The Social Value of English Landscapes[1]

Edmund C. Penning-Rowsell[2/]

Abstract: Qualitative assessments of landscape resources can best be approached through direct measurement of landscape perceptions. Results from a survey of one District in Hertfordshire, England, show this approach not only to be viable but also to yield much information relevant to plans for landscape improvement and protection. Consensus was high and the socio-economic variables generally had little effect on evaluations. Residential location was important in affecting landscape perceptions, resulting in an urban/rural variation in results. For detailed surveys of landscape resources prior to planned landscape change this public-participation approach to landscape resources is recommended in preference to methods based on statistical prediction or professional judgment alone.

INTRODUCTION: THE EVOLUTION OF LANDSCAPE ASSESSMENT METHODS IN BRITAIN AND THE RATIONALE FOR PREFERENCE SURVEYS

In Britain the scenic quality of rural areas has been seen by both planners and the public as a valuable attribute to conserve. However, agreed criteria on which to base measurement of these scenic resources is absent and in its place there has developed a large number of different techniques each aimed at predicting landscape preferences from measured landscape characteristics (Penning-Rowsell 1973b, 1974 and 1975, Dunn 1974, Robinson et al. 1976).

The Evolution of Landscape Assessment Methods

Three main themes run through British landscape assessment research in the last ten years. The measurement of landscape quality has been approached, firstly, by direct measurement by the planners or landscape architects concerned with drawing up plans for landscape protection or enhancement, mainly using simply intuition aided perhaps by some sort of checklist or variable weighting device to record and assign ratings to sites or tracts based on supposed contributions to attractiveness of individual landscape components. This approach was adopted by many County planning, departments in the late 1960's and early 1970's and is exemplified by the work of Hampshire County Council (1968) based on a method devised by Hebblethwaite (1970) and adapted by other researchers (Tandy 1971).

The second approach to landscape resource assessment in Britain has used complex predictive statistical models such as that developed by the University of Manchester, England (Robinson et al.1976). Here sample qualitative assessments by a panel of professionals for parts of a study region are extrapolated to the remaining locations using multiple regression techniques based on measured independent variables of selected landscape elements for the whole region. Such predictions have been seen as useful owing to the high correlations, generally in the order of r = 0.75, between these landscape elements and the scores allocated to the sample areas by the professional panels.

The third approach to landscape evaluation, and hitherto still in its infancy, has been the assessment of landscape preferences of members of the public for landscape quality: the public preference approach. This direction has been followed in limited ways by

---

[1/]Submitted to the National Conference on Applied Techniques for Analysis and Management of the Visual Resource, Incline Village, Nevada, April 23-25, 1979.

[2/]Reader in Geography and Planning, Middlesex Polytechnic, Enfield, England.

Penning-Rowsell(1973a), Clamp (1975) and Dunn (1976) in Britain and in parallel by Zube (1973) and others (Zube, Brush and Fabos 1975) in the United States.

An Explanation of the Evolution of Methods

In part these three approaches have evolved from one another. Initial distrust of apparently over-subjective intuitive approaches led to the developments of the supposedly more objective statistical techniques in the search for methods of landscape evaluation which professionals could use without fear of attracting criticism of influencing the results by their own feelings - an attempt to remove the subjectivity from resource assessments despite the obviously subjective nature of landscape quality itself. The public preference approach is now growing out of a dissatisfaction with the statistical methods of landscape quality prediction since these now appear unnecessarily complex and simply hide the important subjectivity behind a facade of statistical manipulation.

The Rationale for the Public Preference Approach

The rationale of the public preference approach to landscape evaluation or assessment lies in the inherent complexity of the concept or construct of landscape quality and value (Lazersfeld 1958). To derive indicators and indices to operationalize this construct we need to identify the different facets that comprise the construct, including the historical associations and familiarity. All these different facets of landscape appreciation lead to different assessments of the same scenic resource by different people at different times. Landscape value is therefore part of a changing social reaction to the environment in which we Live, and we cannot quantify this reaction except in terms of what people view as historically important, aesthetically pleasing or safely familiar at any one time. To rely on surrogates is dangerous when we know so little about the true essence of the appeal of landscape (Appleton 1975); greater validity than can ever be possible with surrogates comes from direct social appraisals of landscape as a social resource. Furthermore while legislation in Britain does not demand publicly-based environmental appraisals as reported for the United States (Schomaker 1978), nevertheless landscape planning will fit more comfortably with social expectations if proper public inputs have been employed (Penning-Rowsell 1974).

