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Editorial policy is to include articles, reports, reviews, dissertation and research seminar abstracts concerning a wide range of landscape-related issues. Papers with a bias towards any aspect of rural landscape, landscape education or computer use are of particular interest. Contributions are welcome.

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IS THE COMPUTER DEBASING DESIGN?

THE REVOLUTION we are currently enjoying, some might say enduring, in landscape architecture is based upon the application of computer technology and its associated quantification to a broad range of landscape issues. As in the wider world, no facet of our activities appears immune to the infiltration by computers. To the cognoscenti there is nothing mystical about such machines and the precision that is gained through the use of numbers is regarded as a worthwhile ingredient in design matters. On the other hand, for many landscape architects ignorant of the technology there exists a difficult dilemma of principle to resolve: should one forever shun the computer in whatever guise born out of the Artist's revulsion of anything mechanical or artificial, or should one acquire a 'token micro' in the belief that efficiency of practice will be seen to be promoted?

Two distinct levels of computer application can be conceived in the context of landscape architecture. The first is the fundamentally administrative use in an 'automated office' whereby such activities as word processing, reference systems and specification writing might be the most common. Here the problem of acceptance is due more to the 'shock of the new' than to any notion of inappropriateness in the innovation, and a steady gain in popularity of the technology, after an initial rejection by the prophets of doom, can be considered equivalent to that experienced after the introduction of the typewriter and telephone into normal office practice.

The second level is the field of computer-aided design (CAD) and here the objection is more acute since it is based upon the thesis that the essential creative process that has dwelt for so long in the heads of designers will be devolved to the pre-programmed computer. The perceived outcome is the standardised and unsympathetic solution which debases the whole or certain parts of the design. Although there does not exist at present an 'intelligent' machine that can think through a design in the traditional sense, ought we to resist all presently available applications including the mere number crunching facilities (such as in cut-and-fill calculations), specialised retrieval systems (as in plant selection), visualisation techniques (in terrain modelling) and 'interactive' sketch design displays

(colour paint-box and texturing)? Or do we regard these developments as an unacceptable thin end of the wedge?

Many experts in the computer field are predicting that current research into the so-called fifth generation computers will ultimately throw up a machine possessing artificial intelligence (AI) which will simulate the 'fuzzy logic' of our own brain processes. However if John Searle is to be believed from his recent Reith Lectures this fear of the ultimate submission to computers is ill-founded. His argument is that digital computers are incapable of thinking, that it is through syntax not semantics that they operate, that thoughts, feelings and emotions are features that the computer will remain unable to duplicate.

Given this base-line, one might confidently employ the computer in a variety of routine tasks, in the expectation that the time so released can be made available to higher-level design decisions. The computer in this sense is merely a means to an end, a tool in the design process. The flaw in this argument however is that there is no guarantee that this extra time will be profitably used or that computer-derived solutions are not slavishly adopted.

So what is the prospect? No one wants to be bypassed by a new technology, yet it is clear that all the hype and jargon that has bombarded us for the past two or three years has succeeded in making computer technology completely incomprehensible to many potential users. A mathematical background is no pre-requisite for computer literacy, and computer programming is certainly within the scope of designers. Since there is a need for software to do what the designer wants when he wants, it is common sense and desirable that the designer takes an active role in its production. 'Expert systems' have to be designed by experts. This does not mean that designers must learn to program, merely to understand the principles involved, the way the various computer components operate and to be aware of current applications and likely future trends. In the words of Aart Bijl, "computers offer designers a new mode of working by improving their access to information. Computers should make information more visible and more easily manipulated by designers." In essence practitioners and educationists need not feel threatened by the computer but must learn to understand its potential, since they alone can influence the future development of the technology to the benefit of the landscape profession.

CONSERVATION AND RECREATION PRIORITIES IN THE RURAL LANDSCAPE

N.R. Curry

1. Introduction
2. Conservation and Recreation in National Policy
3. Conservation and Recreation in Strategic Policies
4. Conservation and Recreation in Countryside Management
5. Public Attitudes towards Conservation
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1. INTRODUCTION

Although recreation and conservation in the rural landscape are by no means mutually exclusive, this paper shows that public policy at all levels places a clear priority on conservation rather than recreation. In the main conservation is seen as an objective of policy and recreation as a land use problem.

In stark contrast to this policy balance, public attitudes towards conservation and recreation in the countryside clearly favour recreation. Not only is recreation more popular in the rural landscape but conservation interests also appear to originate from a much narrower, more privileged sector of the population. In terms of recreation and conservation priorities then, there is a stark divergence between public policy and public opinion.

Evidence used in identifying relative attitudes towards recreation and conservation comes from a new large

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household survey conducted by the Countryside Commission throughout 1984. A wide range of results from this National Survey of Countryside Recreation inevitably will have an impact on recreation policy emphases both nationally and locally. It is argued in the conclusions to this paper that professional attitudes towards policy formulation for, and the management of, conservation and recreation in the rural landscape should more closely reflect public attitudes than professional philanthropy. Policy should adopt a much more positive and promotional role towards countryside recreation and the value of conserving the rural landscape should be more clearly stated.

2. CONSERVATION AND RECREATION IN NATIONAL POLICY

The raising of conservation priorities within national government and its agencies has proceeded throughout the 1970s and into the 1980s. Two main movements have encouraged this trend. The first has been increasing capitalization in agriculture, particularly since accession to the E.E.C., and the adoption of the Common Agricultural Policy. Policies of agricultural intensification have created an increasing awareness of rural landscape deterioration through hedgerow and hedgerow tree losses, the standardization of farm buildings and the ecological consequences of monoculture (Bowers and Cheshire, 1983). Landscape deterioration over such a short space of time inevitably has led government departments and quangos to consider mechanisms by which 'traditional' rural landscapes might be conserved.

A second major movement, fuelled by agricultural policy, has been the 'politicization' of pressure groups (Lowe and Goyder, 1983). Governments have been lobbied increasingly effectively during the last decade about the importance of conserving just about everything that could be considered to be in some way 'natural'. Possibly because of its accessibility to a wider public, the rural landscape has been at the forefront of 'things to be conserved'. And the pressure exerted on government by minority environmental interest groups to bring conservation into the centre of the political arena has been made all the more effective by the forceful writings of polemical authors such as Marion Shoard (1980) and Richard Body (1982, 1984).

Agriculture and environmental pressure groups, then, have caused government to give serious consideration to positive conservation measures in rural policy. Slightly

earlier than these developments, the seeds were being sown for the development of restraint measures for recreation in rural policy.

The rapid expansion in car ownership and countryside trips in the 1960s gave grave cause for concern about the capacity of the countryside to hold such a volume of visitors. The three 'Countryside in the 1970s' conferences during the 1960s set the theme for recreation policy into the 1970s and 80s. Fitton (1979) sums up the ethos of these conferences with a number of quotes from the second conference (Council for Nature, 1966). For example:

"Almost complete destruction of vegetation is taking place where the public congregate at weekends in large numbers....some control is necessary unless the places they wish to visit in large numbers are destroyed".

In the 1970s, similar concerns were expressed to the House of Lords, where even agriculture was considered to be under threat from recreation. (H.M.S.O. 1973):

"There will be certain parts of the country within less than a generation where one will have to accept that it is no longer possible to farm at all, because of public pressure to come and look".

At the same time as the development of promotional policies for conservation and restraint policies for recreation, government was developing a clear priority for conservation relative to recreation. Perhaps the formal starting point for this prioritization was the Report of the National Park Policies Review Committee (Sandford 1974) which proposed that specifically for national parks and only where the two are in unavoidable conflict, should conservation take priority over recreation, in policy formulation.

By 1976 this ethos had not only permeated policy proposals for the wider countryside, but also had begun to be reflected in the organisational structure of government quangos, notably the Countryside Commission. The Civil Service Review Committee on the countryside (Countryside Review Committee, 1976) also saw countryside recreation as a 'threat' to the conserved landscape and proposed that it should be 'controlled' by careful management. Clearly by this time, then, conservation priorities over recreation were becoming established.

This priority has become more entrenched in the 1980s

with the increasing political popularity of conservation developing from the notorious drafting, redrafting and passage of the 1981 Wildlife and Countryside Act (Clove and Park, 1985, Chapter 11). The priority of conservation over recreation is now given formal sanction in the Countryside Commission's prospectus (1982, p5) issued as a policy statement at the time of their change in status from a civil service to a 'grant in aid' body:

"Proportionately rather more of our resources will go into conservation" although, "recreation and access will continue to receive a very substantial part of our funds".

Nationally, then, policy for the rural landscape gives a clear priority to conservation relative to recreation. This priority has been developed and accentuated since the early 1970s.

3. CONSERVATION AND RECREATION IN STRATEGIC POLICIES

These policy priorities at a national level have been reflected by and developed in, policies at a county level. This can be seen in structure plan policies but more particularly in the development of recent countryside local plans of either a statutory subject plan nature or of an informal type.

Little comprehensive analysis has been undertaken of conservation policies per se in structure plans although the Nature Conservancy Council currently is undertaking a review of the nature conservation component of structure plans.

Generally, in the structure plans of the shire counties at least, conservation is seen as an objective of rural policy and a number of mechanisms are proposed as a means of maintaining both landscape and nature conservation values. These include conservation designations within which stricter development control policies are proposed. Blacksell & Gilg (1981), for example, observe more stringent development control policies within national parks and Areas of Outstanding Natural Beauty, than elsewhere.

