RURAL LANDSCAPE QUALITY:

the general and the particular

by Mary Powell

A thesis submitted for the degree of Ph.D. at Brunel University

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TABLE OF CONTENTS.

Acknowledgements

Abstract

Preface 1

Prologue: What is rural landscape quality? 7

I The Context 14
The range of literature
Physical standards
The workings of the eye
Shapes in the visual cortex
Sexual fixations
National culture
Biological instincts
Cognitive structures
The phenomenological approach
Matters arising

II An Alternative Perspective 69
Grinding the lens
The focus on landscape quality
The general and the particular
Form and content of landscape perception

III The Genetic Inheritance 88
An evolutionary standpoint
Limitations on the senses
Physiological differences
Active hypothesis testing
Conceptual schemes
The biological basis of emotion?
Beyond the gene

IV The Cultural Inheritance 118
The extent of the cultural contribution
An agent of adaptation
A social environment
Plurality and historical change

V Aspects of English Culture 142
Focussing on cultural content
The pagan landscape
The useful landscape
The aesthetic landscape

VI The Individual Inheritor 220
Individuality and particularity
Personal development
Familiar places
Special interests
Creativity

Epilogue: The instant of perception. 235

Acknowledgements

When questioned as to why a vaguely environmentalist type was studying rural landscape quality at the Department of Building Technology, Brunel University, famed for its work on drainage systems in buildings and much besides, I would carefully explain that a member of the department, Peter Clamp, had been investigating the values placed upon landscape for some time, and on the strength of his work had been able to obtain a grant from the Leverhulme Research Trust to pay an assistant for two years who, with marvellous luck, was me. It did not take long to discover, however, that this explanation produced a less enthusiastic response than the hardnosed reply: "I'm at Brunel because the money is there," which went down particularly well with planners who tend to revel in the realisation that finance is at the bottom of everything. In my case, the money brought time and complete freedom to pursue lines of thought that others working under financial and bureaucratic pressures usually have to drop, and I am therefore deeply grateful both to Peter and to Leverhulme. But the money has not been quite everything: my efforts have always been met with kindness, tolerance and helpfulness, most particularly by Peter himself, followed by many others in the field. Family and friends have also contributed ideas and made innumerable attempts to improve my spelling and grammar. I can only apologise to them for producing something so unsatisfactory and incomplete.

Finally special thanks to Mrs Pamela Wells who typed this thesis.

ABSTRACT

This is a theoretical dissertation built on the premise that different people appreciate landscape in different ways. It takes a multi-disciplinary approach, and links findings made in several fields so as to attempt understanding of the phenomenon of rural landscape quality. A range of relatively modern explanations of the nature of landscape quality is examined and criticised primarily on the grounds of a tendency to confuse the abstract and uniform with the concrete and variable, that is, a failure to separate the general from the particular. A means of making this separation is then proposed and pursued for the remainder of the thesis.

Discussion centres upon the activity of perceiving landscape. What does it involve? At the most abstract there are the structures of the senses and cognition inherited genetically and, with minor variations, common to all who perceive. At the most concrete there are the circumstances surrounding each individual engaged in the actual instant of perception. Between these two is the role played by the culture of the individual concerned. This thesis is slightly unusual in laying stress on the importance of the cultural inheritance as a factor contributing to differentiation and constant change in rural landscape quality.

No firm conclusions are reached in what is essentially a work of experiment and speculation.

References are supplied at the end of each section.

Preface*

The overall aim during the course of study leading to this thesis has been to find out whether a non-positivist approach towards an understanding of landscape quality is possible. The overall conclusion has been that it is, but such an approach reveals a phenomenon far more massive and complicated than initially expected, and far too rich to be given full justice within one volume.

The direction that my investigations have taken owes a great deal to a thesis,[1] written for an M.Phil. degree in Town Planning, which critically discussed the quantitative techniques used to evaluate certain qualitative aspects of the countryside for planning purposes, including landscape quality. I argued that positivistic assumptions, derived from the physical and numerate sciences which seem to hold powerful sway in decision-making circles today, were being inappropriately applied to values that had more of a social than a physical origin. From this theoretical standpoint, it was relatively easy to pull empirical landscape evaluation techniques to pieces, but, like many critiques of manifestations of positivism now appearing in various academic fields, my M.Phil thesis was almost wholly destructive and failed to suggest any more suitable approach to replace the one condemned. Subsequently, the post at Brunel gave me the opportunity to face up to the challenge of being more constructive and, in over-ambitious ignorance towards the beginning of my work there, I not only proposed to find an explanation of landscape quality in non-positivist terms, but to use this to produce prescriptions for the process of landscape planning. The latter proposal soon had to go by the board because, in pursuing research in the former area, so immense and involved a subject was uncovered that all the time

* References P6 below

available was consumed in trying to make some sort of sense out of it. Although completely failing to cross the theory/practice barrier, I would still contend, given my interests in rural planning, that this is a vital crossing to make, and still hope that others will be able to make it.

The body of the present work endeavours to furnish a theoretical explanation of landscape quality; an explanation intended to be satisfactory in the light of personal preconceptions. One of the prime contentions of the non-positivist argument is that preconceptions are unavoidable and so it is better to make them explicit at once rather that pretend, as do the hated positivists, that they have been eliminated or never existed. Mine are rooted in the firm belief, which is not an uncommon one, that different people may enjoy the landscape in quite different ways, and that the various manners in which they do so must be respected and understood, not castigated as naive or incorrect nor reduced to one concrete component or set of components. Intuitively, there is something wrong, for example, when good quality landscape is held to have a changeable relief,[2] if a Scotsman who has lived most of his life in the Highlands can say that the most beautiful scenery he has ever found was the wide open flat expanses of Norfolk where he was posted in the War.[3] It is also suspicious when we are informed that everyone essentially appreciates landscape as providing the opportunity to see about us and to hide from others' sight,[4] although nobody actually realised this until recently. My prejudice against the idea of there being only one basic kind of landscape quality perhaps arises from the particular way I enjoy the countryside myself, which is mainly in terms of its geology and geomorphology, and has meant that I have always resented

the implication, put about by those with artistic leanings that I am not really appreciating the landscape properly, being devoid of a sense of form, space and colour.

Coming from a planning background where the emphasis is necessarily upon emphirical work giving rapid practical results but lacking, in my opinion, any adequate theoretical foundation, it was at first disappointing to find that, in attempting to remedy this situation, there is no widely accepted tradition of thought about the nature of rural landscape quality, with the active lines of inquiry and areas of debate that usually accompany a defined academic discipline. Instead, there appeared to be only a small number of scattered thinkers, a dozen or so in the eighteenth century and rather fewer in the twentieth, who have directly attempted to deal with the question of why the landscape has qualitative value and, moreover, none of their answers quite accorded with my own preconceptions. But they were of enormous assistance because among this tiny group, from say Shaftesbury to Appleton, one custom at least had become established - that of the amateur. Whatever the real character of landscape quality, it seems to demand a multi-disciplinary approach, forcing investigators into several normally separate fields where, in some at least, they are bound to be complete novices. The intrepid few stride in and out of philosophy, theology, anthropology, aesthetics, psychology, sociology, history, geography, painting, biology, landscape architecture, literature and so on; the present effort being no exception.

Almost total reliance has been placed upon the findings of others working within these disciplines. No new factual discoveries have been made, and so point by point very little originality will be found in the dissertation that follows. What is being offered is a speculative interpretation, demonstrating the connections to be made between diverse pieces of existing knowledge deemed relevant to the subject of landscape quality. Research proceeded by means of a literature survey of the fields mentioned. The frequent citing of references is meant to serve as recognition of one of the major faults of any multi-disciplinary study, which is not overcome here either, namely the superficial and possibly inaccurate treatment meted out to many of the individual contributory disciplines. Firstly, any field of inquiry that, unlike this sort of landscape research, has centuries of concentrated and extensive thinking behind it, will have attained highly complex and subtle levels of analysis which are often impossible for the amateur to fully comprehend, much less convey in brief overview. References constitute a reminder of where deeper specialist discussions may be found. Secondly, an academic discipline rarely presents a united front. Quite fundamental differences, over which there may be virulent controversy, often occur between opposing schools of thought within one field, but the monster multi-disciplinarian will select out the faction most suitable to the proposition in hand while ignoring the rest. For example, in dealing with psychological considerations, I have completely passed over Skinner's stimulus-response model, because I believe it to be antipathetic to an understanding of landscape quality, but within psychology it has been of great importance. The references given should indicate the faction within any discipline upon which the ensuing argument depends.

Given the inevitable drawbacks of crudity and naivety, only properly appreciated as my research progressed, plus the very strong common sense idea, often brought home to me, that the experience of landscape is something so intensely and intimately personal as to be only debased by explaining and writing about it, there is the question of why the present enterprise was not abandoned entirely. Apart from being unable to bear the thought of two years work going down the drain, the answer primarily has to be because, like the mountain, landscape quality is there. For a start, certain people - the evaluators and the amateur theorists - have thought fit to deal with it, but in ways that are often unacceptable because they afforded too little respect to the aforementioned personal individuality. As already stated, I felt that someone at least had to make the effort to dispute with the : "you may think your enjoyment of landscape is unique to yourself, but we are sorry to reveal that it all boils down to factor x" brigade. But, more importantly, in studying for my M.Phil. thesis, I had come upon the notion which, afterwards deployed when venturing into various specialist fields, disclosed quantities of material, already extant, concerning many aspects of landscape quality; material demanding to be sewn together. The notion, to be found in both the philosophy and psychology of perception, goes by several names, most commonly: 'conceptual scheme' or 'schema', 'conceptual framework' or 'frame of reference,' and has the advantage of being so flexible, some would say so nebulous, that it may either be very general and abstract or very particular and concrete. As will later transpire, this feature assumed a central importance within the conception of landscape quality, but it also allowed such an amount of information to be located that I have been more or less overwhelmed by

the complexity and extent of the subject, while developing an awareness of the tremendous amount I do not know.

Finally, there is something of a tradition among the miniscule community I am aspiring to join, of referring to the author's own profound feeling for landscape as an inspiration for their work. I am not sure whether this is true for me, as I seem to have been spurred on mostly by intellectual indignation, but, despite the gruelling and depressing times that always seem to accompany the manufacture of a thesis, I am now beginning to appreciate that I have been left with a lifetime's opportunity to find and explore the many paths to enjoying landscape.

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3. I was told this on 2.10.79 while hitching a lift from Bonar Bridge to Lairg with a driver who chose to take me by the 'nice route'.
4. Appleton, J 1975 The Experience of Landscape (John Wiley, London)

PROLOGUE:*

What is rural landscape quality?

It would be convenient at the outset to explain what was meant by the term 'rural landscape quality', but as the whole thesis comprises a search for this explanation, no concise definition is possible. However, a few preliminary comments upon the subject are necessary in order to delineate the area within which the ensuing action is to take place. Of the three words, 'rural', for current purposes, presents the least difficulty, and the following discussion will specifically cover the countryside as opposed to the town. This need not completely exclude the concerns of the comparatively larger volume of work done upon the qualities of urban areas,[1] but architecture, community spaces, route networks and so on, are, of course, only one set of elements to be found in the countryside.

'Landscape' is much more problematic, as indicated by the efforts made to define it which are nearly always found in the first few paragraphs of any work dealing with landscape. It requires the greatest care in making the initial interpretation because upon that will depend the scope and direction of all subsequent analysis. The word has long and complicated etymological antecedents which, with respect to the countryside at least, have left it with three distinct connotations.[2] The first two, which tend to be the more frequently cited,[3] are strongly pictorial being closely associated with developments in art history. From small beginnings in fifteenth century Italy and Holland, advances in painting techniques, among other influences, encouraged an increasing number of artists to depict the countryside. 'Landskip', a painting term from the Dutch, was used to describe these

* References p13 below

representations both when they formed a background to the main subject, as was usual in the earlier phases, and when, as was common once the genre became established, they were the main subject of pictures themselves. The first book in English using 'Landscape' to mean a certain kind of painting came out in 1598,[4] and the usage has continued to the present.[5] But besides this, around the seventeenth century the word took on a new derivation. John Milton (1608 - 1674) seems to have been the first published figure to have extended the pictorial 'landscape' from art objects to the actual countryside.[6] Henceforth, there was a growing tendency, greatly reinforced in eighteenth century English aristocratic circles, to consider tracts of rural land as artistic compositions, as scenes,[7] and this usage too is still current.

The idea of seeing the countryside as a picture has had enormous influence, an influence that has at once been theoretically beneficial and detrimental. Beneficial, because it calls attention to the presence of a human observer. For there to be a scene, a painting or nowadays a photograph, someone, whether artist or not, must choose the viewpoint and notice the constituent elements. 'Landscape', then, embodies an inescapable tension between the physically real landscape 'out there' and the mentally real landscape 'in here' - between the objective and the subjective.[8] However, as will later transpire, there is a certain strand of thinking which struggles to avoid this inherent tension, and in so doing, the detrimental side of an overly pictorial emphasis is sometimes brought out. In such cases, interest is focussed upon the purely visual aspects of the countryside, those aspects which are often incidentally important to a painter's technique, while ignoring the deeper implications that both a picture

and the countryside itself can convey. A narrow pictorial interpretation, for example, fails to encompass the historical nuances of W. G. Hoskins' use of 'landscape':[9]

> "I am concerned ... with the ways in which men have cleared the natural woodlands; reclaimed marshland, fen and moor; created fields out of wilderness; made lanes, roads and footpaths ..."

or the ecological ones, which are drawn from the German 'landschaft', of Angus Hills':[10]

> "Landscape is the mosaic formed by variations in the many combinations of non-living and living systems which interact within the ecosphere encircling our planet;"

or the geological ones of Frank Cunningham's:[11]

> "... the earth's physical constitution and its surface relief."

Likewise, as Jay Appleton remarks in his description of the way different disciplines approach landscape,[12] 'scenery' has been somewhat pre-empted by writers on physical geography and geomorphology.[13] Dudley Stamp, for instance, says that the purpose of his book, which is now something of a standard work, is:[14]

> "... to trace, step by step the building of the British Isles. By this means we are able to understand the structure or the build of its contrasted regions. We are, in fact, attempting to understand the structure and the development of the stage upon which the drama of British natural history is played."

To account for those many usages which are not strictly pictorial, attention should be paid to the third connotation of 'landscape'. It is much more ancient than the previous two, and probably provided the source of both the Dutch painting term and Milton's extension. In Old English, Old Saxon and Old Norse, landscipe/landskipi/landskapr denoted

a tract of land or province, often a district owned by a certain lord or inhabited by a certain group of people.[15] This is the sense to which Dr Johnson (1709 - 1784), who was not very pictorially minded,[16] referred when he defined 'landscape' as: "a region"[17], while modern dictionaries suggest and association of land- with -ship, the suffix indicating the state or condition of being something, as in 'township'. The present work will lean towards this older, more abstract concept because it is so malleable, and will incorporate not only a narrow pictorial view but also all other aspects as well. Such an interpretation may seem slightly vague but, in comparison with the import of 'quality', it is crystal clear.

The defeatist would define 'quality' as the indefinable. Etymology offers little help,[18] while over the centuries no established findings about the nature of this insubstantial phenomenon have been produced by philosophers. Here, then, the amateur fool rushes in where most professional angels fear to tread. One of the least obscure facets of 'quality' is that it is never discovered alone, having no independent existence.[19] Instead, quality always belongs to something, in the present case the countryside, and is appreciated by someone; a feature that ties in remarkably closely with a point already made about 'landscape'. Indeed, the two are quite inseparable - 'quality' like 'scape/ship' indicates the condition of land, what its essential character may be, whether, depending on how the countryside is being considered, that character be one of property, art, natural science, or whatever. But more than that, 'quality' implies a feeling of some kind for character, an attachment of value, on the part of the human observer, to the land observed. Emotional sensations, that being

either favourable or unfavourable are at the heart of valuation, spring up inevitably, and seem to be born of the tension between object and subject,[20] countryside and person, spoken of earlier. They are therefore integral to any examination of landscape quality, but pose the problem of striking a balance between sterilising them by over-rationalisation and sentimentalising them by over-emphasis, both longstanding traditions in the landscape arena.

In addition, it is quite impossible to catalogue feelings for the countryside as they extend over an almost infinite range from a gut reaction of intense pleasure, to tranquil enjoyment, to cool, carefully judged approval, not to mention disgust, terror, depression and boredom. Moreover, these sensations appear in innumerable circumstances: the enjoyment of autumn colours in the dying light of the day; the enjoyment of an ancient field pattern complete with multi-species boundary hedges and ridge and furrow; the enjoyment of standing on a Millstone Grit edge looking down across a valley of shale to the hills of Carboniferous Limestone rising from beneath; and so on also add infinitum. In an attempt to cope with the complexities of this situation, Yi-Fu Tuan has gone to the extent of inventing a new word - 'topophilia' - to cover: "all the human being's affective ties with the material environment."[21] However, although it provides a useful way of thinking about, and referring to, landscape quality, the present work will not employ 'topophilia' because the introduction of more specialised terms than absolutely necessary is inadvisable when impinging on several different disciplines. 'Landscape quality', on the other hand, is sufficiently nebulous to provoke little disturbance when brought into contact with various specialised interests.

The dangers of becoming too technical are well exemplified by what has happened to the word 'beauty'. As a common-place, or as in the often quoted definition of St Thomas Aquinas (c1226 - 1274): "Let that be called beauty, the very perception of which pleases",[22] it would be ideal for current purposes, along with 'ugliness'. However, 'beauty' was once so closely defined by certain commentators on landscape value,[23] that the effect was to produce a widespread reluctance to use it except in a specific aesthetic manner, and even there it has now largely been rejected.

But what is rural landscape quality? To go beyond superficial semantics, that can provide only the broadest of answers, and to ask why pieces of countryside are valued, is to enter an immense and difficult terrain. Fortunately, explorations have been made there before and so the area is not uncharted. Consequently, in looking for any deeper answers, it would be well to consider some of the latest work that deals with the subject. There now follows a review of a selection of twentieth century literature which has taken rural landscape quality as its direct and primary concern.

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"streit mine eye both caught new pleasures
Whilst the Lanskip round it measures."
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Barrell 1972 abid p23-24, points out that 'scenery' as used here keeps the countryside separate and framed, just as in a picture.
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1 THE CONTEXT*

The range of literature

In contrast to its eighteenth century counterpart, which perhaps with hindsight appears to have centred around two more-or-less definite philosophical positions,[1] the body of modern analytical literature lacks cohesion. Although relatively few in number, twentieth century writers have not adhered to any prevailing theoretical approach, and sometimes even seem hardly to be aware of each other, which means that there is little agreement between their explanations of the nature of rural landscape quality. The field, if such a collection of amateurs may be so called, being a disparate one, is difficult to review systematically. Here it has been arranged into a loose kind of continuum, similar to one often used by aestheticians,[2] stretching from objective to subjective emphases.[3]

Eight positions along the continuum will be distinguished, each of which represents an alternative way of understanding landscape quality. While varying in the extent of support they have received, none have (yet) become widely accepted, and to demonstrate why this should be so, some of the criticisms that may be levelled at each type of analysis will be mentioned. In addition, each position will be characterised according to a set of factors that become substantially modified as the range is traversed, the most basic of these being the role that perception is given to play.

If the phenomenon of landscape quality embodies a tension between the landscape 'out there' and the landscape 'in here', then the process of perception somehow mediates between the two. Landscape only enters

* References p64-68 below.

people's awareness through their perceptual faculties, and an idea of what these faculties are like must be present in any analytical discussion, if only implicitly. Further, any interpretation of the nature of landscape quality is contingent upon the model of perception employed, and across the range of literature different models may be found. The treatment perception receives is, then, a kind of touchstone for the reviewer especially as many other factors arise out of it, including: the level of detail an author is prepared to ascribe to actual manifestations of landscape quality; how far such manifestations are thought to vary; whether prognostications as to 'good' and 'bad' landscape are provided; and the extent to which cultural considerations are permitted to penetrate the analysis.

The spectrum of literature discussed below begins at a position where qualitative value is considered to be solely the property of the physical landscape, the countryside itself. When mentioned, perception, which does after all belong to the subject not the object, is rendered in so straightforward a manner as to make possible the direct registration of qualities inherent in the landscape 'out there'. As the continuum proceeds, however, the models of perception become progressively more complicated. The next four positions explain landscape quality in terms of: the workings of the eye; shapes in the visual cortex of the brain; sexual fixations; and national culture - all of which are concentrated more closely upon the perceiving subject. But their proponents still maintain an interest in the objective by arguing that these psycho-perceptual mechanisms produce the same landscape 'in here' for the whole of humanity, or in the fourth instance, everyone of the same nationality. Finally, there are three positions which understand landscape quality from the point of

view of biological instincts, cognitive structures, and phenomenology. They take an almost completely subjective stance and give validity to at least a certain degree of variation between landscapes 'in here', thus taking on board a feature of landscape quality that other positions usually dismiss as distortion namely, individual and group bias. But to return to the case most hostile to such tolerance.

Physical standards

The difficulty in examining this first type of literature for any answers to the question: 'what is rural landscape quality?' is that it is almost exclusively concerned with the estimation of the degree to which quality is present, and explanations as to how or why the material being estimated comes to be present are rarely offered.[4] Most, but not all, landscape evaluation techniques[5] fall into this category, and although it is a little unfair to look to them for any deep analysis, since they were usually devised rapidly under the pressure of some immediate planning purpose, they necessarily ential certain unspoken assumptions which appear to be relatively common among those making a first, or brief, encounter with the problems posed by landscape quality.

The motivation behind landscape evaluation techniques was the effort to discover a set of specifications which would enable planners to conclusively demonstrate that some areas within their jurisdiction were qualitatively better than others; apparently a useful exercise especially in a structure planning context.[6] A typical example is the technique devised by the landscape architect C.R.V. Tandy[7] and applied in West Sussex[8] in the early 1970's. Briefly, it consisted of: identifying the amount of arable land, grass land, heath, scrub,

trees, undulation, water and artificial structures within one kilometre squares of countryside; allocating a score to each of these physical characteristics, and to the same characteristics seen in views out of the square, on a scale of -2 (intolerable) to +2 (highly desirable); and then computing the scores to obtain a figure which indicated the landscape quality of the whole square. But where was the qualitative value this final figure represented supposed to come from? Presumably it resided within the vegetation, hills, rivers and buildings that were so assiduously counted judged, measured and mapped, and could be directly and unproblematically perceived by whoever was engaged in these activities. Qualitative value was being pictured as a sort of magic ingredient inside the physical features making up the landscape (or 'components' as they are sometimes called) that would automatically stimulate an appreciative response in any observer, irrespective of their personal characteristics.

Early approaches of this kind met with considerable criticism not, perhaps surprisingly, in the main for their unthinking acceptance of the objective existence of landscape quality, but, paradoxically, for being 'too subjective' about it[9] in that they openly relied upon the judgements of one or two assessors who were not necessarily capable of proper appreciation. One of the greatest stumbling blocks for the evaluators has been the complete absence of any independent device, like a thermometer or litmus, to measure landscape quality. Ultimately, estimations of value have to be based on someone's reaction to landscape and these reactions are never as consistent as thermometers' are to temperature or litmus to pH, so the question of whose reaction is involved always remains. Barrie Needham[10] neatly demonstrated that when four groups, with five planning students in

each, applied the same evaluation technique to the same area they arrived at different results. Results also differed when slightly different techniques were used on the same area. But it was still felt, in certain circles, that an evaluation technique could be devised which would standardise reactions to landscape in a way that was 'as objective as possible'; a recurrent phrase which not only implies that landscape quality might be assessed neutrally[11] but that it is an intrinsic property of the object in question.

Who, then, are the people able to perceive the qualitative property of landscape most clearly? Who are likely to make estimations of landscape value which, although probably not in total agreement, are sufficiently close together to be consistent and reliable? Long before landscape evaluation techniques appeared, members of certain professional groups had tended to believe themselves especially endowed through their training and experience with the ability to cut through the superficial and variable kind of reactions exhibited by lay people to the real and constant values beneath, and this argument was taken up in some of the second generation techniques. The most sophisticated of these was developed over five years at Manchester University,[12] and in the report of this exercise may be found, at last, some explicit indication of the mode of understanding landscape quality and the model of perception upon which the proposed technique is based.

The Manchester method approached landscape quality on two related fronts - expert estimations of value and physical components. At the heart of the technique, almost buried beneath an enormously complicated statistical analysis that had replaced the few simple sums

of the first generation and cast a suitably scientific aura, were the judgements of landscape quality to be made by people with "experience and insight":[13]

> "... it is suggested that useful and acceptable assessments of visual quality can be obtained if observers are selected from among those people with a high degree of training and experience in the visual arts and appreciation of landscape."

The environment and landscape design professions - planners and landscape architects - and painters and writers were mentioned, while individuals with a known attachment to the survey area were excluded.[14] The assessments made by a group of such experts were used, via intricate statistical operations,[15] to place fixed values upon a series of landscape components; and then according to the amount of each component mapped and measured within kilometre squares of countryside, overall landcape quality was predicted. In comparison to the first generation of techniques, many more components were itemised while each tended to be more specific. When the method was applied in Cheshire,[16] for instance, 44 components were listed, three of which dealt with physical relief.

The drawbacks to using components with fixed values as a means of arriving at an estimate of total landscape quality were well recognised both by the Manchester group and by the report of the application of the same method in Clwyd.[17] Firstly, even with a computer to cope with extensive lists of components "it is impossible and inefficient to include 'everything'";[18] it is impossible to recognise evey single component with its qualitative contribution, and if they are not recognised what kind of contribution are they making? Oddly enough, in a technique that employed landscape experts,

'intangible components' such as texture, colour and spatial relationships, which landscape architects often consider to be of central importance,[19] had to be omitted because they could not be defined quantitatively as area, length or number present. Secondly, the authors decided that an increase in the amount of a 'good' component need not necessarily produce a corresponding increase in overall quality:[20]

> "For example, deciduous woods and parkland stood out as factors contributing to high value and the greater proportion of those in a tract the greater the predicted value. In practice, values would increase up to a certain proportion but would then level off."

Thirdly, it was found that specific components with fixed worth tended to change in character from place to place in ways that changed their contribution to landscape quality but which could not be accounted for by simply measuring the amount of a component that was present:[21]

> "Area cover is the measurement used for woodlands: the implications of this are that the same coverage of woodland in similar situations will always make the same contribution to landscape quality. In practice the impact could be rather different - a tract of farmland containing one rectangular block of woodland would probably be much less attractive than a tract of farmland with several smaller and irregularly outlined clumps of woodland of the same total acreage. It must be admitted that this is a weakness in any method using standardised values as a basis for prediction."

When the attempt is actually made, then, to enunciate the number and nature of particular physical features donating their qualitative

value to landscape, inconsistencies stand revealed which surely serve to undermine the objectivist assumption central to such an endeavour.

Probably the only recent occasion upon which this assumption has been made quite explicit is in the Manchester report, where it is unequivocally stated that one of the criteria which must apply if the defined set of components is to be acceptable is:[22]

> "That the most important contributions to the visual quality of landscape are all to be found within the landscape, and not within the observer."

Even the authors of the earlier chapters of the report carefully steer clear of this position because no substantial or independent justification of either the existence of these contributions or the manner in which they may be ascertained is forthcoming. Given the obvious variability in lay opinion the implication is, as already mentioned, that only those who have been properly trained will really know about the essential qualitative ingredients in landscape. In the past, it was quite acceptable to argue that only a sensibility refined by years of learning was capable of a proper appreciation of the quality, or beauty, in landscape that had been put there by God and was also akin to some Platonic ideal.[23] In fact, the best exponent of the proposition that the trained alone are fully acquainted with the detailed physical standard existing independent of their knowledge and to which the landscape 'out there' either does or does not conform (this being the import of any exercise that specifies expertly valued components) is the eighteenth century amateur artist, traveller and clergyman, William Gilpin (1724-1804).[24] Although the theoretical backing he furnished for his arguments was brief, it was far more meticulous than anything produced by a modern writer taking a similar

stance, perhaps because a more concrete foundation than the God-given ideal, that Gilpin relied upon, is expected of the latter. No one, as yet, has provided such a foundation, although Eric Newton,[25] the art critic, has gone some way towards it by suggesting that beauty in nature is related to the inherent functions of natural patterns and forces. The most beautiful nettle leaf is the most efficient nettle leaf, and the oak tree most efficient at producing acorns would be the most beautiful oak tree. This does, however, still leave the question of who decides what constitutes efficiency, and Newton's point that mountains formed mainly by stratification have too many straight lines and are therefore unsatisfactory, would probably be disputed by geologists. Newton also confusingly mentions that humans ascribe differing levels of beauty to different natural phenomena, for example, preferring horses to pigs because of their speed and strength which humans desire for themselves, thus bringing in a concept of associations which does not cohere with his functional approach.

This is not to say that today, as long as an explanation is not pressed for too closely, reliance is never placed upon the superiority of expert judgement with respect to landscape, presumably in the belief that it is tapping the values resident there; a belief which possibly owes something to Gilpin's impact on thought about landscape quality. And, especially following the tedious convolutions of statistical evaluation techniques, a systematic division of the landscape into components is no longer considered a necessary adjunct to this kind of analysis, since, as is often argued,[26] the qualitative value belonging to the whole landscape is greater than the sum of the value belonging to the parts. The Countryside Commission for Scotland, for example, recently selected forty of "the very best

scenic areas for particular care and attention as part of the national heritage"[27] on the basis of straightforward assessments made by a group which included: "members with acknowledged expertise in the fields of assessment of scenic quality and rural land use."[28] Colin McKerchar's review of this exercise began:[29]

"You have to have experienced the torments of systematised and 'scientific' appraisal methodologies, either by reading them or preferably by trying them yourself, to be able to see the value of a simple solution. The Commission, having themselves been through the agonies with their previous document 'A Planning Classification of Scottish Landscape Resources' prepared for them by Land Use Consultants,[30] have emerged from the gloom of dissection, enumeration and reassembly into the light of simplicity and directness. Their approach is based on the idea that they know what attractive landscape is and they know how to recognise it when they see it."

At present there seems to be no way in which the sentiments expressed in that last sentence can be logically refuted, as they are internally quite consistent - if you are an expert and you know what the true value of a landscape is, then anyone who differs from you must be wrong. It would, however, be most helpful to provide outsiders with a properly worked out explanation of the purely objective nature of rural landscape quality, although the possibility of doing so is in doubt as even McKechar complained that distinctively Scottish cultural and historic aspects, which are essentially subjective, had been omitted from the valuation of Scotland's scenic heritage.

A certain amount has, of course, recently been written to substantiate expert opinion, but is is noticeable that when such work displays any depth of enquiry, landscape quality is never considered to be wholly the property of the object. The third chapter of the Manchester report[31] is a case in point. Here the purely objectivist position is rejected, on the vaguely mentioned grounds that an opposing school of aesthetic thought places beauty entirely within the mind of the observer, in favour of the idea that high visual quality in landscape may be equated with[32]

> "... landscape beauty which derives both from the object, and the eye and mind of the observer - both sources interacting to give pleasure to the senses."

In discussing the properties of the object, first of all, the report puts considerable emphasis upon "inherent formal qualities" - shape, proportion, colour etc. - and the relationship between them - spacing, scale, composition etc. - and remarks:[33]

> "It is usually believed that there must be a degree of order and unity in a formal relationship to produce pleasurable aesthetic feeling.... A landscape may be perceived as beautiful if objects are in an ordered relationship to their setting, eg. a large well-landscaped reservoir in the uplands, where there is no conflict of scale between the reservoir itself and the surrounding landscape."

The characteristics of the human observer are discussed next - physiological faculties, cultural background and personal attributes such as temprement, education and upbringing. Little is said about physiology, but much about cultural and personal factors, probably because once these are referred to within the context of landscape quality, a great deal of potential variability: comes flooding in; indeed, so much so that C.R.V. Tandy, who had once advocated landscape

evaluation,[34] has recently been arguing against the application of one simple standard because of the 'anarchy' in landscape tastes prevailing in modern society.[35] Taste, fashion, preferences, "affectation, novelty, whimsy and caprice"[36] are the ephemeral sources of variation arising from cultural changes and personal bias, including close attachments to particular places. They are lumped together in the Manchester report under the heading 'associational factors'. It then goes on to suggest that, as far as possible, the influence of these factors must be reduced in making assessments of landscape quality, and since:[37]

> "It seems inevitable that associational responses will have greater effect on the judgement of observers who have less capacity for perceiving beauty,"

trained observers should be used because they are able to exclude most personal considerations from their evaluative judgements of landscape. Most, but not all - the report accepts that expert opinion on landcape quality will be affected by some "cultural and other influences," but as these cannot be separated out on any one assessment,[38] they are subsequently ignored.

However, the work of Kenneth Craik,[39] an American psychologist who has gone one step further, is cited briefly because he has argued that even lay people can distinguish between two kinds of landscape appreciation: firstly, the 'preferential judgement' which is subject to inter-cultural, intra-cultural and individual variations, and expresses an entirely subjective appreciation; secondly, the 'comparative' or 'esthetic appraisal' which is much more consistent because it judges landscape with respect to some implicit or explicit standard that is kept and renewed by landscape aestheticians and professionals. No one trained in the philosophical discipline of

aesthetics has actually produced an aesthetic standard of landscape since 1805,[40] but despite this, independent support for the existence of such a standard is said to be obtainable as when lay people are requested to do so, they are able to make judgements similar to those of experts. However, this was not borne out by a small exercise recently conducted by D.R. Helliwell.[41] On the whole Craik's substantiation of expert opinion appears rather coercive, an attribute which comes out in the following statement:[42]

> "If an observer were forced to adopt a certain psychological set, his assessment would reflect the values that he ascribes to a larger group. The variation in responses of several individuals would be less than the variation in preferential judgements of the same individuals. Therefore... comparative appraisal may be more useful in public decision making.

