jr., R.L.	1980	Implied human influence reduces landscape beauty.	Landscape Planning, 7, 171-179.
congestion: 380slides, 0.75x0.75m screen, 12sec, 1.15h/boat	Pitt, D.G., et al.	1980	A Perceptually Based Definition of Valued Boating Environments on the Tributaries of Chesapeake Bay	Landscape Research 5(3), 19-21.
analysis: 100 color slides.	Propst, D.B. and Buhyoff, G.J.	1980	Policy Capturing and Landscape Preference Quantification: A Methodological Study.	J. of Environmental Management, 11, 45-59.
comparison of b-w and color photo: 6 sites	Shuttleworth, S.	1980	The use of Photographs as an Environment Presentation Medium in Landscape Studies.	J. of Environmental Management, 11, 61-76.
effects of regional familiarity: 11 slides, 5sec	Wellman, J.D. and Buhyoff, G.J.	1980	Effects of regional familiarity on landscape preferences.	J. of Environmental Management, 11, 105-110.
congruity: 46 slides, 50x75cm screen	Wohlwill, J.F. and Harris, G.	1980	Response to congruity or contrast for man-made features in natural-recreation setting.	Landscape Research 3(4), 349-365.
information: 80 color slides	Anderson, L.M.	1981	Land Use Designations Affect Perception of Scenic Beauty in Forest Landscapes.	Forest Science 27(2), 392-400.
on-site: 40 respondents, 21 sites	Aoki, Y.	1981	A study of On-site Evaluation for Site Planning: Lake Kasumigaura.	Landscape Planning 8, 235-258.
30 method: 54 pairs b and w photo, 10sec	Bernaldez, F.G., Parra, F. and Garcia-Quintana, J.A.	1981	Environmental Preferences in Outdoor Recreation Area in Madrid (Spain).	J. of Environmental Management, 13, 13-28.
on-site: 10 observers, minibus, 47 sites km2	Briggs, D.J. and France, J.	1981	Assessing Landscape Attractiveness: a South Yorkshire Study	Landscape Research 6(2), 2-6.
attributes: 19 pairs slides, pre and post, student, US Federal, BLM/Forest Service	Falmer, N.R. et al.	1981	Evaluating Effectiveness of Observer Based Visual Resource and Impact Assessment Methods	Landscape Research 6(1), 12-16.
experience: pre and post 30min hike, 24 photos, b and w	Hammitt, W.E.	1981	The Familiarity-Preference Component of On-Site Recreation Experiences.	Landscape Research 6(1), 17-21.
statistical test on-site to slide: 19 sites, 0.96 coefficient	Kane, P.S.	1981	Assessing landscape attractiveness: a comparative test of two new methods.	Applied Geography, 1, 77-86.
predictive model: percentage of sky, effect of morning, snow, clouds, 79 or 80 slides	Latimer, D.A., Hogo, H. and Daniel, T.C.	1981	The effects of atmospheric optical conditions on perceived scenic beauty.	Atmospheric Environment, 15(10-11), 1885-1894.
meteorological: on-site and slides, 80 slides, 8 second, 15-150km	Malm, W. et al.	1981	Human Perception of Visual Air Quality (Uniform Haze).	Atmospheric Environment, 15(10-11), 1875-1880.
predictive model: sampling of photo points, 90 points	Schroeder, H. and Daniel, T.	1981	Progress in Predicting the Perceived Scenic Beauty of Forest Landscapes.	Forest Science 27(1), 71-80.
other appraisals: 60 slides, 50x75cm screen	Ulrich, R.S.	1981	Natural versus urban scenes: some Psychophysiological effects.	Environment and Behavior 13(5), 623-650.
effect of age: 20 slides	Balling, D.C. and Falk, J.H.	1982	Development of visual preference for natural environments.	Environment and Behavior 14(1), 5-28.
on-site: twice, 37 sites	Beer, A.R.	1982	The Development Control Process and the Quality of the External Environment in Residential Areas	Landscape Research 7(3), 14-21.
40 color panoramic slide, 6 screens formed a circle, back-projected information, 70 slides, 15s, 20ms, 10ms	Clamp, P. and Powell, M.	1982	Prospect-Refuge Theory under Test.	Landscape Research 7, 7-8.
greenery: 35photos, 3x7inch, slides	Herzog, T.R., Kaplan, S. and Kaplan, R.	1982	The Prediction of preference for Unfamiliar Urban Places.	Population and Environment 5(1), 43-59.
difference of new residents and natives: 118x165mm photo	Schroeder, H.W.	1982	Preferred features of urban parks and forests.	Journal of Arboriculture 8(12), 317-322.
validation: 5 scenes, field and photo, R=0.39-0.68	Aoki, Y.	1983	An empirical study on the appraisals of landscape types by residential groups - Tsukuba Science City.	Landscape Planning 10, 109-130.
distance: affect SBE: 38 slides, 4000-8000ft	Coetzier, J.F.	1983	A photo validity test.	Journal of Environmental Psychology 3, 315-323.
other presentation: 8 slides, graphic, sketch, 8sec	Hull IV, R.B. and Buhyoff, G.J.	1983	Distance and scenic beauty: A nonmonotonic Relationship.	Environment and Behavior 15(1), 77-91.
information: effect of foreground details: 19 pairs slides	Killeen, K. and Buhyoff, G.	1983	The relation of landscape preference and abstract topography.	J. of Environmental Management, 17, 381-392.
evolutionary: experience 4 sites: 15 respondents, open or closed view, observation point	Law, C.S. and Zube, E.H.	1983	Effects of photographic composition on landscape perception.	Landscape Research 8(1), 22-23.
information: 17 pairs, panorama(140), wide(51), 100x147cm screen	Nasar, J.L., et al.	1983	The emotional quality of scenes and observation points: A look at prospect and refuge.	Landscape Planning 10, 395-391.