Penning-Rowsell (1983) lists twelve different types of policy component in structure plans, based on a survey of 44 County Councils, relating to the pursuits of landscape conservation. These range from extending protected area status such as Green Belts and Areas of Great Landscape Value to the development of informal management schemes.

Selman (1982) too, identifies a number of issues raised in the use, by County Councils, of more methodological approaches in the preparation of structure plans, that concern the pursuit of conservation objectives.

The recreation component of structure plans, however, seems to characterise recreation in a much more negative way. Again, Fitton (1979) notes that at one extreme, strategic policies, particularly in shire counties adjacent to conurbations, clearly pursue the exclusion of recreation. In Fitton's words:

"The Interim Planning Policy for North Buckinghamshire suggests, for example;

"If recreation pressure can be intercepted as near as possible to its source, the danger of conflict with the amenities of local residents will be avoided".

In discussions about countryside recreation, the use of terms like 'destroy', 'explode', 'pressure', 'intercept', 'filter', 'containment', make the activity sound more like some set piece battle than a description of people seeking to enjoy themselves".

In structure plans, therefore, conservation appears to attract attention as a rural characteristic to be pursued and developed whereas recreation is to be controlled or even reduced.

This attitude is also reflected in the development of local plans for the countryside. A large number of local plans have been produced, mainly by County Councils, in the late 1970s and 1980s, for the open countryside. In the main they are concerned to develop structure plan policies into implementable policies. A survey by McNab (1985) again shows the conservation orientation of these plans.

The most common type of rural subject plan, in fact, relates to the control of minerals development. Outside of this, however, a majority of plans are concerned with the implementation of positive conservation policies. These frequently relate to Green Belts, but can range from 'Wildlife and Habitats', (for example, Barrow-in-Furness Borough Council, 1980) through 'Special Landscape Areas' (Clwyd County Council, 1979) to a wide range of conservation policies for a whole county (Cornwall County Council, 1983).

Within these conservation orientated plans, recreation is

often mentioned, but invariably in the context of restriction and control. Cornwall, for example, develops the notion of 'Tourism Restraint Areas', where recreation and tourism will not be further encouraged so as not to further degrade the landscape. Within these subject plans, only a minority relate to recreation directly, and here again, plans with a dominance of control policies (for example, Humberside's (1980) 'Coastal Caravans Plan) are more common than plans mainly concerned with positive promotional policies for recreation (for example, Suffolk County's (1976) 'Gipping Valley Countryside and Recreation' plan).

4. CONSERVATION AND RECREATION IN COUNTRYSIDE MANAGEMENT

National, strategic and local policies and plans all provide an emphasis on positive conservation and, in the main, recreation control. This relativity is also reflected in the nature of countryside management.

The management of conservation areas has clear conservation priorities. This extends from the scale of Areas of Outstanding Natural Beauty, which have a statutory conservation remit but not a recreation one, down to designated sites such as Sites of Special Scientific Interest and National and Local Nature Reserves. In all of these types of area, both habitat and landscape management are pursued for conservation purposes and there is a degree of exclusion of countryside recreation. The public often have restricted access to these areas by being limited, certainly in the case of smaller sites, to guided tours or 'open days'. Attendance at 'open days' in areas such as these is considered further in the following section.

In the case of management at recreation sites, however, such priorities are not as clear. Even in national policy (Countryside Commission, 1974), management for sites such as Country Parks is encouraged to have specific regard to conservation objectives, and even may determine whether a park should be broadly conservation or recreation orientated (page 3).

Management plans for such sites certainly reflect this encouragement. The bulk of the management plan for Crickley Hill Country Park, for example, (Curry, 1982, Part 3) is concerned with conservation measures for specific areas and habitats within the park. There are even proposals for restrictions on public access where the habitat is considered particularly sensitive. In one possibly extreme case, a country park management plan

gives clear priority to conservation objectives above those of recreation. The following, from the Frencham Country Park, Signpost 2000 report by Hambleton District Council (1973) is quoted in Slee (1982a):

"The first priority must be to retain the existing landscape topography and vegetation in its existing form and subsequent uses must be subordinated to this ideal".

It has been argued elsewhere (Curry, 1985) that this imbalance in recreation and conservation objectives for recreation and conservation sites can, in part at least, be attributed to a dominance of a conservation philosophy in the training of countryside managers. It is only recently that this conservation/recreation balance has begun to be reappraised in the training of countryside managers (Slee, 1982b).

There is clear evidence, then, that from national policy down to site management, policy makers and implementers accord a much higher priority to conservation objectives than recreation ones in the development of the rural landscape. But how does this priority relate to public opinions about recreation and conservation? The following three sections seek to establish both the degree of interest in recreation and conservation on the part of the public at large, and the relative interest in recreation, compared to conservation. Use is made of results from the 1984 National Survey of Countryside Recreation as well as other sources, in examining these issues.

5. PUBLIC ATTITUDES TOWARDS CONSERVATION

An understanding of public attitudes towards conservation is a little more sketchy than that of attitudes towards recreation. There is no comparable survey for conservation to the Countryside Commission's National Survey of Countryside Recreation. Levels and types of interest in countryside conservation on the part of the public, can, however, be considered in a number of different ways. Some information, for example, is available about general interest in conservation; the membership of conservation groups; the social composition of conservation interests and, to an extent, the visiting of conservation sites.

A general interest in conservation can be seen in the increasing growth of interest in the Ecology Party in England and other green parties in Europe. Commentators have noted generally the 'greening' of politics during

the 1970s (Town and Country Planning Association, 1979). A popular interest in conservation, too, can be seen in mass culture. Wildlife and countryside programmes on radio and television are among the most popular. Some 9 million people watch 'Wildlife on One' and wildlife programmes generate the highest levels of audience satisfaction (Blunden and Curry, 1985, Chapter 4). Sentimental attachment to wildlife and landscape are extensively used by advertisers to sell most types of product.

More specific evidence of public attitudes towards conservation comes from an opinion survey conducted in 1983 (World Conservation Strategy, 1983) with nearly 2,000 members of the public. Here, 53% of respondents said they would support an increase in income tax of one penny in the pound to pay for measures to protect wildlife and the environment. Twenty-six per cent said they would oppose such a move. A similar survey by Cotgrove (1982) found that 64% of people favoured raising taxes to protect the environment, and 19% were opposed to it. Thirty-one per cent said they had donated money to a conservation charity over the last twelve months and 4% claimed to belong to a conservation organisation. These indirect indicators provide a reflection of the popular interest in conservation.

The membership of conservation groups provides a second indication of conservation interest. The combined membership of nature and rural conservation groups in England and Wales is about one million, a figure which does not include the 1,140,000 who belong to the National Trust. In 1978, for example, the County Naturalist's Trusts had a combined membership of 121,000 and the Royal Society for the Protection of Birds had a membership in excess of a quarter of a million (Countryside Commission, 1979). Some idea of conservation interest, then, can be generated by looking at general factors exhibited by the public and by the membership of conservation organisations. But are these interests representative of a wider population? In fact, the vast majority of members of conservation groups are middle class. Most groups have a strongly upper middle class membership (the R.S.P.B. being an exception - membership is mainly lower middle class). (Blunden and Curry, 1985, chapter 4).

The membership of more radical conservation groups such as Friends of the Earth and the Conservation Society are still identifiably middle class but their radicalism is reflected in a younger membership. They are also well educated: a majority of both of the above groups, for

example, have degrees (Lowe and Goyder, 1983).

This 'middle-classness' of conservation organisations could just be a reflection of the propensity of the middle classes to join organisations rather than just be interested in the environment. Certainly, on a priori grounds it might be expected that poorer people, who tend to live in the most degraded environments would be environmentally the most militant. This, however, is certainly not reflected in the membership of environmental groups.

Lowe (1983) quotes Anthony Crossland (1971) in an attack on this exclusive middle-class preserve, maintaining that environmentalists are affluent people who:

"want to kick the ladder down behind them. They are militant about threats to rural peace and wildlife and well loved beauty spots: but little concerned with the far more desperate problem of the urban environment in which 80 per cent of our citizens live".

Lowe himself makes suggestions for overcoming this middle-class image - "broaden recruitment efforts", "make greater use of the mass media", "change the image of 'the society' to that of 'the club'", "dismantle the barbed-wire mentality". But this sounds little more than coercion and middle class tactics, particularly when the motivation behind it seems less of a genuine interest in spreading the environmental gospel than making public expenditure on conservation look less like a progressive tax. This evidence reinforces conservation as a middle class concern and lends support to Newby's (1979) notion of the conservationist as a "nature loving Hampstead Fabian".

Public popularity and the level and structure of conservation group memberships, then, give some insight into broader notions of conservation interest. A final type of evidence about the popularity of conservation, although partial, comes from surveys of visits to conservation sites. Bull (1980) undertook surveys of visits to five 'open day events' at nature reserves in Bedfordshire and Huntingdonshire in 1978. He maintains that visits to these events provide a better reflection of interest in conservation than the membership of organised groups. He observed a high level of visits to all events and nearly all of these visits were made on the basis of a specific decision to visit the site rather than a chance occurrence. In all observed cases, only between 9% and 25% of visitors were members of the

appropriate Country Naturalists Trusts, the organisations who ran the events.

The discussion in this section has centred on making use of indirect evidence, to determine some idea of the extent of public attitudes towards conservation. It may be claimed that conservation interest is widespread although tends to centre among the relatively affluent middle-classes. Public interest does extend beyond the membership of organisations as the visitor surveys indicate, but little is known about the social characteristics of those 'casually' interested members of the public.