In other words, when you have been made to think like we do (refer to a common standard) all these aggravating differences of opinion (personal bias) will go away and we can get on with our job.[43]

But to put aside these objections for a moment, if landscape quality is not solely the property of the object, nor properly derived from the cultural and personal characteristics of the subject, where does it come from? Neither the Manchester report or Craik's work are specific about this, but, as they tend to equate landscape quality with visual quality, it may perhaps be assumed that they are relying upon the one set of attributes of the subject that are left, and which are also broadly the same for all, namely, the physiological structure of the eye and brain which facilitates the process of visual perception. The next two positions in the range of literature to be described will cover approaches made in the twentieth century towards landscape quality through investigations of the physiological nature

of perception. From this point in the range onwards, at least something of the characteristics of the perceiving subject are held to be involved in any consideration of landscape quality. The perceptual process itself thereby becomes problematic and has to be explicitly analysed in some way, and although standards are sometimes provided for estimating 'high' or 'low' quality landscape, they are slightly less exact, not being couched in terms of actual trees, rivers, hills and other components.

The workings of the eye

In this very small category may be found those who have taken the adage: 'beauty is in the eye of the beholder' quite literally. On occasion there are hints of it in works that concentrate mainly upon cultural and historical aspects of appreciation, although the link between culture and the physiological functioning of the eye is usually left unclear. R.L. Heathcote,[44] mentions that because of the limited angle of vision of human eyes a broad panoramic view tends to be unattractive unless it also has vertical depth, before going on to discuss the scientific, romantic, colonial, national and ecological visions of Australia which developed among European settlers as they came to terms with a strange landscape. In the same way, Paul Shepard[45] suggests that the eyes automatically abstract vertical and horizontal lines from the surroundings because they evolved in arboreal conditions when our primate ancestors were leaping from branch to branch,but does not pursue this when tracing the eighteenth century revolution in landscape tastes, or the effect of Christianity upon Western attitudes to landscape.[46]

The one great advocate for the workings of the eye being the sole explanatory factor, was the physical geographer and photographer,

Vaughn Cornish (1862-1948), who was inspired by a speech given by the President of the Royal Geographical Society[47] to develop a 'science of scenic beauty', and who published several books on the subject.[48] These proposed the theory that there are two sources of pleasure in the visual aspect of scenery: the association of ideas; and the 'physical satisfactions of the eye' which occur before the observer has time to think and either have a predisposing influence upon mental associations or appeal directly to the emotions. As the second source is basic, landscape quality may be analysed by a system of 'physiological optics', one of the most important factors involved being colour, which is a true pleasure of the eye as an organ of sense. Here is Cornish's exposition on the colour green:[49]

> "I have sought amidst the colours of the natural scene for a line of division between those which exercise soothing and exciting effects. The green of the young leaf is certainly a cheerful colour, some tints verging upon the exciting, as that of larch. The darkening foliage of the late summer, whether we regard it as soothing or dull, is certainly quiet. Thus the demarcation between the soothing and exciting halves of the gamut of colour in the natural scene does not come between blue and green, or between green and yellow, but mid-way in the band of green."

The appreciation of line and form is held to be slightly more complicated. According to Cornish:[50]

> "... the more the eye takes in vertically the more it takes in horizontally and the less impressive are both dimensions. If one may speak of the eye as an organ possessed of personality, I should describe this personality as of the kind that can only attend to one theme at a time... By a theme I mean in this connection a visual category, and the categories with which I am dealing... are height, breadth, distance and area."

This means that scenes which fulfil one theme, such as the round-topped woods of southern England in their characteristically undulating landscape, are visually satisfying, while those which offer, say, confusion of vertical and horizontal themes, are not. In addition, two kinds of landscape are especially important - woodlands and cliffs. Woodlands, because the stereoscopic effect of trunks and boughs greatly enhance the theme of distance; Cornish recommended that the New Forest be made a National Park. Cliffs, because these offer impressively distant prospects over the sea, especially those of 100 feet or over in height with a sufficiently sloping cliff face to enter into the base of the field of vision so emphasising distance; Cornish used cliff height and slope to select lengths of coastline requiring preservation.

Cornish's explanation of rural landscape quality was given at a level of detail, then, to enable him to decide quite specifically what were 'good' or 'bad' landscapes. Of course, he and his supporters did not expect that everyone would agree with his assessments, but put any lack of consensus down to ignorance of the real beauties of scenery. E.W. Gilbert, a geographer, for example, remarked that:[51]

> "... the fact that the countryman does not always appreciate the natural beauty of the landscape which surrounds him is not surprising: he has not been educated to see it."

Paradoxically, it was thought that for the educated their sophistications, specialisations, fashions and creeds gave rise to an excessive amount of associations of ideas which overlay and perverted the true pleasure of the eye and could only be eliminated by learning to appreciate the external world directly, as Cornish did.[52] They therefore had to learn to unlearn.

But if all knowledge and experience on the part of the observer is eliminated leaving only the instinctive reactions of the eye, would anything be seen at all? It is now well known that when people who have been blind from birth recover their sight (usually by an operation to remove cateracts) they initially see a chaos of brightness and colours. Only by a long and arduous effort can their brains learn to distinguish and make sense of shapes and distance, some patients failing to do so because they find the difficulties of learning insurmountable and become frustrated, depressed and finally apathetic, returning to a blind existence although physically their eyes are functioning.[53] Moreover, the kind of environment in which people learn to see seems to have an influence upon their mode of vision. Visual illusion tests have shown, for example, that plain dwellers are far more likely than forest dwellers to infer long horizontal distances from short vertical drawings.[54] And even something that seems so direct as colour perception has to be mediated by mental processes which have been found to categorise the visible spectrum according, to some extent at least, to the language that has been learnt. For example, English has two separate terms for 'blue' and 'green', but only one term for all intensities of 'black' short of 'grey', while Navaho does not have separate terms for 'blue' and 'green' but has two terms for different kinds of 'black'.[55]

Apart from Cornish's now unacceptable habit of extending a few personal experiencies of scenery, carefully described, measured and sketched, into general rules goverening landscape quality, his major failing was to avoid completely any anatomical consideration of the workings of the eye. He assumed that, within certain limitations such as the angle of vision and the visible spectrum, the image registered by the eye, which stimulated immediate emotional reactions, was a

perfect replica of the landscape 'out there'. This is not the case, and the eye has been found to be incredibly inefficient in comparison to artificial optical systems.[56] The image projected onto the retina is distorted by: the different refractive indices of the film of tears, the cornea, the aqueous humour, the lens and the vitreous humour; the impurities within each of these layers; and aberrations, which are not corrected for, due to their spherical shape and flexibility. The pupil is constantly subject to three kinds of involuntary movement so that the image inverted by the lens is never still, and the most sensitive part of the retina is not exactly in line with the central axis of the lens where the refractive distortion is least. The receptor cells, the rods and cones, are in the deepest instead of the uppermost layer of the retina so that the image is further warped by nerve cells and blood vessels through which it must pass, and the receptors themselves have their vertical axes parallel, instead of at right angles, to the light rays. The rods and cones are stimulated by the image they finally receive to produce a pattern of electrical impulses which go through a series of recoding proceses before an extremely vague correlate of the external world reaches the visual cortex of the brain.

Given these deficiencies, no one after Cornish has attempted to completely separate the workings of the eye from operations carried out by the brain which must decode the nerve impulses it receives if visual perception is to be achieved. Neither have the physiological reactions of the eye, for example, the dilation of the pupil, been found to give any indication of the emotions experienced when looking at landscape.[57] As already mentioned, even those writers who have more recently remarked upon the physiology of the eye, have paid far more attention to culturally derived knowledge. But before considering

the integral affect that this subjective factor might have upon landscape perception, two positions in the range of literature will be discussed which ground their explanations upon the decoding operations in the brain that are held to be automatic and universal.

Shapes in the visual cortex

The electrical impulses that are generated when light rays impinge upon the retina are passed along the optic nerve to an area at the back of the cerebral hemispheres known as the visual cortex. Injuries to this area of the brain result in blindness, even if the eyes are left undamaged.[58] But how does the visual cortex effect a translation of incoming nerve messages in a way that allows the perceiver to register anything of the landscape 'out there'? One answer to this problem was suggested by the Gestalt school of psychology which developed in early twentieth century Germany. For a time it had considerable influence upon art criticism in Europe and America, and has occasionally been extended to theories of landscape quality.

Among the propositions of the Gestalt school was the idea that the visual cortex of the brain consists of a three-dimensional complex of electrochemical force fields that embody simple, regular visual patterns of shape, colour and space. Depending upon the philosophical position taken, these fields were thought to be either inherent, or built up in childhood through an association of tactile and visual experience. The stimuli arriving from the retina are said to be released into the cortical complex and then spontaneously become organised to conform with the electrochemical field holding the pattern closest to the content of the incoming impulse.[59] So:[60]

> "... only to the extent to which the confused panorama [a

landscape of trees] can be seen as a configuration of clear-cut directions, sizes, geometric shapes, colours, can it be said that it is actually perceived."

Obviously, the physical landscape itself is rarely arranged into neat geometrical patterns, but certain scenes give rise to nerve impulses from the eye which conform more easily than others to the electro-chemical shapes in the visual cortex. The forms of organisation in such scenes are 'better' as the brain gravitates towards them because they have 'goodness of configuration' or 'good Gestalt'.[61] Sometimes it has been argued that the most appealing configurations are those mimicking human posture and behaviour,[62] for instance, the weeping willow hangs passively in a gesture of despair, while the oak towers in strength and dignity. But unusually the shapes involved are considered to be quite abstract, Gestalt psychology once having been used as a critical tool in the discussion of abstract art.

According to the art critic Rudolf Arnheim,[63] the visual configuration perceived as a result of the Gestalt process is the psychological counterpart of the physiological forces active within the visual cortex, and these forces are experienced as properties of the external world itself. The subjective operations of the mind are held to take place in a physiologically objective manner, and this point has been strongly emphasised by A V Trowbridge,[64] a psychologist, who argues that 'psycho-physiological' or 'bio-rhythmic' codes built into the brain resonate with similar codes of order within the outer physical appearance of any material environment. This system of resonance, which is shared by all people regardless of cultural and other influences, makes them respond aesthetically to the autonomous harmony of the universe, and therefore constitutes the basis of aesthetic laws or a 'code of visual values'. Trowbridge, however, fails to specify

this code beyond a few abstract mathematical formulations, and it must be admitted that no one has made an explicit Gestalt approach to the detailed evaluation of landscape quality. Still, such an approach seems to lie behind a method of evaluation devised by Elwood Shafer,[65] director of environmental research with the United States Forest Service, as made apparent in a critical discussion of the technique by A A Carlson,[66] a philosopher. Although neither author actually refers to Gestalt psychology, inferences are made that are very similar to those of Arnheim and Trowbridge. Shafer was seeking an objective basis for evaluation, in order to facilitate objectivity in decision making, and he also replicated his results in Scotland to demonstrate the non-cultural nature of landscape quality.[67]

Briefly, Shafer's technique was developed as follows. One hundred black and white photographs were taken in the wilder parts of western and eastern America, each then being divided into zones of vegetation, water, rock and so forth. These zones were measured by covering the photographs with a 0.25 inch grid, the number of squares and their edges being used to calculate the area and perimeter length of all the zones within each picture. In this way, 46 possible variables were obtained to describe the photographs which were next shown to campers and day visitors in the Adirondacks who were asked to place a score on each one indicating their level of preference for it. This information together with the 46 variables was analysed by computer, and an equation of six of the variables with several weightings was derived which explained 66% of the variation in preference scores:[68]

"$Y = 184.8 - 0.5436\ X_1 - 0.09298\ X_2 + 0.002069\ (X_1 \cdot X_3)$

$+ 0.0005538\ (X_1 \cdot X_4) - 0.002596\ (X_3 \cdot X_5)$

$+ 0.001634\ (X_2 \cdot X_6)$

$- 0.008441\ (X_4 \cdot X_6) - 0.0004131\ (X_4 \cdot X_5)$

$+ 0.0006666\ X_1^2 + 0.0001327\ X_5^2$

where: Y = preference score

X_1 = perimeter of immediate vegetation

X_2 = perimeter of intermediate non-vegetation

X_3 = perimeter of distant vegetation

X_4 = area of intermediate vegetation

X_5 = area of any kind of water

X_6 = area of distant non-vegetation."

It was then proposed to use this equation to predict landscape quality as part of the planning process.

Carlson has properly pointed out that:[69]

"The methodology of the landscape preference model is completely formalist in that this methodology presupposes that the 'aesthetic quality of different landscapes' can be determined by means of measuring only formal aspects of photographs. The zones which are measured are initially identified in terms of content (eg distant vegetation) but only the measurements of the shapes of the zones, not their contents, figure into the calculation of overall value for the photograph. The measurements of perimeter and area of zones are essentially measurements of certain shapes and lines. Thus ... the 'elements within an environment', when considered aesthetically, seem to be for Shafer 'shapes, sizes and colours' rather than trees, shrubs, and rocks."

Now, to defend himself against the attack that Carlson proceeds to make upon the formalist assumption, Shafer might have depoloyed a few

Gestalt arguments, just as certain critics and aestheticians in the art world have substantiated their reliance on shape, line and proportion by referring to the brain's supposed tendency to seize upon patterns.[70] Indeed, the Manchester group might also have mentioned Gestalt psychology when discussing the formal qualities of landscape,[71] but perhaps they did not do so because Gestalt ideas have suffered something of an eclipse in recent years.

There are at least two grounds for criticising the idea that shapes are pre-programmed into the brain and act as the only means of visual perception. First, despite Trowbridge's[72] suggestion that the inbuilt code of visual values might be studied through neural research of brain rhythmns, no independent evidence for the existence of electrochemical force fields within the visual cortex has been obtained. This lack of any electrical or chemical means of detecting such formal fields has been most damaging from a psychological point of view.[73] But secondly, and more importantly with respect to landscape, quality does not always appear to be solely a matter of shapes and lines and the relationships between them.

In the earlier stages of Gestalt theory, it was postulated that high qualitative value went together with maximum regularity and simplicity of shape[74] since, according to Arnheim,[75] physicists had shown that all natural force fields strive to distribute themselves in the simplest way. Likewise, the forces in the visual cortex would seek to re-establish the most regular of formal patterns upon incoming visual stimuli, satisfaction resulting when total simplicity was achieved. This could be applied to some abstract art, but was difficult to maintain with reference to landscape where, from the eighteenth century onwards, there has been a strong aesthetic emphasis upon

irregularity of shape and line. Arnheim, however, later dealt with this objection[76] by arguing that not only did the brain respond to 'rational shape', governed by simple principles such as straightness and curvature:

> "The square is a rational shape for every person with an unimpaired brain..."

it also reacted positively to certain 'irrational' shapes! Even though these were not geometrically regular, they could produce the impression of complete lawfulness, and when disturbed upset the balance of the whole. Arnheim illustrated the 'goodness' of irrational figures by referring to the controlled irregularity of Japanese gardens, but gave no specific examples of the shapes he had in mind. Perhaps Shafer could have said that he had described them with his equation.

The problem is that as soon as attempts are made to get away from completely regular geometrical forms, considerations other than the purely formal can creep in. Even the delicate assymetry of Japanese gardens was a creation and expression of deeply held philosophical and religious beliefs.[77] Gestalt psychology, however, attempted to operate within a cultural vacuum, developing under laboratory conditions where simple shapes, rarely to be seen in the environment outside, were used as experimental material. It was found that uncompleted figures were perceived as complete, for example, an array of equally spaced dots was seen as organised into columns and rows, and such tendencies were construed as general laws of perception, although subjects involved in visual experiments may produce variable reactions as soon as the material becomes less geometrically regular and closer to their usual environmental experience. To take one case, J W Bagby[78] discovered that if subjects of different nationalities

were shown scenes from two different countries at the same time, one to each eye, they would see only the picture that had been taken in their home country, an indication that personal knowledge can be an over-riding factor in contrived situations of perceptual conflict. The part that this factor plays in shape perception becomes much more obvious once outside the laboratory. For example, Frank Cunningham[79] mentions that as soon as the pioneer concepts of peneplane remnants and constant slopes were advertised sufficiently widely, geomorphologists proceeded to see a rash of these forms in landscapes long familiar to them but which they had never noticed before. Similarly, Peter Howard,[80] a geographer, could not accept paintings of a Norweigan landscape he knew well which featured V-shaped wedges lying on their sides, until the artist had explained that these shapes were made by descending mountain ridges combined with their reflections in adjacent lakes. Howard had previously been looking at the shapes of the mountains alone.

It is Carlson, in his critique of Shafer's strict formalism, who most tellingly demonstrates the inadequacy of considering rural landscape quality to be simply a matter of visual configurations. He points out that the significance certain landscapes may have - the austerity of deserts or the serenity of quiet meadows - which makes an important contribution to their qualitative value, cannot be wholly accounted for in analyses depending upon shape and line, and also that these terms can lead their protagonists into inconsistencies. Thus:[81]

> "... power lines often detract from the ... value of the natural environment. The loss of ... value, however, can neither be appreciated or evaluated in purely formal terms for, from a purely formalist point of view, such power lines are not only often aesthetically attractive in themselves, but in many cases 'fit'

within an environment such that the whole is an aesthetically attractive formal design. Sometimes a power line can even help to 'frame' and/or balance a landscape view."

Unfortunately, Carlson does not explain why power lines are actually unattractive, why deserts are austere or meadows serene. He seems to think that these qualities are intrinsic to the landscape 'out there', and goes on to conclude that they may be only properly appreciated by 'environmental critics' who are able to suitably temper formalism with their extensive knowledge and developed sensibilities; a return to the inviolability of expert judgement exhibited at the first position in the range of literature.[82]

Be that as it may, the proposition that landscape quality is exclusively visual quality has been challenged effectively. When accepted, as it has been in much of the preceeding work that has been discussed, the proposition seems to tempt researchers into simplistic models of perception where the terms shape, line and colour become all-powerful, and everything else is eliminated to a quite nonsensical degree. For a start, outside the controlled conditions of the laboratory and the art gallery, although perception may still be predominantly visual, it is informed by the other senses too, a point stressed by several authors.[83] Thus, the perceived landscape 'in here' is usually made up of much more than what is seen through the eyes, being compounded of the sounds, smells and feel of the countryside - birds singing, muck spreading, wind freezing:[84]

"... beauty in Nature resides not only in the eye of the beholder but in his nose, his ears and his finger-tips."

And it is noticeable that with less emphasis being placed upon vision and purely visual qualities, as occurs from this point onwards in the range of literature, greater importance is given to the significance and

meaning that is understood by the perceiver to be associated with landscape, which goes both behind and beyond the registration of shape and colour. As will transpire, there have been various explanations of how such meanings, other than the solely formal, are derived. One which posits a universal attribution of significance to landscape may be found in the following position on the literary continuum.

Sexual fixations

It was Sigmund Freud (1856-1939), of course, who declared that:[85]

> "... the concept of the beautiful is rooted in the soil of sexual excitment;"

and, on occasion, this maxim has been applied to landscape quality. The implication is that humanity possesses certain inbuilt psychological tendencies which cause the landscape to be invariably perceived as being analogous to the human body, and to attribute sexual significance to physical features which makes them especially alluring. One of the main efforts to explain landscape perception in Freudian terms has been made by Paul Shepard[86] who has argued that valleys, gorges, caves and hollows, which have widespread and persistent appeal, are seen as vaginas, and provide a primordial view of the relationship of man to his environment as being similar to that of a child to earth mother. But men seem to have certain complexes about their mothers, and Shepard[87] suspects that in male dominated societies hatred of women spills over into hatred of mother earth which leads to her ruthless exploitation by man. Likewise, Yi-Fu Tuan[88] mentions that for both Chinese traditionalists and Congo Pygmies, fire is male, phallic and conscious-giving while water is female, passive and death-bringing because it extinguishes fire and consciousness. Water and the feminine are therefore to be feared

although they are also, mysteriously, the source of fertility. The evidence cited in support of the Freudian hypothesis with respect to landscape is almost always of this kind, that is, it is drawn from anthropoligical literature dealing with the customs of pre-industrial societies whose religious beliefs often figure female deities of land or water. On the other hand, there is little evidence that all members of technologically developed societies directly appreciate the sexual connotations of landscape. Marghanita Laski,[89] for example, was told by a Freudian psychologist that, in her study of the prime stimuli of ecstatic states, she would probably find that men were more moved by mountains and women by water, but this did not prove to be the case. It could perhaps be argued, in romantic vein, that modern cultures have somehow managed to repress the psychologically natural course of landscape perception, but a Freudian substantiation of this suggestion has not (yet) been provided.

However, the most interesting point arising from the line of argument presented at this position in the range of literature is that it demonstrates the necessity of considering cultural traditions and knowledge as soon as any recognition is made of meaning attached to landscape which goes beyond the visually formal.[90] Even when a certain interpretation of landscape is held to be all pervasive, as in the present instance of inherent sexual fixations, it is only found to be manifest in society through the medium of culture, which is why the illustrative examples in this case had to be drawn from pagan religious beliefs, not to mention nineteenth century Viennese inhibitions. But this is the only position at which a detailed uniformity of culture across social groups is assumed. From now on, the literature displays both an acceptance of culture as an integral

part of landscape perception, and of the fact that culture is a variable phenomenon which, in turn, gives rise to at least some degree of variation in the nature of rural landscape quality.

Thus, a conspicuous break in the objective-subjective continuum occurs here. Previously, efforts have been made to exclude notions of relativity, the process of perception being conceived to be governed almost automatically by a specified, concrete set of physical, physiological or psycho-physiological factors. These have been taken to explain landscape quality more or less for all times and places, and could have been used to justify internationally applicable landscape evaluation techniques, the need for which has occasionally been expressed.[91] Of course, such exact specifications set the requirement that any signs of divergence from them, as for example the strong aesthetic dislike felt for mountains by the upper classes until the eighteenth century, have to be treated as facile, perverted or mistaken. From this point on, however, the introduction of cultural considerations produces less rigid interpretations of landscape quality within which differing schemes of values are allowed to co-exist. The next position on the continuum accepts that there is a variable cultural effect upon landscape quality, but can be seen as a last ditch attempt to confine the element of relativity so introduced by assuming that this effect is homogeneous within national boundaries

National Culture

To return briefly to the first position in the range of literature: it will be remembered that early landscape evaluation techniques were criticised for using assessments of value made by a small number of people whose judgement was not necessarily reliable.[92] One proposed solution was to ensure henceforth that the judges involved had been trained in proper appreciation; having been stripped of cultural and personal bias they were capable of perceiving the physical or physiologically real landscape quality correctly. But this approach, too, received criticism from those who were noticeably not landscape architects, and who had developed quite a different understanding of the nature of landscape quality. They reversed the argument which gave expert appraisal a greater validity than public preference,[93] maintaining that the latter was the proper indicator of landscape quality. Accordingly, the assessments made by an expert:[94]

> "... cannot be guaranteed to be typical of the population as a whole or even of any sizeable sub-group."

Nor need a consensus among several experts match the population's spread of taste, for example, landscape architects tend to like fussy planting.[95] Landscape quality is assumed therefore instead to be a product of public opinion, and, because of their specialised training, experts cannot be taken to represent that opinion.[96]

Given this premise, the question then becomes one of which 'population' or 'public' generates qualitative value, and Peter Clamp, a psychologist, definitely refutes the idea that such a public could be an international one:[97]

> "The claim is frequently made that some particular 'objective' evaluation system is an appropriate method for a national or even

an international survey of landscape value. It is doubtful that a meaningful international survey of subjective preferences could be made, since, owing to distinct national attitudes to landscape, it is unlikely that natives of countries A, B and C will give similar assessments to the landscapes of A, B and C." However, within national boundaries the population is culturally homogeneous, and thereby displays a sufficient level of consensus to allow the mean population response to landscape to be treated as though it were absolute quality.[98] Both Peter Clamp and the economist, Colin Price (who takes a similar position overall, despite the occasional waver towards independent 'aesthetic principles'[99]) seek to ascertain impartially this average national response to landscape in their endeavours to assist planners in obtaining precise measurements of the value of pieces of countryside. To this end, Clamp applies statistical social survey techniques to assessments made of photographs by: "a balanced sample of the ordinary public," and suggests that by using this method it would be possible to compile a complete map of landscape value for England based upon public reaction. Price on the other hand, argues that public preferences are expressed through the national economy, and may be estimated by economic analyses of market forces. Each claims to be measuring subjectively derived preferences objectively, but, putting aside the weaknesses that may be found in statistical and cost-benefit approaches in this field,[100] Clamp and Price leave largely unexplained the mechanism by which national culture produces consensual landscape preferences; perception, although assumed to be influenced by certain social factors, is being treated as a 'black box'. It should perhaps be added here that the supporters of expert opinion have occasionally countered the argument for direct sampling of public opinion by

suggesting that certain professions are able to articulate nationally held landscape values, but they still fail to explain how these values are derived.

What, then, are the means that bring about inter-cultural differences in landscape perception? Perhaps they might be of the kind that give rise to intra-cultural differences too, in which case the statistical or economic amalgamation of a whole range of public preferences into a single scale of landscape value is as suspect as taking an international average of reactions to landscape. It has already been admitted that a certain sort of specialised education can produce variations in preference within a society, expert versus lay opinion, so possibly other sorts of training also result in other differences in attitude on the part of particular sub-cultural groupings.

Price[101] remarks that cultural norms could derive from experience of the characteristic land use style of a country, such as the traditional agricultural landscape of lowland Britain which has not greatly altered for over two centuries. It is altering now, of course, and Price speculates that, as a result, a new kind of landscape will eventually become established as the attractive cultural norm. But, presumably, during the transition period some of the population will adhere to the old norm and some to the new. Thus, at present, there is a section of the population giving quite vociferous support to the traditional farming landscape while others are less convinced of its virtues. To merge both viewpoints into a culture-wide consensus would be to misrepresent each of them. Apart from this, the point most frequently made about British scenery is its diversity of geological form and land use. Not everyone, therefore,

has the same experience of the lowlands, and for example, Stephen Shuttleworth[102] found that sixth formers brought up in the rural uplands considered lowland agricultural scenes more 'artificial' than did students from other areas in Britain.

Still, if a common land use experience does not bind a national culture together, perhaps the language held in common does so instead. James Hope[103] has argued that language is an integral part of culture and embodies certain habits of perception which are passed on whenever it is employed. He maintains that the culturally based consensus on landscape value may be revealed by an objective analysis of the words respondents use to describe photographed scenes, and this would permit a national landscape survey to be carried out. It would entail, however, the assumption that the words involved meant the same thing and were used in the same way throughout one society, and although to a large extent this is true, otherwise communication could not proceed, there are many indications that finer interpretation of meaning can vary between members of the same society. Hope himself has remarked that 'solitude' may be construed in different ways, and Edmund Penning-Rowsell, in his questionnaire survey of public landscape attitudes, encountered a similar problem with words like 'remote'.[104] Indeed, questionnaire surveys make differences in interpreptation especially evident, as for example a recent survey of farmers' attitudes[105] in which respondents usually took 'wildlife' to refer to pests requiring extermination, rather than the interviewers' understanding of natural species to be conserved. Some farmers also remarked upon drainage and the importance of maintaining ditches when questioned about the effect of farming changes upon the landscape, a hint of yet one more connotation of that central word.

From this point on in the range of literature, the idea that landscape quality is manifested heterogeneously, both within and between national cultures, is fully accepted. With this acceptance goes a sharp change in the direction of analysis, so that another conspicuous break in the continuum occurs here. Up to now, the emphasis has been upon actual manifestations of landscape quality which, it has been argued, are of a uniform nature down to the most detailed level (saving the differences between nationalities). This conception has allowed single concrete estimations of value, whether stated in verbal, numerical or monetary terms to be fixed absolutely upon designated pieces of countryside - the Lake District is of very high quality, the Fens are of very low quality. Now, however, attempts to devise a system of landscape evaluation die out, as do approaches supposedly modelled upon scientific procedure. Landscape quality is no longer taken to be something belonging to the physical world, like temperature or pH, but is considered as a subjectively constructed phenomenon that belongs to the social world; a distinction of importance for certain social scientists.[106] Conceptions of the perceptual process tend, henceforth, to be more complicated and theorectically more sophisticated, permitting a variety of landscapes 'in here'. But the focus of interest goes underground. Authors are far more concerned with the general underlying foundation of landscape quality than with its particular manifestations at the cultural, sub-cultural and individual level. These latter are viewed as the last variegated gloss upon some single, universal structure which can, however, only be illustrated through the examples they provide. In a way, then, the aim remains the same - to find the one, final explanatory solution to the problem posed by the existence of

landscape quality, but the solutions put forward now become more abstract; the development of a suitable theoretical explanation assuming a much greater importance than the offering of practical help to rural planners. The most notable recent British contribution of this kind is to be found at the next position on the literary continuum.

Biological instincts

In the post-war years, the discipline of ethology has come to have an increasing influence upon the understanding of behaviour. Originally, ethologists were concerned with animal behaviour and its interpretation as a product of moulding by the processes of Darwinian natural selection. They were able to show that, in addition to the basic drives for food and so on, complex patterns of behaviour had genetically evolved through continual interaction with the physical environment, such as the search for, and defense of, territory. Subsequently, certain ethologists, notably Konrad Lorenz and Desmond Morris, extended the concepts of ethology to human behaviour[107] encouraging, perhaps, a rush to jump onto the ecological bandwagon and be biologically respectable in dealing with landscape quality.

A Portmann[108] provides an early example of this approach in his proposition that human beings are born with certain perceptual structures, especially visual ones, which allow them to identify the self-projection of other species - animals and plants. These structures, which are left unspecified, mature through direct contact with nature by the whole of society, but in the modern world the majority of a population experience only limited contact, and are

therefore illiterate in terms of appreciation. To achieve a satisfying existence they must conform more closely with their genetically inherited modes of perception.

The overwhelming need to comply with the 'more primitive substrates of human behaviour' is also emphasised by B Greenbie[109] who argues that all human beings genetically inherit strong biological imperatives, for example the territorial one, that are expressed through culture in diverse fashions and must receive due attention in environmental designs. He locates these fundamental imperatives within the 'limbic system' of the brain. It is to be found in all mammals, and governs their social behaviour as well as their ability to feel emotion. The higher mammals are characterised by the addition of the neo-cortical area, overlying the limbic system but not fully integrated with it. The neo-cortex allows cool, rational, abstract thought, and new cogntitive worlds may be constructed by the perceiving subject. However, human beings cannot stay in such worlds for long without falling back upon the intrinsic biological sources of behaviour and emotion that constitute the original base upon which they have evolved.

The most complete exposition of these fundamental biological drives has been furnished by Jay Appleton,[110] Professor of Geography at Hull University, who, unlike Greenbie, has little to say about neurophysiological aspects. Instead, he has formulated a 'habitat theory' of landscape perception which asserts that:[111]

> "... the relationship between the human observer and the perceived environment is basically the same as the relationship of a creature to its habitat. It asserts further that the

> satisfaction which we derive from the contemplation of this environment ... arises from a spontaneous reaction to that environment as a habitat, that is to say as a place which affords the opportunity for achieving our simple biological needs."

Early hominids, like other hunting species, could only survive if they possessed an immediate appreciation of the facilities offered by the physical landscape that would enable them 'to see without being seen', a key phrase borrowed from Konrad Lorenz[112] whom Appleton quotes extensively. The point being made is that landscape features which gave good prospect allowed the hunters to assess the potential of their surroundings, obtain forewarning of possible hazards and to see their prey, while features providing refuge were used for shelter from hazards such as predators and the weather - hence 'prospect-refuge' theory. Since this kind of sensitivity to the environment was a pre-requisite of physical survival:[113]

> "Any creature born without it would be less likely to live long enough to procreate its species and, by the principle of natural selection, such a sensitivity would continue to be a distinctive attribute of surviving members of that species."

The present human population is only 200 generations away from the Stone Age and therefore still retains the genetically determined perceptual mechanism that was then necessary for survival. However, current civilisation has made the prospect-refuge mechanism redundant for survival purposes, permitting people the luxury of gratifying their biological inclinations in isolation from exposure to the real hazards faced by their ancestors. This gratification is at the root of all pleasurable experience of landscape although its actual manifestations are variable as from one historical period to another, one culture to another, and from one individual to another different

'mixes' of prospect-refuge features are found to be preferred. For example, traditional Japanese gardens lay more emphasis upon 'refuge symbols' than their 'prospect-dominant' western counterparts;[114] and while Adolf Hitler "seems to have had an exaggerated desire for refuge"[115] in that he spent most of the war inside the deep, dark Prussian forest, Paul Cézanne:[116]

> "... was driven by his pre-occupation with Mount Sainte-Victoire to paint a series of landscapes dominated by this potent prospect symbol."

In addition, the same feature may carry a different symbolism for different people, or even a combination of symbols for the same person. Thus a wood may be seen to afford: prospect from the tops of trees; refuge behind the leaf cover; prospect-refuge because one could peep out from behind the tree trunks; or hazard because the dense vegetation impedes locomotion.[117]

The problem with a strictly ethological explanation of landscape quality is that, as Uvedale Price once remarked of William Gilpin's approach, it is: "at once too vague and too confined."[118] It is so vague that anything can be interpreted into prospect-refuge terms, by force if necessary, which results in difficulties when seeking some kind of empirical confirmation of the theory.[119] It is so confined in that the terms used seem to be overly narrow and fixed in comparison to those that were probably employed by many primitive peoples coping with a diversity of habitats across the world. Citing evidence from anthropological literature, Ian Brotherton maintains that:[120]

> "Man has not gained supremacy throughout a whole range of environments with a standard pattern of behaviour. Rather his superior memory and learning abilities have enabled perfection of

> a range of behaviours appropriate to a range of environments, prey species and purposes. Man is extremely versatile, both physically and mentally and this is reflected in the variety and complexity of behaviour patterns that hunters use to achieve success.... Not all of these methods, by any means, involve behaving so as to 'see without being seen.'"

Appleton's theory is also confined in that, although cultural influences are taken to be an integral part of landscape perception through which prospect-refuge is expressed, the theory cannot be extended to explain how and why such a characteristic of humanity evolved. Culture is seen as being 'superficial', and derived from something other than prospect-refuge tendencies.