7 photos images: 125 color and 128 b and w sketches	Nassauer, J.L.	1983	Framing the landscape in photographic simulation.	J. of Environmental Management, 17, 1-16.
greenery: 340 slides, tree shade management	Ross, M.G. and Kopka, S.J.	1983	An Elementary Linear Analysis of Variables in the Communication of Landscape Simulations: Implications for Visual Resource Management.	Landscape Research 8(1), 19-21.
personality: 58 color photo	Schroeder, H.W. and Cannon, Jr., W.N.	1983	The aesthetic contribution of trees to residential streets in Ohio Town.	Journal of Arboriculture 9(9), 237-243.
prediction model using altitudinal and photographic data: 30 sites	Zube, E.H., Pitt, D.G. and Evans, G.W.	1983	A lifespan development study of landscape assessment.	Journal of Environmental Psychology 3, 115-128.
personality: 30 color photo, 12x16cm	Buhyoff, G.J., Gauthier, L.J. and Wellman, J.D.	1984	Predicting Scenic Quality for Urban Forests Using Vegetation Measurements.	Forest Science 30(1), 71-82.
information: 100 slides, 15s, 200ms, 20ms	Dearden, P.	1984	Factors influencing landscape preferences: An empirical investigation.	Landscape Planning 11, 293-308.
scenic beauty: 134 slides	Herzog, T.R.	1984	A cognitive analysis of preference for field-and-forest environments.	Landscape Research 9(1), 10-16.
validation: field, laboratory: 34 sites	Hull IV, R.B., Buhyoff, G.J. and Daniel, T.C.	1984	Measurement of Scenic Beauty: The Law of Comparative Judgment and Scenic Beauty Estimation Procedures.	Forest Science 30(4), 1064-1098.
validation: 10 photos, 10 variables, -0.02(middle ground)-0.86(variety)	Kellomaki, S. and Savolainen, R.	1984	The scenic value of the forest landscape as assessed in the field and the laboratory.	Landscape Planning 11, 97-107.
predictive model: 40 color slides	Kopka, S. and Ross, M.	1984	A study of the reliability of the bureau of land management visual resource assessment scheme.	Landscape Planning 11, 161-166.
predictive model using landform, color and uniqueness: 63 photos	Miller, P. A.	1984	A comparative study of the BLM scenic quality rating procedure and landscape preference dimensions.	Landscape Journal 3(2), 123-135.
analysis: 10 color photos, 25inches	Pattrel, M.R. et al.	1984	The prediction of scenic beauty from landscape content and composition.	Journal of Environmental Psychology 4, 7-26.
rank order and quality: 180photos	Russell, J.A. and Ulrich F.L.	1984	Acceptation level and the effective appraisal of environments.	Journal of Environmental Psychology 4, 119-136.
validation: 50slides on-site	Shuttleworth, S.	1984	Consensus and the Perception of Landscape Quality.	Landscape Research 9(1), 17-22.
needs and fears: 26 photos	Stewart, T.R., et al.	1984	Judgments of photographs vs. field observations in studies of perception and judgment of the visual environment.	Journal of Environmental Psychology 4, 283-302.
recovery from the surgery: 183x122cm window, 74cm height	Talbot, J.F. and Kaplan, R.	1984	Needs and fears: the response to trees and nature in the inner city.	Journal of Arboriculture 10(8), 222-228.
predictive model: 492 color slides, 319 color slides, 60 degree	Ulrich, R.S.	1984	View Through a Window May Influence Recovery from Surgery.	Science 224, 420-421.
greenery: 82x122mm color	Ning, J., Daniel, T.C. and Schroeder, H.W.	1984	Predicting Scenic Values in Forested Residential Landscapes.	J. of Leisure Research 16(2), 124-135.
analysis: 18 color picture pairs	Aoki, Y., Yasuoka, Y. and Naito, M.	1985	Assessing the Impression of street-side Greenery.	Landscape Research 10(1), 9-13.
preference: 70color slides	Barnico, J.C., Bernaldez, F.G. and Ruiz, J.P.	1985	Content analysis of landscape preferences: the environmental perception of Madrid livestock raisers.	Landscape Research 10(3), 2-6.
density of trees: 40 slides	Herzog, T.R.	1985	A cognitive analysis of preference for waterscapes.	Journal of Environmental Psychology 5, 225-241.
validation: 28mm lens, 5x7inches print, on-site, photo, written	Schroeder, H.W. and Green, T.L.	1985	Public preference for tree density in municipal parks.	Journal of Arboriculture 11(9), 272-277.
predictive model using dead-down wood and basal area: 587 height, 3x30" additional shot	Selby, B. and Harris, R.	1985	Comparing methods for determining visitor evaluation of ecological impacts: site visits, photographs, and written description.	J. of Leisure Research 17(1), 67-87.