THE DEVELOPMENT OF A METHODOLOGY FOR THE ASSESSMENT OF THE SOCIAL VALUE OF LANDSCAPES

Virtually all previous attempts to incorporate public preferences into landscape assessment methods have either used photographs or used select panels of professionals (Dunn 1976, Robinson et al.1976, Shafer 1969, Fines 1968, Zube et al.1974). This approach[3/] was explicitly rejected in this research because the author distrusted the use of photographs as not being sufficiently close to reality and also the use of professional or otherwise selected panels was avoided as possibly introducing bias o the basis that "professionals can no longer base decisions solely on what they deem best, ignoring public input (Schomaker 1978). Instead the major aim was to elicit the responses to rural landscape of ordinary members of the public while at the same time aiming at developing a technique that was simple, cheap, rapid and effective because otherwise planning departments would not be willing to employ the resulting methods.

To link the landscape assessment even more clearly into a planning framework two further constraints were imposed. Firstly, the result of the purvey was to be a map of perceived landscape quality based on the public preference surveys, as being the result required by the planner (although obviously in itself a gross over-simplification). Secondly, it was decided that the area covered should be the whole of an administrative rather than a landscape unit: to select a river basin or mountain range for study facilitates the assessment of landscape character and quality but not the planning process taking off from that assessment.

Pilot Assessment of Attitude-Measurement Techniques

The approach to developing techniques for assessing the public's view of landscape quality involved two stages. Initially a pilot survey reviewed many attitude-assessment techniques and tested several through a small survey comprising 23 interviews (Penning-Rowsell 1979). Subsequently a main survey applied the techniques found most successful in the pilot

---

[3/]The research described in this paper was carried out under a $10,000 grant from the Social Science Research Council and is fully reported in Penning-Rowsell et al .(1977) available from Middlesex Polytechnic, Queensway, Enfield, England.

work to a much larger area using a survey involving 540 interviews.

The pilot survey tested the use of a wide range of attitude-assessment techniques including attitude statement, and semantic differential rating scales (Osgood et al.1957, Lowenthal and Riel 1972), adjective checklists (Craik 1970) and cued and tree response. These techniques were all incorporated into two questionnaires, designed to test these methods in different ways, which were used to interview respondents in their own homes. These methods were all structured to elucidate evaluative, potency and detailed landscape judgments from those members of the public interviewed. The main conclusion of the pilot survey was that the basic approach was successful and that it was possible to obtain firm and apparently rational assessments of landscape quality from members of the public. However some of the techniques were more successful than others when applied to this complex perception situation. Both cued and free response were successful in gauging the degree of familiarity of respondents with local landscapes as well as revealing some previously not considered reasons for landscape appreciation such as this landscape familiarity and even ordinariness. The adjective checklists with 40 adjectives produced useful descriptions of landscape areas. However semantic differentials used in this survey were most successful at obtaining the comparative information essential for landscape evaluation, although the 15 scales used were far too many and repetitive.

Main Survey Methods

The questionnaires used in the pilot survey to incorporate into a single questionnaire a simplified semantic differential approach using a single preference rating scale of "Attractiveness" which had been found the most efficient landscape descriptor in the pilot tests. The choice of a single simple scale was again made in recognition of the major aim of arriving at a simple evaluative technique for planning department use. Ranking of landscape areas was also incorporated to guard against excessive use or identical rating positions. The cued response sections were retained to obtain information on respondents' familiarity with landscapes in question, with a view to subsequent weighting responses to reduce the influence of those with low familiarity ratings in the final "consensus" evaluations. Also included were questions to elucidate reasons for evaluations with which to attempt to gauge the degree of rationality or randomness of the assessments, as well as investigating attitudes to distant landscapes since the pilot survey had shown the tendency fur respondents to over-praise their immediate locality.