Finally, there is the question of whether any deep hereditary response to former habitat would necessarily be experienced with unalloyed pleasure. Like other romantically inclined ethological advocates, Appleton[121] argues that modern people, in their artificially created environments, are constantly harking back to the simpler, more direct relationship with nature experienced in their evolutionary past. But Paul Shepard[122] had previously made the point that such primordial experience might just as well bring out a deeply ingrained anxiety as a survivalist satisfaction, an anxiety and alarm that could be far more overwhelming than Appleton's limited conception of hazard. Indeed, Yi-Fu Tuan, in his latest book,[123] has catalogued the varieties of fear that landscape may arouse, and includes the suggestion that Stone Age hunting groups probably felt a considerable degree of fear and antagonism towards an environment that was often very hostile and insecure. Certainly, people like the Eskimo, who have continued the hunting way of life into modern times, display

anxiousness and fear towards the landscape. Tuan argues that an element of fear is always present whenever landscape is apprehended, although it materialises differently from one society to another. This argument is part of an overall theoretical approach that Tuan has been developing for the past decade, and which bears closer relationship to structuralist, as opposed to ethological, thinking.

Cognitive structures

Structuralism is a diffuse movement that has evolved mainly across the fields of child psychology, social anthropology and linguistics.[124] Its concern in these disciplines has been to analyse the ultimate basis from which variety is generated, and Tuan, in applying it to the perception of the environment, has set out the structuralist argument as follows:[125]

> "The perceived world is almost infinitely complex, varying as it does with the difference in individual physiology, experience and intention. At a higher level of abstraction, we learn to see similarities in the personal worlds, for they reflect the constraints placed upon individuals by a common culture. The values and beliefs of cultures vary greatly, and yet they appear to share certain themes. It is nature that places limits on the range of cultural variation, and, by nature, the structuralist means not only the biological needs for food and procreation common to all mankind, but also the character of the human mind which apprehends reality."

At an abstract level, then, the intelligent human mind is characterised by a specific and ascertainable set of genetically inherited structures, or cognitive nuclei, that are common to all perceiving subjects. Structuralists are rarely concerned with the

precise evolutionary origin or neurological nature of these inherent psychological structures, but see them acting as general frameworks upon which each individual actively constructs their own mental worlds to mediate between themselves and external reality.[126] These personal constructions may be built out of environmental experiences as individuals pass through the stages of childhood and/or by learning the language and myths of the society into which they are born.

As already noted, Tuan has recently discussed fear as an ever-present ingredient in landscape perception, drawing upon many different examples from child psychology, anthropology and medieval history.[127] He has also treated the concept of space and feeling for place in a similar manner, arguing that both are:[128]

> "... shared traits that transcend cultural particularities and may therefore reflect the general human condition."

The posture, structure and relations of the human body, for example, provide a universal pattern for coming to terms with space. Front/back, left/right, up/down give the cardinal directions, binary oppositions like these also being a central structuralist idea, and the body is a template when it comes to extracting further meaning from the landscape:[129]

> "... man has tried to integrate multi-faceted nature in terms of the intuitively known unity of his own body.... The Dogon of West Africa see rock as bone, soil as the interior parts of the stomach, red clay as blood, and white pebbles in the river as toes. Certain North American Indian tribes take the earth to be a sentient being made of bones, flesh and hair. In China popular lore has it that the earth is a cosmic being: mountains are its body, rock its bones, water the blood that runs through

its veins, trees and grass its hair.... In the European Middle Ages the idea of the human body as macrocosm was common place." And in his first book in this subject area,[130] which might well have been entitled 'landscapes of pleasure', Tuan itemised many of the ways that landscape is enjoyed - sensually, aesthetically, patriotically and so on - along with yet more of the varieties of significance ascribed to it by different cultural groups, mostly non-technological ones.

There is much of value in the structuralist approach which will be pursued later, but at least three points are left unclear. Firstly, how does any particular mental world, say of the Dogon or the Chinese, knit together with the derivation of fear, pleasure or whatever from the landscape? Tuan implies that the sensations themselves are common psychological structures, but the link between this very general conception, the more specific structures such as that of the body-template, and the many anthropological examples cited, is obscure. This leads to the second point. Although culture is mentioned on nearly every page, Tuan provides no straightforward theoretical explanation as to how it relates to the inborn cognitive structures. Does he agree with the anthropoligist Lévi-Strauss, who has argued that culture is a direct outgrowth of these structures, or with Piaget, who started as a biologist and considers culture as something quite separate from the structures underlying the course of intellectual development? Thirdly, there is some ambivalence over the position of the researcher, the one who specifies and describes the finite set of structures. If these are universal, then the researcher is also presumably subject to them, but, perhaps as a result of concentrating upon children and 'primitive' societies, structuralists

often seem to assume that their theoretical grounding enables them to step outside the cognitive structures they believe to be inherent. The leading structuralists take refuge in 'logico-mathematical' formulations which Piaget[131] argues are on the highest of thought-planes and in complete harmony with the real world; they are, of course, highly abstract. On a somewhat lower plane, Tuan, who is Professor of Geography at the University of Minnesota, although recognising that science is one of the "cocoons that humans have woven in order to feel at home in nature"[132] often takes geographical knowledge as the touchstone of physical reality. Thus, there may be a tendency to see "the earth as the human body writ large"[133] but modern geographers have successfully challenged this and other such child-like/primitive modes of understanding.[134] Similarly, he lists with respect and sensitivity many manifestations of attachment to place, to a homeland, but does so as if they have an almost mythological status.[135]

There is a tendency among those engaged in explaining landscape quality to take themselves to be outsiders and somehow omniscient. At this position in the range of literature, the assumption is reinforced by the fundamental assertion that the cognitive structures involved have an ultimate basis within the genetic inheritance. This means that they can only be discovered by researchers and not invented at some point in time by the people being analysed. However, there has been a reaction against the idea of the researcher as a distinct entity looking in onto certain pre-ordained paths of perception, and this is displayed in the final position on the literary continuum.

The phenomenological approach

Phenomenology is as diffuse and complicated a movement as structuralism, but one of its clearest assertions is that in order to reach a proper 'understanding', this being a central conception, of people's mental worlds of beliefs, attitudes, intentions, preferences and so on, their 'life-worlds', the researcher must seek to enter fully into their way of thinking and come to terms with it from the inside. This approach stresses the autonomy and flexibility of the 'life-world' and, instead of aiming to reduce it into a defined set of explanatory components, proposes that it should be accepted in all its richness and complexity. These propositions are in overt opposition to the usual stance taken in scientific investigations, and it is among the phenomenological literature that numerous critiques of positivism and the scientific method may be found.

Although it is having a growing impact in several disciplines, relatively few authors have taken a phenomenological approach towards landscape quality, one of these being David Lowenthal, an American, now Professor of Geography at University College, London. He has argued[136] that landscape perception is conditioned by each individual's private world view which is to some extent unique. But these personal milieux contain concepts that are shared by other members of the group and are profoundly influenced by society and culture, especially through the medium of language. Geography itself is one of these shared world views, but there are a plurality of such worlds varying from the specialist to the common sense. All are subject to historical change. Lowenthal has gone on to state with Hugh Prince,[137] another geographer, that more holistic modes of analysis are required if the often incommensurable 'provinces of

meaning' involved in landscape perception, at the core of which is an affective response, are to be understood.

Lowenthal and Prince also suggest that as the physical landscape becomes modified by human activities it begins to accrete certain provinces of meaning; a point echoed by P.T. Newby:[138]

> "Landscape is more significantly the embodiment of cultural heritage and of social values, rather than a form or surface provided by nature; and any theory of landscape quality that seeks to reverse this situation can only be of limited value."

The Canadian geographer, Edward Relph, who has probably taken the most overt phenomenological approach towards environmental perception, has stressed the same message.[139] In pushing it to the extreme, he maintains that as landscapes are transcriptions of various cultural and individual endeavours, deep appreciation only comes with a recognition of their unique historical identities, and this somehow leads to a recognition "that universal truths are embedded in the unique identities of particular landscape."[140]

The nature of these truths, however, is not immediately apparent, probably because although Relph's work is theoretically meticulous, it is at such an abstract level that little of concrete substance is left within grasp. As D.W Meinig has remarked,[141] the kind of geographical literature which puts emphasis upon cultural behaviour tends to be philosophical or polemical and rarely mentions specific localities or actual modes of perception and understanding. He later sought to correct this lack of concreteness by conducting an imaginary exercise[142] in which a varied company were taken to the same viewpoint and asked to say something of the meaning of what could be seen.

Meinig discussed ten possible ways of appreciating the scene - from landscape as wealth, as ecosystem, as history, to landscape as aesthetic - so as to illustrate that:

> "... even though we gather together and look in the same direction at the same instant we will not - we cannot - see the same landscape. We may certainly agree that we all see many of the same elements... but such facts take on meaning only through association; they must be fitted together according to some coherent body of ideas. Thus we confront the central problem: any landscape is composed not only of what lies before our eyes but what lies within our heads."

But how are these bodies of ideas, meanings and associations constituted? Lowenthal and Prince, again, have been almost the only authors to go beyond the generalised answer of 'culture' and discuss the influence of one specific culture - that of the English. In their seminal paper[143] they asked "how do the English people look at England?" and went on to analyse the affect of varied land form, moist climate and centuries of occupation and domestication upon the English life-world. Strangely, they later wrote[144] that unlike the diversity to be found in American modes of appreciating landscape, the English display a high degree of consensus, having a fondness for the old, the rustic, the picturesque and the tidy, a view to be challenged later in this thesis. Interestingly enough, Lowenthal, like Relph but in less abstract fashion, has recently paid far more attention to the historical construction of the English landscape and the history of ideas associated with it,[145] which brings the search for an explanation of landscape quality into close contact with the history of art and literature; disciplines where something similar to the phenomenological approach has existed for years.

In conducting an analysis of ideas held in a previous age, it is necessary to enter into the spirit of that age and to think as the people then thought. This enables the evolution of world views over time, the impact of individual innovations in thought, religious tenets, scientific advances, economic circumstances and the many other aspects of culture, to be seen in appropriate perspective. On the arts side, there is a considerable amount of material dealing with ideas that have previously been held about landscape, especially in seventeenth and eighteenth century England, although these specific discussions of artistic and literary modes of understanding are rarely tied to any general theory of perception. Occasionally, however, this has been attempted. Paul Shepard's book,[146] somewhat of a precursor, has already been mentioned, with its rather uncomfortable leap from the physiological structure of the eye to Christianity and landscape gardening. In the same way, it is difficult to connect Christopher Tunnard's[147] detailed exposition of the Chinese influence upon English landscape gardening, for example, with his broader statements about the plural nature of landscape perception today. Here, then, the problem of linking a general theory of landscape quality with particular instances of its manifestation stands fully revealed.

Matters arising

In conducting this review, the intention has been to discover an answer to the question: 'what is rural landscape quality?' A range of suggestions have been considered, but each was found to be inadequate in some way. It might be possible to work towards remedying at least a few of these deficiencies and, in attempting to do so, the salient features of the preceeding discussion will serve as guidelines and

must therefore be kept constantly in mind. However, rather than repeating them all at this juncture, a few further observations about the literature may be made, the most outstanding of which is the way that the general and the particular aspects of landscape quality have been handled.

At the beginning of the range of literature, where landscape quality was held to be an objective attribute of the landscape 'out there', no differentiation was made between its universal explication, holding for all times and places, and its specific occurence at one time and place. This amalgamation of the general and the particular allowed a highly concrete conception of qualitative value which could be covered by a single, detailed, all-embracing standard. The lack of a satisfactory theoretical justification for this standard encouraged the incorporation of perception, an obviously subjective ingredient, into analyses of landscape quality. Initially the perceptual process was considered to operate in a more or less uniform manner down to the individual level, thus producing the same landscape 'in here' for everyone. This meant that a degree of objectivity was retained and completely impartial discussion permitted. Landscape quality was again explained in terms of one generally applicable set of characteristics which, although slightly less specific than those used in the first position on the continuum, were still set out, or could have been set out, quite concretely; the general not yet having been separated from the particular. This separation was achieved later in the range of literature when it was recognised that, given the evidence of studies on perception, culture had an important part to play, resulting in different kinds of perceived worlds, landscapes 'in here', at the group and individual level. The emphasis was now put

upon the subjective nature of landscape quality, but it was felt that lying beneath its actual variegated occurences there was some universal foundation. This became the focus of interest for those inclined towards ethology and structuralism, however their descriptions of it continued to be concrete and detailed enough to be open to the charge of lacking sufficient flexibility. The general explanation of landscape quality was still too specific and, moreover, its relationship with particular manifestations by different cultures and individuals was difficult to fathom. The first of these difficulties was solved in the final position on the literature continuum by providing a general analysis of landscape quality that was completely abstract, but within the universal phenomenological framework attempts to descend from the heights of abstraction and homogeneity to the concrete particulars of cultural and individual heterogeneity were less successful.

It seems, then, that an approach towards understanding landscape quality might be made by the very careful separation of the

general	particular
universal from the	specific
uniform	diverse
abstract	concrete

But these are two sides of the same coin, and must therefore be distinguished in such a way that an easy and reasonable connection may be established between them.

Some indication of how this connection could be made is available in the literature under review. In a certain light, the range is not a linear one, but comes full circle as the phenomenologically inclined

begin to pay attention to the history of art, literature and ideas about landscape. This is bound to include such figures as William Gilpin, the best proponent of the physical standards approach, and could also be applied to the formalists, the ethologists, the structuralists and the phenomenologists themselves. In other words, if the phenomenological standpoint were fully exploited it might provide not only the general theoretical base from which to explore landscape quality, but the means to encompass other attempts that have been made at explanation by placing them in their particular historical and social context. The phenomenological approach, then, contains most of the clues for the development of an alternative mode of understanding landscape quality in which the general and the particular are both separated and connected, although further substantiation at the abstract level and greater elaboration at the concrete level is required.

Such a goal, of course, leads one into deep philosophical waters but, as the review had demonstrated, any discussion of landscape quality entails contact with the eternal problems of the substance of reality and truth, the constitution of knowledge, the mind/body question, nature versus nurture and so on, which become increasingly urgent as greater account is taken of of perception. This, in itself, might create a suspicion that the appreciation of landscape has something to do with the fundamentals of human intelligence and thought. Be that as it may, how or whether these longstanding debates will ever be resolved is far beyond the compass of the ensuing argument. But, if it is to advance at all towards the goal of explaining landscape quality, it must come down on one side or another in these debates, just as previous attempts have done.

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II AN ALTERNATIVE PERSPECTIVE*

Grinding the lens

The overall aim of this thesis is to find out whether it is possible to formulate a reasonable explanation of rural landscape quality which is tolerant of the diverse nature of the phenomenon. The starting point is an intuitive belief that the rural landscape may be appreciated by different people in qualitatively different ways, and also that the same person may be capable of applying different modes of appreciation on different occasions. The problem then becomes one of how at the general level such diversity and flexibility arises, and whether it is feasible to detail some of the particular ways that landscape pleases or displeases.

As the relevant literature indicates, a consideration of perception is vital to any discussion of landscape quality, and a useful means of tackling the problem has been suggested by W.J. Hipple in the following passage where he argues that beauty is only perceived:[1]

> "... through the terms in which we describe it, the categories to which we refer it, the inferences by which we interpret it. The purpose which leads us to the objects of our contemplation, the presuppositions which have equipped us with vocabulary and prepared us to distinguish some aspects of the object and to pass over others, our habits of reasoning, these circumstances make up that prism or lens through which we view reality; what our lens brings into focus, we see. Different lenses are of use for different purposes, to be sure, and we can grind our lens to fit the application; but dispense with it we can not."

* References p86-87 below

The quotation is doubly apt because it both summarises a model of perception which can provide a suitable approach towards landscape quality while typifying, in reflexive fashion, the approach itself. To take up Hipple's analogy, this must consist of grinding a lens to focus upon the range of lenses that are focussed on landscape.

What is required of this lens, and how may it be ground to fit the application? The primary need is for a set of general explanatory terms that are sufficiently comprehensive to account for, and give an understanding of, all the differing circumstances under which landscape quality is perceived, without grossly distorting the particular categories, inferences and presuppositions involved in specific circumstances. Hipple has already listed these general terms, and they may be viewed collectively as describing the pursuit of order in the landscape 'out there' on the part of the perceiver. Now the idea that order is closely associated with beauty has been a theme within philosophy since the time of Plato,[2] and it can also be said to come through the previous explanatory accounts of landscape quality. But the majority of these accounts display a tendency to latch on to one kind of order, for example, formalism or prospect-refuge, rather than conceiving of a basic multiplicity of orders. This is made possible once the ordering process is located firmly within the autonomous individual, as Hipple has done. He is not, of course, alone. As has already been seen, the phenomenologists have an equivalent for his 'terms, categories, inferences' etc. in their concept of the life-world, but perhaps the discipline which has taken the most definite and elaborate view of the mental ordering entailed in perception is that of environmental psychology, a growing field especially in the United States.[3]

As there is no established discipline dealing with rural landscape quality, it is noticeable that those engaged with the subject frequently borrow the vocabulary and direction of their analyses from some discipline, often a popular or up-and-coming one of the moment, which does not usually take the appreciation of the countryside as a central concern. Explanations have been couched in terms of physiology, ethology, structuralism, phenomenology, and the ensuing effort, being no exception, will rely heavily upon the tenets of environmental psychology,[4] although to complicate matters this latter discipline could be considered to encompass at least some aspects of all the others. To complicate further, the field of environmental psychology, which has mainly been directed at urban as opposed to rural landscape perception, is without a properly cohesive theoretical background, especially with respect to the meaning and significance of the perceived environment. However, underlying most research in this field is a basic assumption that the nature of the environment cannot be apprehended directly but only through a highly developed interpretative process which acts as a scheme for discovering a meaningful order within the environment, and that the constitution of these mental schemes may vary from one person to another.[5]

The rendering of the landscape 'out there' into the landscape 'in here' is therefore to be conceived as taking place within a perceptual scheme or framework constructed of the categories, inferences, purposes and presuppositions which enable the perceiving subject to detect some kind of recognisable order within the perceived object. Hipple has stressed that these schemes or frames of reference are

quite indispensible to the process of perception, so it seems better to consider them as 'lenses' focussed upon reality rather than as 'filters' of reality, a tendency among many environmental psychologists, because 'filter' could imply the possibility of removal, just as coloured filters may be taken off a camera lens. Likewise, the perceived environment, the landscape 'in here', is often denoted by the word 'image' which may suggest that to a certain degree it is illusory and somehow open to ultimate correction once the filtering mental schemes are removed. The term 'image', then, will also be avoided, and each differing landscape 'in here' will be viewed as having captured certain facets of reality, which means that an equal general respect and theoretical validity will have to be afforded to all the particular ways of perceiving landscape,[6] from animism to aestheticism.

Taking this position has immense implications for the ontological status not only of the lenses focussed upon landscape, but of the lens focussed upon those lenses. To be brief, the concept of perception as a process of schematised ordering owes a great deal to Immanuel Kant (1724-1804) who also propounded the idea that although things-in-themselves may possess their own essential order, this could never be fully comprehended by human beings.[7] The selection and organisation required if perception is to serve a particular purpose means that no one ever sees the whole reality of landscape-in-itself, only limited perspectives of that reality. Operating within a similar philosophical framework, Martin Heiddegger (1889-1976) has given the following example:[8]

> "A distant mountain range under a broad sky <u>is</u>. Does it disclose its being to the traveller who savours the landscape, to the

distant meterologist preparing his weather chart, to the farmer who makes his living in its shadow? 'To all and none', replies Heiddegger. It may well be that each of these viewers is perceiving some aspect of the mountain range. But the sum of these aspects cannot be said to constitute the being of the object. This being is felt to lie 'behind' or 'within' the complex of aspects. What, then, <u>is</u> it?"

Heiddegger's attempt to reply to this question of ultimate being is of such abstraction and complexity as to be quite beyond the everyday perceptions of the mountain range. In addition, just as people's perceptions of landscape distinguish certain aspects and pass over others, the explanation of that perceptual process must have its own selected foci of interest. Landscape quality is taken to be a subjectively derived phenomenon, but the terms and inferences used to understand it cannot, at the general level, be the same as any of the particular categorical apparati actually employed in perceiving landscape[9] because the purposes and presuppositions involved are different. In other words, the real landscape-quality-in-itself is also beyond direct apprehension, all that can be offered is a perspective on that reality,[10] a lens fit for its application.

The focus on landcape quality

The quality of the rural landscape is rooted both in its character and emotional significance. These two are fused together in the process of perception which makes the externally real landscape internally real. Humans are intelligent beings and perceive the landscape intelligently. They seek some pattern, some order, there which makes sense to them within their own terms, and this activity itself possesses a qualitative dimension.

At the general level, perception may be described as the selection, classification and interpretation of the stream of sensory stimuli generated by the external landcape according to some conceptual scheme held by the perceiver. This constitutes the basis upon which structured presuppositions are built that will either be fulfilled or denied by the sensory information picked up from the landscape 'out there'. If fulfilled, the very success achieved in establishing a meaningful pattern, finding a character, in the landscape can be a source of pleasure, as may be the opportunity to explore disorder and extend the pattern further. But a positive reaction to the discovery that an expected order is present is not invariable because it also depends upon the connotations a particular order has for the particular individual, connotations that are the product of past experience.

Perceptual activity takes place within a temporal frame[11]. It involves the future, because it proceeds by the confirmation or contradiction of expectations, and it involves the past, which conditions the conceptual scheme giving rise to expectations. Whether a particular order is greeted with delight or dismay is often a matter of previous personal experience of landscape together with the knowledge acquired in the course of living as a member of society, knowledge derived from the experience of other members that can go back many generations.

To understand the qualitative connotations of a particular frame of reference therefore requires a detailed examination of the cultural and personal background informing the terms, categories and inferences which constitute that frame. In addition, the historical context is

of vital importance because the particular concepts that facilitate landscape perception rarely remain static for long periods of time. The people who use them tend to add to them, adapt them, modify and reform them to meet changing circumstances. Moreover, if a particular order becomes over-familiar and boring or unsuited for the purposes in hand, creative individuals are likely to react against it and construct something different, which can be exciting and inspiring both for themselves and their audience.

It seems possible, then, to find an answer to the question: 'what is rural landscape quality?' on two planes. Generally, the quality of landscape is an inevitable concomitant of human intelligence which acts in an active, constructive and flexible manner as landscape is perceived. But this kind of universal answer is somewhat trite and empty. More definite are the myriads of particular ways in which intelligence is manifested as actual landscapes are perceived at specific times and places. Here, at the level of the particular and the concrete, an almost infinite number of answers to the question are available, each within its own historical and cultural context.

The general and the particular

At a time when the notion of some commonly agreed standard of landscape excellence has been gaining ground, at least in rural planning circles,[12] a position is being taken in this thesis from which the qualitative value attached to the countryside appears as far too vast and complicated a phenomenon to be reducible into a single set of concrete criteria. The acceptance of inherent diversity stands in sharp contrast to the assumption that landscape quality is something unitary, explicable in terms of particular yet generally

applicable factors, for example, at the extreme, the presence of certain physical components or specific formal and spatial relationships.

A number of circumstances have contributed towards a tendency, especially among those encountering the subject briefly, to make the assumption of unity and general consensus, one of the most salient probably being a harking back to what might be called the golden age of landscape aestheticism. There seems to be an underlying recollection embodied in English culture of the time in the eighteenth century when 'everyone' subscribed to the same aesthetic standard. The details of this standard will be discussed later as one of the particular schemes employed in landscape perception,[13] but even in the eighteenth century it was not as universally applied as might superficially appear. 'Everyone' actually meant the majority of the small upper class of aristocracy and gentry who constituted a close-knit elite holding a dominant economic position in society.[14] Their education was oriented towards the classics, they greatly admired a few Dutch and Italian landscape painters, they read the same books and periodicals. A strongly cohesive and well articulated understanding of landscape developed among them which was most obviously demonstrated in their gardens and parks. But these specific binding influences no longer have a very active hold upon any group in modern society, and only a rather vague notion occasionally surfaces to the effect that somewhere a definite standard of landscape quality lies waiting to be discovered.

When it does surface, however, there is a chance that it will be reinforced by certain writers seeking to explain landscape quality

scientifically. Scientific concepts have had an enormous impact upon Western thought in the last three hundred years,[15] and they tend to place a strong emphasis upon homogeneity and objectivity rather than the heterogeneity and subjectivity, this approach being most useful in investigating physical, natural phenomenon. While attempting to adopt a natural scientific mode with respect to qualitative value, A.V. Trowbridge,[16] for example, has expressed his irritation with those who maintain that beauty is an entirely subjective experience with a different meaning for every individual, because this hinders the case for a single objective scale of aesthetic value. Such a case has strong attractions for individuals who shelter in the belief that the only ultimately valid knowledge is objective scientific knowledge, and who are repelled by the slightest hint of relativity.

In recent years, scientifically based approaches to landscape quality have interested certain rural planners exactly because they provide an opportunity for fixing upon the one precise qualitative value of each piece of countryside.[17] It would be useful and convenient, in making planning decisions, if landscape quality could be scientifically assessed against particular criteria because then there would be valid grounds for avoiding, or even settling, the conflicts of opinion that can arise between different interest groups. A single definite specification of what constitutes 'natural beauty', a phrase beloved in legislative documents and indicating not only the presence of flora and fauna but qualities that should naturally be recognised by everyone, would be most serviceable in the national plan for the countryside currently being mooted in some quarters,[18] and in environmental impact statements[19] that may soon be a statutory requirement for any large proposed development.

The difficulties encountered in accepting any closely specified description of landscape quality come not with regard to whether it is absolutely right or wrong, but with respect to any claims made for its ultimate generality. If nothing else, a particular specification of excellence is likely to be employed by the person who devised it, and perhaps by some wider social group, but to argue that everyone should subscribe to it, or actually does so beneath any personal bias, is unsatisfactory both in the wider scientific and political sense. The need is for a general framework within which particular variable instances are accepted and understood.

Form and content of landscape perception

If the vast and complex phenomenon of rural landscape quality is to be made at all comprehensible, it has to be approached through an understanding of how people perceive landscape. Only by the process of perception can the physically real landscape 'out there' become the intellectually real landscape 'in here', and from the compound of meaning and emotion, knowledge and sentiment, implication and feeling that perception appears to entail, emerges the mingling of character and value which constitutes the quality of landscape. But how does this come about? The perception of landscape is likewise an extremely difficult subject to tackle, not least because, whatever the operations involved, they occur all together in an instant wherein much is unconcious and taken for granted. Such rapidity is obviously essential to perception, but it does produce a need to conceptually magnify that instant so as to discern the factors present.

When a moment of perception is stretched out, for the purposes of investigation, it may be viewed as a progressive sequence of

establishing order, pattern or regularity in the landscape, always remembering that what are discussed as sucessive stages in the ordering process actually inter-relate and take place simultaneously. The general idea of perception as a struggle to create order out of what would seem to be chaos is a common one that has formed the basis of many theories about the nature of human intelligence. Karl Popper, for example, upon whose work in this area the following thesis has a certain philosophical dependence although not always in complete accord with it, has observed that:[20]

> "... we are very clever animals, precariously placed in a surrounding that differs greatly from every other place in the universe: animals that strive courageously to discover, by some method or other, the true regularities which rule the universe and thereby our surroundings."

And again, that humans have:[21]

> "... an immensley powerful need for regularity - the need which makes them seek for regularities; which makes them sometimes experience regularities even where there are none; which makes them cling to their expectations dogmatically; and which makes them unhappy and may drive them to despair and to the verge of madness if certain assumed regularities break down .... The need to try to impose such regularities upon our environment is, clearly, inborn and based on drives, or instincts. There is the general need for a world that conforms to our expectations..."

The derivation of these expectations and the manner in which they are either fulfilled or denied by the external environment are to be considered in a series of steps towards some detailed pattern that makes sense to the particular individual; the progression gradually

brings the landscape into focus until its significance becomes fully clear to them.

To begin with the landscape 'out there': it does not, of course, bodily enter people's heads. Instead, more indirectly, it reflects and sometimes produces electromagnetic waves, generates air vibrations, emits air-borne chemical substances and can exert various mechanical contacts, all of which envelop people in a sea of information about the physical landscape around them. Having been structured by this landscape, such waves, vibrations, chemicals and contacts are not without inherent order,[22] but the range and quantity of information thus made available is so enormous that no one could possibly take everything in, and would indeed be swamped by its apparent chaotic state if somehow they were able to do so.[23] That they cannot, is first of all governed by the absolute limits set upon the receptivity of their senses by their genetic make up. Human eyes, ears, nose and skin are only capable of being stimulated by a relatively narrow spectrum of light, sound, smell and touch which, together with additional neural limitations on sensitivity to certain events within that spectrum,* considerably reduces the amount of information about the external landscape that may be obtained without the aid of instruments.

Even inside the fixed limits on sensitivity, a great deal of selecting and organising of stimulus information remains to be done. It has been said that if, for instance, people could be directly conscious of visual images as passively registered by the eyes and transmitted to

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* Rabbits, for example can see the sun moving across the sky.

the brain, they would probably see a shifting, flat, variegated confusion of brightness, darkness and colour.[24] Normally, however, organisation is immediately and automatically imposed upon visual sensations as the brain strives to interpret their significance for the individual. Nor should the senses be regarded as passive receptors.[25] Under the brain's direction, they actively search for pieces of information that will fit in with the pattern of organisation it construes. Relevant material is selected out while the rest, although falling within the span of sensitivity, is liable to be ignored.[26] The workings of the brain, then, have been geared to locating order within the visual, auditory, olafactory and tactile information streaming from the physical landscape through the manipulation of the senses. But how is the process of selection and organisation carried forward?

The essential form of the process can be conceived as being founded upon a strong and inherent urge towards classification. Humans are classifying animals,[27] who instinctively seek to break up the flood of sensory information - "segment the continua of nature," as Yi-Fu Tuan remarks[28] - and to arrange it mentally into categories, each with a network of associations. This intellectual capacity to reduce the huge diversity of potential stimulation into a restricted but manageable set of classes which make sense to the individual is fundamental to the perceptual process, and even something as straightforward as colour is treated in this fashion. When the smooth gradations of the colour spectrum are denoted by luminosity, dominant wavelength and purity of admixture, about 7,500,000 just noticeable differences may be discriminated by the eye, but the English language only provides 4,000 categories with specific colour names and only

eight of these are used frequently.[29] Moreover, blobs of colour in the landscape are not simply blobs, but carry whole realms of association. Red, for example, indicates ripening fruit, autumn leaves, iron compounds in soil and rock, vivid dashes in an artistic composition, and so on, with all that follows.

The formulation of mental classes and connections, whatever their actual content, probably occurs automatically due to the physiological functioning of the neural circuits of the brain as determined by the genetic endowment humanity hold in common; although it must be recognised that little is known in physiological terms about the relationship between neural circuitry and intellectual activity. Still, one point is perhaps reasonably clear: the scheme of classification employed is unlikely to be constructed from scratch at the instant of perception as it would be grossly inefficient to continuously go through complete reconstructions at ensuing instants. Rather, neurons within the brain would seem to be already in possession of certain sets of categories and associations that are brought into play when deemed appropriate. But where do these originate? Some schools of thought would argue that specific schemes have been genetically pre-programmed into the neural circuits, in other words, that both the propensity to classify and its realisation are governed almost wholly by universal physio-psychological characteristics.[30] However, this position often leads to a serious underestimation of the scope, the flexibility and diversity of classificatory schemes that have been devised and may yet be devised. In taking account of such heterogeneity, it is perhaps more appropriate to seek to separate the overall propensity to classify from the differential ways in which that propensity comes to fruition.

The former consists of a fixed, genetically inherited ability to arrive at an intellectual ordering of the landscape, while the latter, being realised on the basis of remembrances of past experiences retained in the brain's memory cells, is more fluid.

No one encounters landscape with a completely blank mind, forever isolated in the immediate present. Their inherent need to find pattern in it is satisfied by referring to categories and associations derived from previous encounters with landscape, and the past, therefore, has vital implications for each present instant of perception. Individuals obviously learn from their personal contacts with landscape over the years, but only very rarely are they left alone to rely wholly upon their own experiences.[31] Humans are not just classifying animals but social animals too, and this gives them access to bodies of past experience and intellectual endeavour accumulated by fellow members of their society, both of contemporary and preceding generations. Myth, science, art, religion, technology are all manifestations of the culture thus created,[32] and, especially through the medium of language, they provide ready-made conceptual classes and connections that may be used in the perception of landscape.[33] The simple example of the categorisation of the colour spectrum in English has already been given.[34] Other societies have other means of dealing with colour,[35] one small indication of the inherent variability of culture between different social groups. In some instances cross cultural variation is especially striking, as in the case of the Yvrok Indians of North America who traditionally considered hills to be regions bounded by valleys as opposed to the widespread Western conception of valleys as regions bounded by hills.[36] But the cultural contribution to landscape perception not only changes from group to

group, it also changes with time. Few Yvrok nowadays probably think of their land in the old way following the impact of Western civilisation. Culture, then, along with the individual's own experience, is naturally subject to variability and change, and this diversity of collective and personal pasts produces different kinds of classificatory schemes for selecting and organising stimulus information made available by the landscape 'out there'.

In addition to reaching back into a heterogeneous past, the present instant of perception reaches forward into a heterogeneous future.[37] The specific cultural and individual content of the conceptual scheme used enables certain predications to be made about the likely character of the landscape. These predictions are tested[38] by deploying the senses, and information thus obtained may confirm the existence of anticipated classes and connections, or it may prove them wrong, or it may reveal something unexpected. Whatever the outcome, the resulting landscape 'in here' embodies some facet of the landscape 'out there' that the perceiver can grasp and act upon. Since the knowledge and traditions on which predictions depend will vary from one person and one social group to another, so will the final perceived landscapes. But none are any the less real, as each reflects an ordered aspect of the immensely complex external landscape relevant to the individual or society.