Of interest now to the argument developed here is the relative public interest in recreation compared to conservation to the extent that it can be perceived. It is this relative interest that will be used to evaluate current policy priorities on the part of both central and local government.

6. CONSERVATION AND RECREATION : RELATIVE PUBLIC VALUES

The site surveys carried out by Bull, discussed above, also give some indication of the relative importance of recreation and conservation, to the public. He notes a "remarkable" similarity in the number of visits to nature reserve 'open day events' compared with country park and picnic site visits. Presumably, the thing that is remarkable is that the visits to nature reserves are so high. Bull himself offers reasons for this possible distortion. Firstly, specific events will always attract more people than general resource availability. Second:

"Of course, country parks and picnic sites are always open to the public, and the large numbers of visitors at some of the nature reserves could well reflect a certain amount of novelty value".

Thirdly, Bull admits that visits to these nature reserves may be unusually high because Bedfordshire and Huntingdonshire are within a region where there is little public access land.

There is a strong implication in this information, therefore, that at least in terms of site visits in this part of England, recreation is a more popular leisure time pursuit, than conservation. Is this reflected in the wider results of the 1984 National Survey?

Returning again to the membership of organisations, the

national survey asked about membership to both conservation and recreation organisations. Table 1 below indicates the results of this question for the whole of the survey (a sample in excess of 6,000 households).

Table 1 Membership of Recreation and Conservation Organisations: Analysis by Occupation of Head of Household

ORGANISATION	OCCUPATIONAL GROUP							
	A	B	C1	C2	D	E	UE	TOTAL
National Trust	20	16	7	3	2	2	1	5
R.S.P.B.	13	10	5	2	1	1	1	4
Other Amenity / Wildlife	6	6	3	2	1	*	1	2
Ramblers Association	2	1	1	1	*	*	*	1
British Horse Society	4	1	1	*	*	*	*	1
Cyclist Touring Club	1	*	1	1	*	*	0	*
Camping & Caravan Club	2	3	2	2	2	*	1	2
Caravan Club	3	4	2	1	1	1	8	2
Youth Hostels Association	4	5	3	2	1	*	1	2
Countryside Holidays	0	*	0	*	*	*	*	0
Other Outdoor	9	8	5	3	3	2	1	4
Girl Guides & Scouts	8	9	7	5	4	2	4	6
None	59	57	74	83	90	95	92	80

(Source:1984 National Survey of Countryside Recreation)

Notes

- All figures in percentages.
- Columns do not sum to 100 since respondents may belong to more than one organisation.
- Occupational groups defined as:
 A=high managerial, administrative or professional
 B=intermediate managerial, administrative or professional
 C1= junior management, administrative or professional, or supervisory or clerical
 C2=skilled manual
 D=semi-skilled
 E=unskilled
 UE=unemployed
- * =figures aggregate to less than 0.5%

The responses are analysed here by the occupational status of the head of the household. A number of points may usefully be drawn from this table. If the membership of the National Trust is held to represent a joint conservation and recreation interest, then the total membership of organisations favours recreation rather than conservation groups. Even if the National Trust is considered dominantly a conservation organisation membership of organisations still marginally favours recreation groups.

If membership is considered across occupational status, membership of both recreation and conservation groups is more common, in percentage terms, across the higher status occupational groups, from the lower status ones. Significantly, however, the distribution towards higher status groups is much more marked in the membership of conservation organisations, than recreation groups. It does seem then that there is evidence from the 1984 National Survey to suggest, at least in terms of the membership of organisations, that recreation is more popular than conservation and that this interest is spread more broadly across the population. In general population terms, however, it must be noted that membership of both recreation and conservation organisations is very much a minority activity.

But if membership is a minority interest, what about the relative popularity of conservation and recreation activity? Here again the National Survey is informative. Table 2 indicates across the whole survey period the proportion of respondents who made trips into the countryside in the previous month to their interview.

Table 2 Activities on Countryside Trips

ACTIVITY UNDERTAKEN	% of respondents making trips	% of trips
Visiting coast/cliffs (not resort)	24	9
Historic buildings/museums	22	4
Country Parks	16	4
Zoos, safari parks	8	1
Nature Reserves	7	2
Drives/Outings/Picnics	57	20
Long walks greater than two miles	36	19
Fishing	5	2
Horseriding	2	2
Shooting	2	*
Hunting	*	*
Organised Sport	14	7
Informal Sport	21	11
Watching Sport	13	3
Visiting Friends and Relatives	38	13
Conservation/Recreation Voluntary work	1	*
Pick Your Own	14	3

		100

(Source:National Survey of Countryside Recreation, 1984)

Notes.

- All figures in %, as mean percentages of the six survey months of the full survey.
- '*' =figures aggregate to less than 0.5%.

The table examines the types of activity that people undertook and also the total number of trips that were made for each activity. Obviously because respondents may have made more than one trip in the previous month, the total of respondents undertaking different activities, sums to more than 100%.

From these activities undertaken only four could be considered to be trips dominantly for conservation interests - visiting historic buildings and museums, visiting zoos and safari parks, visiting nature reserves and conservation voluntary work. Together, they account for only 7% of all trips made in 1984. Ninety-three percent of trips to the countryside then seem to be for recreation rather than conservation purposes.

In addition there is a minority of the population, by and large, that undertake these trips. Although visiting historic buildings and museums is the fifth most popular of the seventeen activities stipulated, only four active sport activities seem less popular than visiting zoos, safari parks and nature reserves.

These activity patterns also have been analysed in terms of which sectors of the population undertake which type of activity most frequently. Rather than using the occupation of household heads, in this instance, activities were analysed by neighbourhood type. This type of classification, known as the ACORN classification, distinguishes people by the type of housing in which they live. Although care must be taken in the interpretation of these data, visits to the countryside for conservation purposes do seem more closely correlated with housing quality than recreation trips.

Visits to nature reserves for example, are most commonly undertaken by people from high status non-family areas and affluent suburban areas whereas people from the poorest council estates and multi-racial areas are the least likely to visit such sites. In between these two extremes the proportion of visits does seem to relate to neighbourhood quality. This activity pattern, in contrast, is much less determinate when considered in the context of visits, for example, to country parks.

Recreation and conservation can be compared, then, by making use of the National Survey of Countryside Recreation. Three aspects of such a comparison have been undertaken in this section: membership of organisations, the social composition of recreation and conservation

interest and the relative popularity of recreation and conservation visits. The survey indicates that both membership of recreation organisations and the frequency of recreation trips are greater than their conservation counterparts. In addition, those people who express an interest in both conservation organisations and conservation activity come from a narrower, more affluent and higher-status section of the population.

These three aspects of interest were discussed in the context of conservation in section 5. In addition the public popularity of conservation was assessed. The following section completes this recreation/conservation comparison with an assessment, again using the 1984 survey, of the public popularity of recreation.

7. RECREATION POPULARITY IN 1984

An indication of the popularity of countryside recreation in 1984 can be seen if the sample is related to the 1984 population of England and Wales. Table 3 indicates the scale of recreation trips in 1984 in terms of all households and individuals in England and Wales.

Table 3 The Scale of Recreation Trips in 1984

MONTH	% OF SAMPLE MAKING VISITS	SAMPLE % AS No.OF	SAMPLE % AS No.OF
		HOUSEHOLDS IN E+W (MILLIONS)	INDIVIDUALS IN E+W (MILLIONS)
February	44	9.4	24.8
May	61	12.9	34.1
June	55	11.7	30.8
July	65	13.8	36.4
August	62	13.1	34.7
October	47	10.7	28.2

Notes

1 The 'Household' and 'Individual' estimates are based on 1983 household size estimates (C.S.O., 1985)

Not only did the percentage of people make countryside recreation trips in the months shown above, but the number of trips they made per month is also sufficient to indicate a very regular use of the countryside for recreation.

From table 4 below it can be seen that in July and August for example the average number of trips in households that make trips is in excess of two per week.

Table 4 The Intensity of Trip-making in 1984, by Month

MONTH	AVERAGE No.OF TRIPS PER MONTH PER HOUSEHOLD
February	5.8
May	7.1
June	7.2
July	8.4
August	8.6
October	6.7

Clearly then, if national trends can be inferred from the 1984 survey, countryside recreation is a very regular activity throughout the year for in excess of 20 million individuals in England and Wales. Indeed, during the four summer months May, June, July and August a majority of the population, in excess of 30 million people make regular use of the countryside. This would imply that countryside recreation enjoys a much greater degree of popularity than conservation, particularly if figures such as "some 9 million people watch Wildlife on One" (see section 5) are used as a means of justifying popular conservation appeal.

8. CONCLUSIONS

From recent evidence available from the 1984 National Survey of Countryside Recreation conducted by the Countryside Commission, a strong case can be made for both the very broad appeal of countryside recreation and for the breadth of its popularity, relative to conservation. The very popularity of countryside recreation, of course, implies, for it, the careful development of policies and management strategies. But need these be so restraint orientated?

Certainly the development of restraint policies took place in the fear of an uncontrollable recreation explosion, which never really took place, as a result of the slowing down of economic activity and the increase, in real terms, of petrol prices.

This slowing down in the rate of growth does allow the restraint ethos on the part of the policymaker to be reappraised. If careful management is required for countryside recreation, then certainly this could be more in accord with public popularity and be more positive and promotional. Conservation objectives rightly should have a role to play in recreation planning and management, but

they should be to enhance the recreation experience of the public and not, through exclusion, diminish it. All too often, conservation has been the master of recreation and not its servant and in the context it is difficult to understand the nature of conservation values. Conservation values, taken out of the context of human enjoyment, become very difficult to understand.