In the main survey 540 respondents were sampled from a population of 120,000 in the District of Dacorum in Hertfordshire (fig. 1), using electoral registers to obtain the sample. Each person was interviewed, in their homes, about the landscape of their immediate locality and of the region, divided into landscape tracts designed to isolate areas of homogenous landscape based on statistical cluster analysis of landscape elements. Interviewers reported that respondents both know local landscapes well and that they made firm evaluations using the preference rating scale although there were inevitable interviewing problems particularly concerning the definition of degrees of "Attractiveness. As in virtually any household survey there was sample bias in favour of middle-class housewives at the expense of working-class males but subsequent analysis showed that these socio-economic factors do not appear to affect landscape perceptions.

SURVEY RESULTS: THE CONSENSUS LANDSCAPE EVALUATION OF THE STUDY AREA AND FACTORS AFFECTING EVALUATIONS

The main survey was arranged such that in each community or parish about 30 persons were interviewed and from these sub-samples consensus evaluations were derived using the modal or most popular preference rating scale position elected by these respondents. Each of these modal evaluations then forms one element in the map shown as figure 1 to produce a generalized (and almost certainly over-generalized evaluation of the study District.

The 73 landscape units - each corresponding to a part of a parish in which the 30 or so interviews had been conducted - were rated by the interviewees in a range from 'Extremely Attractive" to "Unattractive;" none was rated overall as "Very Unattractive" or "Extremely Unattractive." The "Unattractive" units comprise certain village center areas and a disused airfield while the "Very Attractive" areas form a Land to the north of the study area following the Chiltern Hills, the exception being one locality in the south comprising a well-known "beauty-spot" within the Chilterns Area of Outstanding Natural Beauty (a statutory designation similar but at a lower level to National Parks).

Consensus With The Most Popular Evaluations

Public landscape evaluations will only be valid and useful if the degree of consensus is high, The extent of the actual consensus can be masked by the process of taking the modal evaluation, in that there can be bi-modal or near bi-modal distributions of responses only one result from which can be taken. Nevertheless the consensus overall was high, ranging from 76 percent in one community to a low of 40 percent in another (where there was indeed a "split-vote" bi-modal distribution). The overall distribution of consensus rates is given in figure 2 showing that most of the 73 landscape units attracted a majority of respondents agreeing to the most popular or modal evaluation. Greater perceived attractiveness does not appear to promote greater or lesser consensus, nor is high consensus related to those landscape areas generally most familiar; indeed the variation in consensus rates is still largely unexplained.

General And Detailed Reasons For Evaluations

Respondents were asked the reasons for evaluations given and, in addition to familarity which shows a strong correlation with evaluation such that those areas most familiar are rated most highly and vice versa, the use of land and landscapes appears important in affecting evaluations. In general, aspects of rurality such as the presence of worked agricultural land and of woodland and the presence of water were given as the reasons for high evaluations, along with the incidence of views and certain "urbanizing" elements such as vernacular villages. Low evaluations such as "Unattractive" and "Very Unattractive" were associated with unfavorable characteristics of farmland, such as poor access and intrusive farm buildings, but mainly these low evaluations were related to urban intrusion into the countryside especially village centers perceived as "scruffy" and eyesores such as the disused airfield,

More complex detailed reasons for low evaluations, given this time by individuals rather than the groups as a whole, included "Tatty - unplanned development" and the "Noise from roadways," the appearance of the landscapes in these circumstances seems secondary to other less obvious landscape factors. Detailed reasons for high evaluations included "Quietness" and "One can get out of sigh: of houses" and "Grandeur" in addition to repeated mentions of trees, woodland and "Nice old Janes."

We can see in these reasons for evaluations both a coherent structure and a vindication of the admittedly oversimplyfying preference rating scale. The areas designated with different levels of attractiveness both have contrasting perceived characteristics and the public respond to these is different ways such that different evaluations within the samples genuinely reflect different feelings towards the same landscape and its features. From this rational relationship between landscape characteristics and its evaluation we can infer that the preference rating scale of landscape value is not arbitrary or random but coherent and furthermore the extent of agreement of the reasons for evaluations amongst respondents shows that the map produced (fig. 1) is a genuine representation, albeit generalized of perceived quality of the landscape of the areas.