The process of landscape perception, when seen as a sequence of ordering, ends with the arrival at the landscape 'in here'. In summary, it has been argued that the means which allow landscape to be perceived fall into two main categories - a fixed form and a variable content. The fixities consist of: the ability to use the senses to

obtain information; the ability to classify; the ability to rely on past experience; the ability to formulate expectations. These are all instinctive, integral to the structure and functioning of the senses and the brain as determined by the human genetic inheritance. They are, however, only abilities, propensities, forming the skeletal frame of the perceptual process which must be fleshed out by actual expectations, actual past experience, actual schemes of classification, actual sensory information. The input of a specific content comes from social and personal sources, and, since these are inherently diverse, the propensity to perceive is realised in different ways. The next two sections of the thesis attempt a closer analysis of the fixed and general genetic and cultural factors that enable the perception of landscape. The last two sections touch upon the variable cultural and individual factors that permit actual landscapes to be perceived.

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III THE GENETIC INHERITANCE*

An evolutionary standpoint

In pursuing a general theory of rural landscape quality, it is necessary first of all to consider those points which may be applied universally, to the whole of humanity, and then to work from these towards the individual who is ultimately responsible for landscape's character and value. This stems from their perception of landscape, and perception as practised by all human beings proceeds according to a common basic structure, or form, which, it has been suggested, consists of a highly intelligent capacity to discern order, to select, categorise and find meaning in the landscape. But how does such a capacity arise? Since the ability to perceive is taken to be universal, it is appropriate to look to the natural sciences for an explanation of the operations involved which are surely grounded in the physiological attributes of the senses and the brain. However, despite a great deal of research, the physiological functioning of the brain, especially, is as yet so little understood that no adequate neurophysiological theory has been provided that covers the complete process of perception from the external and physical to the internal and perceived. Nor has any other branch of biology been fully successful in this, perhaps the closest approach, to date, having been achieved by employing the arguments which have sprung from the study of genetics and evolution.

The way the senses and the brain function must be under the control of the characteristically human genetic complement. Admittedly, investigations of how this complement was produced, through adaptations to the environment, have not furnished many insights into

* References p116-117 below

the physiological mechanisms of perception, but they have been directly concerned with the development of the capacity to perceive intelligently.[1] An evolutionary account is therefore relevant to any discussion of landscape perception, and it is additionally desirable as the current ethological and ecological climate of opinion[2] dictates the need for an explanation of the genetic underpinning of any human attribute discussed.

This is not to say that evolutionary theory itself is without difficulties. Almost as soon as Charles Darwin (1809-1882) published his version, based on the survival of the fittest and random mutations, a major problem was discovered that still awaits a satisfacory solution.[3] How could the evolution of a complex organ and associated physiological mechanisms take place by a long series of small steps, each the result of a purely accidental mutation, and each on its own conveying no survival advantage? The example most often cited is that of the eye:[4]

> "But what use is a half-made lens? What use is a lens giving an image, if there is no nervous system to interpret the information? How could a visual nervous system come about before there was an eye to give it information? In evolution there can be no master plan, no looking ahead to form structures which, though useless now, will come to have importance when other structures are sufficiently developed."

Similarly, it is hard to explain how the ability to create conceptual schemes of classification, using knowledge and experience gained in the past, could genetically evolved through haphazard trial and error;[5] although this, as well as the eye, when completely formed confers tremendous survival advantages upon its possessors.

One resolution to the problem posed by Darwin's theory of natural selection has been the proposal that evolution could sometimes occur in one large random jump, rather than many small steps, as the fossil record occasionally displays quite abrupt discontinuities where gradual transformations might have been expected. Another, more heretical, suggestion advocates a neo-Lamarkian notion of evolutionary master plans, and seems to be favoured by one or two writers who regard perception as an ordering process. Following a lead given by C.H. Waddington (1905-1975), it has been argued that individuals' interaction with the environment can affect their genes within their own lifetime, allowing the inheritance of acquired characteristics;[6] also, that internal propensities, such as to see, randomly evolve first but subsequently foster certain organ mutations that were previously useless.[7] There is little evidence from geneticists to support any of these solutions, and to go into them any further would be to give up discussing landscape perception altogether. The pursuit of the 'how' and 'why' of landscape quality has to stop somewhere, and so a neo-Darwinian standpoint will be assumed as the most acceptable for the purposes in hand.

These are to describe the inherent functioning of the senses and the brain that allows intellectual order to be established among the welter of information that the physical landscape makes available. Not all this information is sensory information because only a small proportion can possibly be registered as light, sound, smell and touch. Universally, perception must be carried out within fixed limits imposed by the human genetic inheritance.

Limitations on the senses

The absolute physiological limits on sensitivity have presumably been inherited from ancestral species adapted to being stimulated by that range of information from the physical environment bearing upon their survival in the ecological niches they inhabited. It should be noted, however, that this Darwinian argument is also deficient because the only way of judging the survival value of an adaptation is according to whether the mutant organism survives to perpetuate the new characteristic - "those that survive are those that survive."[8] But leaving aside this tautology, the human eye, for example, would seem to be the product of a diurnal existence in that it is adapted to accept wavelengths of maximum energy of sunlight as filtered through the atmosphere.[9] Lacking immediate nocturnal ancestors, humans do not have the infra-red vision of rattlesnakes or the blindness of bats which rely on radar. To be precise, their eyes are capable of reacting to a narrow band of electromagnetic frequencies stretching from a wavelength of 4×10^{-5}cm., which produces a sensation of blue light, to a wavelength of 7×10^{-5}cm., which produces a sensation of red light.[10] Similarly, with respect to hearing, the average young person's ears are sensitive to a range extending from 16,000 to 20,000 cycles per second.[11] If they were receptive below this range, individuals would suffer the annoyance of hearing their own heartbeat, while maximum sensitivity appear to correspond to the pitch of a child's cry.

The habitat that has been the most important in shaping the physiological character of the senses is the arboreal one.[12] Here the early primates developed an excellent visual sense in making nice estimations of distance while leaping from branch to branch, and in

assessing from afar the places they intended to jump towards. So much so, that vision evolved as the main sense of the primates, hearing smelling and touch becoming subsiduary and acting to provide data to assist vision rather than taking major roles of their own. Thus, in comparison to other animal species, humans descended from these primates have a poor sense of smell, although their sense of touch is relatively good arising from the ability of primate hands to pick up and fiddle with objects. Vision, however, is primary, and as such its functioning will be discussed in the next few pages. In all probability, similar principles will hold for the other senses, but since until recently there were no independent disciplines dealing with them, studies of the physiology of hearing smelling and touch are lagging behind that of sight.[13]

The structure and functioning of human eyes are vestigal remains of life in the trees where binocular stereoscopic colour vision enabled the anthropoid apes to focus clearly on the next branch, on distant coloured fruits among the leaves, as well as on what was in their hands.* Unusually for vertebrates, the eyes became positioned at the front of the head giving an overlap of 50% in their separate fields of vision, while on the retina in each eye an area under the lens, known

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* The following discussion relies primarily upon:

Gibson, J J 1983 The Senses Considered as Perceptual Systems. (Greenwood Press, London). First published 1967.

But the operations of the brain are credited with a greater role in perception than that assigned by Gibson in accordance with the majority view among psychologists and physiologists

as the fovea, developed that was best equipped anatomically for the discrimination of fine detail and colour. It has been said that to move from the centre of the human retina towards the periphery is to travel back in evolutionary time from the highly organised structure of the fovea, packed with colour sensitive cones, to a primitive region scattered with rods which only reacts to light, dark and movement. At any rate, the resulting total visual field extends about 180° laterally and 150° vertically, being sharply defined at the centre and progressively vaguer towards the boundaries. Indeed, a relatively larger area of the visual cortex of the brain is devoted to the fovea so that the point towards which the eyes are directed is 'spaced out' while the surrounding parts are 'compressed.'

But, and this is a vital but, visual perception under ordinary conditions does not provide a stationary oval-shaped image with one clear centre, rather, visual life is spent at the core of a shifting transparent shell that can be located at desired distances. The eyes are never still: they make small, continuous involuntary movements to preserve the sensitivity of the retinal cells which require ever-changing stimulation; they make scans of the visual field under voluntary control; and they make larger shifts when the head, which is rarely stationary for long, and the body are moved too. The active ingredient, then, must be introduced into the understanding of the visual system at this early stage. The co-ordinated voluntary movements of the eyes, head and body mean that information from the physical environment is generally obtained by, not imposed on, the perceiver. A stimulus is not a physical object, nor is it the reflected light waves which offer information. Only when the information is intercepted by the eyes and penetrates them, has

stimulation occurred, and this interception is most often the result of activity on the part of the senses. Looking involves searching for expected patterns of stimulation.

Activity takes another form too. Once a stream of light waves has been intercepted and focussed on the retina, it is immediately transformed, by the photosensitive rods and cones, into a flow of electrical charges which are passed along the optic nerve, being recoded several times, to the visual cortex of the brain. The brain must reconstitute the electrical message if the individual is to see the landscape at the other end of this chain of reactions - the shapes, distances, colours and implications of the objects present in their environment. In addition, the visual cortex must compensate not only for the continual movement of the image over the retina as the eyes move, but also for the distortions resulting from the inefficient structuring of the eye as an optical instrument.[14]

In organisms with simpler brains the mechanism which interprets nervous impulses from the eyes is relatively passive and straightforward. For a start, many such creatures have eyes whose structure and functioning is far more sophisticated than those of the human, providing electrical messages more closely corresponding to stimulus information received and therefore simple to decode. Moreover, in these and other cases, the decoding operation always takes place fixed, instinctive, pathways when certain required stimuli are obtained. However, this kind of specialised apparatus can only deal with a strictly limited range of stimulation essential to its possessors' survival. For example, experiments have shown that frogs distinguish edible flies by two factors: black dots that dance in the

air. If surrounded by dead flies, a frog will die of starvation, as flies are only flies to a frog when they are moving. A relatively unspecialised, though defective, eye coupled with an elaborate brain brings greater freedom in selecting information and therefore a wider variety of options to exploit. But a complicated interpretive operation is needed, if reliance is placed on past experience, stored by the brain, instead of upon instinctive mechanisms, for the process of perception to be completed in the human.

Physiological differences

Before, however, discussing the activity of decoding carried out by the visual cortex, mention should be made of the differences in the physiological limitations on the sense organs that can occur. Up to this point, the limitations have been considered the same for all, but, being governed by the genetic inheritance, they naturally vary to a comparatively small extent between members of the same species. Almost nothing seems to have been written about the effect on landscape appreciation caused by differences in sharpness of eyesight, or hearing, smelling, and touch too, for that matter. Is it significant that the painter John Constable (1776-1837) possibly had extremely acute vision as his pictures of Dedham Vale accurately record, in minute dashes of paint, the position of objects, like churches, many miles distant?[15] Or perhaps he was able to do this not because his eyesight was especially good, but, being familiar with the area since childhood, he simply knew where the churches should be. It might also be interesting to find out whether painters' eyes are extra-sensitive to colour, and, conversely, whether colour blindness detracts from an enjoyment of landscape, since 10% of the British male

population cannot tell the difference between red and green. It seems likely, however, that they do not suffer in this respect because colour is only one of the criteria on which objects are identified:[16]

> "We call grass green, though we have no idea whether the sensation is the same for different people. Grass is a certain kind of plant found on lawns, and the sensation of colour which it gives we call 'green', but we identify grass by other characteristics than its colour - the form of the leaves, their density and so on - .... We know it is supposed to be green, and we call it green even when this may be doubtful."

The colour blind, then, are probably rarely conscious that the grass they see may not be the same colour as that seen by the rest of the population.

In some cases, of course, the sensory system is severely impaired by injury or illness, as well as by the inheritance of defective genes or harmful mutations. Again, little research seems to have been done on the impact on landscape perception of the complete elimination of one sense, although this must have an effect if only to provide evidence about normal functioning. In one American experiment, for example,[17] the noise produced by city streets was blocked out while subjects viewed them, and it was found that this gave rise to an urban landscape that was surrealistic in its peacefulness, but was sad, lacking in contrast and almost two-dimensional. How far this experience relates to people who are permanently deaf has not been explored, but it does reveal that hearing and vision usually work in conjunction. Still, the loss of one or even two senses does not appear to necessarily destroy the ability to appreciate landscape. A

blind man once told William James (1842-1910) that he thought few people could enjoy the view from a mountain top more than he,[18] while Helen Keller's (1880-1968) descriptions of landscape can be quite lyrical.[19]

In an attempt to discover how the blind obtain information about their environment, an American architect[20] interviewed six blind graduates. They had difficulty explaining their sensations to a sighted person, but were able to describe their sensitivity to air - its density, humidity, sound and smell. For example, they could feel thicker layers of air near water swirling around their knees, and hear the distinctive sounds refracted by layers of air over grass which were soft after rain and crisp on a dry day, and they could sense the denser outline of a tree when air was being held between the leaves. This indicates that blind people can develop an ability to receive ranges of information that tend, in certain aspects, to be quite beyond the sensory capacities of the non-handicapped. Quite different patterns of stimulation are being obtained, but once these have been conveyed to the brain as nervous impulses from the ears, nose and skin, they must be interpreted, just as messages from the eyes in the sighted must be interpreted, if a coherent landscape 'in here' is to be achieved.

Active hypothesis testing

To continue, for the moment, to concentrate on vision: conventionally, the translation of the somewhat ambiguous messages about the external landscape arriving via the optic nerve, is divided into two stages, both of which are widely regarded as being active and constructive.

Firstly, there is the identification of shape* and space, and, secondly, the attribution of further meaning to objects so defined. Both operations are carried out by the brain, but precisely how they are done is a mystery. Research into brain functions is hindered by the fact that function is not reflected in structure to any great extent, the physical arrangement of parts of the brain having little importance to the work they perform. However, the brain is obviously made up of interconnecting nerve cells. In some places these are randomly arranged, while in others they occur in layers or columns. Parts of the brain have specialised functions, and in the cortical area dealing with vision, the neurons are composed in regular patterns indicating ordered connections.

In the initial reconstruction of shapes and spaces to be found in the surrounding landscape, the visual cortex appears to use the messages received from the eye to check hypotheses about the configuration of lines, surfaces, distances and depth present. The contours of objects, for instance are identified in all mammalian brains through the agency of 'feature detectors' - separate visual neurons, or groups of neurons, which each carry a separate hypothesis about the angle of orientation of lines, and which are 'fired' only when the sensory

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* The term 'shape' as opposed to 'form' will be used in this context because occasionally when 'form' is applied to objects it has lead to general and aesthetic 'formal' theories of perception, criticised on p32-40 above. 'Form' in the thesis is being used with respect to the general framework of the perceptual process, as summarised on p84-5 above.

input conveys their own specific angle. Experiments have further shown that in the monkey's brain combinations of nervous activity from certain line-detecting cells lead to neurons which require more complex shapes, such as that of a corner, to make them communicate to the rest of the brain, thereby confirming the hypothesis they embody. Whether the results of neural experiments on monkeys are wholly applicable to the human brain is unknown, but human recognition of space seems to occur in a similar hypothesis testing fashion. Depth and distance 'cues', present in the optical messages, are used to determine the most fitting spatial hypothesis. Such cues include: the apparent decrease in the size of objects with distance; the hiding of parts of far objects by nearer ones; the angle of convergence as the two eyes pivot to focus on an object; and the disparity between the images obtained by each eye which produces the stereoscopic effect. The importance of these, and many other cues, is best revealed in experiments which provoke visual illusions. Cues may be provided, as in the Ames distorting room, in a way that encourages the brain to jump to inappropriate conclusions. One or two cues are selected out, in this case indicating that the room is rectangular, which support the most probable hypothesis, while others pointing to a different conclusion are ignored. The Ames room is built with a steeply sloping floor and a receding back wall. There is, then, a suggestion that the visual cortex seeks just enough corroboratory evidence to confirm expectations, and the rest of the available stimulus information is made redundant. Indeed, some nerve fibres seem to transmit impulses from other parts of the brain to sensory pathways which can inhibit messages passing along them.

However, given that a wide range of hypotheses about shape and space are encoded in the visual cortex, which actively sifts incoming optical messages for clues to the most likely pattern of contours and perspectives in the landscape, where do these hypotheses come from? Controversy rages over whether they are innate or learned, but, whichever is the most correct, environmental experience in early life has emerged as being vital for their development. Without it, either inborn neural mechanisms degenerate through lack of stimulation, or the basic neural potential to detect lines and distances is not fulfilled. The failure to develop this visual ability can be observed, for example, in blind people who newly recover their sight,[21] while a great deal of research has recently been done on its growth in babies and young children.

A large proportion of the young's environmental experience with respect to shape is, of course, universal. Expectations about shape appear to be built up, at least in part, by watching objects being touched and manipulated by the hands, and, with a body that is upright (eventually), bilaterally symmetrical and permanently under the influence of gravity, everyone grows up with the same co-ordinates of up/down, front/back, right/left and vertical/horizontal, which are extrapolated on to space. In certain instances, however, the environment offers different kinds of stimulation, providing evidence of how important experience is in the development of hypotheses about shape and space. The example of the difference between plains and forest dwellers has already been mentioned,[22] and it has also been found that when the latter come out of their usual surroundings, they see far away objects as small, not distant, because they have little experience of distance cues in the forest. Similarly, people

belonging to non-Western cultures, who are less acquainted with rectangular rooms, are less prone to illusion when confronted with the Ames distorting room. Cultural factors have some impact, then, even at the initial stage of identifying shape and space.

But this stage alone is quite insufficient to achieve the landscape 'in here' as it is so very abstract. If humans could only perceive a landscape of spatially dispered, bright and dark, coloured shapes, they would hardly have survived the rigours of natural selection for long. To exploit the environment to their advantage, they have always had to be able to ascertain how its constituent shapes and spaces will bear upon their activities, which is one of the reasons why the idea of order in the landscape cannot be <u>generally</u> confined to one of geometry. Shape and space are immediately, if not simultaneously, enriched with further meaning, so humans, outside the laboratory and the art gallery, rarely see abstract compositions; they see fertile soil, old oak trees, waterfalls, home, and so on.

This enrichment forms the second stage in the translation by the brain of nerve messages sent in by the eyes, and it, too, can be described as an hypothesis testing procedure in which the brain seeks to establish the most likely character of the objects present. In attributing more elaborate meanings to the shapes and spaces already identified, two additional sources of evidence are tapped. Firstly, the brain does not use visual stimuli in isolation. They may be the dominant providers of sensory evidence, but the countryside can be heard, smelt and touched as well. Stimuli obtained by the ears, nose and skin are of assistance in reaching conclusions about the landscape, adding dimensions beyond those of the purely visual - the

texture underfoot, the smells of a place, and so on. At this point, then, in discussing landscape perception, where the significance of landscape makes vast gains in richness and complexity, it becomes necessary to reintroduce the other senses. They work together with vision to furnish the most reliable sensory grounds possible for the construction of the landscape 'in here'.

The process of construction, however, is still a long way from completion even when the stimuli obtained by all the senses have been taken into account. A second source of evidence is required if, for example, a rustling, green and brown, vaguely round blob on a rough, vertical column is to be perceived as Quercus robur, the solid English oak, relict of the Wildwood, habitat of many moths, or whatever. Such concrete and detailed perceptions are derived by bringing into play a conceptual, as opposed to a directly sensory, kind of evidence that is not tied to the immediate moment, but, like the ability to apprehend shape and space, is built out of past experience. Perceiving and thinking are connected activities, and the framing of concepts is so powerful a force, in humans at least, that it could be said to have over-riding control of play. In fact the manner in which hypotheses about the whole significance of landscape are tested cannot be viewed as a chain of reactions occurring in one direction only. Stimulus information is fed in by the senses and used to check hypotheses, but the pieces of information which are selected and obtained are largely governed by the mental concepts which give rise to hypotheses.

Conceptual schemes

In one way, all animals could be said to perceive what their environment means to them by testing out hypotheses - the frog

postulates that flying black dots are edible - but, in many such instances, the process seems restricted, expectations being derived instinctively rather than creatively. This is of no consequence when a species is in possession of other efficient survival techniques - frogs are most successful, and would probably consider themselves to be at the top of the evolutionary ladder. However, among the 'higher' mammals especially, there developed a tendency to solve some survival problems by placing greater reliance on a mental flexibility in attributing significance to the environment which involved formulating expectations on the basis of remembered previous encounters. The advantages of this technique were perhaps nowhere more needed than in the case of the grounded pre-human apes who were without formidable physical abilities, and thus could only survive by vastly expanding the mental ability to weld past and future together into each present moment of perception:[23]

"The arboreal environment had led to the development of excellent vision and a uniquely flexible response capability through the combination of upright posture and grasping hand. But a cleverly crafted plan and a cleverly crafted tool in the hand were necessary to take advantage of these natural assets. The planning and anticipating required for survival favoured the development of a larger more flexible information-handling capacity."

The pre-human (or now human?) apes pursued a life of hunting and/or gathering which required extensive knowledge of where food and shelter might be found in the locality, of the habits of animals to be chased, and of dangers to be avoided. Strategies for hunting had to be worked out, and new opportunities continually discovered, whether in the home area or further afield. An ability to cope with, and preferably

exploit, changing conditions was needed, not least because this was a time of spasmodic glaciations that affected the climate world-wide. In adapting to such pressures, the intellectual capacity was selectively developed, an adaptation which brought increases in the range of survival possibilities open to the human species.[24] It was now able to create solutions to problems posed by the environment which could be changed to suit different places, as well as when they no longer worked.

But how to make the best use of information that might be obtained from the environment once its exact interpretation was no longer so instinct-bound? In the precarious existence of the early humans, there would not have been time to review all the information available, most of which would be irrelevant, before making a decision and acting upon it, nor did their brains have infinite storage space for an indefinitely large number of unique memories.[25]

> "... somehow the organism must operate on a more schematic basis. Out of the diversity and uncertainty the organism must be able to extract the essence of an object. In some sense the organism must have a prototype or ideal of an object, the instances of which are often poor shadows. Note, however, that this essence is presumably not an innate preconception of the object; rather it must be some sort of statistical summary based on many individual experiences. Efficient perception therefore depends on objects and situations having recurrent properties; that is, properties that occur together with reasonable frequency in the environment. Thus from an adaptive point of view, there appears to be a strong argument for... identifying the current situation in a way that capitalizes on past regularities and requires only

a relatively small amount of information out of the diverse and uncertain environment."

Humans evolved an ability to schematically organise regularities previously perceived in landscape which allowed specific hypotheses to be formulated that could be confirmed or denied by the senses checking a relatively small proportion of the total quantity of stimulus information available. The schemes, held in the form of intellectual concepts, could then be either reinforced, corrected or rejected, and the next hypothesis produced. A constant rhythm of perceptual activity thus came about which established meaningful order on the landscape; a rhythm that has been inherited and maintained by each succeeding generation.

At the heart of this activity lies the conceptual scheme, and those who regard it as the driving force in human perception[26] frequently emphasise that it is not akin to a photographic representation. The external landscape cannot be mentally reproduced verbatim, there would be little advantage in doing so. Instead, cognitive constructions are made on a few, particular aspects of the landscape which are considered applicable to the purposes in hand, and the mode of construction overall can be described as one of classification. Now, it has been argued, by some structuralists especially, that all human thought is binary; that the brain inherently functions in such a way as to always divide selected arrays of experience between two opposing categories, for example, natural/artificial, raw/cooked, wild/domestic. But although the brain does have a tendency to distinguish binary opposition, which is, after all, the simplest system of classification, it has been found to operate in a more complicated fashion as well,[27] when dealing with more complicated

realms of experience. The number of categories employed need not be restricted to two in all situations, nor need the relationships between categories necessarily consist of oppositions only. All that can be said, at this most general level, is that the human brain retains patterns of classes and connections through which the perceiver is able to come to terms with landscape.

These schemes of classification are of a symbolic kind and, as Susanne Langer has put it,[28] in spontaneously generating symbolic patterns, the brain is working as naturally as the kidneys, having been primed to do so by the course of evolution. Symbols are the basic material of thought, and thinking organisms are forever producing symbolic versions of experience. But the earliest humans not only began to think symbolically, they also developed a speech faculty which enabled them to communicate symbollically; the capacity to use language had evolved. Whether human thought is conceivable except as embodied in language is a chicken-and-egg question. Many structuralists would argue[29] that it is by their language capacity, rather than their intellectual capacity, that humans are distinguish-able from other animal species. Be that as it may, the ability to use words to classify objects and situations, and to combine words by following grammatical rules indicating relationships, must have been of immense benefit in the struggle to exploit the environment and survive.[30] Individuals could now learn indirectly about experiences of other members of species, avoiding mistakes that had already been made and profiting from successful options already discovered. They could acquire ready-made conceptual schemes for locating signficant regularities in the landscape, and, in this, the naming of things seems to have been, and continues to be, of vital importance.[31]

Words, then, carry the categories and associations that give meaning to the landscape, thereby allowing perception to be completed. However, the whole subject of language is far too difficult to be tackled in this thesis, and it will therefore be taken for granted that language and conceptual schemes are closely bound together, both belonging to the human ability to symbolise, and open to being treated as one. A study which concentrated on the use of language with respect to landscape would probably prove most interesting, but this is not the path to be followed here, where the stress is on the whole process of landscape perception.

One point remains to be made about the genetically inherited part which the conceptual scheme plays in this process. Perception has already been discussed as being managed in an inherently active way - the senses actively seek stimuli, the brain actively tests hypotheses. And once the grounds for making hypotheses about the significance of landscape were no longer instinctive but symbolic, an additional fund of activity was forthcoming, offering an advantage to accompany that of the opportunity to communicate. Now that the exact interpretations to be placed on landscape were not inbuilt, they had to be built up symbolically, and, in doing this humans seem to have become strongly motivated by curiosity. They had to be prepared for an active intellectual struggle to obtain concepts that would enable the landscape to be categorised and understood; an unceasing struggle because it would always be possible to extend symbolic systems of classification further, covering wider aspects and new aspects of the landscape. Conceptual schemes could be acquired and extended by making two related lines of inquiry: firstly, into knowledge

accumulated by other members of the species, through the medium of language; and secondly, into the landscape itself, by conducting personal explorations[32] the results of which could eventually be passed on to others. Both lines of inquiry were biologically essential for the survival of humanity, but what encouragement could individuals receive to construct viable means of conceptualising landscape?

The biological basis of emotion?

Throughout this thesis it is being maintained that landscape perception is inevitably qualitative, combining understanding of landscape with feeling for landscape; comprehension and emotion being quite inseparable while the perceptual process is in action. When the process is dissected, the evolutionary and neurophysiological explanations of intellectual activity might seem tenuous enough, but an explanation of the basis of human emotion must be almost completely speculative. The natural sciences have had little to say about it. Moreover, there are dangers in becoming too involved with arguments which attempt to link feelings for landscape with the evolution of neural structures and functions, because this can lead back to something like the stimulus-response models rejected in the Prologue. But emotion, in the widest sense, permeates the perception of landscape, and cannot, therefore, be put on one side and ignored.

A most helpful way of tackling this problem has been suggested by Jay Appleton. In developing, and to some extent relaxing, his original prospect-refuge theory,[33] Appleton proposed that individual animals do not perform activities necessary for their, and their

species', survival for that fact alone, but for the pleasure they derive from such activities. In the case of the propensity to explore, for example, he has argued that:34

> "We <u>enjoy</u> discovering the nature of our surroundings, and it is just as well that we do, because, in a state of nature, a creature's chances of survival are often dependent on its ability to exploit the environment to its own strategic advantage. We need the knowledge that comes from exploration, but we explore because it is fun."

The existence of emotion, then, is reasonable from an evolutionary standpoint as it would have encouraged the early humans in their efforts to pursue the constructive course of perception with which they had become endowed. There might be a pleasurable excitement in discovering something strange and apparently complicated, yet successfully creating the categories that enabled it to be understood and perhaps used beneficially. There might be satisfaction in finding that a landscape was easily recognisable in terms of concepts already devised, and that the features present could be named. There might be a quiet enjoyment in the security of the familiar. Equally, there might be fear of the over-complicated, disappointment when little was recognisable, boredom when things were so familiar that the urge to inquire was never challenged. A combination of positive and negative emotions thereby became a vital ingredient in the perceptual process, providing spurs, checks and rewards in the struggle to give landscape sufficient meaning and character to make its exploitation possible.

At the same time as the capacity to derive symbolic systems of classification was selectively developed, linkages in the brain, between the areas devoted to thought and the centres giving rise to

emotion, must have either been established or, more likely strengthened in comparison to those of the immediate primate ancestor. By stimulating them with electrodes, centres of pleasure and pain have been found occurring close together and scattered throughout the human brain, and they seem to consist of units rather like the 'feature detectors' which codify hypotheses about shape.[35] How they work is uncertain , but a good proportion have nervous connections with regions of the cerebral cortex where intellectual activity appears to take place, and perhaps the resultant electrical charges fire the neural units of pleasure and pain.[36]

D.E. Berlyne,[37] who conducted extensive laboratory research on "hedonic value" by measuring evaluative responses to geometrical shapes, believed that the pleasure and pain centres are not activated by absolute amounts of electrical stimulation, the effect of which is known to wear off after a while, but by changes in the quantity of charge produced by changes in levels of interpretive effort. Complicated shapes demanded greater effort and were rated exciting; simple shapes were easy to interpret and were rated satisfying. In addition, he located cut-off points where levels of activity became "aversive": if the effort already being expended was high, a further increase could engender anxiety and confusion; alternatively, if the initial state of activity was low, a further decrease led to an experience of boredom and monotony. Berlyne's ideas have been applied to the perception of the urban landscape by the American architect, Amos Rapoport.[38] He argues that in seeking a perceptual order, people like neither very simple nor very complex environments, and that somewhere between the two lies a peak of satisfaction where simplicity

and complexity are at an equilibrium, the landscape offering enough to be relied on and enough to be investigated as to promote maximum stimulation of the pleasure units.

Yet although Rapoport recognises that learning can induce variation in what is taken as simple or complex, he gives the example of a botanist finding more complexity in a forest than a layman, there is a suspicion that he considers only one kind of classification to be possible, the one that is the property of the external landscape itself, and that individuals vary in the facility with which they can use it. This is probably a legacy of Berlyne's reductively geometric notion of order, but a forest in the landscape, say, produces a far greater range of stimulus information than a dodecahedron in the laboratory, and can also have much more of an impact on people. They must, therefore, be able to find a particular system of classification for the forest which is relevant to their own interests and activities, and, as such interests and activities will vary, so will the content of the categories and associations employed. Pygmies' conceptions of a forest will be of quite a different order to botanists', although both might appreciate high levels of complexity and be excited by them. As has already been emphasised, this flexibility in devising different kinds of conceptual schemes to give signficance to the landscape was of great survival advantage to humans and is now an inherited trait. It means that there is not just a single continuum from the simple to the complex in any landscape, but at least the possibility that several different continua will exist, depending upon the ways the landscape is classified by different individuals. A variety of particular classificatory schemes, as well

as a variety in the facility with which schemes are used, must be taken into account.

However, to regard simplicity/complexity as the fulcrum of emotion in the perceptual process is still hardly sufficient to capture the full qualitative nature of the landscape 'in here', that is, if there is any hope of capture. It has just been repeated that the conceptual scheme through which landscape is perceived must be a scheme with a particular content, consisting of a definite set of categories and associations which are inclined to vary between individuals in different circumstances. A scheme of symbolic classification never occurs in perception as that - as an abstract mental framework - there would be little benefit in it. When in operation, specific categories and specific associations are built onto the underlying framework, and some, if not all, of these particular schemes would seem to be attached to positive or negative connotations. Stephen Kaplan[39] proposes that through experience certain sets of "representations", as he calls them, become linked by nervous pathways in the brain to certain pleasure or pain units which are fired when the hypotheses they represent are confirmed. Presumably, for the early humans, this was another aid to survival, reinforcing their ability to immediately recognise a favourable or unfavourable pattern in the landscape and to react accordingly. The actual reasons why such linkages should come into force, the kinds of experiences which might have established them, can only be explained within the particular contexts they appeared, and a number of specific cases will be discussed later in Section V of the thesis. But before the detailed content of a few conceptual schemes can be described, its sources must be investigated.

Beyond the gene

So far, in concentrating upon the genetically inherited factors contributing to the process of perception, a series of rather empty generalities has been put forward with regard to landscape quality. However, this is in the very nature of things. During the Pleistocene period, a certain ape species evolved the survival ploy of relying on symbolic, instead of instinctive, constructions to find meaningful order in landscape. Physiological and neurophysiological capacities were developed for collating the experiences of a life-time into conceptual schemes of classification whose content was both communicable and changeable, and which generated the hypotheses to be tested by the senses. Paradoxically, this genetically inherited ability to symbolise cut the tie between the course of evolution and the genes on chromosomes in the body cells. For the species endowed with it, every adaptation to a particular niche in the environment no longer had to become part of physical make-up as, for landscape perception at least, modifications could be made intellectually rather than organically.

According to several humans,[40] the relaxation of the bond between the gene and the struggle for survival brought evolution to new heights, making it 'exosomatic', and proving to be the most successful innovation ever produced by random mutation and natural selection. From an evolutionary standpoint, four biological advantages may be distinguished. Firstly, the course of human evolution became overtly goal-directed as individuals consciously sought for the symbolic schemes that would enable them to cope with the survival problems they knew they faced. Secondly, errors made in the search for a solution

to a problem did not have to be eliminated by the death of the individuals who made them, which happened when erroneous attempts were in the form of inappropriate, random, physical mutations. Symbolic modes of classifying the environment which turned out to be a threat to safety could be modified or rejected by the very persons experimenting with them, and life was preserved for finding a more suitable mode of approach. Thirdly, in consequence of being freed from the length of time required for the reproductive cycle and for favourable chance mutations to occur, exosomatic evolution could proceed at a much faster rate than genetic evolution. Adaptive techniques employed by humans could come and go within the span of one generation if necessary: rejection of failures could be rapid, and quick capitalisation made of successes, which might be taken to high levels of refinement within a comparatively short period. Fourthly, in addition to the easing of temporal restrictions, there was an easing of geographical restrictions, since, as frequently remarked, the ability to symbolise allowed a variety of adaptations to be made by members of the same species so that a variety of environmental types could be colonised.