If these arguments for changing recreation and conservation priorities in the countryside seem too ethereal for the 'practical' policymaker, then another important characteristic should be considered. The positive development of recreation generates direct real wealth. The development of conservation does not.

In seeking a balance between recreation and conservation policies for the countryside, then, it is argued here that there is considerable potential for a reassessment of policy much more closely aligned to public opinion than currently seems the case. This would imply that policymakers are much more explicit about their relative importance of each in the context of other activities in the rural landscape.

ACKNOWLEDGEMENT

This article was written whilst the author was on secondment to the Countryside Commission. Thanks is due to Jeremy Worth, Head of the Commission's Recreation and Access Branch for comments on an earlier draft.

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ESTATE LANDSCAPES DEVELOPED FOR VISUAL EFFECT

J . St. Bodfan Gruffydd

THE FINANCE ACT of 1976 provides for tax relief for land of outstanding scenic, historic or scientific interest, and for land essential for the protection of the character and amenities of a building of outstanding historic or architectural interest. Interpretation, however, is extremely narrow, for it seems that developed estate landscape has not been included in the scenic category.

'Scenic', according to the Oxford English Dictionary, infers picturesque scenes artificially created, very much in accordance with the philosophy of the 18th-century landscapist, as early portrayed at Euston in Suffolk, where William Kent disposed clumps of trees across the heathland. He went on to extend the ambience of his landscape garden at Rousham in Oxfordshire, over an early ha-ha, to an eyecatcher that he built on the skyline across the Cherwell Valley, dressing up the mill in the mid-distance as a Gothic temple. In both cases, the scenic landscape of the park was deliberately extended to include ambient views to distant skylines. The fact that much of the intervening land was farmed was incidental, for the disposition of woods and copses as well as many of the farmhouses and buildings were all arranged as part of a park aesthetic.

Later, Capability Brown extended these ideas, and Repton came along with his well worked-out theories in his Red Books. Many of these landscapes are well documented; but for every garden and park with historical records there are many more for which no plan, picture or

Bodfan Gruffydd, Past President of the Institute of Landscape Architects and a landscape design and planning consultant, is the author of "Protecting Historic Landscapes".

description exists.

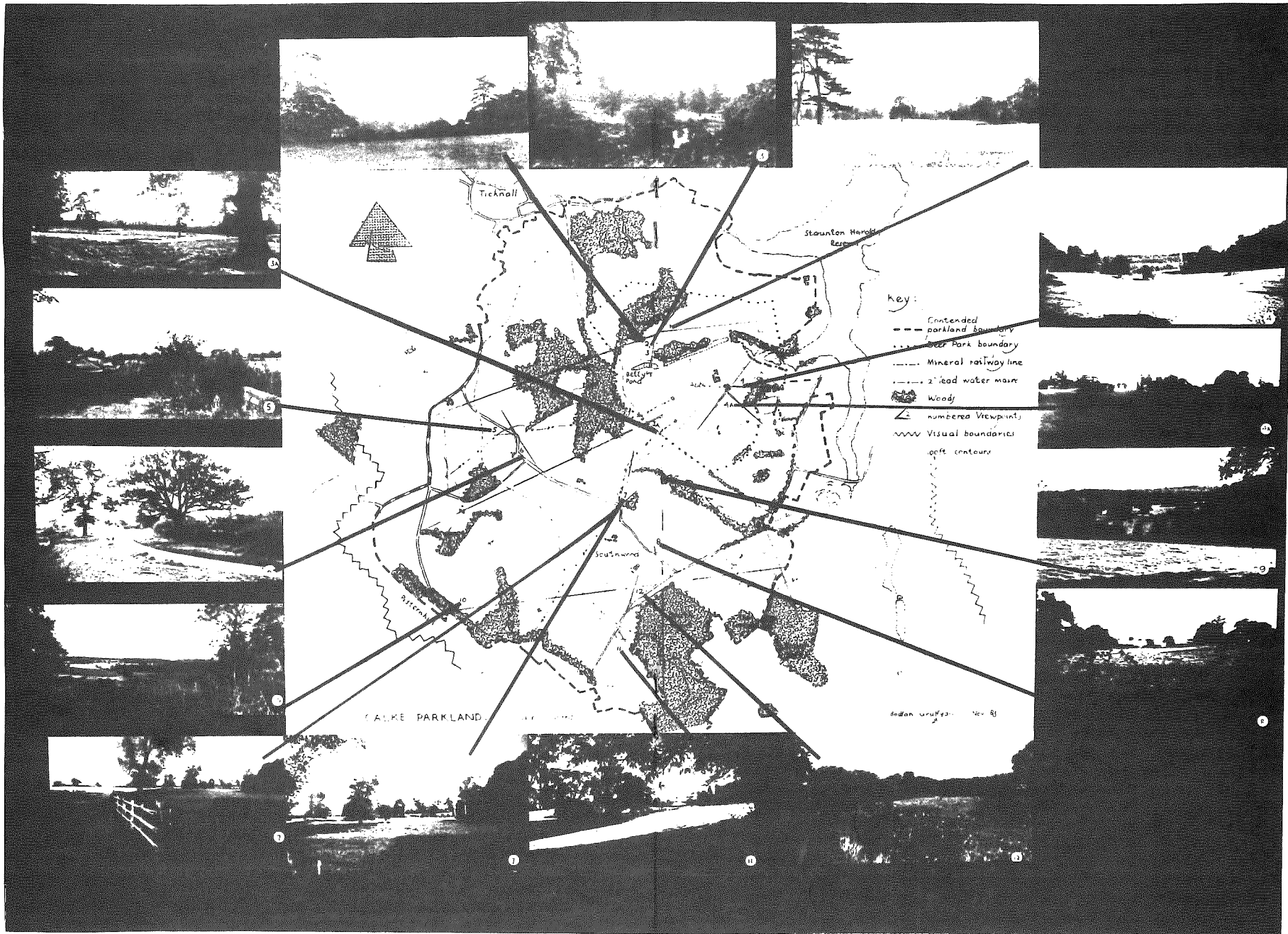
Understanding and love of the land has developed steadily in the minds of Englishmen since the first Anglo-Saxon settlements. It assumed strong individual character when the breaking up of the monasteries finally ended medieval life and thought, and squires and yeomen started to develop their estates and manors. Slowly, as the land was cleared of forest and drained, as fields were enclosed with hedges and woods, and copses were managed for timber and game, parkland emerged from clearings and the forest fringe, and the settled landscape assumed the appearance we so much love today.

Before the days of McAdam, each parish was an isolated unit dependent on its own resources. It was essential to stabilise an economy of land use where each crop, be it corn or hay or timber, grew to best advantage, in ecological equilibrium. So the pattern of timber on steep slopes and plough on the flatter land developed; thus clumps of trees crowned knolls, orchards commanded the sunny slopes and covers, copses and tree belts were sited for game, faggots and the shelter of livestock.

Later as the 17th merged with the 18th century, a philosophy of landscape perfection, inspired by the painters of France and Italy and interpreted by our native poets, influenced landowners to think positively about their estates, and to plan their aesthetic development more purposefully. Some of them sought advice from knowledgeable friends or neighbours, others called in a member of the budding body of professional landscape designers; but the majority depended on their own ideas.

So in rural Britain there developed what we may call a functional aesthetic in the management of the land, each generation of landowners and their agents adding their own contribution to the succeeding requirements of their estates, still with loving thought and care, upholding a tradition for good land management in which beauty combined with utility epitomised in the ferme ornée.

Slowly, as the medieval period gave way to the Tudor, rural life became more settled and more prosperous; and as the Stuart gave way to the Georgian new ideas



liberalised thought and provided ways for landowners to consider the latest ideas about landscape beauty. Kent and Brown leaped the fence to bring the whole ambience into the aesthetic of the park. This new idea caught on. Everything that could be seen was to be included in the concept of the landscape garden. It involved the removal of visual barriers and the moulding of land form on a vast scale; rearranging the woods and copses, camouflaging farm buildings, and siting follies to compose picturesque scenes as far as the eye could see. A whole parish could become a park! Thus the ambience and the whole idea of the landscape park was extended to the horizon, which became the meaningful boundary of the parkland.

As this was a spontaneous movement, and because landscape design was in its infancy, it should not surprise us to realise that comparatively few estates are covered by graphic records. In consequence, many parks and estate landscapes of considerable importance and beauty can only be recognised on the ground.

This presents a problem, requiring imagination and the understanding of a practised eye to solve. Certain pointers were suggested in a previous study*, in which, by comparing Ordnance Survey maps and air photographs with topographical features on the ground, evidence of authenticity could be established. Topographical features to look for are: high ground and tree belts at the extent of vision, defining an ambience; notable land form, natural or induced; areas of water-ponds, lakes or canalised streams; carefully sited farmsteads and buildings; clumps of trees, copses and shelter belts and above all specimen trees in the fields. Such features are characteristic of the English landscape park, and they indicate deliberate planning in the development of the estate. Consciousness of this will be heightened for anyone moving about the policies, as items in the surrounding farmland are seen to slot into place, as scenic features forming part of the design of the park itself. If all this goes with a scale of topographical pattern recognisably belonging to the pre-mechanised age

* "Protecting Historic Landscapes" by the Author, published under the auspices of the Landscape Institute in 1977, whose recommendations now form the basis of the official listing by the Historic Buildings and Monuments Commission.

of current agriculture, i.e. traditional-sized fields divided by treed hedgerows and unspoilt by silos or 'industrial' farm buildings, then probably here is a viable surviving example of an estate developed for visual as well as functional effect and a landscape art form unique to Britain.

