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LANDSCAPE PERCEPTION AND APPRAISAL: ETHICS, AESTHETICS AND UTILITY.

Introduction

The processes of landscape perception and appraisal have aroused interest in recent years due to the uncertainties they cause in management and environmental impact assessment. Since 1973 the present research team has undertaken experiments concerning natural environment perception and evaluation, developing data processing methods for the analysis of preferences of sets of picture pairs.

So far the experiments have involved 1500 people of varying social categories and 700 photographs of differing environments paired within thematic groups, and also in situ interviews and content analysis of the comments. Data processing took the form of a systematic search for the information's structure and regularities (see, for example, Gonzalez Bernaldez-et al., 1973; Rodenas-et al., 1975; Bernaldez & Parra, 1979, 1981; Ruiz y Gonzalez Bernaldez, 1983).

Landscape perception and appraisal by those subjects unfamiliar and with no interaction with the environment ('spectators', visitors).

This situation corresponds to one of the most frequent interpretations of the term 'landscape' as an object of contemplation, somewhat removed from and with little interaction with the observer. The analysis of the preferences' structure shows the presence of groups characteristic of intercorrelated appraisive features:

- Cognitive factors: for example, structural legibility, predictability (recurrent patterns, rhythmic versus random position of components), contrast and straight lines. The answers are used to place the subjects along a gradient with one end of the axis representing features giving security and the other stimulating characteristics (mystery, curiosity arousal).
- Psychophysical factors: for instance, vegetation, plant biomass and vigour, and water (Ulrich, 1981).
- Evocative signs and symbols, including those of hostility, and/or challenge: sharp forms and abrupt relief.

Various authors have shown the adaptation promoting role and the survival value of these characteristics (Kaplan, 1979). Some of these aspects are frequently associated in wider groups, for example, the abundance of unstructured vegetation, absence of signs of alteration, characteristics of mystery, absence of predictability and random element positioning are correlated to characterise a 'natural' extreme, in contrast to that of a 'humanised or controlled' landscape with greater legibility and predictability (patterns, rhythms), for instance.

Relation with explanatory characteristics

The experiments revealed interdependencies between preference patterns and different features of social groups, for example:

- Socio-professional interdependence: The landscape's 'humanised' or 'natural' character gives rise to clear differences in preferences depending on the subject's sociological class. Farmers differ from university members through their preference for 'humanising' elements, and housewives from students for similar reasons.

- Psychological interdependence: Various features of psychological personality correlate with a classification of landscape preferences studied in the above mentioned manner, (Macia, 1979,1980). For example the low score of 'emotional stability' appears to be positively related with visual characteristics of predictability and the presence of rhythms and recurrent patterns (Abello, 1984).

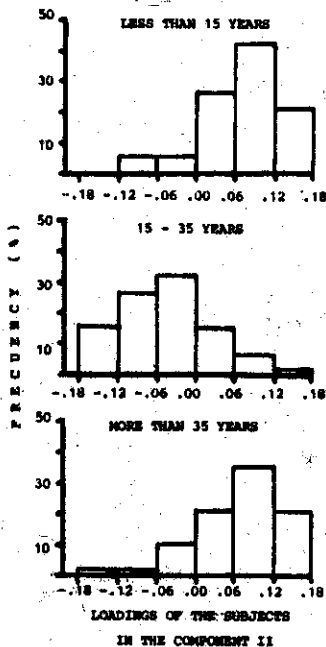


Figure 1
Distribution along the second component of factor analysis of picture pairs preferences of the population interviewed in the Gernika area, according to age groups.

- Effects of age: a recent study in the Basque Country (Ruiz & Ruiz, 1984) confirms that preferences for more 'natural', rugged, wild landscapes (uncontrolled environments with little human influence) increases from childhood to adolescence and adult ages, only to decrease again in later age groups, (Figure 1). This change in the appraisal of 'security-giving versus stimulant' characteristics resembles Piaget's ideas concerning the evolution of cognitive and affective characteristics and with observations of primates according to which acceptance of challenges presented by the environment (curiosity, exploration, tolerance of environmental hazards) increases during growth and maturity in males, (Baldwin & Baldwin, 1981).

- Rural versus urban: in the above-mentioned study in the Basque Country the contrast was noted between the perceptive appraisal of 2 groups of subjects: residents of the rural areas from which the landscape pictures were taken (Gernika) and urban inhabitants of nearby Bilbao. The local rural population emphasised the integration of human activities in the traditional landscape and also acknowledged and evaluated negatively landscape changes such as that caused by afforestation with *Pinus insignis*, a species introduced from the United States, or urbanisation. Town dwellers were less sensitive to such aspects, exhibiting a 'spectator' type perception implying no involvement with the landscape.

Perception and evaluation of those environments with which subjects experience direct interaction

Environmental perception by its traditional users emphasises its utilitarian aspects. Analysis of traditional livestock farmers' perception of their own environment in Northern Madrid reveals a component of consensus representing their 'canonical' or ideal landscape, (preference for green tones, choice of potentially more fertile zones, maintenance of a characteristic tree density, and scrub and stone clearance for example). Other components shape this canonical landscape through preferences for high, well-drained zones which act as complements to lower zones, being characterised by their lower productivity but higher quality, (Figure 2). The results show a certain variability in relation to adherence to traditional management rules which constitute the 'ethics' of man-environment relations.

The landscape model shaped by such rules is adapted to self-sufficiency situations (nowadays not prevalent) and is orientated fundamentally to buffer the fluctuations of an irregular and adverse environment, (for example, seasonal complementary nature between high, well-drained zones and low wet areas in Mediterranean areas; between woody and herbaceous vegetation in drought years; microclimate and shelter effects of a tree cover of characteristic density).

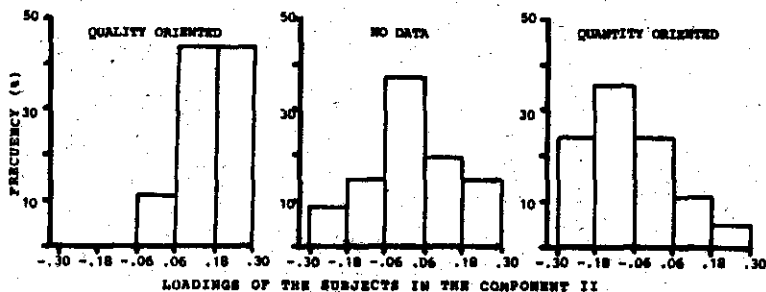


Figure 2 - Relation between classification in the groups "quality/quantity oriented" of livestock farmers according to interview data and their position in the second component of factor analysis. This axis represents the degree of adherence to traditional rules of "canonic" landscape management.

Concluding remarks

Research into perceived preferences of different groups and, above all, interpretation of their mechanisms and causes is of great use for environmental management, facilitating communication between planners and the general public.

Application of this knowledge to environmental education would allow increasingly lucid proposals for environmental management and impact assessment. Appraisive desirability has psycho-ethological roots (frequently with a survival value), and utilitarian and 'ethical' bases (rules of man-environment behaviour), which are rarely prevalent or up-to-date. Environmental education could update awareness through the improvement of environmental perception and the adaptation and enrichment of cultural rules.

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THE INAUTHENTIC PLACE? MYTHS AND FOLKLORE IN RESEARCH ON SUBURBIA

There is no doubt about the quantitative significance of
suburbia in the twentieth century growth of cities on both
sides of the Atlantic. Nor can there be much dispute that
suburbia is one of the typical landscapes of the contemp-