The complications around the general assessment are themselves revealing. For example, urban dwellers tend to over-praise rural areas compared with their rural colleagues. The latter reserve the high praise given by urban residents to large areas of landscape for the few select areas or "beauty spots" perhaps more familiar to the rural dweller. Again, those living in one rural community tend to over-praise their immediate locality compared with assessments of the same landscape from those living in neighbouring rural communities, who perhaps have a more detached view.

Landscape Perception And Socio-Economic Factors

There appears to be no relationship between social class and landscape evaluations; higher socio-economic groups do give marginally higher evaluations --or are more free with the use of the higher evaluative points on the preference rating scale—but this trend is not statistically significant. Nor is there a significant relationship between the reasons given for the evaluations and socio-economic characteristics of respondents, as one might perhaps expect. The lower social classes were less forthcoming with responses but when these responses were obtained they were not significantly different from those of other social groups.

In contrast, landscape evaluations appear related to respondent's age such that the older interviewees in general give higher evaluations, presumably reflecting their greater familiarity with the landscapes in question. Female respondents tended to report Jess familiarity with their local landscapes but landscape evaluations did not differ between the sexes. What did appear to affect evaluations is the

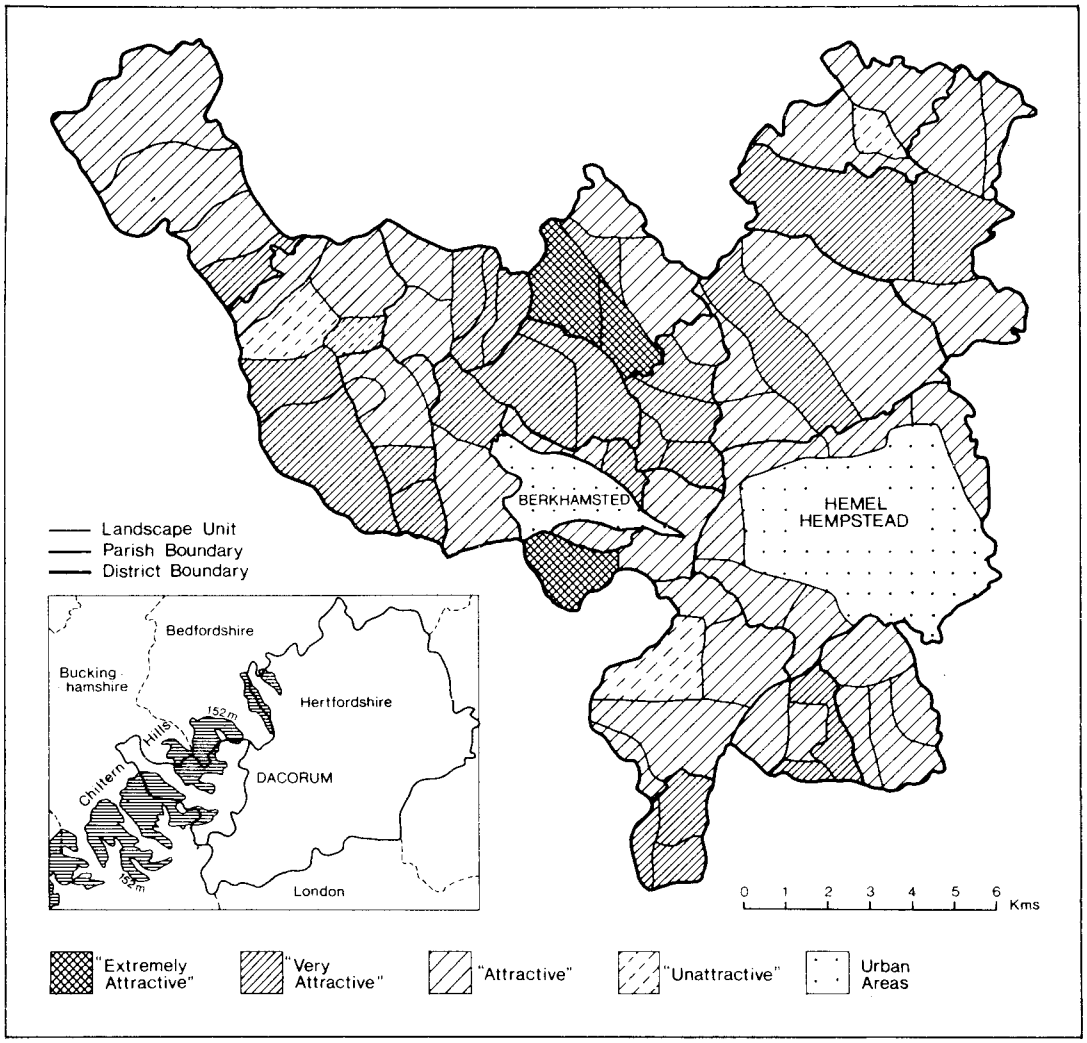

Figure 1 - Landscape assessment of Dacorum District, England.