Hitherto these facts have not been recognised in interpreting the provisions of the 1976 Finance Act. At Calke Abbey in Derbyshire, for example the boundary of "heritage land" was arbitrarily drawn, in the absence of rational criteria, close round the old Deer Park, ignoring its visual ambience, which is so obviously part of the *raison d'être* for this part of the Abbey's developed estate, until corrected by the Chancellor of the Exchequer in his 1984 Budget.

Criteria for judging the quality of our more natural landscapes, and their protection in National Parks and Areas of Outstanding Natural Beauty, is now established and applied by the Countryside Commission. We understand well enough what constitutes park and garden landscapes and have the means to maintain them through the Historic Buildings and Monuments Commission, but accepted definition of estate landscapes developed for visual effect is needed to satisfy the provisions of the 1976 Finance Act. Specifically, para 77 (1)(b) provides authority for "any land which in the opinion of the Treasury is of outstanding scenic or historic or scientific interest" to qualify for tax exemption. Clearly, estate landscapes here considered are in this category and should be brought under the same protective heading as gardens and parks.

The inspiration which underlies this approach to the development of landscapes is uniquely British, and should be recognised by including the means for its practical survival through endowment, as is now allowed for historic buildings and historic land, by the owners setting up a trust or maintenance fund, relieved of tax liability.

(This article first appeared in the Country Landowner, volume 36, October 1984)

rolling, tumbling or spinning "rotations", or necessitate "translation" of size.

All of these ways in which a mental image might have to be modified exactly parallel the ways in which retinal images are constantly changing as we go about our day-to-day business. As with all other aspects of modelling abilities, original observation is of paramount importance. A designer who has not observed will be severely inhibited.

But it is necessary to be able to separate the nature of the changes that are being observed from the particular circumstance which is exhibiting those changes. It is necessary to be able to image the abstract nature of possible changes if novel dynamic situations are to be designed. The objective of the game described below is to exercise abilities to "cognipulate" abstract images so that those skills can be later applied when working with subjects with more tangible qualities.

The game is for one player and is played with three packs of cards. The main pack has the content of the exercise whilst the other two give instructions. The main pack has seven different suits of shapes cut out of square cards. Each shape appears in three different sizes and each size of each shape is included three times - once cut centrally to a quarter, once centrally to a half, and once centrally to the whole of the card. There are, then, seven suits with three sizes in three places, or sixty-three cards in the main pack (see figure 1). The subsidiary cards which give instructions are rectangular. One of these packs has only four cards with each showing a number 1 to 4. The second instructional pack has thirty-five cards in total. Each of these has two graphic signs. One of these signs says whether a card has to be "twisted" through 90, 180 or 270 degrees, and either clockwise or anti-clockwise, or not "twisted" at all. The other sign says whether a card has to be "turned" top over bottom, bottom over top, left over right, right over left, or not "turned" at all (see figure 2).

(As an aside it should be said that there is nothing very significant about the number of cards in the main pack. Experience has shown that this gives sufficient variety for a useful exercise without the pack becoming physically unmanageable. Also, many of the instructions duplicate each other. Twisting 90 degrees clockwise has the same effect as twisting 270 degrees anti-clockwise, for example. There is no logical need for this duplication but cognitive imaging does not always follow

COGNIPULATION

A.D. Pinder

MUCH DESIGN THINKING is mediated by images. These can have a physical expression - indeed must have if that thinking is to be appropriately informed, tested and recorded. The kinds and levels of graphic and other model making skills possessed by designers will significantly affect the kinds and levels of their thinking. But designers' models do not only exist in such physical expressions. They are generated by mental models or "cognitive images". It is through a productive inter-play between physical models and cognitive images that design thinking progresses.

Whilst it remains debatable whether an individual's capacities to form and employ cognitive images are limited genetically, there is no doubt that potentials will not be realized if such abilities are not exercised. This paper describes a game which will develop a small but not insignificant aspect of cognitive imaging skills.

Rarely is it the case that an appropriate mental image can be retrieved from memory that exactly satisfies the designer's current needs. Almost invariably there will be a need to modify that image in some way. It may be necessary to "subtract" an element from the image as remembered so as to examine either the part which has been removed or that which remains, or to "add" a part taken from some other source. Indeed it may be useful to "compile" images from aspects of a host of memories of experiences which were widely separated in space and/or time, and thus image circumstances that have never previously existed. It may be necessary to form dynamic images either because the imagined circumstance would itself be dynamic or because that circumstance would be experienced by a dynamic observer. This could require

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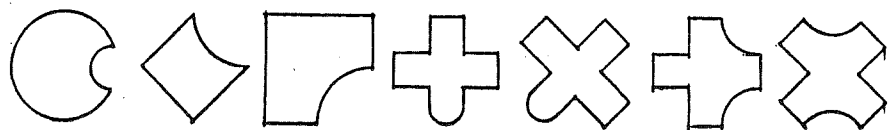
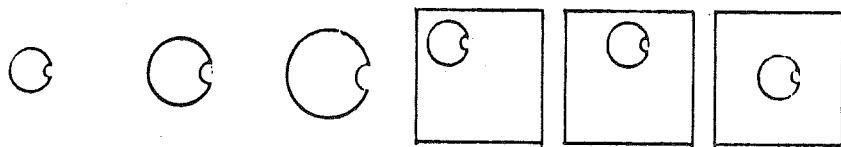


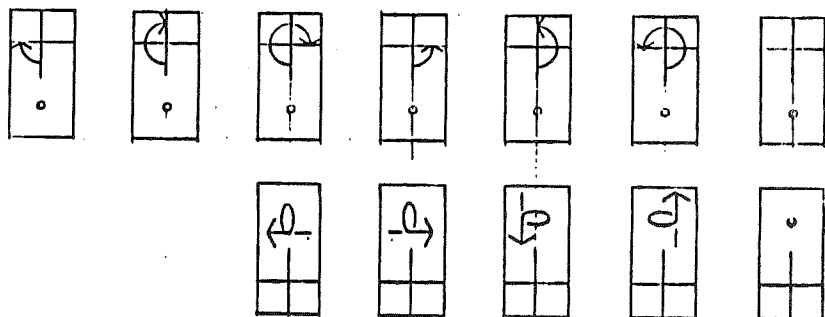
Figure 1. The main pack has 7 suits of shapes cut out of square cards.



Each shape appears in 3 different sizes and each size in 3 different places.



Figure 2. The first instructional pack has 4 cards showing sequence.



The second instructional pack has 35 cards indicating combined "twists" and "turns".

logical procedures and so all ways of achieving the same effects have been included).

The game is played by shuffling the main pack and placing four cards from it in a horizontal line. The cards in the smaller instructional pack are also shuffled and then placed one above each of the four main cards. The second subsidiary pack is then shuffled in turn and one placed below each of the four main cards. A typical arrangement is illustrated (3).

The instructional cards indicate the sequence in which the main cards are to be "picked-up", "twisted", "turned" and "piled". All of these terms are in inverted commas

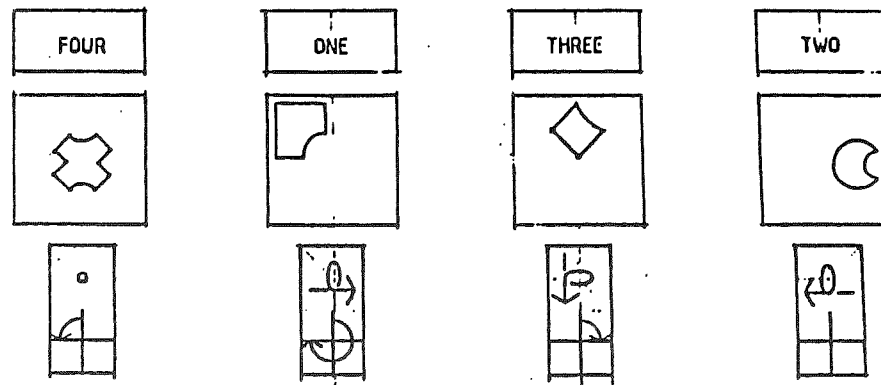


Figure 3. A typical "hand".

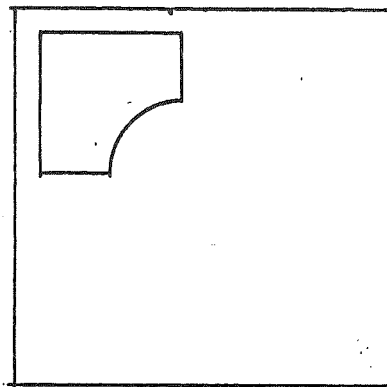


Figure 4.

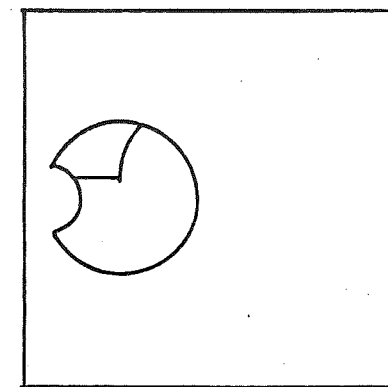


Figure 5.

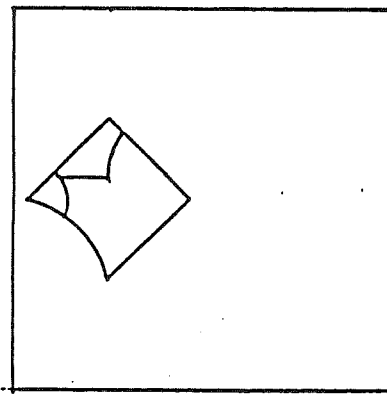


Figure 6.