All these advantages, however, would have been cancelled out, and the first apes who possessed them much better off with fixed, instinctive mechanisms of interpretation, but for one other biological factor - they were social animals capable of exosomatic transmission[41] of survival strategies among themselves. Individuals were not forever starting from square one in constructing useful symbolic systems for coming to terms with landscape because the anthropoid apes had already developed the habit of living in groups, and, almost from the day they

were born, they were the recipients of the particular adaptive techniques devised by fellow members of their own band. The transmission of these techniques was no longer genetic, but in the form of language - a verbalisation of symbolic schemes - and experiences passed on in this way could be accumulated into a body of adaptive customs shared by everyone in the social group; a body that was always open to additions, modifications and refinements from contributions made by succeeding generations. This cultural inheritance became just as natural to humanity as their genetic inheritance, being indeed a product of it, but, whereas the latter furnished only a relatively loose structure for the perceptal process, culture filled out much of that structure with more specific sets of symbols according to which the landscape could be categorised and understood.

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IV THE CULTURAL INHERITANCE*

The extent of the cultural contribution

In any account of rural landscape quality, some consideration of culture is required precisely because there is a requisite cultural element within the process of perception from which springs the character and emotional significance of landscape. Humans live in social groups which are never merely collections of solitary individuals but consist of people communicating and interacting with each other according to the social arrangements and organisations that they have created and that bind them together. Culture is inseparable from social interaction, that is, from civilisation, and the perceiver's cultural inheritance makes an essential contribution towards bringing the landscape into focus, acting as a repository of schemes constructed in the past for finding what is relevant and significant there. Little is perceived by human beings without reference to this naturally derived yet artificially created domain. It is co-extensive with physiological and neurophysiological attributes, working in conjunction with them in the establishment of a perceived order in the landscape; a specific order which makes sense to the perceiver. But how does this come about, how is the cultural inheritance comprised?

Looking back and picturing human societies on their initial development, it might perhaps have been easy to recognise as a cultural body all the knowledge they had obtained and shared amongst themselves. This knowledge, in the form of collectively owned schemes of classification, would have enabled members of communities to adapt to their particular surroundings: picking out the features and events

* References p140-141 below

important to survival; making the appropriate deductions; and then taking suitable action. However, even at the time when this exosomatic method of adaptation evolved, some individuals and groups were probably following up the opportunities it offered for diversification and elaboration. Very soon, the whole body of knowledge about the landscape held in common must have become so various and wide ranging that it would have been, as it continues to be, less easy to identify as a single cultural entity. In the face of such an heterogeneous phenomenon, all-inclusive descriptions of culture seem practically without point because in them the depth, richness and complexity of detail are lost.

Nevertheless, while discussing the content of conceptual schemes in general, the cultural inheritance will be taken to embrace the entire range of human knowledge applicable to the landscape. It stretches, say from first century Celtic knowledge of the spirits dwelling in springs and trees, to twentieth century ecological knowledge of the vegetational cycle in beech woodland on chalk plateaux; each provides a way of focussing on an aspect of landscape. Thus, myth, art, religion, and science too, will all be regarded as manifestations of culture, and culture as an inevitable participant in the act of perception:[1]

> "Man cannot escape his own achievement. He cannot but adopt the conditions of his own life. No longer in a merely physical universe, man lives in a symbolic universe. Language, myth, art and religion are parts of this universe. They are the varied threads which weave the symbolic net, the tangled web of human experience. All human progress in thought and experience refines upon and strengthens this net.... [Man] has so enveloped himself

> in linguistic forms, in artistic images, in mythical symbols or religious rites that he cannot see or know anything except by the interposition of this artificial medium."

Further investigation of the cultural medium, from within the medium itself, of course, cannot be the concern of natural science. Given that a substantial proportion of the meaning attributed to landscape occurs within a social context (the rest being contributed by individual factors which will be discussed later[2]), and that this body of knowledge is necessarily liable to a much greater degree of variation than the structure and functions of the senses and the brain, the path of discussion must now turn towards the social sciences, the humanities. From the view that these can provide, culture still appears as it has been defined naturally - as adaptive, pluralistic and changeable - but much greater elucidation of these characteristics is possible in the light of material made available by, for example, anthropology, sociology and history. The former is especially useful in making the transition from genetic to exosomatic evolution because certain schools of anthropology consider the social attributes of a community to be responses to pressures exerted by the environment.[3]

An agent of adaptation

The idea that culture exists in relation to environmental setting can be traced back to the time when the Ancient Greeks first became aware of peoples living in different places with societies that differed from their own.[4] However, although a deterministic stance was often assumed in the past, culture being seen as under the dictation of compelling environmental forces, modern anthropologists tend to advocate a more active and probabilistic interpretation.[5] The

particular ecological composition of a place - the climate, relief, water supply, vegetation, animal life, and so on - would impose certain constraints, and also present certain possibilities for obtaining basic survival needs. How the community adapted to these, adjusting to the constraints and exploiting the possibilities, was a matter of selecting a package of solutions from among the range that could be devised to suit the particular circumstances. The cultural inheritance was not so much determined as determined upon, growing from the choices people made in tackling the problems posed by their environment, which were then passed on to their contemporaries and successors for further development.

Nowadays, the adaptive function of culture is best observed in societies operating at, or near, subsistence level.[6] Here, by definition, survival needs are just sufficiently covered: food comes from hunting and gathering or shifting agriculture; shelter is produced quickly, facilitating a nomadic or semi-nomadic way of life. Communal knowledge and organisation would seem to be largely made up of techniques to simply stay alive in the natural environment, the cultural inheritance mediating the ecology for individuals by providing the conceptual categories and associations for arriving at an appropriate understanding of prevailing conditions. The example most frequently cited to illustrate this is that of the Eskimos[7] whose immensley detailed knowledge of their land is encapsulated in rich vocabularies which name animal and plant species undifferentiated by outsiders, and which classify various kinds of winds and conditions of snow. They are able to travel across what appear to others as featureless snowy wastes guided by the direction and smell of winds and feel of ice and snow underfoot. Even though the majority of

Eskimos have now ceased full-time hunting, they are still, as might be expected, in receipt of at least a proportion of this adaptive tradition, often making long journeys over the snow and feeling drawn to a closeness with the land, the sea mammals and the caribou that they realise is slowly being lost as they become Westernised. In comparison, most resident Whites in the Artic usually stay within the settlements, passing only from building to building and shrinking from the fierceness of the unknown. It may be remarked that an exercise by Joseph Sonnenfeld[8] indicated that this group much preferred American to Alaskan scenes, while Alaskan Eskimos tended to express a reverse order of preference.

Similar examples abound, although many anthropological field studies have concentrated on internal social structure and treated the categorisation of landscape pursued in society as something of a side issue. One of the clearest expositions by an anthropologist of the connection between a group's traditions and their ecological setting has been provided by R.A Rappoport[9] whose aim was to show how ritual regulated relationships with the environment. He spent a year with the Tsembaga people of Papua New Guinea, a group that had had little previous contact with Europeans. They occupied a mountainous inland region which above five thousand feet was covered in thick primary forest with a limestone cliff at the highest point, and which below five thousand feet was mainly secondary forest interspersed with dwellings and fields that were shifted every year. There were five clans within the Tsembaga grouping, each with a territory covering stretches of high and low land. Like the Eskimos, the Tsembaga had an elaborate nomenclature for the plants in the region, and one of these, a small tree called yu min rumbin, had special significance as

representing territorial claims. Each clan planted this 'men's souls bush' in their home area, and while it was in the ground no fighting could take place. During times of peace, food was accumulated by hunting, slash and burn cultivation and, most importantly, pig husbandry, the pigs being kept as pets and living in the women's houses. For assistance in these activities, the Tsembaga called upon the cold and wet 'spirits of the low ground,' their properties in a tropical climate leading to softness and decay thereby contributing to soil fertility. A 'good' place in the low ground was where the spirits were beneficient and a quantity of food could be produced quickly. Once this had been done, usually to the point where the number of pigs was causing nuisance in the houses and gardens, a clan would begin festivities which involved the sacrifice and eating of many pigs. These would culminate in the uprooting of the clan's tree and war was declared on a neighbouring clan who then uprooted their tree with shorter ceremony. Both sides invoked the 'spirits of the high ground' who were men killed in past hostilities now occupying the virgin forest and who were hot, dry and hard conveying strength in battle. In addition, they appealed to the 'smoke woman' of the limestone cliff, who presided over the shamanistic ecstasies obtained when ritually smoking locally grown tobacco, and who was the ultimate spiritual arbiter. Battle would continue until a clan successfully invaded enemy territory, had been defeated, or had run out of food. A truce was then called, the clan trees replanted and the ritual cycle begun over again. So, Rappoport was able to discern in this cycle, and in the knowledge and organisations that accompanied it, a communal method of handling survival problems set by the conditions of climate, food availability, vegetation and territorial range, and which involved a certain symbolic scheme for classifying the landscape.

This brief glance at Tsembaga traditions brings to notice a striking point about the culture of subsistence societies all over the world, namely, their possession of spiritual ways of coming to terms with landscape. Living in close contact with the natural environment, that is, living relatively close to the borders of biological need, would seem to engender an awareness of the divine. For such peoples, the real world could be said to be the sacred world,[10] although understanding of sanctity might differ from place to place. Many groups hold, or once held, animistic beliefs akin to those of the Tsembaga. The Alaskan Eskimos, for example, traditionally defined features within their homeland according to the ghosts, trolls mermaids or giant beasts resident there.[11] Others believed in a single divine presence encompassing the whole of their surroundings; for example the Pygmies of the Central African forests would sing and dance the praises of the supreme forest deity, and scorned the beliefs of neighbouring village-based tribes who thought the forest was animated by a multiplicity of evil spirits.[12] And similarly, perhaps, a pastoral society in the Middle Eastern deserts, some thousands of years ago, became aware of the one God. There has been a suggestion[13] that knowledge about the spiritual significance of landscape was gained, by groups living at subsistence level, through the recognition of their very close ties with the surrounding environment which encouraged them to project onto it concepts they had developed in their experience of social life. The human group belonged, together with the rest of the landscape, to the one great social body which was organised, maybe in an heirachical way, and made up of living beings, who might be human or non-human, and who might be creative or destructive. Still, whatever the connection, it is surely paradoxical that societies engaged in a continual struggle for survival should so often have possessed such strong religious inclinations.

A spiritual categorisation of landscape could be an agent of adaptation, as observed in the case of the Tsembaga. It could also be an expression of a group's ability to cope with a particular setting as, to cite another example, might be seen in the contrast between the Pygmies' love of the kindly deity presiding over the dense forest where they hunted and thrived, and the evilness attributed to the same forest by other tribes who were forever struggling to clear it for their villages and fields, and who were incapable of living inside the forest itself.[14] But although religion may have embodied many survival techniques, the knowledge thus supplied tended to go far beyond that obviously necessary for obtaining basic subsistence. Understanding was provided of things that would otherwise be inexplicable to the group, eg the reasons behind the occurence of water or sudden crop failure, as well as giving answers to wider questions such as why the land and its people existed at all. Sometimes religious knowledge would even seem to have been a hindrance. Alaskan Eskimos once avoided certain lakes well-stocked with fish because they feared the resident spirits, and it was disbelieving Whites who eventually demonstrated the absence of danger.[15] So, even in societies where simply finding enough food and shelter to stay alive was of paramount concern, the cultural inheritance was not confined to strictly adaptive practices. Their religious understanding broke the bounds of this evolutionary model, and tackled problems which were not always life-and-death problems, but sought to satisfy the inherent need to know, to explore, to classify and explain - an intellectual, rather than a purely biological, survival need. It is therefore likely that the description given of Tsembaga traditions is overly reductive, an outsider's emphasis on basic survival techniques, and, to mention a non-religious example, the Eskimos apparently distinguished many plant and animal species which were

never of any use to their subsistence activities.[16] The cultural inheritance, while providing humanity with the means of adaptation to the natural environment, contained within itself the opportunity to venture occasionally into a state where the threat of extinction was less severe, that is, where "not all problems are survival problems"[17] in the narrow sense of adapt-or-die.

The social environment

The way that ideas of 'adaptation' and 'survival' are applied to human societies also has to be modified by the consideration that culture tends to reflect back on itself, producing a social environment to which members of the group must also adapt if they are to survive physically, mentally and spiritually. Perhaps with the exception of the very earliest societies, culture cannot be solely comprehended in relation to the natural surroundings because the shared knowledge that is built up in coping with these, the schemes of classification that give meaning to the landscape, also consitutes a surrounding which exerts influence of a symbolic kind over every member of society. Each person is coerced, through the medium of the spoken, written or printed word, into assimilating the categories and associations that have become communally established, although the effect on their own modes of perception may vary from complete acceptance to rejection and the derivation of new schemes. This gives an indication of the strange inconsistency between subjective and objective features which emerges whenever culture is discussed generally.[18] Undoubtedly, culture only has existence in the individuals who create, employ and transmit it to one another, yet it also appears to be partially separated from the lives and minds of specific people, an objectified [19] outside force which moulds their perception of landscape and which can sometimes be perpetuated without their fully conscious participation. An attempt

will be made in Section V[20] to trace the connections between one individual, William Gilpin, founder of the Picturesque movement, and the cultural climate enveloping him, which he managed to change in certain respects and which retained evidence of his efforts long after his death. However, the present concern, in working down from the universal towards the individual, is with culture in the objectified state, that is with the semi-independent social environment, and this occurs in two related guises: material and organisational.

A social group most obviously produces an environment of its own when its members make material alterations to the natural surroundings. Such alterations are now so extensive that only a small proportion of the world's land surface remains in an entirely natural condition. To a greater or lesser extent, the rest has become socialised into a range of cultural landscapes (a phrase from geography) where the symbolic schemes, developed by the inhabitants in their search for orders of meaning in the landscape, have found some physical expression.[21] Capitalising on their tool-making abilities, human societies have attempted to manipulate the physical environment, implementing there the knowledge they share so as to satisfy biological needs and wider interests. Thus in many, but not all, cases, the conceptual order discovered in landscape has been translated into a material one, objects being fashioned and placed in the environment which bear a reflection of symbolic patterns of thought, thereby, becoming recognisable as symbols themselves. And, in turn, those concepts that have been reinforced by objectification develop a hold over the community to which it must also find ways of adapting. Where an artificial, cultural landscape has been created, therefore, the relationship between the modified physical landscape 'out there' and the perceived landscape 'in here' is extremely

complicated, becoming ever more so with the passage of time as the one rebounds on the other.

A major complicating factor in this relationship must have been the invention of agriculture which had enormous implications both on the material and organisational elements of the social environment. In hunting and gathering societies, the most that was done towards creating a cultural landscape was likely to have been the identification of important places by a shrine or territorial marker and the beating out of a framework of paths between these places. Indeed, some groups may not have gone so far as this if they were in any way similar to the Australian Aborigines who, until this century, made no significant alterations to their land which they largely understood by referring to the mythological adventures of their Dreamtime ancestors.[22] But once a society adopted agricultural practices as the accepted manner of obtaining subsistence, animals and plants were put to human uses which removed them from the realms of the natural.[23] The agricultural community soon became surrounded by a given pattern of pastures, fields, tracks and so on, as well as the accidental results of their activities, such as the secondary forest produced by the Tsembaga. Certain groups went on to develop agriculture to the point where a more settled way of life could be adopted and the whole pattern of land use was given greater permanency. Fields no longer had to be shifted frequently and grazing followed a more regular cycle so that, for example, the hedges, walls, ditches, meadows and coppice woodlands became fixtures along with the houses, villages, roads and shrines.

In addition, the turning away from nomadic or semi-nomadic habits would seem to have been accompanied by the production of food

surpluses, and gradually the societies involved ceased to operate at subsistence level. This, of course, had numerous consequences for the social environment, among them the eventual construction of towns and cities, where the physical environment has undergone substantial modification, and where non-subsistence, non-agricultural concepts could be created for finding meaning in the rural landscape. City dwellers might consider themselves fortunate to have escaped from the dirt, drudgery and dullness of the farmed countryside. Alternatively, it might offer them a retreat from the hectic pace of urban life - an idea that Yi-Fu Tuan has found mentioned in the Epic of Gilgamesh, composed in the third millenium BC by someone of the urbanised Sumerian civilisation.[24] This latter interpretation could be pursued much further by the section of the population freed from continually working the land. They often belonged to that class of people who were rich enough and had time enough to design gardens, which gave expression to the new concepts they derived. It is perhaps within the highly controlled confines of the garden that symbolic schemes employed in perceiving landscape can be most fully realised as material objects.

The advent of a non-subsistence type of economy thus placed at least some members of society in the luxurious position of being able to concentrate their energies on developing sets of categories and associations for understanding landscape with little immediate bearing upon the problems of just staying alive. It has already been observed that even in those social groups constantly faced with the struggle to find sufficient food and shelter, symbolic schemes of classification had been extended to cover aspects of the landscape which aroused interest but were not strictly relevant to basic survival. This tendency received a great impetus with the production of food

surpluses which eased the stringent conditions of a subsistence way of life and increased the opportunities to satisfy intellectual needs for some sections of society. So, again, the narrowly adaptive function of culture was exceeded.

However, it should always be remembered that this relative freedom was gained within the patterns of social organisation that were developed in producing and distributing the agricultural surpluses. A Marxist viewpoint is useful here, especially as Karl Marx (1818-1883) considered himself the Darwin of economics, because institutional arrangements can be seen as techniques for allowing members of society to adapt, in a wider sense, to whatever mode of production is employed. Once such techniques become communally established as the accepted way of doing things, they can come to appear as the only way, acquiring an objectified status that contributes to the social environment surrounding each individual:[25]

"An institutional world, then, is experienced as an objective reality. It has a history that antedates the individual's birth and is not accessible to his biographical recollection. It was there before he was born, and it will be there after his death. This history itself, as the tradition of existing institutions, has the character of objectivity .... The institutions, as historical and objective factities, confront the individual as undeniable facts. The institutions are there, external to him, persistent in their reality, whether he likes it or not."

To take a brief example from a subsistence society, where the relationship between social organisation and mode of production also pertains, Paul Shepard[26] has suggested that Jewish culture emerged among a group of people who had developed strict heirachical and patriachal institutions to enable them to extract a living from the

harsh semi-arid regions of the Middle East. The nomadic tribespeople, driven with their flocks from one temporary pasture to another, sought to subjugate the hostile land that God had put beneath them in the heirachical order He had created, an interpretation which was perhaps enhanced by contact with other communities who believed in the female character of the land, Earth Mother. Eventually, the concept of man versus the land was incorporated into the Old Testament, and thereby had considerable influence later on Western thought.

Another example that may be cited, this time from a market economy, is that given by Raymond Williams[27] in his discussion of the understanding of landscapes developed by eighteenth century English aristocratic landowners. Previously, these people had regarded their estates in feudal terms as an inheritance with certain duties and income attached. But with the invention of new agricultural technology and the rise of a new agrarian capitalism, the landowners came to feel about their estates in a more distant fashion as offering opportunities for investment and improvement, as sources of ever-growing profit. This distance enabled them, as it were, to take a step back and cooly look at landscape as an artistic composition - 'pleasing prospects' being a catch phrase of the eighteenth century. And because the landlords had gained a new confidence in their abilities to make the landscape move to their pre-arranged designs, vast landscape gardens were created where the artistic attitude was realised. They could complete their system of exploitation of agricultural land by imposing enclosure schemes, and the income from this could be spent on landscape gardens designed to provide pleasing prospects. Moreover, Howard Newby[28] has argued that these gardens conveyed and exerted a dominating effect on the landowner' tenants and servants, symbolising power and wealth.

This illustrates three points about the social environment. Firstly, social organisation can be reflected in the material alterations made to the landscape. Secondly, social organisation entails social divisions.[29] These divisions probably had been present always, whether between different levels in the heirachy, between the sexes, or between possessors of specialist skills, but the production of economic surpluses led to their enhancement and, of course, further proliferation occurred with the rise of complex industrial societies.[30] Thirdly, the social environment is subject to change. This is perhaps most easily seen where one set of material alterations, one cultural landscape, has been superimposed on another; for example where the boundary hedges of a feudal open field system encircle hedges planted during the Enclosure Movement, both having been partly removed to make way for the modern farming industry. It is in this respect that the English landscape, especially, has been called a 'palimpsest.'[31]

But however much the adaptive and survivalistic model is modified, it cannot encompass all the richness and diversity of a culture that has been evolving over many generations. There is something unsatisfactory, for instance, in the attempt to confine the whole ferment of artistic interest in landscape in the eighteenth century to modes and relations of production. The speed and complexity of exosomatic, cultural evolution, relative to genetic evolution, makes even the most refined adaptive and survivalistic explanations of a body of knowledge insufficient, at least to humans who are forever

entangled within culture, although the explanation might be quite plausible to a Martian biologist. Obviously, it makes evolutionary sense for a cultural inheritance to embrace a diversity of concepts and to be open to change so as to furnish as many solutions as possible to the problems of survival.[32] But once the adaptive approach has demonstated that culture is neither monolithic or static, it has to be placed in reserve while a deeper investigation of the pluralistic and changeful nature of culture is conducted.

Plurality and historical change

However, exactly these characteristics obstruct much further discussion at the general level of the cultural contribution to the process of landscape perception. Throughout the preceeding argument about culture, particular examples have had to be cited constantly to show how the general framework becomes manifest in different ways at different times and places. But now, if the analysis is to be pursued, if the diverse pattern of conceptual schemes made available within society and their historical development are to be observed, it is necessary to descend altogether to the particular and concrete, and select out a specific cultural inheritance for closer examination.

Selection is difficult because, given inherent diversity and flexibility, the limits to any one society are hard to distinguish. They may be more or less obvious in subsistence societies where a particular culture, as J.W. Berry argues,[33] belongs to a particular group of people living within fairly definite geographical boundaries and interacting socially among themselves. However, with the onset of more divided societies where market and industrial economies promote various types and intensities of social interaction, as well as with the spread of communication networks and the movement of people and

ideas from place to place, the boundaries between one culture and another become more diffuse.[34] It is equally possible, for example, to look at Western culture, British culture, English culture or English working class culture. In addition, social interaction may occur across geographical and national boundaries, as in the case of the scientific community. English ecologists, in certain respects, have more in common with their American counterparts than with English farmers or landscape painters. Still, the English do possess a characteristic culture of their own, and since a particular reference point is required for the purpose of discussion, the English cultural inheritance, as it pertains to landscape, has been chosen as the subject for the next section of this thesis where reasons for its selection are given.

At this juncture, the direction of argument in the thesis must briefly go into reverse because, on the basis of the observations made later about English culture, a few finishing touches can be added to the theoretical framework with reference to the cultural inheritance. These consist of four main points that would seem to be applicable to other societies, although lack of infinite space in this volume prevents the provision of further detailed evidence in support of this assertion.[35]

Firstly, any one cultural body of knowledge, at whatever scale it has been defined, contains within itself a repertoire of differing conceptual schemes for finding meaningful order in the landscape, rather than a single set of categories and associations to which everyone in society subscribes. Depending partly upon the extent of institutional divisions within society, a cultural inheritance encompasses a number of "segregated sub-universes of meaning"[36] which

may, on occasion, be so diametrically opposed as to provoke conflict between fellow members of the group. A culture cannot, therefore, be safely characterised by some unitary mode of understanding, at least by anyone who examines it from the inside. What is distinctive is the particular distribution of knowledge entailed. But neither, to counteract the other extreme, can the various realms of knowledge covered by a characteristic distribution be regarded as completely divorced from one another. They are conditioned, although perhaps differently, by events happening in the shared physical and social environment, and similar historical circumstances may bind them together. Thus the repertoire is by the same composer, or school of composers, while each separate work remains in some way unique.[37]

Secondly, however, this is not to say that all the works in the repertoire achieve equal prominence. Among the reasons why a particular cultural inheritance may appear unified is that one scheme for understanding landscape rises to a dominant position and gives the impression of being the only one in existence at the time. This may be because a sizeable majority of the population employ it, but, as Marxists would argue,[38] a set of ideas can also become dominant when propounded by the class of people dominating the institutional structure of society. In this situation, the elite may seek to impose their views on the rest of society, seeing themselves as the sole source of knowledge which eventually trickles down to the lower orders whose own, differing, subordinate views are discounted. It should be noted that since the elite are liable to obtain a virtual monopoly on books and paintings at periods when these are relatively expensive, printed and pictorial evidence cannot always be taken as representative of the concepts applied to landscape by all sections of

the population, some of whom anyway will be less inclined towards literature and art.[39] Without a compensating recognition of the complete pattern of interlocking dominant and subordinate conceptual schemes, ideas that have assumed prominence will seem to have suddenly arrived from nowhere, although they may have been developed previously among less influential members of society over a long period. Likewise, when a dominant scheme falls from grace it may be thought to have disappeared completely, whereas it might be found hanging on in a subordinate position and still important to many people. A sort of 'now you see it, now you don't' history does not take full account of the complexities of a cultural inheritance in which each constituent symbolic scheme of classification can only be adequately explained in the light of its historical development including those phases that occur in comparative obscurity.

Thirdly, then, the ways in which landscape is understood owe a great deal to the historical past, having gone through a series of constructions and reconstructions to reach their present state. As has already been argued,[40] the whole process of landscape perception relies on the ability to use past experience to find meaning in the landscape and the emergence of culture enlarged this ability by allowing the transmission of experiences gained by both preceeding and contemporary generations. A particular conceptual scheme will reflect the path of development that it has followed within the social context, and signs of it can often be traced back into the remote past where their ultimate origins remain a matter of speculation. Clarence Glacken, for example, maintains that the philosophical, scientific and theological ideas about the earth characteristic of

Western society were all in existence by 30BC and most probably had been composed much earlier than that.[41] But while perhaps retaining the same basic categories and associations, no conceptual scheme is passed on forever unaltered to the finest detail. As Glacken remarks of the Western concepts he examined:[42]

> "In their development, in the changes and accretions coming about through time and circumstances, in their application at different times and places to different situations, they neither completely lost their original identity nor did they retain it. This process is typical of the history of an idea; it is like the history of a culture, which changes and innovates, accepting this, rejecting that, abandoning something held dear, each new synthesis preparing its own opportunities for further change, retention, or innovation."

So, fourthly, while historical change is actually brought about by particular individuals at particular times and places, the conditions for it have been set at the general level. There is the inherent propensity, emphasised before,[43] to extend, to elaborate, to adjust symbolic schemes of classification conveyed by the cultural inheritance, and to reject them when deemed unsuitable in favour of some innovative concept. But another factor that inspires and promotes change is the plurality of culture itself.[44] Contact between separately defined societies, such as East and West, or the English and the Italian, as well as between different groups within the same society who adhere to dominant and subordinate schemes, gives added impetus to the tendency for communal knowledge to grow and evolve. An alternative way of finding order in the landscape poses a challenge to the accepted frame of reference, and reactions to the confrontation between them range from: defensive reinforcement of the accepted; its

modification through borrowing and assimilating selected aspects of the alternative; to a more or less wholesale revolution of ideas wherein the alternative both provides grounds for rejecting the accepted and for building its replacement. Linkages with certain previous modes of understanding can be traced even in the most innovatory concepts. They rarely, if ever, come completely out of the blue, but consist of newly created versions, perhaps with major additions, born of the cross-fertilisation between differing conceptual schemes.

Taken together, these four points - pluralism, dominance and subordination, historical background, historical change - serve to greatly enhance the complexity of the already complicated picture of cultural inheritance. Variation at the same time and with time is endemic. To return to the analogy made by Ernst Cassirer,[45] culture can be seen as a symbolic net or web woven of many strands of concepts about landscape, which are spun out as time passes, waxing and waning, sometimes separating into new strands; the intricate patterns created being in a constant state of flux, their edges difficult to see with the frequency of inter-cultural and intra-cultural ties.

This does not exhaust the complexity. Taking a step closer reveals that the intertwining strands are spun of many individual fibres, each in some way different from the others. Cultural patterns owe their existence to individuals, to persons, and, at this finest level of detail, the plurality and changeability of meaningful orders found in the landscape is at its greatest.

To further examine the nature of rural landscape quality, then, this thesis must shift in focus from the general to the particular. So, Section V, which follows, looks at three selected strands within specifically English culture, while Section VI attempts to deal with the individual who receives both a genetic and cultural inheritance as a member of human society.

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V ASPECTS OF ENGLISH CULTURE*

Focussing on cultural content

Discussion of the general form given to the conceptual schemes used in the process of landscape perception by cultural inheritance was necessarily abstract and relatively short, as pointed out towards the conclusion of Section IV.[1] But this section in dealing with the detailed content that culture supplies for these schemes could be infinitely long. To prevent this, a selection of certain themes from the cultural repertoire must be made, which means identifying where one theme ends and another begins. Such an exercise is not really compatible with the nature of the cultural inheritance outlined in Section IV since it has been said to thrive on interaction and interlinking of its diverse aspects. As Glacken has remarked:[2]

> "One does not easily isolate ideas for study out of that mass of facts, lore, musings and speculations which we call the thought of an age or of a cultural tradition; one literally tears and wrenches them out. There is nothing disembodied about them, and the cut is not clean. They are living small parts of complex wholes; they are given prominence by the attention of the student.
>
> These simple truths introduce a more difficult problem. Where and when does one stop?"

The first cut to be made here is to select out for closer study the specific cultural inheritance belonging to the English. This is partly done because the present writer is English, and it is interesting to be able to explore the background to one's own perceptions. Partly, also, because the notion of nationality is

* References p214-219 below

commonly ill-defined[3] and therefore open to interpretation in accordance with the general characteristics of culture given in Section IV; whereas choosing, for example, a class-culture , would dictate closer association with other theories which have not been derived to explain the processes of perception as such. Examination of English culture should be profitable, too, since the subject has not often been treated by the literature in the same way as Western culture,[4] or as the evolution of characteristic American and Australian traits[5]in relation to landscape. For some years there has been a good deal of discussion over the last two. This is mainly because, for both America and Australia, detailed written and illustrative records are available which display the reactions of explorers and pioneers from Europe on encountering the strange new countries. Culturally based preconceptions are thereby thrown into relief, and it is also possible to follow the various influences on settlers which subsequently led to the emergence of understandings of landscape adapted to their new circumstances.

Looking at English culture, where decisive influences are often buried in distant history, if not prehistory, it is striking that foreigners tend to be more capable of attempting to specify what is typical about the English perception of landscape. For example, Lowenthal,[6] an American, and Pevsner,[7] a German, both pick out the temperate climate and very changeable weather as having a fundamental effect upon the English. People are brought out of doors but kept constantly active:[8]

> "Climate and morality are twin spurs to activity, constant encouragements to be up and about. 'The English climate is the best in the world', Charles II is reported to have said. 'A man

can enjoy exercise on all but five days of the year.' And on most days he will feel more comfortable in vigorous motion than in sitting still.... in most seasons people prefer brisk country walks. For such walkers practically any weather will do. Fewer would laugh at the English pursuit of the midday sun if they realised how rare a phenomenon it is .... For Trevelyan, 'the fight against fiercer wind and snowstorm is among the higher joys of walking, and produces in the shortest time the state of ecstasy. This is a characteristically English response to nature in general."

Pevsner[9] has argued that the relative moderateness of the climate is associated with a trait of moderation in English culture - a tendency to seek reasonable compromise over any problem by carefully examining each case upon its merits. He suggests that this habit of careful observation is linked to an English preference for looking at the landscape in factual or scientific terms, rather than going in for fanciful allegories.

On a different track, Fussell, also an American, asks:[10]

"What other nation supports through all the vicissitudes of modern economics and politics a periodical like Country Life, devoted very largely to the excitation of rural nostalgia?"

This nostalgia, identified in Lowenthal's more recent work too,[11] is for the pastoral with its emblems of hedgerows full of evocatively named wild flowers, of the first cuckoo, of the shepherd and his flock wandering in tranquility by clear streams.

As may be seen, such blanket descriptions of the English cultural heritage differ widely from each other and can be in direct opposition. They are rarely more than superficial, yet evidence is to

be found in certain quarters to substantiate any one of them. It is just that this evidence cannot be applied reasonably to all members of English society, something that a foreigner with limited contacts might not realise for a while.

The English themselves, of course, are not averse to making brief, overall prognostications about the nation's attachment to its landscape. Thus, Drabble's excellent book begins with: "The British have long been known for their love of landscape."[12] It may be noted that she then goes on to speak of English literature and English painting, and subsequently does not seek to trace landscape in Scottish, Welsh or Irish literature. These cultures have always had elements distinct from the English, partly because of their stronger Celtic heritage, and research for this thesis was not widened to include them except in so far as they have interacted with the English themes to be considered.

The English, then, display a common pride in their sensitivity to landscape. Indeed, they are sometimes liable to consider other cultures lacking in this respect,[13] which may be attributed often to their own lack of awareness of foreign cultural idioms. Be that as it may, the English, like the Chinese and Japanese do seem to inherit a notably rich and diverse range of concepts for dealing with landscape.

When the English comment upon themselves as a whole, they are frequently conscious of this diversity, expressed here at its simplest by Clark:[14]

> "Almost every Englishman [sic], if asked what he meant by 'beauty', would begin to describe a landscape - perhaps a lake

bluebells and silver birches, perhaps a little harbour with red sails and whitewashed cottages; but at all events, a landscape." Clark's investigations are focussed on the history of painting, and historical studies of the arts have recently proved most fruitful in revealing sources of some of the concepts that the English may apply to landscape. Drabble,[15] for example, has examined the relationships between the pastoral, the aesthetic and the romantic in English literature. Other studies, such as that by Barrell,[16] show how landscape and literature conjoined over a particular interpretation at a particular point in time.

So, there is a danger when pontificating about 'the English', of taking one aspect from within the diversity and idiosyncracies of the cultural inheritance, exaggerating it and applying it generally. Admittedly, at any period, including the present one, certain aspects will be more prominent than others because, for instance, they are better articulated. But the heritage is constantly undergoing change, and it is not satisfactory to take the predominant concepts of the moment as absolute. This has been done, for example, with aestheticism in the late eighteenth and early nineteenth centuries, and is liable to occur with the nostalgic interpretations of landscape current in the late twentieth century.