80 method: 60slides, b and w	Vodak, M.C., et al.	1986	Scenic Impacts of Eastern Hardwood Management.	Forest Science 31(2), 286-301.
predictive model pine trees, herbages and downed wood: 50 slides	Abello, R.P., Bernaldez, F.G. and Gallano, E.F.	1986	Consensus and contrast components in landscape preference.	Environment and Behavior, 18(2), 155-178.
predictive model: 57 photo slides, tree density	Brown, T.G. and Daniel, T.C.	1986	Predicting Scenic Beauty of Timber Stands.	Forest Science 32(2), 471-487.
predictive model using diameter, trees per acre and age: 30R aside, 30R focus, 24 degree sidelong, slides	Buhyoff, G.J. et al.	1986	Prediction of Scenic Quality for Southern Pine Stands.	Forest Science 32(3), 789-778.
loggers, foresters, eagle club: 126 slides, 8sec	Hull IV, R.B. and Buhyoff, G.J.	1986	The Scenic Beauty Temporal Distribution Method: An Attempt to Make Scenic Beauty Assessments Compatible with Forest Planning Efforts.	Forest Science 32(2), 271-280.
planning: 40 slides, 10sec, distance 60 100 120R	McCool, S.F., Benson, R.E. and Asar, J.L.	1986	How the public perceives the visual effects of timber harvesting: an evaluation of interest group preferences.	Environmental Management 10(3), 385-391.
preference: photographs, 0.1-18 acres	Schroeder, H.W.	1986	Estimating park tree densities to maximize landscape aesthetics.	J. of Environmental Management 23, 325-333.
difference between eastern nations and western tourist: 11 photos, 12x9cm	Talbot, J.F. and Kaplan, R.	1986	Judging the Sizes of Urban Open Areas: Is Bigger Always Better?	Landscape Journal 5(2), 63-82.
personality: 11photos, b and w, 12x9cm	Tips, W.E.J. and Savasdsara, T.	1986	Landscape preference evaluation and sociocultural background: a comparison among Asian countries.	J. of Environmental Management 22, 113-124.
on-site: 24 trails, scenic view	Tips, W.E.J. and Savasdsara, T.	1986	The influence of the environmental background of subjects on their landscape preference evaluation.	Landscape and Urban Planning 13, 125-133.
for planning: 15x205mm, 61photos, photomontage	Westphal, J.M. and Lieber, S.R.	1986	Predicting the effect of alternative trail design on visitor satisfaction in park setting.	Landscape Journal 5(1), 38-44.
nature camp affect altitude: 72 pairs slides	Yamada, H., et al.	1986	Visual vulnerability of streetscapes to elevated structures.	Environment and Behavior, 18(5), 733-754.
personality: 6 photos, 50 pairs	Bernaldez, J., de Lucio J.V. and Bernaldez, F.G.	1987	Environmental Altitude Shifts as Revealed by Landscape Taste and Activity Preference.	The Environmentalist 7(1), 21-30.
information: 130 color slides	Bernaldez, F.G., Gallardo, D. and Abello, R.P.	1987	Children's landscape preferences: from rejection to attraction.	Journal of Environmental Psychology 7, 169-178.
other presentation: 15s, 200ms, 20ms, 70 color slides	Brown, T.C. and Daniel, T.C.	1987	Content effects in perceived environmental quality assessment: scene selection and landscape quality rating.	Journal of Environmental Psychology 7, 233-250.
effect of wildflower society: 60color slides, 10sec	Herzog, T.R.	1987	A Cognitive Analysis of Preference for Natural Environments: Mountains, Canyons, and Deserts.	Landscape Journal 6, 140-152.
on-site: interview: 20slides, viewing direction	Kaplan, R. and Eugene J. Herbert	1987	Cultural and sub-cultural comparisons in preferences for natural settings.	Landscape and Urban Planning 14, 281-293.
analysis: 32 b & w photos, 2x3"	Nasar, J.L.	1987	Environmental correlates of evaluative appraisals of central business district scenes.	Landscape and Urban Planning 14, 117-130.
difference between on-site and color slide: 5 sites	Ruddell, E.J. and Hammitt, W.E.	1987	Prospect Refuge Theory: A psychological orientation for edge effect in recreation environment.	J. of Leisure Research 19(4), 249-260.
survey paper: simulation techniques chronology, photo, drawing, computer, photomontage, three dimensional model, detailed model, dynamic model	Trent, R.B., Neumann, E. and Kivashny, A.	1987	Presentation mode and question format effects in visual assessment research.	Landscape and Urban Planning 14, 225-235.
	Zube, E.H., Simcox, D.E. and Law, C.S.	1987	Perceptual landscape simulations: History and prospect.	Landscape Journal 6, 92-90.