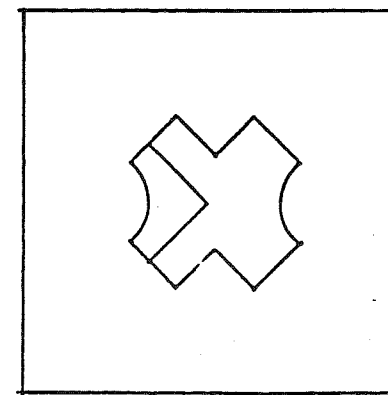


Figure 7.

because the player does not physically move the cards until a mental image has been formed of the appearance of the resulting "pile" and a graphic model of that image produced. The cards can then be moved as instructed and the accuracy of the image checked.

For example, if this were an exercise in manipulative rather than cognipulative skills the illustrated "hand" would be played by picking up the main card below the 1, turning it left over right, twisting it through 270 degrees, and placing it at the bottom of the eventual pile. (Its appearance would be as figure 4 - looking exactly as it did when it started!) The main card below the 2 would then be picked up, turned right over left, not twisted, and placed down on the first. (The pile would then look as figure 5). The third card would then be picked up, turned top over bottom, twisted through 90 degrees clockwise, and placed on the pile. (The pile would then look like figure 6). The final card is then picked up, not turned over, twisted 90 degrees anti-clockwise, and placed on the pile (The pile at the end would look as figure 7). But none of this manipulation is undertaken until a mental image of the final appearance has been formed and a drawing of that mental image made. The manipulation is simply to check the accuracy of the cognipulation.

The game can be made easier for beginners in a number of ways. Initially only two main cards need be laid down, developing to three and then four. The number of suits in the pack can be reduced. The cards requiring "twisting" can be left out, or those requiring "turning". Early attempts with the full pack can leave all of the cards in the second instructional pack oriented the same way so that the origins of "twists" and "turns" are all in the same place.

The game can be made tougher. Any number of suits could be made for the main pack with these being used in different combinations if it is sensed that familiarity is reducing efficacy. Even tougher would be to make the second instructional pack circular so that "twisting" and "turning" are not only in horizontal and vertical planes.

This game has not been thoroughly tested in a scientific sense. But experience has shown that both speed and accuracy improve with time and so it seems reasonable to infer that skills are being developed. I would be very interested to hear from anybody who chooses to extend my experiments.

LANDSEARCH : AN INDEX TO THE PERIODICAL LITERATURE OF LANDSCAPE ARCHITECTURE

AN IMPORTANT NEW reference tool for those interested in the landscape industry will be introduced in 1985. Called LandSearch, it will be the first subject index to the periodical literature of landscape architecture. It will provide references to recently published articles from approximately 100 journals in the fields of landscape planning, design, construction, history and related disciplines. Coverage will be worldwide and will include the journals of major commercial publishers as well as those of professional institutes (including Landscape Issues).

The material indexed in LandSearch will reflect the diversity of the landscape disciplines. The index will be useful for those involved in landscape theory and research, landscape gardening and contracting, park planning and management, sportsground design and maintenance, interior landscape work, landscape management and science, and land rehabilitation and conservation.

Major journal articles, news items and book reviews will be included in LandSearch. For each article, full bibliographic descriptions will be provided in one 'main entry' sequence. This sequence will be arranged alphabetically by title and will include details of plans, diagrams, photographs, other graphics, language and subject headings. Separate author and subject indexes will provide brief entries for ease of use, and refer users back to the main sequence for fuller details. A thesaurus of landscape terms has been created for the index to provide specialized subject headings, and will include a 'see' and 'see also' cross-referencing structure.

LandSearch will be produced quarterly, with annual cumulations. The first issue will be available in April 1985. Details of subscription price, and of a special pre-publication discount offer, can be obtained from Datascape Information Pty Ltd, GPO Box 1870, Canberra, ACT 2601 Australia.

LARGE SCALE ORDNANCE SURVEY PLANS DRAWN BY COMPUTER

R.J.Moore

SINCE 1972 THE ORDNANCE SURVEY has been producing maps at the basic scales of 1:1250, 1:2500 and 1:10,000 by digital techniques, such that they are in a form suitable for manipulation by computer. What this means is that, employing a computer and automatic plotter, map data held on magnetic tape can be drawn according to the user's specifications.

The Ordnance Survey map drawing program was installed on the computer system at the Gloucestershire College of Arts & Technology in 1982, and it has enabled maps derived from the Malvern Wells (S07742) 1:2500 data to be produced for demonstration and use in the School of Landscape Architecture.

This report provides a summary of the basic methods used by the Ordnance Survey in digital mapping and a discussion with examples of its application in Gloucester.

DIGITAL RECORDING

The conventional map detail (line, point, text) is digitised by the Ordnance Survey from enlarged film negatives of the surveyor's working drawings; that is their unique X and Y coordinates are determined manually using a cross-hair cursor and recorded automatically onto magnetic tape. Further coding of the coordinates identifies the feature (house, fence, kerb edge and so on). Following the processing of these data, eliminating distortion, transforming the digitising table coordinates to those of the National Grid and linking the feature coordinates to specific feature codes, a number of further modifications or edits may be necessary to achieve correctness and completeness, at which stage a master film positive is made of the plotted map.

ESSENTIAL HARDWARE

Since the map data file is quite sizeable (150 k bytes), in order to store it and to undertake the necessary processing for plotting, a mini or mainframe computer is essential. Whilst it is theoretically possible to part-run the program on a micro-computer, the writer has to date no information on whether such an implementation has been attempted.

Besides a computer, other essential hardware includes a high resolution display screen and some form of plotting device. At Gloucester the program is driven by a Prime 550 computer linked to a Tektronix screen and an A2 flatbed plotter.

AVAILABILITY AND PURCHASE

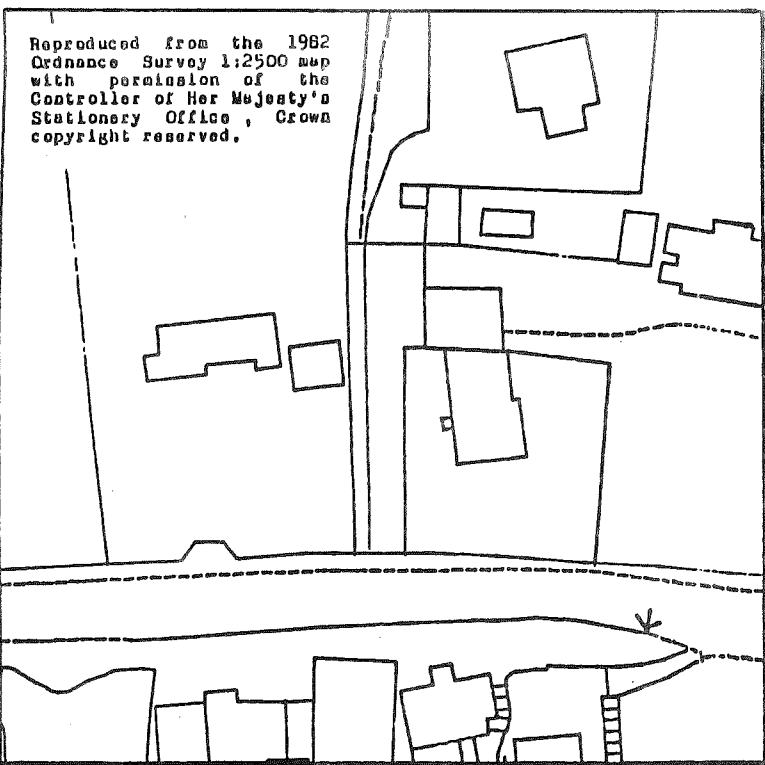
Since 1979 the Ordnance Survey has been systematically digitising map "blocks" within England, Scotland and Wales in order to ensure continuous cover in those areas (Tyne and Wear, Durham, Cleveland; West Yorkshire; Nottinghamshire; Northamptonshire; West Midlands; Hereford and Worcestershire; London; Hampshire and West Sussex; Cornwall; areas now coming into production include Glasgow, Warrington, South Oxfordshire, Swansea, Cardiff and Avon). Ultimately, the Ordnance Survey will digitise all 220,000 basic scale maps covering the country and it is predicted that this task will be completed by the year 2015. By next year all resurvey and new editions of 1:1250 scale maps will be produced by digital techniques. A diagram showing the availability of digital map tapes can be obtained from the Digital Marketing section of the Ordnance Survey on request.

To obtain digital tapes customers are requested to use a pre-printed DM ORDER form which allows full technical specifications. The current price of the digital map data (which is copied onto the customer's own magnetic tape) is £32.50 (+ VAT) per map sheet. Included in this price is the D09 plot program. Although this is more expensive than the conventional paper map it compares favourably with map transparencies for dyeline printing. Furthermore it is much more flexible and versatile, as will be described below.

MAPPING OPTIONS

By means of simple editing of the program, the user has the benefit of being able to specify the kind of map output from the digitally held data. In other words,

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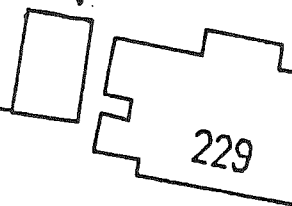


Ordnance
Survey
digital
map output

<1:1000 (no text)

1:250 >

1:500



Elsdon
Cottage

229

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BM 149.25m

BM 149.25m

Elsdon
Cottage

227

49

Spout

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Spout

whilst the map can be printed in the form and scale of the master film positive, there exists a number of recall options that can vary the scale, the grid limits, and the map content.