From the complicated, shifting pattern of English culture, it has been decided to select three strands or themes for further examination; three particular and detailed conceptual schemes from the variety made available to members of English society. They are:

Paganism - understanding landscape and objects in it as having souls of their own or being inhabited by gods or the God.

Utilitarianism - understanding landscape as useful, to be managed productively for the benefit of humanity.

Aestheticism - understanding landscape as form, line space and colour.

The problems, already mentioned, that are to be encountered in focussing on a cultural content apply as well to the tearing out of these three strands from English culture. Their selection and definition has been done to facilitate and limit the progress of discussion. Other aspects have been passed over. It must not be assumed, then, that these three themes constitute the sum total of the contributions English culture can make to the process of landscape perception. A different student might have concentrated upon the concepts of natural science, romanticism, nostalgia, pastoralism or stewardship, and there are many more that might have been selected. However, the three chosen have each held a dominant position on one or more occasions during the evolution of English culture, and each have some kind of existence at present.

The defining of boundaries around each of them has also been a matter of choice. But such distinctions do make it possible to observe the importance of interaction within the cultural pattern. Cross-connections between different aspects become apparent, for example, between the pantheism of a pagan interpretation of landscape and certain elements of romanticism. Moreover, larger cross-currents can be identified, which are not themselves exclusively concerned with

landscape, but have had substantial impact on several modes of perceiving it. These include Christianity, which held sway in England for over a thousand years, and the classical literature of Ancient Greece and Rome, closely studied by the literate section of society from medieval to Victorian times. Christianity and the classics have been exhaustively explored as themes in their own right by Glacken.[17]

Finally, when considering the essential permeability of any cultural boundary, it should be remembered that those around nations are also to be crossed. The ensuing discussion cannot be patriotically chauvanistic because the English are indebted to many foreign cultures for developments in their understanding of landscape. After all, both Christianity and the classics had to be imported, and each of the cultural aspects to be examined has been involved in international contacts.

Having decided to focus on a national culture and then on certain aspects within it, some mention of the method employed in focussing the lens to be used[18] - becomes necessary. The key to the approach taken towards the three differing aspects of English culture is that it is not an evaluative one. No attempt is to be made to judge whether one theme is 'better' or 'more valid' than any other. This is crucial to remaining open to the fullest extent towards the content of each aspect, but how is it to be done?

In Section I brief reference was made to the phenomenological approach, and to its proposition that to reach an understanding of any 'life-world', the student must transcend their own and enter into the other completely; this being the approach that many literary and art

historians as well as linguistic philosophers attempt to adopt.[19] However, Gadamer,[20] who owes much to the early phenomenologists, has pointed out that there is no obvious reason why adherents of the school should claim unique exemption from the condition they ascribe to the rest of humanity. That is, the student can never abandon their own culturally and individually derived concepts. Rather, they must be conscious of the dialogue that takes place between their own understanding and that employed in other life-worlds.

The framework thus far constructed in this thesis has been designed to permit such a dialogue with a range of different understandings of landscape; to provide the equipment for getting inside and exploring separate aspects of the cultural pattern in a way that renders them equally comprehendable; to produce a lens that brings other lenses focussed on landscape into focus themselves.

What are the particular categories that each of the three cultural themes entail? What features of landscape do they select out? What kinds of vocabulary and reasoning are employed? And to obtain answers to such questions, an historical perspective is vital, since only by following the formulation and reformulation of a theme - the conditions under which each particular lens has been ground out - can its content be properly appreciated. The past shapes the present,[21] if only to give a foundation for rebellion.

In order to follow the history of each aspect satisfactorily, the framework devised should have been applied at first-hand to contemporary, original sources. But, again, even with just three threads to follow, the work required would have stretched into

infinity, and such research for just one aspect would have meant foregoing the primary aim of this part of the thesis which is to demonstrate the genuinely diverse, detailed nature of the cultural inheritance. The three aspects chosen, then, have had to be treated summarily and, with mostly modern exceptions, have been drawn from secondary analytical and critical material. This may be considered problematic because a proportion of the literature consulted has been at odds with the non-evaluative notion of divergencies in understandings of landscape.

A number of authors consulted have either assumed or suggested that the particular strand they are pursuing has the only claim to reality. This applies especially to literature dealing with what have been labelled here the 'aesthetic' aspects of English culture. Their argument has a tendency to run as follows:[22] until the end of the seventeenth century the landscape was hardly noticed except by a few outstanding Europeans such as the Younger Pliny and Petrach. Then there was a sudden burst of enthusiasm in England for scenery evident in the arts, philosophy and gardening which can be attributed to the growth in the fashion of taking the Grand Tour during which the Alps were crossed and the paintings of Lorriane, Poussin and Rosa sampled in Rome. This type of narrative tends to tail off somewhere in the nineteenth century with the aesthetic discovery of the upland of Britain, and largely fails to indicate how the English have been coming to terms with landscape since then. Likewise, the utilitarian interpretation of landscape common before the onset of aestheticism is not taken as legitimate - a position also assumed by some modern aestheticians who go to great lengths to exclude usefulness as a criterion of beauty. Indeed, the words 'beautiful' and 'value' have

been purloined to such an extent by aestheticians and romantics that they can hardly be applied now to landscape except in an aesthetic or romantic sense.

Such predatory tendencies are evident amongst proponents of other identifiable themes. Hoskins,[23] for example, implies that the landscape is only fully revealed when appreciated in terms of historical geography. But modern aesthetic and romantic historians seem especially prone to them, perhaps because, their absorption into the English aristocratic eighteenth century life-world becomes almost complete, and they cannot comprehend other concepts that the English have employed.

The approach that has been superimposed when referring to this kind of literature is in agreement with John Constable's (1776 - 1837) argument that: "... there has never been an age ... in which the love of landscape has not been in some way manifested."[24] It also accords with Hepburn's statement that the temptation to work with a single supreme concept in the area of landscape appreciation must be resisted, and replaced by a cluster of related key concepts.[25] This approach leads to an alternative historical perspective. Instead of presenting a sort of now-you-see-it-now-you-don't history, an attempt will be made to show how each of the three themes has been in existence for a long time but they have waxed and waned, so that at any one period one may be more obvious and subject to more rapid transformation than the others. For instance, at present, as already pointed out, nostalgia is one of the strongest themes, while utilitarianism which was once very important now plays a more minor role.

Another group of secondary sources present a slightly different problem in making their contribution to the ensuing discussion. This literature is built on the recognition that a variety of conceptual schemes may be applied to landscape, but labels some or all of them as 'images'. Even Hipple[26], whose terminology on lenses has been crucial to the development of this thesis, says that only images of beauty can ever be perceived, which may misleadingly imply that somehow the images are illusory and the lenses distorting. Several interesting commentators go down the path further, especially those of a Marxist persuasion, and identify 'illusions', 'ideologies' and 'myths' which must be dispelled so as to establish the true order of things. One of the best examples is Newby's detailed attack[27] on what he calls the 'myth' of rural retrospect' in the prologue to a sociological analysis of the agricultural worker. But, as Hipple emphasises and Section IV of this thesis has explained, some system of meaning is required for landscape to be perceived at all, and it has been widely observed that urban dwellers have long displayed a tendency to apply nostalgic concepts to the countryside. For some of them the rural landscape <u>is</u> an embodiment of an idyllic past, whereas among other sections of English society it <u>is</u> a productive resource.*

Description of three aspects of English culture, therefore, will depend on the proposition that none are illusory. Instead, they are seen as three aspects of reality; three true orders of things. Without such tolerance they cannot be entered and understood in their

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* It may be noted that the tensions in this paragraph are current in the field of anthropology, emerging too in the debate over the application of anthropological techniques within rural sociology.

own terms. To adapt an argument put forward by Gombrich:[28] it is important to be clear wherein illusion consists. It consists in the conviction that there is only one way of interpreting the world in front of us, and being blind to other possible configurations because they cannot be imagined.

The pagan landscape

* * *

"And I have felt
A presence that disturbs me with joy
Of elevated thoughts, a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of man,
A motion and a spirit, that impels
All thinking things, all objects of all thought,
And rolls through all things."[29]

* * *

The first inhabitants of what is now England arrived in the late Paleolithic period and lived by hunting and gathering. Only speculations are possible about the way these societies made sense of their surroundings, but for more recent cultures with a similar economy, the sacred world has been ascribed great importance.[30] This may be linked with Piggot's suggestion that the Late Paleolithic and Mesolithic English practised a type of shamanistic or ecstatic religion.[31]

The experience of ecstacy has been studied by Laski,[32] and she gives many examples, drawn from literature and interviews, of triggers for ecstatic states which fall into one or other of the three categories of landscape under investigation here. ('nature' proving to be the most common stimulant of ecstacy). She concludes her survey with the observation that:[33]

"... what men (sic) have worshipped since ecstatic experiences were known was their own creative and generalising capacity..."

If this capacity can be taken to be coterminous with the conceptual frameworks necessary for perception, then one might fuel speculation by proposing that ancient peoples constructed a religious understanding of landscape from initial attempts to give meaning to the trees, hills, rocks and streams they found in their localities. Laski reports that someone in an ecstatic state experiences close identification with the object of contemplation which may pass into a mystical identification with the cosmos as a whole; with gods or the God.[34] The earliest English cultural inheritance possibly gave its members an ability to construe landscape as a collection of deities or the home of deities or the Deity, and prescribed the manner in which these could be worshipped and consulted through the agency of the shaman.

Religion probably dominated all the systems used for coming to terms with landscape and this is likely to have applied also to Neolithic society which, at sometime during the fourth millenium BC, began to invade England from Europe. The people settled on the lighter soils where they carried out shifting cultivation and stock-keeping. To

what extent they assimilated the religious knowledge gained by the resident hunter-gatherers is impossible to guess, but much of that knowledge may have been irrelevant in the new farming communities. Burl has imagined that:[35]

> "To the first agriculturalists in the British Isles, searching the strange wild countryside for trees like the wych elm that would indicate the presence of highly fertile soils, the need for propitiating the dangers of nature was great: lightening could start forest fires; continual rain could make rivers impassable ... the badger, the boar, the bear, the wolf, the snake, were masters of the land ... The wheat had to ripen and be harvested, and drought or heavy storm could destory crops and then, more lingeringly, the people .... Every bird, every tree, every thunderstorm had a life of its own and had to be communicated with personally, appeased and forestalled."

There is a considerable amount of archaeological evidence of Neolithic religious practices, but the substance of their belief is unknown. Early in the period, people dug pits in the ground which they filled with charcoal, bones, pottery and hazel nuts, apparently as offerings to the deities of the land to ensure fertility. Later, mainly between 2,500 and 1,600 BC, the stone circles (apparently a British innovation) were built by Neolothic cultures and may also have been associated with fertility cults.[36] In addition, the dead were occasionally buried in grave mounds in some of which have been found carvings that possibly represent the Earth Mother.[37] It is generally thought that the equation of a goddess with the earth, or rather goddesses with the land of particular localities, existed in England at a very early date.[38]

After the bronze making cultures, which also constructed grave mounds, the next invasion was by the iron-using Celts who came in successive waves between the fifth and first centuries BC. There is little archaelogical evidence of their religion, but since they were in contact with the literate Roman world and later with Christian monks in Ireland, some written evidence is available although, having been produced by outsiders, it must be treated with caution. Seemingly, for the Celts,[39] the land was inhabited by a vast collection of rustic godlings each connected to a certain place and each having a name, also the place name, which evoked some explanatory legend. A vast body of this 'lore of prominent places' grew up, providing a legendary guide to the landscape in which a certain degree of coherence is discernable in the veneration of the earth, water and trees. A female deity generally stood both for a certain piece of land and for the spirit of the people living there, for soil and human fertility. The goddess Brigantia, for example, was intimately connected to the tribe and tribal area of the Brigantes. Water in the landscape was also linked with fertility and with the underworld. Springs, wells, rivers and pools were among the focal point of rituals which involved the deposition of coins and jewellery as offerings to the spirits who lived in them. Thus the goddess Deva was associated with the River Dee, Brigantia with the Brent and Sabrina with the Severn, the Severn estuary probably being of special importance given the remains of many small shrines. The cult of trees was widespread, each tribe having a sacred tree which stood at the symbolic centre of their area. Like water, trees were not only venerated for themselves but as reflecting the powers of the gods. The god at Colchester, for example, might have been represented by 'coll', that is, hazel. Certain groves of trees were also sacred and natural clearings deep in

the forest that still covered the landscape, were consecrated and used as centres of worship. It is here that the small priestly caste, the Druids, are thought to have practiced their obscure rites which perhaps involved the oak and the mistletoe.

With the coming of the Romans the Druids were rapidly stamped out, mainly because they provided a core of national resistance, but otherwise Celtic pantheism continued much as before, the Romans incorporating many native deities into their own religion with soldiers seeking to placate the god or goddess of the area they had conquered. But with the collapse of the Empire in the fourth century AD, a somewhat different set of beliefs was introduced by the Angles and Saxons[40] who had no prominent goddess of fertility, rather Thor took care of the land while also being god of thunder and weather in general. The oak tree was especially sacred to him, representing his strength and endurance, and his cult was vigorous as shown in place-names like Thundersley (Essex) meaning 'grove of the Thunderer'. However, Davidson[41] suggests that for most ordinary people the high gods, of which Thor was one, were probably less significant than the local land spirits which probably had much in common with their Celtic forebears. There is written evidence from the period that these included dragons, elves and fairies in the old burial mounds and giants living in caves in the hills. It has been suggested that tales of the former, at least, originated in the Neolithic and bronze ages as a means of preventing theft of grave goods from the burial mounds.[42]

Towards the end of the sixth century AD a challenge to all religious notions previously held about the landscape in England was presented by the arrival of Christian missionaries. They preached of the one

God who was quite separate from, and outside of, the landscape He had created, and was not to be placated by worshipping features like springs or trees. Their influence spread rapidly and by the time Bede was writing in 731 AD most of the population were at least nominal Christian converts. Pagan conceptions of the landscape were on the point of submergence when the Viking raids began in the ninth century AD. The capture of northern and eastern England by the Vikings revived all the old cults of Thor and so on, so that only in the eleventh century did Christianity fully gain hold in these areas. It would be quite untrue, however, to say that the missionaries managed to banish pantheism altogether since, although they were strictly instructed by the Council of Arles in 452 AD, to prevent infidels venerating trees, fountains and stones, this was found to be extremely difficult. Instead, St. Augustine of Canterbury (d.605) was told by the Pope in 601 AD not to destroy the sacred pagan places but to cleanse them with holy water and convert them to the worship of the one, true God.[43] Thus, the people were able to continue their religious practices at the old springs and clearings under the auspices of Christianity, while probably knowing full well that they were following the traditions of their pagan ancestors. The spirits of the wells were transformed into Christian saints, such as Ann and Margaret, who bore a remarkable resemblence in character to the originals, while the legends attached to sacred places like Glastonbury took on a Christian gloss. Christianised pagan practices were long fostered by the Church, for example ceremonies were held at stone circles well into the sixteenth century,[44] and throughout the time of Langland and Chaucer there was a strong pagan element in songs and poetry, with tales of the lord of the greenwood, magical plants and birds, and the fertile potency of Spring.[45]

Still, over the centuries, Christianity on the whole prevailed (contributing to other means of coming to terms with landscape to be discussed later), and the old beliefs slowly descended into fairy stories told by parents, who no longer subscribed to them, to amuse their children. Perhaps all but a trace of the pagan landscape would have been lost from English culture, but for an odd revival that occurred in the eighteenth century.[46] At this time, the romantic idea of the Noble Savage, living in harmony with Nature and uncorrupted by civilisation, gained currency among a certain section of the community, and was confirmed for them by the discovery of the American Indians and the peoples of the South Pacific. A nostalgia developed for a time when England was in the same happy primitive state - the noble Ancient British with their virtuous sages, the Druids. This bout of, what Piggot has called, Celtomania was fuelled by the publication of a book by William Stukeley (1687-1765)[47] arguing that the stone circles had been built and used for ritual by the Druids.* Other authors mistranslated, or even fabricated, ancient texts to add substance to Druidical mysteries. Classical sources such as Pliny, who spoke of the Druids cutting mistletoe from oak trees with golden sickles, were taken not as dubious references to what, for classical writers, was a barbaric society they did not understand, but as the foundation of a whole new cult. Pseudo-Druidical groups were formed for whom places like Stonehenge became sacred and where they still worship, while many of the romantic notions about Druids passed into popular folklore. It should be noted that at about the same period fashionable persons were paying more attention to the religious

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* Archaeology finds the circles Neolithic not Celtic creations and there is no evidence to connect them with the Druids.

beliefs of the ancient Greeks and Romans as well. Gods such as Pan and minor spirits like water nymphs began to haunt the English landscape; the connoisseur sometimes being encouraged to think along these lines by the placing of a suitable classical text at a viewpoint.

This, however, was more of a conscious intellectual amusement than a serious return to pantheism, and was of quite a different order from the deeper vein explored by some of the late Romantics in the nineteenth century.[48] Literary figures especially, like William Wordsworth (1770-1850) and Richard Jefferies (1848-1887), experienced nature ecstasies and arrived at a kind of pantheism which owed little to speculations about the exact format of the Celtic or Greek cosmology. In opposition to the prevailing dogmatic Christianity, they tended to conceive of God as the divine principle, the sun-life, <u>in</u> Nature with which humanity, when cleansed of modern sophistications, could commune and obtain spiritual sustenance. The inanimate landscape had mysterious powers, plants might experience emotions, Nature could speak to those who approached her with suitable piety, and it was possible to make direct contact with the force that gave life to the whole universe. In this respect, Drabble[49] quotes the lines given at the beginning of this passage and suggests that:

> "... one of the reasons why Wordsworth struck so deep a response is that he was drawing on deep sources of collective memory, on a primitive animistic view of the world, certainly present in earlier times, but powerfully suppressed by the scientific seventeenth and eighteenth centuries .... Wordsworth was able ... to restore an essential contact with the primitive, to divine its workings, and to restore an earlier vision."

In their own time, of course, the pantheistic poets and the Celtomanes received ridicule for their continuance of the pagan tradition, and it has continued to be overshadowed by scientific and other understandings of landscape until the present day. But even now, elements of paganism still figure within the English cultural inheritance. For example, much effort has been made to record customs and folktales attached to old oak trees, ancient woods, springs, pools, stone circles, grave mounds and early churches. These are repeated in popular guides,[50] often together with references to Stukeley's work. Although there are few complete believers today, considerable attention is paid to at least registering pagan associations, and obtaining a mild thrill at 'spookiness', 'weirdness' and 'the occult'. On the other hand, certain modern poets, notably Robert Graves,[51] have perpetuated the concept of the Earth Mother, and there are small groups that worship her seriously, according to their interpretation of Celtic tradition;[52] the goddess taking different personalities in different places.

Finally, another branch has almost eliminated personality in an interaction between pagan beliefs and science which has brought about the definition and exploration of ley lines.[53] This was initially inspired by Alfred Watkins' book: 'The Old Straight Track', published in 1925, but was followed most enthusiastically in the late 1960s. Ley hunters look for straight lines of earth energy marked by the prehistoric and early Christian sites designed to tap it, and to which significant folk tales are attached. Efforts are being made to measure the energy in electro-magnetic terms.

Ley hunting and goddess worship may be among the least respected modes of conceptualising landscape today, but they can both lay claims to manifesting one of the longest traditions within English culture.

The useful landscape

* * *

"There wouldn't be no landscape if it wasn't for farmers. It would be one bloody great mess."*

* * *

"I call it a very fine country ... the woods seem full of fine timber, the valley looks comfortable and snug - with rich meadows and several neat farm houses here and there. It exactly answers my idea of a fine country, because it unites beauty with utility ..."[54]

* * *

An aspect of English culture which has antecedents nearly as distant as the pagan one must be that of finding meaning in landscape through its ability to supply human needs and activities. Obtaining food is the most basic of needs, and discussion of the utilitarian here will be confined to it.

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* Extracted from replies of farmers recorded verbatim to the question:

"As you know there has been a lot of interest in the effects of farming changes on the landscape and wild life. In general, what are your views on this?"

posed as part of a survey conducted for the Countryside Commission in 1979 (hereinafter referred to as Farmers Survey 1979). These replies were very kindly made available to me by Howard Newby of the University if Essex and are not available for further publication.

Again, evidence is lacking, but utilitarian concepts must go back to Paleolithic and Mesolithic times when they were probably closely allied to a religious understanding of the land. Nevertheless, Appleton[55] has imagined clearly the probable modes of perception that would then have facilitated hunting for food, including the location of features offering concealment from, but a good view of, the prey. This tradition may be traced through elaborations and transformations to that associated with field sports today.[56] But, from Neolithic times onwards, agriculture has been the main means of obtaining food in England and, under these circumstances, the useful landscape has been equated commonly with cultivation and stock keeping. The following discussion picks out a number of categories and meanings evident in this utilitarian understanding of landscape. They are: fruitfulness and abundance; wealth and ownership; neatness and efficiency.

For the long period during which agriculture had only a precarious hold in England, the productiveness and promise of plenty of a farmed landscape was appealing in a society where many lived close to subsistence level. The country was predominantly forest, heath, marsh or moor within which there were small farmed enclaves requiring unremitting work to make them cultivable and to keep the surrounding wilderness at bay. This was seen as simply wasteland, often to be hated for being outside human control and therefore chaotic. In contrast, the domesticated areas offered freedom from hunger. The earth could be fruitful when subdued by agriculture, and appreciation of the abundance that could come from it could be expressed, firstly, as an attribute of fertility goddesses, and then later in classical and Christian terminology. The reading of Ancient Greek and Roman

authors reinforced awareness of the yields of the farmed landscape. Virgil's eclogues, for example, extolled the simple country life sustained by the fruitful earth.[57] In addition, Christian teaching,[58] based on arguments originating in classical philosophy, held that to make the earth yield abundantly was to fulfil God's plan of creation; God having left the final stage for humanity to complete. It was felt that Paradise might be brought to earth in this way - Paradise being seen as an enormous garden, strongly protected from the wild chaos outside, and within which, careful tending of the soil produced all the necessaries of life. Thus:[59]

> "Early eighteenth century travellers contemplating scenery were predisposed towards undulating country where complete humanisation of nature had imported to the landscape many of the virtues conventionally ascribed to the garden. Such landscapes, especially where bordered by distant hills offering a contrast, were praised for their variety and for their suggestion of prosperous well-being, order and harmony, recalling to mind the pastoral eclogue which was the main literary tradition of the time."

Over a prolonged period, then, many English people looked for signs of utility and plenty in a landscape. It is well known, for example, that Daniel Defoe (1660-1731) found the unproductive Lake District 'barren and frightful' while he felt comfortable in the 'rich, populous, fruitful' area around Preston.[60] The same concern for fertility and abundance is shown in the paintings of Samuel Palmer (1805-1881) over a century later which are filled with contented sheep, fat sheaves of corn and trees weighed down by fruit.[61] But somewhere between Defoe and Palmer, the utilitarian view lost its

primacy of place in English culture as the aesthetic movement, to be mentioned next, came to the fore. Even so, the tradition of the useful landscape continued as productive farming landscapes strengthened their connections with the possession of wealth and power.

Before the Dissolution, the large intensively cultivated holdings of the monasteries had represented profit and high position, and their place was assumed by aristocratic landowners. Poets began to catalogue the visible wealth of their patrons, and it became fahionable in the eighteenth century for the gentry to have their holdings depicted in paint too - portraits of power and glory.[62] Thomas Gainsborough's (1727-1788) famous painting of Mr and Mrs Andrews is one such, celebrating their complacent ownership of rich cornfields, sheep flocks and fine timber. At the same time, English artists visiting Scotland ignored the mountains and moors and concentrated upon depicting the cultivated beauties of the great estates in the hope of obtaining commissions from the owners.[63]

A third element in understanding the useful landscape is the significance attached to the adoption of agricultural innovation. Implementing the latest advances in husbandry has gone hand in hand with increasing the fruitfulness of the soil and adding to the wealth accruing from ownership. There is evidence of this amongst certain Tudor gentry who engaged in farming experiments and brought in new technology and practices from abroad.[64] This tide of innovation eventually swept into the Agricultural Revolution of the eighteenth and early nineteenth centuries which reinforced the long extant concept of the best landscapes being those most successfully exploited

by plough and stock. Especially for the smaller gentleman farmers, for tenant farmers and the rural professional class of surveyors and land agents engaged by the aristocracy to carry out the minutiae of agricultural development, the areas that had been improved by enclosure, new crop varieties, new breeds of stock, new technology and new management practices were eminently acceptable because they were prosperous and profitable as never before.[65] Agricultural writers, like Arthur Young (1741-1820) who published accounts of his tours of England, extolled the virtues of landscape created by the modern farming methods and condemned areas where traditional practices were still followed. Practical farmers often travelled the country to see if the latest agricultural experiments had proved worthwhile, and there was considerable interest in the grander technological achievements such as the draining of the Fens.[66]

What was modern in land use two or three hundred years ago subsequently became the traditional English farming landscape. The system of hedges, scattered trees and woods, squarish fields on which crops and stock were rotated, was the ultimate in agricultural efficiency until well into the twentieth century when the replacement of horse power by tractor power began to mean that the traditional landscape could no longer be admired as a profitable, useful landscape:

"... there's too much of this conservation of landscape ... to try and leave the countryside as it was hundreds of years ago ... You can't farm under those conditions in these days ... You're living in a modern age which is mechanised, looking through the eyes if you were doing it with old fashioned horses ... You've got to have big fields. You've got to tidy things up."[67]

Interestingly, the Scott Committee, set up by the government in 1941 to investigate the condition of agriculture, displays the hiatus in the utilitarian appreciation of the now old and the now new. The majority report in places could well have been written by Arthur Young:[68]

> "The landscape of England and Wales is a striking example of the interdependence between the satisfaction of man's material wants and the creation of beauty. If the land were left uncultivated ... the countryside would gradually but eventually return to its former natural condition of forest in the valleys and on the lower slopes, and a scrub of brambles, thorn bushes and bracken on the higher levels .... The beauty and pattern of the countryside are the direct result of cultivation of the soil and there is no antagonism between use and beauty."

It was the pattern of mixed farming in enclosed fields that they took for granted throughout their report, and they assumed that this was the only healthy form that agriculture could take. There was no suspicion that the traditional system was soon to lose its economic viability to a prosperous, productive but highly mechanised agriculture with more single enterprise farms, larger fields, particularly in the arable sector, and altogether much less need of the trees and hedges which had once been such an important feature of the farming landscape. With hindsight, it is possible to see that S R Dennison, in his minority report, was a far more successful prophet of the coming way in which the landscape would be appreciated for its usefulness.[69] argued that features like hedgerows and small plantations could be a nuisance to farming and gave the landscape an overcrowded and fidgity aspect, while a modern healthy agriculture might create a new, no less beautiful, landscape of simpler and wider sweep.

Today, the farming community has strong market orientations and takes farming to be primarily a food producing business, it continues to adhere to the concept of utility, as did its predecessors at the time of the Agricultural Revolution. For this community the system those predecessors set up is now defunct, it has lost its profit making capabilities and can only be regarded with distaste. The hedges no longer have a function and keep strips of expensive land out of production while being costly and a bother to maintain,[70] and trees are often not a pretty sight:[71]

> "You see, you've got a thirty acre field and you've got four or five bloody trees in it, stuck in the middle. You go there with a combine and a plough, you've got to pull out every time to get round the tree ... for which you've got roots that can catch your plough with, it can cost you anything up to £100 if you happen to hit it hard."

From a utilitarian standpoint, then, Dennison's forecast may be confirmed. The uncluttered, fully functional, mechanised farming landscape reflecting progressive agricultural practices and run with modern efficiency for maximum profit, is now the epitome of utility and is highly favoured as such by many farmers.[72]

> "First of all the countryside has got to be put to economic use, first and foremost ..."

> "The area ... has always been a fairly wooded and treed sort of land with an excess of hedgerows so I think some removal of hedgerows has been essential so they could get fields of reasonable working size for today's machinery. By and large, I think this immediate area has been improved by farmers and landlords ..."[73]

Whatever the significance of the useful landscape with respect to survival, theology, proprietorship and economics, and whatever the pattern of use involved - open, enclosed or open again - there is one ingredient that has always been vital: the land must be kept neat and tidy. Thus, Celia Fiennes, (1662-1741) who travelled around Britain between 1685 and 1705, and always appreciated the land in terms of utility, gave her highest praise to the 'neat',[74] while a hundred and fifty years later, William Cobbett (1763-1835) could write that his home area of Farnham was: "the neatest [place] in England, and, I believe, in the whole world."[75] This focus on tidiness continues today. An immaculate landscape from which all rough patches that could harbour weeds (ie wild plants) and vermin (ie wild animals) have been eliminated; where the crops are planted in perfect lines and with the pastures kept completely clean (ie free from weeds); where the hedges are closely trimmed so as not to overshadow the fields; where the ditches are kept clear and provide adequate drainage for the whole; and where the fences and the buildings are in good repair - such a landscape is obviously at the peak of its usefulness, fulfilling God's plan for order in the world, providing an abundance of food and being highly profitable. But there is more to it than that. A farmer whose land is in a clean and neat condition has to be paying meticulous attention to the details of agricultural practice, and must therefore be good at the job. Agriculture is a highly visible profession and reputations within the farming community can depend upon the appearance of the land - a good farmer is a tidy farmer[76] - and sometimes there is considerable pressure to conform to the standards of the group: for example, on putting up a fence:[77]

"... its got to look a nice looking fence because, you know, people are going to tell how you run your farm by the fencing you put up and the way you keep your farm."

and:[78]

"I get complaints from people who expect me to cut my hedges. I like them to see them grown up and that's how I leave them."

An event that seems to have reinforced the importance of cleanliness and neatness in the landscape was the agricultural depression of the 1930's[79] which drove many farms almost completely out of production. It was a shock to find that the wilderness, thought to be completely conquered by the now dominant agriculture, could so rapidly reassert itself as the drains filled in, the hedges spread upwards and outwards and bushes and thistles filled the fields:[80]

"Experience has shown how quickly the land can revert to an unkept wild and ragged condition, even where it is neglected and not wholly abandoned."[81]

There was great relief when the onset of the Second World War brought about an agricultural revival:[82]

"... the countryside is taking on an air of activity. Apart from large drainage and reclamation works, hedges are being trimmed; ditches cleared; urgent drainage work carried out; buildings, gates, fences and roads repaired. From an atmosphere of neglect the countryside has assumed an air of busy thriving prosperity, it has put aside the bedraggled condition which in many parts cloaked its beauty and the landscape has largely resumed its former well-kept appearance."

and a strong determination that such 'farming slums' would never be seen again.

Not only the farmers, but also their employees, have an interest in the handiwork displayed in the fields. Howard Newby tells of a coach trip he made with farm workers who commented on the ploughing they were passing,[83] but little has been written on the subject apart from the material furnished by George Ewart Evans[84] who found evidence of the specialised manner in which ploughing teams regarded the landscape before the First World War:[85]

> "One of the skills that had the highest acclaim in the East Anglian countryside under the old farm economy was the ability to 'draw' or plough a straight furrow and lay a level stretch (a section of ploughed land) so that it looked like a well made length of corduroy. The skill, too, that could drill a field so that no mark was visible on the seed bed except the marks of the drill-coulters themselves, won equal esteem. So great was the interest in ploughing a well-finished stretch with mathematically straight furrows, or in the faultless drilling of a seed bed and so keen was the rivalry between various horsemen that, even after they had spent most of the autumn day ploughing an acre or so in the field, they would spend the rest of it ploughing the land over once again in the cosiness of the inn bar. And on a Sunday morning they walked round the parish inspecting their neighbours' week of ploughing to see if it measured up to the high claims that had been made for it during the detailed preliminary examination at the four-ale bar ... James Seely (born 1894), a Norfolk farmer who had started his career as a horseman, told me: "The old teamseen would walk miles round the countryside to look at other people's work - well outside their own parish sometimes. At the time I'm speaking of, before 1914 ... if you'd travelled

three miles you could have a drink in a pub at any time on a Sunday. So the teamsmen used to walk their three miles out of the village to get a drink, looking at the ploughing as they went ... Some of them made a real outing of it, looking at the land and saying, perhaps: "they've got a real good 'un here. Look at his work."

This may be set against Clark's assertion that, because the fields mean nothing but hard work to them:[86]

"... today agricultural labourers are almost the only class of the community who are not enthusiastic about natural beauty."

It depends, of course, how natural beauty is interpreted. Now less than 3% of the English population is involved directly with agriculture, it is mostly among them that the old categories of abundant yields, landed wealth and neatness of practice still have currency. But these utilitarian terms were specifically and firmly excluded from the definition of natural beauty when it was consciously reformulated by a few influential theorists associated with the aristocratic social strata during the eighteenth century. A path in their treatment of utility and beauty may be traced from acceptance to rejection. David Hume (1711-1776), in his 'Treatise on Human Nature' of 1740, argued that utility was one of the modes of natural beauty. Thus, even if the observer did not directly benefit from a field by being the owner, they would be in sympathy with the pleasure of the person whose property it was.[87] By 1795, Humphrey Repton (1752-1818) in his 'Sketches and Hints on Landscape Gardening' was maintaining that it was not aesthetically acceptable to gain pleasure from landscape because of the monetary wealth it represented.[88] He did include some concept of utility, but only in terms of the comfort and

convenience provided for the aesthetic observer, for example, the presence of gravel walks for easy strolling. Afterwards, usefulness became almost forgotten by aestheticians, except for a condemnatory sentence or two.[89]

Why did the utilitarian strand in English culture, that had been so prevalent possibly since the Neolithic period, begin a gradual decline around the eighteenth century? Part of the explanation must be that in England by this time much of the population had long been freed at least from the immediate threat of starvation. And the upper realms of the class structure were occupied hardly at all with finding the basic needs of survival. Moreover, as the nineteenth century proceeded, industry began to supplant agriculture as the main national source of wealth, so the land began to lose its direct usefulness to an ever-increasing section of society. This has not necessarily precluded them from entering imaginately into the utilitarian framework. Only about ten years ago, Nan Fairbrother was suggesting that the modern farming landscape should be more widely appreciated for its fertile abundance:[90]

> "And in this landscape empty of trees and people - of everything but crops - we are close to the actual process of farming. The soil itself has a satisfying good-earth quality, and we need not be farmers to appreciate a well-ploughed expanse of furrowed earth of a well-harrowed field like a garden seed-bed. The crops too are prosperous as never before, thriving and exuberantly healthy: thousands of acres of cereals, lavish prairies of untrodden grass grown lush and green with nitrogen."