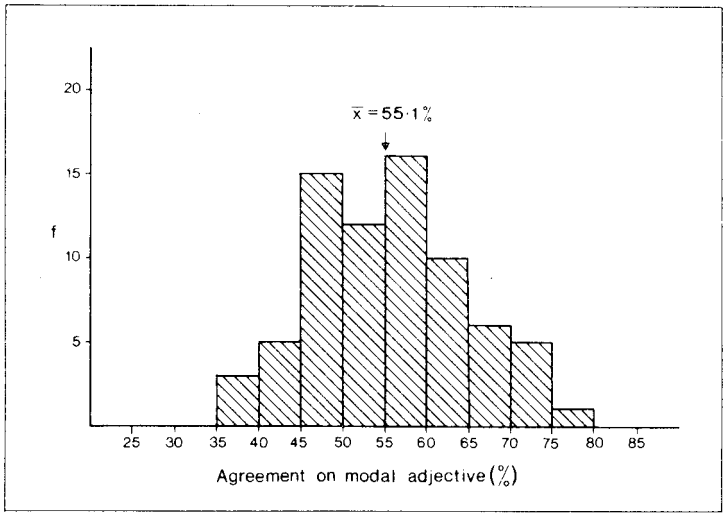

Figure 2 - The distribution of modal percentages of respondents.

childhood place of residence of respondents, with those horn and bred in the same rural community tending to praise local landscape attractiveness, perhaps in order to justify their decision to locate in that area. The essence of these relationships is that "country people" are more familiar with the landscapes of their current home area but are not likely to give higher evaluations than their town bred neighbors now living in the same rural community. However those "country people" who have lived all their lives in the same community show the greater familiarity with their local landscapes, as one would expect, yet tend to give lower than average evaluations. Familiarity here clearly leads to relative "contempt" in contrast to the general relationship of greater familiarity leading to greater appreciation.

CONCLUSIONS: LANDSCAPE - THE PEOPLES' HERITAGE

This research has illuminated many hitherto only suspected aspects of landscape perceptions but, above all, has shown that landscape resource assessment based on public preferences rather than professional judgments or statistical predictions is possible and indeed a fruitful method of obtaining public input into the landscape planning process.

First of all it is contended that the assessments of landscape quality are more valid than professional judgments and statistical predictions in that there is a direct link between the assessment technique, and results in figure 1, and the underlying concept of landscape quality as more concerned with the human mind rather than the physical characteristics of topography and surface mantle. The degree of consensus was surprisingly high and the analysis of the reasons given for evaluations has shown that the different evaluations genuinely correspond to different views of the essence of scenic attractiveness of the areas and not merely to represent random variations in response.

Secondly, and developing from the first point, the results of this type of resource appraisal are demonstrably more useful to local planning and land management agencies. They give a direct public input to the planning process and, most importantly, can yield detailed information on reasons for low perceived landscape quality to which these planners and managers can address their attention in order to promote landscape enhancement policies; this is an area where local planning departments in Britain have power, particularly in controlling development, tree preservation and road alignment. this information can be used to set priorities within landscape conservation plans, so as to tailor expenditure to social goals within an integrated land management program, rather than allowing such participation only at design and implementation stages. This approach could help to minimize conflict between planners and the public which has been all too familiar in Britain over the last ten years.

Finally, landscape is an important heritage resource in a crowded island such as Britain, yet it is undergoing rapid change from agricultural "improvements," highway building programs and urban expansion (Westmacott and Worthington 1974, Coleman 1977). To secure greater sympathy between those with duties to conserve and enhance this heritage requires the public voice to be heard above the the highway lobby and the farmers' Landscape assessment methods which explicitly aim to capture this public view - recognizing landscape as a subjective phenomenon and not to be quantified in an objective and supposedly neutral scientific manner - will be more likely to secure the sympathetic conservation of this peoples' heritage than reliance on professional judgment alone.