1) Grid "window": the whole map area or any rectangular sub-section of the map delimited by grid-lines can be drawn. (In view of scale problems the illustrations accompanying this report are extracts from one 100 metre grid square).

2) Scale: an exact copy drawing or larger or smaller scale versions of the map content can be specified.

3) Map content: the user can choose to omit certain features (by feature code, for example all text, all benchmarks, or by feature serial number, that is only specific features uniquely identified are omitted).

DISCUSSION

Since the Gloucester region has only very limited coverage by digital maps, use of the mapping system has had restricted application to landscape projects in the School, although a range of maps has been produced for display purposes. The quality of the output is considered of a high cartographic quality, especially when clarity of line is achieved through the use of Rotring-type pens, as distinct from fibre-tipped pens. Maps can be drawn onto cartridge or tracing paper, or indeed onto acetate for subsequent dyeline printing. Colour plotting is an available option. The main advantage of the scale option is that a constant line thickness is ensured no matter how great the enlargement. Photographic and photo-copy enlargements from conventional map bases obviously suffer in this respect. For example, at a scale of 1:500 the standard map line produced this latter way is thicker than 1 mm.

Certain features on conventional maps are not as yet digitised: vegetation, slope symbols and roof stipple, although there is current development in this field and it is hoped roof stipple will be produced through the software identifying "polygon points" within each building structure.

Plotting time has been found to depend very much on the number of time sharers on the computer. With no other users the complete map can be plotted in 30 minutes.

With the continuous digitisation of the Ordnance Survey base scale plans in this country, it is anticipated that greater use will be made of the computer mapping facility by the School of Landscape Architecture in Gloucester.

REVIEWS

FENG SHUI by Sara Rossbach, Hutchinson 1984. 170 pages, £4.95.

OFTEN MISLEADINGLY described as a system of Geomancy, Feng Shui has little to do with divination. For Geomancy is a siting theory based on the interaction of man with his surroundings and differs radically from site planning by its attribution of further dimensions to the environment.

Beginning in ancient China and flourishing today wherever there are populations of ethnic Chinese, Feng Shui is attracting renewed attention, not only by its continued presence within a changing society, but by its recent encroachment into America.

The concept of Ch'i is fundamental to Feng Shui. When "a Geomancer can recognise Ch'i, that is all there is to Feng Shui". If you believe that plants or objects have 'spirit' then to a Chinaman you are familiar with Ch'i. It is the vital force that suffuses every part of creation, flowing through the landscape in mystic channels somewhat analogous to ley lines, if only they would twist.

Such a mystic world view (based on Taoism and related Yin/Yang philosophy) had profound effects on the Chinese countryside, to an extent perhaps underestimated today. It led to incredible feats of landscaping to which is ascribed the great beauty of rural China. Mountain profiles were altered, river courses diverted, and all sizes of settlement sited by Feng Shui principles, in order to conform and harmonize with the local currents of Ch'i.

Today, the ultimate application of Feng Shui in discerning the most auspicious location for a given human intervention in the landscape, is seldom employed. Most potential clients live in large cities like Hong Kong,

Singapore and Manila where there is little opportunity to find the optimum sites for their homes and businesses. Hence, Geomancy has adapted (arguably degenerated) by making the best of what is there. It is orientated more towards personal and material ends, especially the accumulation of wealth, rather than enhancement of the "genius loci". The results are often practices verging on either superstition or plain commonsense: for example, to maintain a healthy flow of Ch'i within a room, the relationships between doors, windows, and furniture must be carefully manipulated. Adverse features such as exposed beams or views of brothels across the street are countered by mirrors, I Ching symbols and wind chimes.

Often Feng Shui seems to take perverse or seemingly ludicrous lines of thought: In one Hong Kong business, the owner moved the wash basin - sink, pipes and all - next to the accounts secretary. "Everytime someone washes his hands" he explains, "more money comes in". The 'Form School' of Feng Shui which has traditionally observed shapes in the topography as indicative of Ch'i conditions thereabouts, is now used in an urban setting: the Connaught Building on Hong Kong's water front, clad in circular windows and consequently dubbed 'The House of 1000 Assholes', has, needless to say, a rather bad Feng Shui aura. Since its completion this has been evidenced by continuous structural and service problems which locals blame on the disregard of geomantic principles in its siting and design.

It may be inferred that Westernizing influences are eroding the practice of Feng Shui, but nothing could be further from the truth. Many international organizations (Chase Manhattan, Dow Chemicals, Citibank, etc.) operating in the Far East, consult Geomancers before embarking on construction enterprises. Geomancy is deeply rooted in Eastern culture, presenting a powerful factor or constraint to be considered by the environmental professions. The book is full of stories underlining this.

Feng Shui is an extensive, and in part, highly esoteric subject which no Western scholar has fully exposed. Sara Rossbach has perhaps wisely chosen to restrict her attention to a particular branch of the profession so the result is by no means a comprehensive guide. To an extent, the background material given in the first sections of the book seems somewhat vague and unrelated to what follows. Only cursory mention is made of basic elements like astrology, Feng Shui philosophy and the

geomantic compass. Throughout one feels that the author has never reached beyond the status of a curious observer. She appears to have been beguiled by the characteristics with which an Occidental can, if not identify with, then be piqued by: aspects of Feng Shui which are at one end of the scale eminently rational and pragmatic (planting trees to the north of a building for shelter from northerly winds) and at the other, quaintly superstitious. (Those mirrors again).

Other writers have drawn attention to ecological principles that underlie Chinese geomancy, and their subsequent value and relevance to modern problems. But Feng Shui can be equally instructive and intriguing in another way: much of the Geomancers' work in the field is performed by intuition. With his sixth sense he feels for the pattern of Ch'i in a site to assess its "genius loci". To the Western landscape profession, this style of approach is often taboo but the time has come to realize that more is necessary for site investigation than surveying equipment, vegetation analyses and soil testing kits.

Sara Rossbach writes in an uninspiring style for which the subject matter more than compensates. The book stands as an account of contemporary urban Feng Shui, but if you want a better balanced, less superficial account of Chinese geomancy, try Steven Skinner's "The Living Earth Manual of Feng Shui" (RKP 1982).

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MICROCOMPUTERS IN LANDSCAPE ARCHITECTURE, E Bruce Macdougall 1983, Elsevier Science, 267p, hardback, £34.50, ISBN 0.444.00771.7

This is a very readable introduction into the use of small computing systems in landscape architecture practice. The author's intention has been to cover the entire area of possible applications, including related activities such as word processing and accounting, in a broad brush fashion in the first chapter, followed by detailed sections in later chapters on specific issues within the field. The book is liberally sprinkled with both program listings written by the author, output produced by him, and diagrams illustrating applications studied by other workers.

After laying the groundwork describing the benefits of a computer system to a landscape architect practice there follows a good section on languages available on micros and their various advantages. The author shows a definite bias in favour of PASCAL and similar languages that are pushed heavily by computer scientists as those most suitable for program writing, but uses BASIC throughout the book owing to its wide availability on small and medium sized micros. In practice almost any of the commonly used languages would be perfectly suitable for landscape architecture applications. What is more difficult, as exemplified by the author's own programs in BASIC is deriving software that will drive particular hardware output devices. Some of his programs contain sections of code totally concerned with the interstices of his hardware, rather than the facets of his architecture problem. There is a long section on programming in BASIC - which is easily found in other books - but nothing significant on the software control of output peripheral devices (printers, plotters, ink-jets etc).

The remaining chapters are related to areas of critical importance to landscape architects covering in turn: digital terrain models; slope, solar potential, and runoff; line plotting; perspectives; sun and shadow calculations; earthwork calculations; plant selection; regional analysis and landscape assessment; and project management. These are all self contained chapters with individual examples demonstrating the operation of independent BASIC programs that are intended to start a landscape architect on the road to using computers efficiently and successfully. The programs are well written and easy to follow, and often work on other people's machines - for instance the reviewer has used part of the shadows calculation program to predict shadows around a house extension.

The book is intended to be a general introduction, not a definitive work and hence cannot always cover all the ground it might. The section on digital terrain models considers only the resampling problem from a square grid to another rectangular grid, but only spends three lines indicating there may be ways to convert, say, from contours to grids or to triangular structures. Although a bibliography is provided at the end of the book only occasional reference is made to it, which is perhaps a pity when so much background detail has had to be omitted. Perhaps in a teaching as opposed to a reference book this is a permissible approach.

The other sections in the book are related to the mathematics of perspectives and useful adjuncts such as a full listing of the ASCII character set, both usually essential knowledge for anyone considering output to a graphics device. The section on perspectives is very clear. The chapter on data-bases, hidden under the titles of 'plant selection' and 'regional analysis' uses a commercially available system (dBASE II) to demonstrate the advantages to maintaining structures to data sets rather than simply piling it all in. Although short these two chapters form a good introduction to the practice, if not the theory, of data-base use.

The reviewer was disappointed to see very little in the book on hidden line and surface elimination - only wire diagrams were used as examples except for a US forestry commission example of a DTM showing possible transmission line placement. This is always a difficult area as considerable computer time is necessary for most solutions involving views of solid three-dimensional objects such as buildings, trees etc. Some further discussion of the problem would have been useful.

Altogether this is an excellent book introducing the potential of computers to the (possibly) uninitiated with very few drawbacks and can be thoroughly recommended to anyone as a starting point to building up a computer capability in the field.