This has a somewhat hollow ring in the early 1980's when even farming circles are beginning to question the usefulness of continually

raising yeilds.[91] A major redirection of the utilitarian strand may be coming in the late twentieth century which is regretfully beyond this thesis's capability.

The aesthetic landscape

* * *

"There have been two or three fine old trees cut down that grew too near the house, and it opens the prospect amazingly, which makes me think that Repton, or any body of that sort, would certainly have the avenue at Sotherton down."[92]

* * *

"His Royal Highness Prince Albert, who has occasionally displayed a knowledge and much liking for the Fine Arts, some time since expressed an intimation to display his ability in sketching landscape from nature. The Royal Academicians immediately ... offered, or rather thrust forward, their services to arrange the landscape according to the established rules of art ... the Academicians were in active service at an early hour on the appointed day: some busied themselves in making foreground objects, by pulling down trees and heaping stones together from the neighbouring macadamized stores; others were most fancifully spotting the trees with whitewash and other mixtures, in imitation of moss and lichens ... The most rabidly-engaged gentleman was Turner, who, despite the remonstrances of his colleagues upon the expense attendant upon his whimsical notions, would persist in making the grass more natural by emptying large buckets of treacle and mustard about the ground. In the meantime, to their utter disappointment, however, His Royal Highness quietly strolled with his sketchbook into another quarter."[93]

* * *

The aesthetic understanding of landscape is the most purely academic aspect of the English cultural inheritance since it derives from philosophy and the criticism of pictorial art. Through the centuries, these disciplines have enabled individuals with the time, income and intellectual inclination to face directly the question of why rural landscapes can be beautiful. The word 'beautiful' is used here purposely because, as already mentioned, aestheticism has made it its own. In a sense, the present thesis follows the aesthetic tradition, but the ensuing discussion explores a narrower definition of aesthetics, focussing on the exclusively visual categories the tradition has developed for explaining the qualitative properties of landscape.

Over time, explanation has been framed in four basic terms: form, line, space and colour. Thinkers have concentrated upon the relationships between the shape of objects, the lines that delineate them, the space that encloses them, their colour; and sometimes also their visual texture. While united in terminology, the field has always been a controversial one, embracing differing complex constructions which have faced each other along the lines drawn from the 'subject-object' problem by the wider realms of philosophy. Are the basic aesthetic terms inherent to the landscape 'out there', or do they belong to the structure of the eye or mind? Are the terms sufficient in themselves to explain landscape beauty; can they be abstracted from associated meanings and emotions? This thesis has its own way of tackling such questions, but the aesthetic tradition has supplied other answers. And these have had a reciprocal effect, that is, the terms evolved for explanatory purposes became adopted, by certain groups, as a mode of understanding landscape in its own right.

It was amongst the English that this aesthetic aspect of culture was brought to the height of refinement around the beginning of the nineteenth century. There had grown an especially fertile interaction between the study of neo-classical philosophy and a taste for seventeenth century Italian landscape painting, from which substantial reformulations became possible whose influence went beyond philosophy and art criticism to literature and gardening. Subsequently, however, the controversies among aestheticians became so petty and sterile that this strand was submerged by concepts evolved by members of the romantic movement. Nevertheless, the aesthetic approach is present today within a relatively small academic community and, most notably, within the profession of landscape architecture which traces its ancestry through the eighteenth century landscape gardeners.

To begin as far back as possible: the first two aesthetic terms - form and line - were identified by the earliest Greek philosophers. To them, the wonderful mathematical regularities that they had discovered in two and three dimensional geometric figures had metaphysical significance, and were taken to reveal the ultimate truth about the universe.[94] It is not surprising then, that in attempting to explain the beautiful, the leading thinkers of the day fell back upon the geometrical terms with which they themselves were obsessed, the perfectly straight line, the perfect circle, square or sphere, or whatever, being the most beautiful things they could imagine. Pythagoras (6th century BC) and Plato (428/7-348/7 BC) held that certain geometric ratios and proportions were intrinsically beautiful,[95] expressing universal harmony and, since it was obvious that these rarely occurred naturally on earth, Plato was able to argue that the natural world was but a crude copy of the perfect world of pure and

ideal forms, which could never physically exist or be apprehended by the human senses. Plato did not develop a coherent aesthetic theory:[96] sometimes, he implied that ideal forms were simply geometrical shapes, like the dodecahedron,[97] while elsewhere, he said that each class of objects - for example tables, human bodies and presumably trees and mountains too - had a supersensible ideal form of perfect geometrical proportions.[98] Both of these propositions had enormous influence on subsequent aesthetic thinking, in particular as they were developed by Aristotle (384/3-322/1 BC), who argued that although ideal forms could not actually be manifest, everything in nature was involved in a struggle towards the ideal, and that humanity could assist in the constant striving to realise ultimate perfection in form and proportion.[99]

To the theologians of the early medieval period, this Aristotelian concept was a god-send in their efforts to adapt pagan classical knowledge to the tenets of Christianity. St. Augustine of Hippo (d 430 AD) made a significant contribution to neo-classical aesthetics by equating the world of ideal forms with the perfectly rational mind of God.[100] Everything on earth was working to reach God's ideals and, since humanity acted as the divine agent, landscapes over which they had control - where the forms and proportions were more regular, the lines straighter, the angles sharper and the curves nearer to the circle - were necessarily more beautiful than the wild, untouched, wholly irregular regions. Thus, a theologically respectable, aesthetic justification was found for the widespread appreciation felt in medieval times for the cultivated landscape.[101] It prevailed among the minority of the English who were aesthetically minded until the eighteenth century at least, and appeared most obviously in their

gardens. Gardens, when not intended for food production, have generally been the only areas of cultivated land in which economic and other utilitarian considerations have been allowed to take a secondary role so that aesthetic principles might be more fully expressed. Between medieval and Stuart times, such gardens in England usually displayed a much greater degree of geometrical regularity than the rest of the domesticated landscape. This reached an apogee in the adoption by the English of the formal garden which had been brought to its highest stage of development in seventeenth century France.102 The very adjective 'formal' is an indication of the aestheticism of the garden's designers and owners, as were the symmetrical arrangements of forms and lines, the straight paths and avenues, the geometrical flowerbeds, and the carefully pruned bushes and trees of which such gardens consisted.

Perversely, it was not until just before the reaction against perfect geometrical regularity began in England that the neo-classical aesthetic grounds for disapproving of the wilderness were fully worked out. This was achieved by Bishop Thomas Burnet (1635-1715), whose book: "The Sacred Theory of the Earth" went through many editions after its first publication in 1681. In her brilliant exposition of Burnet, Majorie Hope Nicolson[103] argues that the chaos of natural form in the Alps, seen on his Grand Tour in 1671 and the like of which he had not encountered in flat, domesticated Cambridgeshire where he lived, so offended all Burnet's neo-classical aesthetic expectations of form and proportion, that he felt such mountains could not possibly have been made by God, and he determined to save theology and the classics. Burnet proposed that the Earth had originally been the perfect creation of the Divine mind - a round, smooth, regular sphere

- but the sins committed by humanity had brought on the Flood. Fluids in the interior had erupted through the Earth's crust, breaking it up and heaving the pieces into ruinous heaps, and violating the circle of perfection forever. The Earth would never regain its ideal form and mountains, especially, were the frightful reminders of this catastrophic and disgraceful event. Burnet's theory gained considerable popularity in the fashionable world of his day, and many of his readers proceeded to exaggerate English hills, like the Mendips, into his disgusting "warts and superfluous execrescences". But in so doing, of course, their attention was drawn to the wilder, irregular areas of landscape which had had little previous aesthetic significance.

With the institution of this disapproving scheme for understanding uplands, gentlemen on their Grand Tour now began to actually mention the Alps in their letters home, whereas their predecessors had completed the Alpine section of their journey with the carriage curtains closed. Nicolson suggests that once Burnet himself had been able to categorise and give meaning to mountain regions he felt the stirrings of an appreciation of their chaotic form, but consciously resisted their appeal to the end of his life. In this way, he foreshadowed, and contributed to, the transformation that was soon to occur in aesthetic thinking, which involved the setting up of more irregular forms and lines as the ideal. Nicolson makes two further points about Burnet's effect upon contemporary thought. Firstly, he succeeded in making God a much more remote figure than had previously been the case in neo-classical aesthetics. God had become the Cartesian mechanic who, having once set the world in motion, had drawn quite apart from it. Biblical sources henceforth became progressively

less important for aestheticians, this being in line with the general loss of theocentrism in post-Renaissance philosophy. Secondly, Burnet's ideas were influential quite outside the field of aesthetics in that they provoked so much controversy that his opponents were forced to closely study mountains and hills for the first time since the classical period, so preparing the ground for modern geological science.

Before going on to consider the opposing notion of irregularity of form as ideal, it would be as well to comment upon the subsequent path taken in the search for regular geometrical form. As Ruth Saw and Harold Osborne[104] remark, the theory that beauty consists of certain mathematical proportions was apt to seem trivial once it had been disassociated from the metaphysical and religious background in which it had evolved. It became difficult for an increasing number of people, especially those given to philosophy, to believe in God, yet alone a God who took a keen interest in geometry. However, in the early twentieth century intellectual climate which owed much to positivistic science with its reductionist tendencies, mathematically regular forms regained their hold over some aestheticians, this time with a scientific justification. They drew upon Gestalt psychology which conceived the visual process as the apprehension of shapes pre-programmed in the brain.[105] Added momentum came from the simultaneous development, in the early twentieth century, of abstract landscape art. Certain painters on the Continent strove to depict the inner structural harmonies of landscape, ordinarily imperceptible but now

revealed by modern science.[106] The result was paintings remarkable for their similarity in character to the world of pure geometrical form once postulated by Plato,[107] and English art critics, such as Bell and Fry, argued that abstract painting had finally demonstrated the reality behind landscape.[108] However, neither abstract art nor Gestalt psychology joined the aesthetic mainstream in England.

Fry, like others, had identified Paul Cézanne (1839-1906) as the father of modern abstract aestheticism on the basis of a famous statement the painter had made in a letter to the effect that: "Everything in nature is modelled on the sphere, the cone and the cylinder."[109] This seems, on the surface, to be an aesthetic principle in fine Platonic tradition, but, as Clark[110] has shown, when taken in context, it only appears as an instruction in painting technique, since Cézanne's next sentence reads: "One must teach oneself to base one's painting on these simple forms..." Cézanne's method of splitting up planes into facets, and building his composition out of a number of simplified shapes was his means of achieving the difficult task of depicting the landscape he saw before him in paint on canvas, and, in fact, the drawing of spheres, cones and cylinders had long been part of the training given to art students with no expectation that their finished paintings would be geometrically abstract. Cézanne saw geometry as a means to an end, not, as later abstract painters and some aestheticians believed, an end in itself. However, Fry's attempt to turn a particular painting technique employed by a great master into a general aesthetic concept was in complete accord with another long established aesthetic tradition which, paradoxically, had earlier contributed towards the appreciation of far less geometrically regular forms - namely, the respect given to landscape painters.

To return, for a moment, to Plato's argument that ideal forms could not materially exist, it must have created something of an impasse for all but the most elevated of philosophers because it left little way of knowing what the ideal of any particular class of objects, including landscape, was really like. Moreover, he was quite derogatory in "The Republic" about art which, he said, was doubly debased because a painting was only an imperfect copy of nature that in turn was only an imperfect copy of the ideal. Perhaps this was a piece of defence on the philosopher's part against artists who were practically rather than academically involved in finding the attractive and the beautiful. They had the advantage, in one sense, in that the products of their work could actually be seen, instead of existing only in the philosopher's mind, while they <u>were</u> concerned, as part of their techniques of portrayal, with form and line which Plato, himself, had established as central aesthetic categories. It is to the eternal credit of the aesthetically-minded English of the eighteenth century that they succeeded in identifying the Platonic ideals of landscape with the techniques employed by landscape artists, and in particular with certain accomplished painters who had appeared in Italy and Holland roughly a century earlier.

Of course, the germ of the idea of uniting landcape art and landscape appreciation had been isolated before. The Younger Pliny (c61-113 AD), for example, had written a letter about the mountains, woods and meadows of his estate in Tuscany which contained the following statement:[111]

> "You would be charmed by taking a view of the country from one of the neighbouring mountains. You would fancy you were looking on

> the imaginary landscape of a first-class artist, such an harmonious variety of beautiful objects meets the eye wherever it turns.";

Three points may be made about this. Firstly, Pliny was often cited as an authority by eighteenth century writers when proposing a conjunction between landscape aesthetics and art. The need for such an authority was one sign of what Allen[112] has called, the intellectual tyranny of the classics. Thus, the artistic rejuvination of landscape aesthetics took place firmly within a neo-classical context. Secondly, then, the English retained a version of the world of ideal forms held to exist in the mind of God. As the Earl of Shaftesbury (1671-1713)[113] proposed in: "The Moralists" of 1709, and contradicting Burnet, God could be considered as the supreme artist, and the world in its current form as a work of art created by Him. It was still not quite perfect, however, but moving towards God's ideals in Aristotelian fashion. The argument could then be made that human artists were capable of divining the mind of God by closely observing the general tendencies of His creation, and in their paintings correct the superficial accidents of nature revealing the perfectly irregular forms that constituted the ideal natural landscape. Shaftesbury thereby reinforced a belief, which had been held since Pliny's time, that a landscape painting was properly the imaginative representation of the ideal, not an accurate account of a particular place, which explains why topographical painting was denigrated in aesthetic quarters for some time. The third observation to be made about Pliny's statement is that it displays a feature that became the hallmark of the aesthetic appreciation of landscape as soon as any dependency upon painting developed, that is, the overwhelming emphasis placed upon vision.[114] Indeed 'landscape' itself is a term

derived from art[115] and is thereby inextricably bound up with visual considerations - the look of things - while from the eighteenth century onwards 'aesthetic' and 'visual' have often been used interchangeably, providing the grounds for the long controversy over whether the other senses have anything to contribute towards the perception of landscape quality.

The aesthetic obsession with vision is derived from circumstances surrounding the painting of a picture of landscape. The painter's purpose is to create something that appeals initially through the sense of sight which, in itself, imposes conditions. One of most basic considerations is that to the visual sense the landscape appears in three dimensions and for most of the history of landscape painting, with the exception of some abstract art, it has been the painter's purpose to render these into the two dimensions of paper or canvas. Similarly, painters have to try to reconstruct in coloured pigments the visual outline and shape of objects, their colour not only being important in itself, but as it alters with the shadows created by the direction of light and variations in form. Technique had to be developed that enabled the achievement of artistic aims, which instructed the painter in exactly what visual elements to look for, and how to represent them. Gombrich[116] has clearly explained that such techniques cannot be instantly invented in a cultural vacuum. The tricks of creating visual representations of landscape are learnt from other painters, both past and present, even if only from pictures seen. In addition, if a painting is to be appreciated as representing landscape by a wider audience, some of the tricks of the trade have to be understood by people who do not belong to the immediate artistic community. But in the very process of such people coming to terms

with the vocabulary of representation, conventions are established and may be extended beyond the art objects to the subjects they depict.[117] Of course, painting techniques have rarely remained exactly the same for long. Artists seeking to achieve their own ends, whatever these be, modify conventional usages or reject them in favour of new methods. It takes time for artistic innovations to become part of a more general aesthetic vision, and be conventionalised in their turn. For example, Gombrich[118] shows that John Constable's pictures were the result of a masterly technique developed from long study of Italian, Dutch and English painting, together with personal experiments in method. During his lifetime, Constable was frequently criticised for 'lack of finish', that is, failure to fulfill the established ideals of landscape, and for his odd use of colour - too much green compared to the mellow brown tones then used to convey distance, and too much white to convey light, instead of soft pinkish tinges. It was only after more people came to understand his aims and mode of expression that Constable's pictures became popular.

The bond between the practices of landscape painting and the aesthetic appreciation of landscape was probably sealed with the discovery of the principles of perspective in fifteenth century Renaissance Italy. Prior to this, painters had encountered severe difficulties in representing distance. Examples of their rather clumsy ways of doing so may be seen in the first few pages of most books on landscape painting, and they could have been one of the reasons why the landscape painter cut such a poor figure in the art world and why landscape was usually only sketched in as a background behind human forms. But once the precise rules of perspective had been worked out - the convergence of parallel lines, the proportional decreases in

size etc - artists were provided with a code which allowed a reliable translation of the receeding landscape into two dimensions, a code which their audience rapidly came to understand as the study of perspective was accorded considerable esteem.[119] Moreover, a knowledge of perspective made the Italians first, and then the rest of Europe, more conscious of space. In both Italy and England, the fortified dwellings of the rich had traditionally been built at vantage points to give adequate sighting of attackers and, under these circumstances, distance could only have been regarded as an inhibition to clear seeing.[120] However, as times became more settled, the scientific and artistic exploitation of perspective gave those who knew about it another reason for looking at the views their houses afforded, and encouraged a pleasurable interest in the effects of distance. New houses were designed to give good prospect for aesthetic rather than defence purposes, while the walls or vegetation that had once completely enclosed the formal garden, were opened in places to provide vistas of the countryside beyond.

The English aristocratic craze for landscape painting, and the effects it had upon their appreciation of scenery, is the best documented and the most analysed event in the history of landscape perception, both by contemporary philosophers, literati, poets, painters and gardeners, and by later historians of the arts.* To cope with the subtleties of comment and dissection within a paragraph or two is quite impossible, so a few points will simply be made about the painter who perhaps dominated the entire episode. Claude Lorraine (1600-1682) was French, but spent

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* a selection of reference on the subject is supplied in Appendix 1 and it is upon these that the ensuing discussion relies.

his adult life in Italy where, by 1640, at least partially due to his efforts, landscape became established as a separate and important branch of painting. His primary contribution was to refine the representation of perspective by replacing the original Renaissance method of gradually diminishing the size of things. Instead, Claude used a series of abrupt leaps into distance depicted as a succession of horizontal bands which appeared to receed from the viewer who, to achieve the effect, had to be positioned at a high viewpoint. Claude used such devices as bridges, rivers and cattle fording streams to make the link from one plane to the next and so lead the overlooking eye out into the distance, while the trees and buildings within each plane had to be so composed as to differentiate the bands from one another. Therefore, his compositions while superficially made up of a certain degree of irregularity of form, such as the undulating ground surface, were underlain by a strict geometrical framework so as to represent space. Claude's use of light and colour were designed to achieve the same end. Fifteenth century Flemish painters had already discovered that, in a certain light, colours had tonal values which changed with distance. Claude chose to depict landscapes under the flat golden-pinkish light that he could observe during the Italian sunrise and sunset. In this light, he was able to paint gradations in tone from warm brown in the foremost plane to a pale silvery blue in the most distant one, which, even when the bands that his pictures consisted of were quite parallel, produced the effect of recession. This was further enhanced by the disposition of the shadows cast by objects in each plane. Claude had no intention of painting actual places, but used his scheme to create idealised compositions of the Italian campagna, with the smooth curving lines of

idealised Italian trees and a gentle land form that often piled up into far away mountains. The subjects of his pictures usually had reference to some incident in classical literature and the atmosphere of the whole harked back to Virgilian pastoral tranquility.[121]

The way the English upper class came to be so enamoured of Claude within fifty years of his death is one of those comfortingly oft-told stories. To the English gentleman whose education had been almost entirely classical, Italy was tremendously attractive; an attraction enhanced by it being the seat of the Renaissance revival in classical learning. Unfortunately, for most of the seventeenth century, wars in Europe and the appalling road conditions made the journey to Italy too gruelling an experience to contemplate for all but a hardy few. However, with peace signed* and travel facilities improved,[122] the Grand Tour rapidly became the required manner in which to complete a proper education. As the Ogdens have shown,[123] some of those taking the Grand Tour already had an interest in landscape painting and probably possessed pictures of their own estates. Once in Italy, they came across Claude whom they found immediately accessible because of his nostalgic references to the classical literature they knew so well. His paintings were thus the perfect souveniers of all that the English gentleman had experienced in the land of classicism and neo-classicism, and so numerous Claudes were brought home to add to private art collections. The next generation of Grand Tourists went to Italy fully intending to find more Claudes, and by the 1740's there was a thriving trade in the originals as well as in copies and

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* some commentators mention the Peace of Ryswick 1697, and others the Treaty of Utrecht 1713

imitations.[124] It was not long before Claude was established in England as the master of the ideal landscape. A training in the connoisseurship of art, based largely on his principles, became essential for every person of fashion and it seems, almost simultaneously, efforts were made to apply these principles to the physical landscape too. Hussey finds that in the accounts of Grand Tours between 1640 and 1730 mention of the pictoral view of landscape is rare, but each case that does occur can be traced to a sojourn in Rome where paintings by Claude could be seen.[125]

By dint of very careful selection, organisation and an enormous amount of recomposition, native artists were able to depict English scenes according to Claudean ideals. James Thompson (1700-1748), for example, in his poem "The Seasons" which was widely read when it came out in the 1730's used a strict Claudean structure to create word pictures of the various country seats that he eulogised.[126] His method helped to set up the ensuing poetic tradition of describing landscape, which involved looking out from a high viewpoint while working from foreground to background. Painters, like Richard Wilson (1714-1782),[127] also adopted Claude's technique wholesale. Even in pictures that had English place-names as titles, the trees were of an Italian form, and the tones were mellow brown, although as Constable later established the latter rarely occur under northern skies.

Gentlemen who had returned from their Grand Tour, but who yearned to see again the Italianate ideal they had found through Claude admired such poems and pictures and also proceeded to observe the English countryside with a Claude glass. This was a circular, convex, tinted

mirror which was directed over the back of the viewer so that a tiny, framed picture of the landscape behind, with the colours deadened into Claudean tones, appeared in the glass. The contraption was moved about until the viewer judged that perfection had been attained, but both this and artists' attempts to find the Italianate ideal in England rarely produced complete satisfaction because English scenery hardly ever supplied the form and line required by the then aesthetic standard. The wide stretches of open fields were not easily fitted into the terms of Claude's perspective, while the hedges of the enclosure and the formal gardens were an offence against the softer lines characteristic of Claude. So the landed upper class began to have part of their estates turned into little artistic Italies. The old gardens with their straight paths and avenues were redesigned together with the larger areas of wooded parkland, that had once been used for hunting, so as to realise the ideals towards which nature was striving, and which were exemplified by Claude:[128]

> "... since nature in the raw state was imperfect, and since in the canvases of painters her blemishes had been eliminated and her charms had been culled and combined so as to form a synthesis of her most exquisite beauties, it was the business of the gardener to study pictorial methods of design, adapt them to his medium, create his foreground, middle distances and background, and arrange for a varied play of light and shade."

It must be remembered that this was what was meant by the word 'natural' as applied by the aesthetically-minded to landscape throughout the eighteenth century, a usage at odds with modern understanding of the term, and that in their early stages these 'naturalistic' landscape gardens retained a considerable amount of geometrical regularity.

The greatest designer of the English landscape garden, for so the initial Italianate ideal became, and the person who brought it to the highest stage of aesthetic development, was Lancelot (Capability) Brown (1716-1783) whose total of 211 works were distributed over every English county except Cornwall and Leicestershire.[129] It is often said that Brown, who never made the Grand Tour, created literary rather than painterly compositions as his management of form and line bore a close resemblence to analyses of the now conventional aesthetic ideals by Edmund Burke (1729-1797) and William Hogarth (1697-1764).[130] Burke, whose influential book "A Philosophical Enquiry into the Origin of our Ideas of the Sublime and the Beautiful" was published in 1757, proposed that the Beautiful, as demonstrated by Claude, consisted of smooth undulating forms, which Brown expressed in rolling lawns and strategically disposed rounded clumps of trees, usually placed on gently rising ground. Hogarth in "The Analysis of Beauty" published in 1753, had derived a vocabulary of representation for the painter which dictated that the serpentine line was the best of all,[131] and Brown put this into his winding paths and driveways, and the curved edges of his lakes. The landscape garden thus had a regularity of its own, a defined order of composition. But, to people whose aestheticism had been previously pervaded with the strict geometirical regularity of the classics and the formal garden, as described earlier it displayed complete and perfect irregularity of form and line:[132]

> "The straight and the curved lines were symbolic of the periods in which they had the greatest aesthetic authority: the former connoted simplicity, uniformity, reserve, stability and the absence of the unexpected; the latter connoted complexity,

> multiplicity, energy, and the expressiveness of a resurgent vitality."

This seems to have been one among many considerations reinforcing the contemporary popularity of the landscape garden, besides the point that it was usually cheaper to create and maintain than the formal garden, therefore salving to the English Puritan conscience.[133] The aesthetically-minded had simply become bored with the predictability of regular geometrical forms, and found more to interest and enjoy in less measured designs. The case has also been made, based on a remark by Horace Walpole (1717-1797)[134], for the English taking the emancipation from the strict geometry of the French formal garden as symbolic of the politically liberal nature of their society, in comparison with autocratic European regimes, and of which they were immensely proud.[135]

Once admiration of the vast acres of aesthetically designed landscape gardens had become habitual, it was but a short step to develop an aesthetic approval of the native landscape as a whole, especially as attention had long been drawn to selected prospects extending beyond the garden while landowners were never averse to viewing the rest of their property. Patriotic pride probably also played a part in strengthening such a movement, which occurred, as far as one can be definite about such things, towards the latter part of the eighteenth century. At the time, Britain was becoming one of the most powerful nations in the world, so inspiring the upper classes with the confidence to reject any dependency upon obviously foreign ideals and to apply English ones, which actually owed much to Italy in the first place, to their worthy native country.[136]

The aesthetic contemplation of English scenery was, however, no simple or direct matter. It had to be done in the right way by following a special procedure which involved consciously recognising the stretch of land under the eye as a composition of trees, hills and fields in which each object bore a specific and analysable relationship to the others:[137]

"The recognition of the formal structure of a landscape was not a purely passive activity - a considerable amount of jockeying for position, of screwing up the eyes, of moving back and forth, or rearranging objects in the imagination had to be gone through before a view came right. This is William Gilpin describing how he looked at a landscape: 'The whole view was pleasing from various stands but to make it particularly picturesque by gaining a good foreground, we were obliged to change our station backward and forward, till we had obtained a good one. Two large plane trees, which we met with, were of great assistance to us'."

William Gilpin (1724-1804), who did not make the Grand Tour, was the person who confirmed, reinforced and elaborated upon the trend towards finding native scenery a source of aesthetic satisfaction, despite it not looking like Italy. He provided his large readership with a set of specifications of the Picturesque, and plenty of examples of their application to English landscape. Some confusion was caused by his illustrations of these examples because they were still cast in the ideal mode, that is, his pictures did not purport to represent actual places with any accuracy, but to show how these places would look if they were allowed to reach Picturesque perfection. Gilpin's terms of reference were, as aesthetic tradition now dictated, firmly based on techniques of artistic representation. For example, he put an

emphasis upon colour as found in the English landscape, helping people to see the tints of autumn which they seem not to have noticed aesthetically before; and he instituted a simplification of Claude's perspective, encouraging the viewer to divide the scenery into foreground, mid-ground and background.

However, Gilpin's most innovative contribution was to give clear aesthetic reasons for preferring rough and rugged upland scenery. It has already been shown that Burnet had drawn aesthetic attention to mountains by giving meaning to their chaotic non-geometrical form,[138] and that Claude had portrayed mountains as a minor element in his paintings.[139] According to Gombrich,[140] the painting profession had long possessed the technical means for dealing with 'steep isolated rocks' and were therefore capable of visually appreciating them. Moreover, the Italian painter Salvator Rosa (1615-1673), who had for some time been Claude's closest rival in popularity among the English had made a speciality of depicting grotesque mountain forms. Given such preliminary circumstances, Gilpin was able to maintain that shaggy, jagged, broken and otherwise violently irregular forms, mostly found in certain hilly areas, were aesthetically ideal because, together with the dramatic effects of light and colour which they tended to produce, they could be used to create the best pictures. This was in obvious contrast to the very gently irregular forms and smooth gradations in tone portrayed by Claude, but it may also have had something to do with Gilpin's own abilities as a painter:[141]

> "[His] love of the shaggy stems partly from the encouragement a rough subject gives to a sketchy facility of execution."

Be that as it may, towards the close of the eighteenth century, numerous professional artists adopted his system and:[142]

> "... with critical faculties sharpened on these new theories and with an attitude to nature which saw her as little more than a scribbling-pad for their sketches, the Reverend William Gilpin unleashed a fresh stream of ardent tourists upon the English countryside."

Among a certain section of the English then, Gilpin's delineation of the Picturesque was taken to mark the culmination of the long search for the aesthetic landcape, however, a number of writers on aesthetics at the time were highly critical of Gilpin's theoretical stance, finding it quite inadequate. This was because he completely failed to deal with the question of the extent to which the workings of the human eye and mind played a part in the appreciation of landscape, a point that some aestheticians felt impelled to discuss extensively. Since the preceeding account has also ignored this aspect of eighteenth century landscape aesthetics, it will likewise be found deficient by anyone acquainted with the literature on the subject, but the omission has been a deliberate one due to the fact that a new kind of philosophical thinking was involved whose intricacies were obviously not understood by Gilpin nor, probably by most of his readership in his lifetime. For them, the simple concept of the God-given landscape ideal which could be revealed by painters was still in common currency,[143] but it was unacceptable to those influenced by the vigorous school of British empiricism that had appeared in the seventeenth century as a reaction against the immaterial and spiritual nature of such neo-classicism.

An interesting thesis could be written on the way certain eighteenth century thinkers applied empirical philosophy to the contemporary craze for the aesthetic landscape, but here there has only been sufficient time and space to note a few important features. The empiricists made God an even more remote figure than Burnet had done. The new philosophy turned decisively away from theology towards humanitarianism leaving God, if mentioned at all, as the peripheral Cartesian mechanic. The tremendous impression made by the advances of seventeenth century scientists, particularly Isaac Newton (1642-1727), had left the empiricists with a mechanistic conception of the world, including the working of the human senses and mind:[144]

> "Among the British philosophers we find a marked interest in psychological questions. The leading empiricists, Locke, Berkley and Hume, all deal with problems about knowledge, and they tend to treat these problems from a psychological rather than from a strictly epistemological point of view. That is to say, they tend to concentrate their attention on the question, how do our ideas arise? And this is obviously a psychological question. Again in English empiricism we can see the growth of the associationist psychology. Further, in his introduction to the 'Treatise of Human Nature' Hume speaks explicitly of the need for developing the science of man on an empirical basis. Natural philosophy, he says, has already been established on an empirical basis; but philosophers, have only just begun to put the science of man on a life footing."

Against this philosophical background, some aestheticians identified the technical aspects of artistic construction, which now had an

established role in aestheticism, with deeper, universal, psychological properties. Richard Payne Knight (1750-1824), in his "Analytical Enquiry into the Principles of Taste" published in 1805, perhaps presented the best developed argument along these lines with respect to landscape.[145] Whereas Gilpin had simply said the Picturesque was that which looked well in a picture, Knight defined it as that which appealed to the sense of sight, this being the dominant sense, while colour, light, distance and magnitude were primary aspects of the objective world. To see the visual qualities impartially, the mind had to adopt a mode of apprehension akin to that of a painter, who excluded what were thought to be secondary considerations in the process of creating a picture. So, for example, the primary qualities of a meadow would be its square shape, sloping ground surface, and green and yellow tones with which the artist had to be concerned,[146] while its grazing potential, species composition or significance for local courting couples would only be secondary associated qualities. Knight, then had arrived at what later came to be known as 'the aesthetic attitude',[147] whose main characteristic was to separate the observer from any personal involvement with the scene observed, and is epitomised, in Barrell's opinion,[148] by the selection of high viewpoint, once necessary for Claude's painting technique, to reinforce physically the observer's mental divorce from the landscape.[149]

"Those who held this attitude to landscape, in short, were able to do so because they were not involved in the landscapes they met with: their eye 'loomed over' them, and manipulated the objects in them, simply according to the rules and structures sanctioned by a pure and abstract vision, and without any reference to what the function of those objects might be, what their use might be to the people who lived among them"

In the extreme, the aesthetic attitude excluded everything except form, line, space and colour: it was anti-utilitarian, anti-familiarity, anti-emotion and, according to Hussey,[150] anti-knowledge - seeing abstractly, with as few pre-conceived ideas as possible - although, as Gombrich[151] demonstrates, abstract vision is a pre-conceived idea in itself. More pragmatically, it seems to have been fostered by the Turnpike Acts which not only meant that travellers were no longer too engrossed in their discomforts to give more than a disparaging glance to the view,[152] but that the upper classes became used to seeing landscape with which they had no personal connection and were therefore capable of appreciation in an abstract aesthetic manner.[153]

There must, however, be some debate as to whether many people actually achieved the prescribed rational state, apart possibly from those who gave the prescription, because throughout the eighteenth century the chorus of a conscious emotional involvement with the landscape was heard, increasing in volume until it quite drowned what abstract aestheticism there was. This was the Romantic movement and one of its facets was linked to aestheticism, in that it arose from the two main elements of which the aesthetic view of landscape is composed, namely, art and philosophy. To take art first: it was obvious, perhaps to all but the occasional theoretician, that landscape paintings were not just pure expressions of an artistic technique, they were generally <u>about</u> something, they had a subject of one kind or another to be communicated to the viewer. Native painters, especially provincial ones, were often, of course, concerned with the productivity and profitability of the landed estates,[154] but pride in such things was seemingly unacceptable to a taste refined on Italian landscape art.