LITERATURE CITED

Appleton, Jay
1975. The experience of landscape, 293 p. Wiley and Sons, London.

Clamp, Peter
1975. A study in the evaluation of landscape and the impact of roads. Landscape Research News. 1(11): 6-7.

Coleman, Alice C.
1977. Land use planning: success or failure. Architects' Journal. 3(165), 94-134.

Craik, Kenneth, H.
1970. A system of landscape dimensions: appraisals of its objectivity and illustration of its scientific application. Report to Resources for the Future, Inc., Berkeley, Calif.

Dunn, M.C.
1974. Landscape evaluation: a further perspective. J. Roy. Tn. Planning Inst. 60(10): 935-936.

Dunn, M.C.
1976. Landscape with photographs: testing the preference approach to landscape evaluation. J. Env. Management. 4: 15-26.

Fines, K.D.
1968. Landscape evaluation: a research project in East Sussex. Req. Stud. 2: 41-55.

Hampshire County Council
1968. East Hampshire Area of Outstanding Natural Beauty: a study in countryside conservation. Hampshire C.C., Winchester, England, 75 p.

Hebblethwaite, R.L.
1970. Landscape assessment in the East Hampshire Area of Outstanding Natural Beauty, Hampshire C.C., Winchester, England, 10 pp.

Lazarsfeld, Paul F.
1958. Evidence and inference in social research. Daedalus. 87(4): 99-130.

Lowenthal, David and Riel, M.
1972. The nature of perceived and imagined environments. Env. and behaviour 4: 189-207.

Osgood, C.E., Suci, G. and Tannenbaum, P.H.
1957. The measurement of meaning. Univ. Illinois.

Penning-Rowsell, Edmund C.
1973(a). Public attitudes to landscape quality: a survey in the Wye Valley Area of Outstanding Natural Beauty. Middlesex Polytechnic Planning Research Group Report 18 p.

Penning-Rowsell, Edmund C.
1973(b). Alternative approaches to landscape appraisal and evaluation. Middlesex Polytechnic Planning Research Group Report 51 p.

Penning-Rowsell, Edmund C.
1974. Landscape evaluation for development plans. J. Hoy. Tn. Planning Inst. 60(10): 930-934.

Penning-Rowsell. Edmund C.
1975. Constraints on the application of landscape evaluations. Trans. Inst. Brit. Geog. 66: 149-155.

Penning-Rowsell, Edmund C.
1979 (in press). An experimental assessment of public landscape appreciation. In: Landscape and industry. P.T. Newby, Ed., Middlesex Polytechnic.

Penning-Rowsell, Edmund C., Gullett, G.H., Searle, 0.II. and Witham, S.A.
1977. Public evaluation of landscape quality. Middlesex Polytechnic Planning Research Group Report 13, 140 p.

Robinson, D.G. et al.
1976. Landscape evaluation. University of Manchester, Manchester.

Schomaker, John H.
1978. Measurement of preferences for proposed landscape modifications. Landscape Research 3(3): 5-9.

Shafer, E.L., Hamilton, J.F. and Schmitt, E.A.
1969. Natural landscape preferences: a predictive model. J. Leis. R. 1: 1-19.

Tandy, Clifford V.R.
1971. Landscape evaluation technique. Land Use Consultants, Croydon, England.

westmacott, R. and Worthington, T.
1974. New agricultural landscapes. 98 p. Countryside Commission for England and Wales, Cheltenham, England.

Zube, Ervin H.
1973. Rating everyday rural landscapes in the north-eastern United States. Landscape Arch. 63: 370-375.

Zube, Ervin H., Brush, R.O. and Fabos, J.G.
1975. Landscape assessment: values, perceptions and resources. 367 p. Dowden, Hutchinson and Ross, Inc., Stroudsburg, Penn.

Zube, Ervin H., Pitt, D.G. and Anderson, T.W.
1974. Perception and measurement of scenic resources in the southern Connecticut river valley. Inst. for Man and Env., Amhurst, Mass.