It may be significant that Thomas Gainsborough who as a young man painted that detailed account of Mr and Mrs Andrews' possessions near his home town of Sudbury in Suffolk, later declared, when he was an established portrait painter in London, that there was no landscape worth painting outside Italy.[155] There, the subjects that the master, Claude, had found most suitable to the scenery were those drawn from classical literature, and, for a time, before Capability Brown appeared on the scene, landscape gardeners constantly made literary allusions in their re-creation of Claude's Italy in England.[156] A famous example was the garden of Leasowes, near Birmingham, designed by its owner, the minor poet, William Shenstone (1714-1763). Views, composed in a style reminiscent of Claude, were to be seen from certain fixed points at which there would be a seat and a motto from the classics, or poem by Shenstone in classical genre. These were intended to evoke an appropriate feeling for the scene set out before the viewer, just as Claude's paintings themselves conveyed the tranquility, peace and security of the fixed, ancient order of the classical world. Probably the very calmness of Claude allowed viewers to see through his subject matter to the sophisticated technique of representation that he employed, but his rival in popularity, Salvator Rosa, produced paintings of such dramatic content that they positively invited an emotional interpretation in association with a technical one.[157]

It has already been pointed out that following, Burnet, the Alps inspired disgust and horror. Rosa's pictures of sinister banditti

lurking among deep gorges, stupendous rock formations and blasted trees were a major contribution to the translation of this fearfulness into a pleasurable experience. As Horace Walpole described his Alpine impressions in a letter written on his Grand Tour in 1739:[158]

> "Precipices, mountains, torrents, wolves, rumblings, Salvator Rosa - the pomp of our park and the meekness of our palace! Here we are, the lonely lords of glorious desolate prospects."

The general tendency to impute sentiments expressed by a painter to English scenery was exhibited forty years later in Thomas West's guidebook to the Lake District of 1778, in which he spoke of going:[159]

> "... from the delicate touches of Claude, verified in Coniston Lake, to the noble scenes of Poussin, exhibited at Windemere water, and from there to the stupendous romantic ideas of Salvator Rosa, realised in the Lake of Derwent."

But what of philosophy? Under the old scheme of God-given ideals, there was no clear way of categorising the emotional qualities of paintings that some of the English were now transferring to gardens and mountainous scenery, but the associationist psychology of British empiriciam could deal with such considerations more easily. The father of this philosophical school is said to be John Locke (1632-1704) who, in his "Essay Concerning Human Understanding" published in 1690, argued that all knowledge originated from sense perception. Stimuli, especially visual stimuli, gave rise to simple ideas that were combined by mental introspection into more complex ones - an early formulation of the concept of the association of ideas.[160]

As was previously remarked, a few aestheticians, like Knight, concluded that mental associations made on the basis of primary visual

properties were of almost negligible aesthetic account, but the figure who dominated landscape aesthetics in the eighteenth century, Edmund Burke took a slightly less reductive stance. In "A Philosophical Enquiry into the Origin of our Ideas of the Sublime and the Beautiful", he was the first published aesthetician to introduce emotion, albeit of a specific and limited kind, as a proper and explicit element in landscape appreciation,[161] this being one of the contingencies of his other, greater first which was to integrate the empirical mode of thought with the aestheticism of landscape. That he began his book at the age of nineteen is depressing enough for the Ph.D student, especially as it proved to be one of those works that everyone writing in the field afterwards either imitated, borrowed, or felt necessary to refute.[162] Even the wider aesthetically-minded public picked up his division between the Sublime and the Beautiful, which they found were admirably illustrated on the one hand by Rosa and on the other by Claude, although at the time of publication they probably did not follow the reasoning behind the distinction, and thought in terms of the ideally Sublime and the ideally Beautiful.

Actually, Burke was proposing that form, line, space and colour in the landscape acted mechanically through the eye upon the mind, producing certain instinctive emotional reactions.[163] When line was violently irregular, when form and space reached vast proportions, when there were sharp contrasts of colour, and patches of startling brightness together with areas of deepest gloom and obscurity, ideas were inspired of the immense forces required to execute such greatness, forces that could threaten the passion for self-preservation and so made the nerves tense. This could be unpleasantly painful, unless the observer was assured that life and limb were not in jeopardy, then

the nerves were only moderately stretched which toned up the body and was therefore delightful. This kind of landscape and its associated ideas were labelled 'Sublime', a word once used in the field of literary criticism to denote an impressive, rhetorical style, but applied by Shaftesbury at the beginning of the century to natural phenomenon terrifyingly beyond human comprehension. Burke, however, changed the whole face of aestheticism by taking the fearful in itself as a source of aesthetic satisfaction. Moreover, he was responsible for giving Beautiful its capital B, defining it in such a narrow way that no aesthetician after him could imagine that they were only concerned with Beauty. Burke thus succeeded in finally establishing beauty as an almost exclusively aesthetic term in the more popular mind while convincing aestheticians that it was no longer their only focus of interest.[164] Beauty for Burke occurred when lines were smooth, forms and space were small, and colours only showed gradual variation. The delicacy and elegance of such a scene relaxed the bodily fibres, giving an inward sense of melting and langour that belonged to the social passion of love. This description looked back towards the composition and atmosphere of Claude's paintings, and forward to the calm and serenity that Capability Brown sought to evoke in the gardens he designed followed Burke's tenets of the Beautiful.[165]

Burke' neat classification of landscape and landscape experience into two categories was accepted by most contemporary writers on the subject, but, as might be expected, his enumeration of the constituents of Sublimity and Beauty, and his philosophical/ psychological rationalisations, were much criticised. There was

argument, for example, over whether Smallness had to be a characteristic of Beauty, and whether the Sublime and the Beautiful belonged to two distinct orders, as Burke believed, or were opposite poles of the same aesthetic continuum. But the arguments became even more involved when Gilpin blithely introduced a third category - the Picturesque - in the 1770s and 1780s. Gilpin, as noted previously, operated within a neo-classical framework, that was quite outmoded for those who followed the latest developments in British philosophy, and he therefore gave little attention to the logical nicities that lay behind Burke's separation of Sublimity from Beauty. So, although Gilpin mentioned those terms he confused them to the extent of defining the Picturesque as a kind of beauty, not for any psychological reason but because it looked well in a picture, while giving it such sublime properties as grandeur, violent irregularity of form, and dramatic colouring and lighting. Quite probably, the more philosophically 'advanced' aestheticians would have dismissed Gilpin's scheme outright, if the Picturesque had not become so popular among the gentry, but since there was no avoiding it, efforts were made to incorporate it into the kind of scheme set up originally by Burke.

One of the first to make a coherent attempt to bring Burke and Gilpin together was Uvedale Price[166](1747-1829) who, in his "Essay on the Picturesque" first published in 1794, proposed that the Picturesque was intermediate between Sublimity and Beauty. According to Price, Burke had said tht Sublimity stretched the nervous fibres beyond their normal condition, while Beauty relaxed the same to below their usual tone. The Picturesque, then, was a property in its own right, which fell between the two extremes and so kept the fibres at their full and natural tone, correcting the tensions of Sublimity and the langour of

Beauty. In addition, Price gave much importance to the association of ideas: for example, youth was connected to Beauty because smoothness of line and fresh delicate colouring belonged to both, while the rugged lines and more dramatic colouring of the Picturesque denoted age and decay. In contrast, Price's main opponent, Richard Payne Knight, gave such associations a minor role, and in seeking to reconcile the Picturesque with empirical thought, arrived at the abstract solution already described. For Knight, the Picturesque was not a separate category but a sub-species of the Beautiful which covered all the properties of landscape having the ability to give sensual pleasure to the organs of sight. He was not sure, in physiological terms why this pleasure should arise, but thought that it might be because the Picturesque irritated the eye to just the right degree.[167]

Price and Knight engaged in a public debate over these and other related points,[168] which proved to be so complicated and pedantic that it began to give the aestheticism of landscape a rather unfortunate reputation both among the upper classes in general and within the developing philosophical discipline of aesthetics. This was not helped by certain patent absurdities which emerged from the ratiocinations of the two protagonists. Price managed to reach the conclusion that the Beautiful was ugly by arguing that Beauty, with its smooth, gentle, undramatic characteristics, produced excessive langour when unmitigated by Picturesque elements, and was therefore ultimately boring and insipid. On these grounds, Price castigated the designs of Capability Brown, who had consciously sought to realise the Beautiful, and Humphrey Repton (1752-1818), in leaping to Brown's defence, was drawn into the fray.[169] That Repton, first and foremost

a gardener, was unconcerned with philosophical/psychological questions, took little account of the tenets of landscape painting except as he had inherited them through the now established profession of landscape gardening, and denigrated the very idea of the Picturesque, further added to the confusion.

So, by the begining of the nineteenth century, writings on the aesthetics of landscape had degenerated into such a state of wrangling that they appeared increasingly ridiculous to the reading public, and probably consituted yet one more factor encouraging public rejection of the dryness and reductionism of aestheticism in favour of the richness and elaboration associated with the Romantic movement.

As well as provoking something of a backlash against the pure aesthetics of landscape among a wider audience, and perhaps partially as a result of this backlash, the Repton-Price-Knight controversies seemed to have the effect of persuading those inside the discipline of aesthetics that landscape was no longer a sufficiently respectable subject for their concern. Apart from several historical analyses of eighteenth century thought, no one who might be described as an orthodox aesthetician, trained in the concepts of art and philosophy, has devoted an entire book to, or produced an influential new theory of, the aesthetics of landscape since Richard Payne Knight in 1805. In the following 175 years, the discipline of aesthetics as a whole, attaining levels of theoretical complexity far beyond Price or Knight, has concentrated almost exclusively upon understanding the value of paintings, poetry, music and other objects created for some specific artistic purpose, while almost completely ignoring landscape.[170] So, for example, between its first issue in 1960 up to 1978, landscape in

the British Journal of Aesthetics, as far as has been ascertained, despite being occasionally brought in by authors to illustrate some point about artistic value,[171] has only merited three full articles: two of which are entirely historical,[172] while the other rejects the aesthetic concept of form and speaks instead of cultural heritage, social values and public attitudes.[173]

There have, of course, been one or two exceptions to the general avoidance of landscape within the discipline of aesthetics since Knight, the subject being given a chapter, or dealt with in passing, as part of some larger dissertation. The most prominent figure in this line is John Ruskin (1819-1900), whose five volume opus "Modern Painters", first published in the 1840s, was concerned with the proper appeciation of landscape painting. But, in the course of the discussion many hints were given as to how to view the landscape itself aeshetically. These were never presented systematically,[174] but the thrust of Ruskin's argument appears to have been an amalgam of neo-classical idealism with a natural scientific empiricism plus a strong dose of religious romanticism. Natural science had long been a theme in English culture, and, in the nineteenth century was a prominant force in landscape perception. It can only be observed here, however, that by the nineteenth century the meticulous observation of geological, botanical and zoological aspects of the landscape was well developed, and had even become an acceptable pursuit among the gentry, perhaps owing something to the empirical mode of thought propogated by the British school of philosophy. From this natural scientific standpoint, Ruskin proceeded to venemously attack the old landscape masters - Claude, Rosa and Poussin - for their botanical and geological inaccuracy, stating that the forms

represented in seventeenth century Italian landscape art bore little resemblence to the organic structure of natural phenomena.

But Ruskin did not reject the ideal landscape outright, he simply made a substitution by proposing that Joseph Mallord Turner (1775-1851) was the only perfect landscape painter the world had ever known, because Turner had mastered the technique of representing the smallest details of botanical and geological form and colour with precision, and was able to correct any deficiencies due to accident or disease so as to realise a kind of natural scientific ideal that was the province of God; and to come to this ideal was to be lifted to a higher moral plane.[175] What is interesting about Ruskin is that he did not reach the heights of influence gained previously by Claude or Gilpin. He was respected in the art world, where he developed a relationship with the pre-Raphaeltie movement, one of whose aims was also to depict landscape with scientific accuracy, and he did much to establish an acceptance among the lay audience for a painstaking adherence to biological and geological forms and colours in landscape paintings.

But Ruskin did not succeed in making Turner the master of nineteenth century aesthetic landscape. As has been seen, the cultural climate around aestheticism had changed dramatically over the years, and Ruskin was not helped by an atrocious writing style, nor by the fact that there was no longer a single, or at least limited number, of conventions among professional landscape painters. Throughout the nineteenth century, Turner could be compared successively with Constable, Millais, Landseer, not to mention Renoir, Monet, Cézanne and Van Gogh, all of whom had perfected their own techniques and subject matter, and all of whom, had their supporters and detractors.

It was no longer possible, then, to take one painter's or one school's, interpretation of landscape as a general aesthetic standard, and it became even more impossible in the twentieth century when landscape painting became so divided that few art historians have attempted any sort of overall analysis, and some, faced with abstractionism, surrealism and other peculiarities pronounced the end of landscape painting as an art altogether.[176]

Given this situation and, of course, the many intricate modern philosophical developments, it is possible to understand why those few aestheticians who, in recent years, have touched upon landscape have paradoxically felt it necessary to downgrade the aesthetic terms of form, line, space and colour. Newton,[177] in his three chapters in which landscape is mentioned, declares that all the senses, not just the eyes, are involved and that natural objects are only beautiful in so far as they fulfill their function - a view presumably from natural science. An oak tree, for example, should be appreciated for its efficiency in producing acorns and so on, but when depicted by an artist it is transformed into an arrangement of masses and colours that can be appreciated aesthetically; thus, the painting is of quite a different order to the object it represents.[178] Hepburn,[179] too, makes the point that landscape cannot be judged according to the principles of art and that, since natural scientific knowledge, for instance of the geomorphology of an area, affects the manner of appreciation, pure aestheticism does not cover all landscape experience. Hepburn does not, however, offer any clear explanation of this experience, and at one point confusingly refers, in a way that is similar to Price's approach, to emotional associations aroused by forms and lines, although he does say that these are subject to

endless variation. A tree growing on a steep slope and bent over by the winds may appear tenacious and grim, but from a greater distance, when the view includes many trees like it, the stippled pattern on the slope may inspire a sensation of cheerfulness.

Where, then, if those who might be called aestheticians are not much interested in it, is the aesthetic landscape today? How widespread in English society is the tendency to see the countryside as a picture? Howard Newby[180] suggests that for many John Constable's paintings depict the ideal English scenery. Is it significant that on a warm, sunny Saturday in July last year, eleven people took one or more photographs from a position opposite Flatford Mill in the space of fifteen minutes? Why do tourists want to take photographs of 'beauty spots' and what are they looking at when they stop at 'viewpoints'? Is it true, as Nan Fairbrother argues,[181] that travelling by car fosters an almost entirely visual appreciation of landscape? To what extent is attention generally given to form, line and colour? Who consciously connects them with feelings like tenacity, grimness or cheerfulness?

Of course, painters continue to ply their trade and, in a fashion that harks back to the heyday of Claude and Gilpin, they are occasionally cited as the custodians of landscape quality. Nowadays, seemingly without regard for the diversity of modern landscape art and the theoretical difficulties previously encountered by aestheticians, this idea is expressed most often from the specialist quarters of geography and landscape architecture. Peter Howard,[182] who was trained in the former discipline, states that the professional artist is a visual expert who is capable of indicating the kind of scenery that the rest of society will prefer in the future, while Michael Laurie, in a

textbook for landscape architects, says that:[183]

> "... dramatic scenic landscape or the picturesque combination of settlement and physiography are themselves potential resources that may be evaluated according to their uniqueness and the principles of the artist."

Curiously enough, it has been geographers, not aestheticians or art historians, who have produced new analyses of the aesthetic landscape in the twentieth century. Their training gives them a sensitivity for cartographic space and geological/geomorphological land form - the dome of the Lake District, the Thames basin, lines of communication, settlement patterns - which are easy to translate into aesthetic terminology. Perhaps this was the starting point for Vaughn Cornish and Jay Appleton.

Whereas only a few geographers seem to have taken an overt aesthetic path, the whole field of landscape architecture is steeped in aestheticism. The discipline tends to trace its roots back to the eighteenth century landscape gardeners, but only a very cursory mention can be made here of the aesthetic side of modern landscape architecture, there being plenty of others, including the technical aspects of design implementation and ecological considerations. Still even a glance at the literature produced by landscape architects reveals the emphasis they put upon the aesthetic landscape. That they are concerned with the eye,[184] visual quality or appearance,[185] visual character,[186] visual analysis[187] is quite taken for granted, and the constituents of this kind of landscape are, as ever, shape:[188]

"Landscapes have characteristic topographical shapes, based on their underlying geology. The shapes may be smooth and flowing, as in the agricultural areas of Devon. In West Scotland the strong-angled strata contrasts with the rounded drumlins."

line:[189]

"The basic land form should also be a determinant in the detailing of rural landscapes, the rule in nearly all cases being to work with rather that against it. Thus, roads should be fitted into the landscape by alignment with the general direction of the major land forms, ie with not against the contours. Field boundaries, however, should be with and also against the contours if they are to be visually acceptable, instead of diagonally across them..."

space:[190]

"Land and vegetation are the two main materials of natural landscape. Each, in a different way, contributes to those solid masses and open voids which made up any composition. In the case of the land itself, hills, mountains and convex forms make up the 'masses', while the valleys, plains and water surfaces form the obverse spaces or 'voids' of the composition .... Vegetation provides the 'masses' in the form of groups of trees and shrubs larger than man, and 'voids' of turf, low plants and farm crops which his eye can dominate."

and colour:[191]

"In the soft light of the British countryside the more subdued colours seen against a background of restful greens are most appropriate."

Years of training are required to perfect this way of seeing and to learn the many principles of composition stemming from it, so for the outsider the tenets of landscape architecture can be incomprehensible. Despite a short course in the subject, I personally cannot understand 'space', 'texture' or 'harmony', and this points to a problem inherent in the modern aesthetic view, given its historical antecedents, which has loomed particularly large as a result of recent attempts to evaluate landscape. The neo-classicist, Gilpin, who originally developed the idea that it was possible to compare different types of scenery systematically, was quite happy to accept that a sensitivity to aesthetic qualities only came with long and diligent study, and that the ignorant were simply ignorant. Now, in the more egalitarian political climate surrounding rural planning, which cannot therefore appear too elitist, the empiricist stance on aestheticism, that had been superimposed on the older philosophical foundation, would make things far easier if it could be substantiated. If everyone, however, uneducated, was psychologically conditioned to give their primary attention to form, line, space and colour, and perhaps make similar automatic emotional associations on that basis, the English landscape could soon be satisfactorily classified according to its aesthetic value. Unfortunately, so the argument goes in the report of the Landscape Evaluation Research Project,[192] the general public are inarticulate about visual qualities and tend to become involved in secondary considerations. Landscape architects, on the other hand, have been enabled by their training to see through such superficialities to the aesthetic landscape the general public really sees, and they have the aesthetic vocabulary to describe it. They can, therefore, together with landscape painters and perhaps certain geographically trained planners, make representative judgements when

comparing landscapes. Aesthetic experts, then are no longer above the common herd, instead they speak for it, but do they? If this thesis is aimed at any target, it is at the claims of generality made by those who adhere to aestheticism. The common herd seem to have other ideas about landscape, which they do not always reduce to form, line, space, and colour.

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VI THE INDIVIDUAL INHERITOR*

Individuality and particularity

Up to this point, amidst the effort to find some generality in understanding rural landscape quality, the role of the individual has been underplayed. There has been a quite unintentional implication that, for the purposes of discussion, the perception of landscape can be separated from the people who actually carry it out. This seems to be the inevitable outcome of any attempt at a general theory of some human characteristic because the field of enquiry is set so broadly that the individual will not come clearly into focus.

Unfortunately, but obviously, with regard to landscape perception at least, the contribution made by individuals, each at their particular time and place, cannot be passed over. They alone are responsible for the completion of the perceptual process, arriving at the particular landscapes 'in here'. They embody the genetic inheritance which gives form to the process, and they have created the cultural inheritance which supplies much of its content. In addition to these are such personal features as their dispositions, age, special interests, and so on.

Usually, whatever sympathy is expressed towards the fine detail of individualism, a move away from it is quickly sought as, for instance in this useful summary of the model of perception being used in this thesis:[1]

> "Perceiving the environment through all his [sic] senses, man, is required to interpret the various components (colours, movement, [shape] etc) which appear in the perceptual field. Hypotheses

* References p233-234 above

are formulated concerning each component and these are accepted or rejected on the basis of experience and intuition. Demanding order, man arranged the components or percepts into frameworks which are consistent with categories that exist or are acceptable to the individual. Although the framework will differ from person to person, many of its struts are derived from the group and culture to which the individual belongs."

And this analysis then concentrates upon some of the struts that individual frames of reference share.

This is a reasonable approach because if the individual and the particular are not immediately subsumed in a general argument only two courses remain open, both equally unsatisfactory. Either a series of all-embracing statements are made which then may be supported by a wide variety of illustrations.[2] Or lists of individual differences are provided which defy coherent discussion.[3] The few investigations that have been done into the effects of age and personality on landscape perception tend to suffer from one or other of these problems, and little that is conclusive has emerged. There is still disagreement over whether people's age after childhood influences the way they appreciate landscape,[4] while, as yet, there are no widely accepted definitions of personality types on which to base analysis of their relationship to landscape perception.[5] It is very likely tht such features cannot be examined in isolation from the whole particular and detailed context within which a person perceives landscape, and sufficient material is lacking for further consideration of the impact of adult age groups and personal temprament within a general framework.

Indeed, the rest of this chapter noticeably falls into the first of the traps mentioned in the last paragraph, that is, into making overall comments about points that are important to the individual, but which are devoid of substance. They will be kept, therefore, to a minimum. One of the intentions held during the preparation of this thesis was to deal with the individual as with culture - that the details of some personal biographies would be supplied to substantiate general points made in the same way that details of certain aspects of English culture have been elaborated. However, time has not been found to carry out this exercise, despite the fact that it is eminently feasible. The many letters of John Constable[6], for instance, could be used in this way, and a new biography of William Gilpin, exploring the development of his personal view of landscape and the way he promulgated it, is long overdue. There is no reason, of course, why such 'landscape biographies' need be confined to the famous and influential. Most people, when queried, are able to trace their particular preferences to a childhood experience, intellectual passion, or whatever.

Personal development

Everyone is born with the genetic complement that sets up the workings of the senses and the brain as well as preparing them to make use of experience gained by other members of their society. But newborn individuals do not come into their genetic and cultural inheritance immediately. Full sensory and intellectual abilities are not automatically present at birth, and nor can the communal knowledge required in the exercise of these abilities be absorbed instantaneously. Throughout life, but especially in growing from infant to adulthood, each individual must work constructively to develop perceptual skills.

A great deal of research has been done, inspired primarily by Jean Piaget,[7] into the development of the ability to perceive. Much of this work has been of a general and abstract nature, focussing on the growth of the conceptualisation of shape and space. However, some environmental psychologists, such as Gary Moore,[8] do recognise the influence of personal factors making for detailed variations in the development of individuals' modes of understanding. Developmental psychology is yet another discipline whose findings have implications for an understanding of rural landscape quality but which has not been explored with any depth in preparing this thesis. One vital point, however, must be noted. The majority of writers on the subject continually stress the need for interaction between the growing individual and their physical and social surroundings in the development of perceptual skills.

From very early on in life, each person becomes involved in a complex of interchanges between: their developing sensory and intellectual abilities; the natural and socially created features of the places where they spend their lives; and the realms of knowledge and social organisation belonging to the culture in which they live. These interactions allow the individual to actively construct a whole collection of conceptual schemes. Since some part of this collection must be employed if the individual is to perceive at all, its growth as a totality is equivalent to the growth of a world - a personal world.[9]

One person's world, however, cannot be portrayed as being entirely unified under a dominant conceptual scheme or set of completely consistent schemes. As an example, Seymour Wapner and his colleagues[10] have suggested that a man trained as a botanist might bring into play different aspects of his world in perceiving landscape when he is on a field trip and when on a picnic with his family. Thus, if culture is inherently pluralistic, so are each of the personal worlds that together comprise a culture. This diversity of frames of reference embraced by a single personal world owes a great deal to the diversity of material used in its construction. The particular physical and social surroundings individuals encounter during their lives present them with a varied mixture of experience to be assimilated into their developing collection of concepts.

Furthermore, out of all the combinations made possible by the scale of variation existing at the level of concrete detail in the physical and social environment, it is unlikely that the specific mix of experience gained in any one individual's lifetime is ever exactly repeated in someone else's. The pattern of life itself is selective,[11] being limited by the timing of birth and death; by restrictions on the path a body can trace in a lifetime; by restrictions on events that can be encompassed in one life; on the range of interests that any one person can follow in a lifetime; and so on. Therefore, the particular selection of experience upon which each personal world is built not only contributes to that world's internal diversity but to its uniqueness. Added to this, individuals occasionally make especially original constructions on the basis of their own pattern of experience which sets personal worlds even

farther apart from one another, unless the new construction is transmitted to others.

But, although considered as totalities they are unique, personal worlds are not mutually exclusive because the conditions of their development ensure that there will be overlaps between them.[12] As already indicated, a conceptual scheme derived by one person may be communicated to others, assimilated by them and subsequently pass into the cultural inheritance. To take a simple example, this is what has happened to the botanical system of classification produced by Carolus Linnaeus (1707-1778).[13] Thus, parts of each person's world are shared with various sections of the community while the whole personal world would seem to remain unique.

There are two factors operating at the level of the individual and particular which are often recognised as making great contributions to the development of individual concepts about landscape. Paradoxically, they may be seen to serve as promoting both the overlapping and the differentiation of personal worlds. Firstly, there is the sense of place, and secondly, the special interests to which people adhere.

Familiar places

It is an obvious fact of life that everyone starts from some particular locality or localities which they know extremely well from having been brought up there, or from residing there, or from regularly visiting there. This is true even now that members of some societies tend to be more geographically mobile and it becomes increasingly unusual for them to be born and spend most of their lives in the same district.

Mobility does not so much destroy a sense of place as to bring about other versions of something that is an inescapable part of the pattern of life.[14] This is why almost every approach to rural landscape quality eventually comes up against the often intense feelings that people have towards those places they have experienced at first-hand. Traditionally academics, at least, have often reacted to this encounter either by denying that familiarity with particular localities has anything to do with the appreciation of landscape,[15] or by putting a somewhat nostalgic interpretation of the sense of place on a pedestal.[16] Some attempt should be made to find a balance between these two, but, again, such a balance is probably obtainable only when some actual, detailed case is being considered.

Even so there does seem to be a common tendency for individuals to take the particular landscapes with which they are closely acquainted as archetypes, as reference points against which other places are compared. People interact with the physical and social surroundings of their own localities, and in doing so construct certain modes of understanding for use in perceiving landscape which will have at least some influence when taking in different places. To mention one probably extreme example: Ronald Paulson[17] has observed that John Constable attempted to impose the landscape where he grew up on other landscapes he encountered later. This might partially explain his failure to portray the Lake District adequately since the area was quite unsuited to the techniques he had developed in painting his native Stour Valley. That such deep impressions may be made by places which become familiar only in adult life must not be denied. Vincent van Gogh (1853-1890), after all, grew up far from Provence. But

places known in childhood, whether at home or on holiday, seem to be especially liable to transformation into personal archetypes.

Depending, of course, upon the circumstances of their upbringing, young children would seem to experience all the excitement and apprehension, rewards and disappointment of exploring new ground from a secure home-base as they construct their first collection of symbolic schemes for bringing order into the landscape 'out there'. The initial development of a personal world is closely akin to the discovery of the world itself, and it tends to have a peculiarly vivid and firm quality which ensures that vestiges of constructs made in childhood often remain with individuals throughout life. They become part of the individual's personal identity, an identity that to some extent will remain associated with the familiar places where it emerged.[18] Such places provide for personal development in at least three ways:[19] they offer direct experience of particular physical surroundings; they offer pre-existing means of understanding those surroundings to be learnt from family, friends and neighbours; and they offer the particular social surroundings that these other people engender. Not that the child will separate the human from the non-human attributes of a place. Knowledge of its physical details gained in play[20] intermingles with knowledge supplied by adults, for example, on the names of flowers or of streets, on who lives where, and on events in local and family history. The location of communal activities in which the child takes part will, in addition, reflect the organsation of their society. All work together so that the individual grows in detailed knowledge of that particular place, while the place has detailed knowledge of them.[21] Edmund Relph[22] uses the

key phrase: 'knowing and being known here', to express the closeness of the familiar place with personal identity. It may be observed, too, that children and members of subsistence societies seem to share in a recognition of some anthropomorphous spirit even in the non-human features of their locality;[23] a spirit which is capable of knowing, and perhaps responding to, them.

However, it would be a mistake to assume that, because childhood experiences have an important influence upon the content of each personal world, this content henceforth remains completely static. Adults will naturally structure, restructure and reject the various schemes in their collection which they first assembled as children. Their personal worlds will evolve in a particular way guided by such factors as the special interests they have developed. This applies to the sense of place as well. Over the centuries, certain members of subsistence societies have helped to create complex religious systems from a basic recognition of a spirit of place, while in modern English culture, for example, the feeling for place has been cultivated most assiduously by novelists, poets, literary critics, and lately by human geographers taking an interest in literature. The genius of childhood only persists into adult life in a specialised condition.

Special interests

The cultural inheritance made available to each individual growing up in society consists of a vast and variegated mixture of major and minor specialised constructs. Even in the simplest of societies, no one person could possibly become a specialist in every aspect of their culture. Individuals must select which strands of knowledge they are to pursue - which of their conceptual schemes will become the most elaborated during their lives. Everyone, then, becomes an expert in some things, whether these are recognised in society as having academic, professional, or another type of standing.

Considerable work in recent years has been done on the differences in outlook between acknowledged experts and 'lay' people within one culture,[24] as well as between individual experts in the same field.[25] Disagreements have been found common in both instances. To take one example:[26] in the southern states of America, certain forests are suffering attacks from the Southern Pine Beetle which initially cause the trees to turn orange-brown in colour. To foresters this presents an unpleasant appearance because they see it as a sympton of insect damage. But those people who do not realise the cause may actually prefer the discolouration, equating it with autumnal tinting. Of course, autumn leaves were not usually admired themselves until the Picturesque movement gained sway.[27]

That each person developes specialist interests is an observable fact, and, given an appropriate lens, the resulting diversity of landscape appreciation may also be observed. But why does the individual choose to follow one strand rather than another within the web of culture that surrounds them? Four interacting factors can be mentioned in

answer, although other factors should not be excluded. A much more substantial treatment of these four points would be possible if a particular biography - 'life history' - was being studied.

First, there is the contribution that place can make in an individual's choice of speciality. John Constable's remark on the Stour Valley: "these scenes made me a painter," is often quoted. Presumably this includes reference to love of the area itself - every stump and stone - but might be extended also to the character of light in the Stour Valley which artists still find unusual, and which gives a peculiar clarity to textures and colours.* Then there is the contribution made by people with whom the individual has contact who communicate enthusiasm for the personal interest. Some owe the choice of speciality, for example, to a parent or lively teacher. At East Bergholt, the young Constable became great friends with the local plumber and glazier whose hobby was painting, and they would go on expeditions together. Moreover, there has been a professional painter in every subsequent Constable generation.

Thirdly, there is the important factor of the social class to which the individual belongs. This not so much governs choice as affects the availability of choices, and the way a speciality is developed once selected. Berger and Luckmann[28] provide a more than competent analysis of this factor. As illustration: Constable was a miller's son. He was given adequate education, for the time, at local schools,

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* The lower Stour Valley, Dedham Vale, has attracted painters since the late nineteenth century, and several residents were interviewed during a short period of field work in 1979.

and the family business was able to support him, though not in luxury for some years until his paintings yielded sufficient income.

Finally, the individual may discover a certain aptitude, if not outright gift, for a particular line, which they may then make their work or hobby. It is not for this thesis to delve into the sources of talent, but, if of a creative sort, talent further distinguishes individuals from one another. Constable's paintings are unique, however well the skills he developed are copied. Even the very similar paintings of his son, Lionel, are now being identified more accurately.

Creativity

Creativity on the part of individuals is the source of all cultural change, whether the innovators go down in the annals of history or remain forever nameless. The originality comes in effecting some revolution, large or small, within existing conceptual frameworks, although the revolution can appear in various guises. Some arise from necessity in adapting to alterations in the physical or social environment - perhaps a drought or economic recession. Some spring from a rejection of established concepts; others crystallise aspects drawn from strands not previously brought together; while a very few seem to be brought by a genius from nowhere.

By nature, each individual is continually seeking innovation, to a greater or lesser degree, but whether the innovation works, let alone is passed on and incorporated into others' personal worlds, depends on whether it is made at the right time, in the right place, and in the right culture.[29] Experience in the field of landscape perception alone

suggests true novelties are few and far between. There is nothing new under the sun,[30] but many conceptions are lost at the time of their first formulation for lack of applicability. Even if one individual is capable of questioning what they take for granted and trying something different, other people may not be prepared for the disturbance and loss of assurity entailed in challenging concepts on which they have depended, often for many years.

There is a constant tension, noticed by nearly all writers on landscape perception, between the desire to venture into the unknown and the desire to remain safe and certain; between 'prospect' and 'refuge', between intimations of disorder and the order of the accepted.

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EPILOGUE

The instant of perception

Seaside Golf

How straight it flew, how long it flew,
It clear'd the rutty track
And soaring, disappeared from view
Beyond the bunker's back -
A glorious, sailing, bounding drive
That made me glad I was alive.

And down the fairway, far along
It glowed a lonely white;
I played an iron sure and strong
And Clipp'd it out of sight,
And spite of grassy banks between
I knew I'd find it on the green.

And so I did. It lay content
Two paces from the pin;
A steady putt and then it went
Oh, most securely in.
The very turf rejoiced to see
That quite unprecedented three.

Ah! seaweed smells from sandy caves
And thyme and mist in whiffs,
In-coming tide, Atlantic waves
Slapping the sunny cliffs,
Lark song and sea sounds in the air
And splendour, splendour everywhere.

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Appendix 1

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