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PROVIDING FOR CHILDREN'S PLAY IN THE COUNTRYSIDE, Timothy Cochrane Associates, 1984, Countryside Commission for Scotland, p/b. 116 pp, £7.00 ISBN 0.902226.70.3

MAN ONLY plays when in the full meaning of the word he is a man...(1)

Perhaps it's age: I keep looking backwards, at myself as a child; at odd relics from the past, and at childhood and adolescent memories. Many of the memories still seem to be very clear...

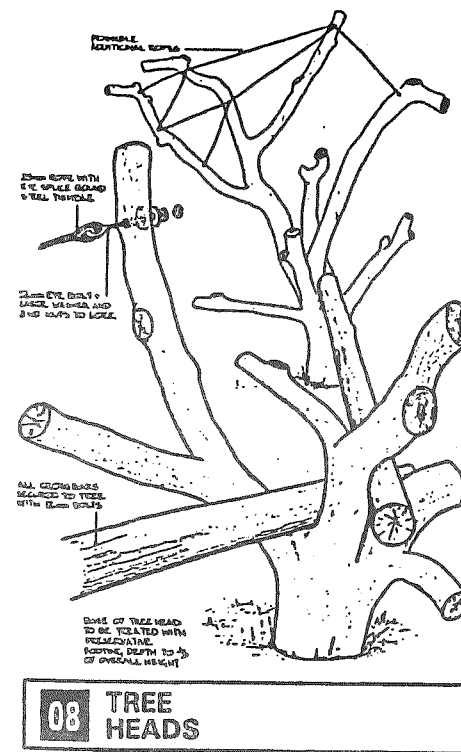
For example, a piece of woodland in Derbyshire - pines and a few oaks, and a dense tangle of Azalea luteum as an understorey; really rather an intriguing combination of plants. For three reasons, I remember being in that wood. It was spring and the Azalea fragrance let me imagine I was adventuring in some exotic forest. After a few yards, I was off the ground, scrambling through a tangle of wrist-thin stems; so that I was completely engulfed in Azalea. And I shouldn't have been there. Three summers ago, holidaying on a neglected Cornish estate, I found myself climbing through a derelict wood overgrown (undergrown?) by laurels; scrambling - potholing above ground is the image I have - often several feet high in the tangle of wrist-thin stems. No sweet scent - but nevertheless intriguing...; and I suppose I shouldn't have been there.

The Countryside Commission for Scotland has published a guide, with an appendix of construction details for logwork, which "takes the designer from the standpoint of the needs of children, through analysis of the site and its natural resources, to the design of the play provision". It looks in turn at children's play needs, 'resources' in the countryside, types of play provision, planning of sites, materials, and the safety, legal and maintenance aspects.

Play experience in the countryside can be and should be designed to be very different from the urban play experience.

I am not convinced that most of the ideas presented here actually live up to this statement. Certainly, the introductory material heads towards what I believe is a good attitude; yet...where is the countryside in all these poles, sand-pits, railway sleepers, car-tyres, ropes, and cute log animals? I too, I am sure, would have found rope bridges, water pumps and tree heads enticing. But 'Tree heads'? Look what construction detail No. 8 suggests! (Of course, it meets 'safety standards'). Now - the cover of the book shows four views with trees, yet all show children playing on artificial constructions. Are you really supposed to offer young children only the mutilated, disarticulated and sanitized remnants of a tree?

No. If you have any respect for children, including the youngest, if you want them to learn how to explore their environment fully, and if you have any anxiety for the future of the environments they will grow up in, allow them the real thing. They will want, and should be



08 TREE HEADS

given, 'play facilities' with 'play equipment' as well; but don't deny the prospect of playing with - learning with - things that are not specifically, separately, designed for children.

Colin Ward has declared (2): "I want a city where children live in the same world as I do". I would like this sentiment to hold for the countryside too; and for what one might call the real countryside. Not least because they might be more likely to grow into adults who understand the countryside sufficiently to be able to respect it and enjoy it in its own terms... What children (and adults) do there may be different from their play in the city, but it is a characteristic of children - except those who have been conditioned out of it - that they will make use of what they find. Too many of them, before it is too late, never actually find what I have deliberately called the real thing, and adults either fail to respond to it, or reject it. We know that most adults visiting the countryside, even as family

groups, rarely venture out of sight of their link with urbanism, the car. Some do, of course; and some enjoy sharing the interest of the real thing with their children (3).

Edward Relph has offered the perceptive insult that "modern landscapes seem to be designed for forty-year old healthy males driving cars" (4). Most playgrounds seem to be designed - still - with an equally narrow perspective.

Most play areas tend to concentrate on providing a sculptural environment in which the child can experience various features, gradients and spacial experiences (sic). Many of these play areas look visually exciting and have been designed in terms of their visual composition..(5).

What Cochrane and Cave, and others (6) are attempting to do is break away from some of the inhibitions on play - and thus on learning - but I do not think they have moved very far. Certainly not as far as my Azalea wood.

Martin Spray,
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1. Schiller (On the aesthetic education of men). The quotation continues" ...and he is only completely a man when he plays" (1795).
2. The child in the city, Architectural Press, 1978 and Penquin, 1979
3. Joseph B. Cornell's Sharing Nature with Children, Exley/Inter-Action, 1981, offers many enthusiastic insights.
4. Rational landscapes and humanistic geography, Croom Helm, 1981
5. Scottish Local Authorities Special Housing Group (1978) Children at play. Preliminary discussion paper.

6. The now almost-dated adventure playground movement provides good examples. Paul Hogan (1974), Playgrounds for free. The utilization of used and surplus materials in playground construction, M.I.T. Press, takes a liberal look beyond the rustic poles. I have tried to look at one aspect for young children in "Planting for play", Contact. Magazine of the Pre-school Playgroups Association April 1984 : 6-7. A thoughtful context is L.H. Wuellner (1979) Forty guidelines for playground design, Journal of Leisure Research 2(1): 4-14.

LANDSCAPE ISSUES

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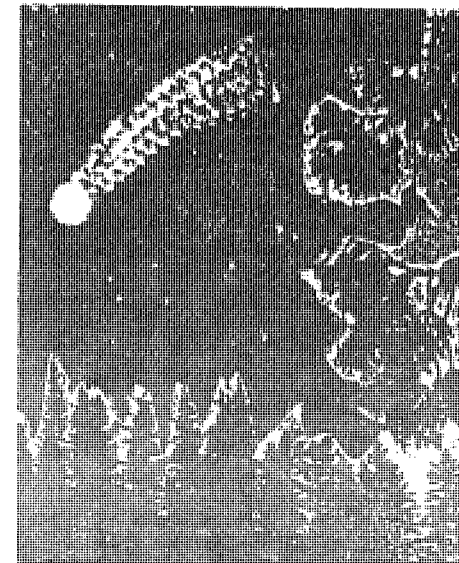
HEAVENLY INSPIRATION

Few people will have managed to evade the current "Halleymania". As with most recurring "great" events, the Olympic Games, the Ashes, the World Cup, we stoically tolerate the media saturation. Yet there is something quite different about natural rhythms, phenomena that owe their periodicity to terrestrial or astronomical forces: arrivals of shooting stars and comets, eclipses of the moon and the sun, appearances of the aurora borealis and surges of tidal bores. There is a mysticism, an awesome power, a compelling attraction in their nature, and in spite of the short, often fleeting, duration of their occurrence, their impact is none the less spectacular, their impression long lasting.

For many landscape architects, design inspiration derives from the qualities of the site: the configuration of the land surface, the disposition of the vegetation and artefacts, the "uniqueness" of the place. Some are moved by the spiritual or emotional character, while others endeavour to respond to temporal change, seasonal effects and longer-term landscape evolution. Invariably, to those dynamic elements of the kind described above, design response, either passive or active, is limited through ignorance or choice. The incorporation of periodic phenomena into a design may be difficult to conceive, yet one could argue that to attempt it is to intimately lock the design into Nature: a simple sundial brings God into the garden, says A.P. Herbert; but more than that, the designer is forced to consider time on a grander scale: a universal dimension, a life-time vision.

It is therefore somewhat unfortunate that the conventional designation of scenic beauty, of environmental quality, is based principally on observable, classifiable, static elements of landscapes: unique geological exposures, rare flora; wild, undeveloped and unspoilt coastal tracts; representative ecosystems. More difficult to categorise are dynamic and periodic features, whether astronomical or terrestrial, yet these are equally precious. Consequently we should all pause and contemplate what a poorer place our planet would be without them. They need to be recognised, as the Halley apparition, for what they truly represent.

As 'The Times' seemed to be demanding recently in response to the revived interest in building a barrage across the Bristol Channel, can we slap a preservation order on the Severn Bore? Indeed, can we also designate Halley's Comet a "sight" of special scientific interest?



A ROLE FOR THE LANDSCAPE ARCHITECT IN ENVIRONMENTAL EDUCATION

John Scott

PREFACE by the Editor

Traditional curricular subjects, geography, history and science in particular, have always accommodated components of environmental understanding through field trips and local studies. The adoption, however, of the environment as a subject suitable for investigation in its own right, learning about the environment, was the foundation upon which "environmental education" was established. A decade ago the Schools Council further recognised two other categories of environmental interpretation:

- the environment as a medium for education, a basis for meaningful enquiry, learning through the environment.
- education for conserving or improving the environment, learning for the environment.

The first of these is very much aimed at offering real experiences to younger children as a vehicle for acquiring skills. The latter is directed towards planning and environmental issues, stressing a fundamental concern with environmental quality in both the functional and aesthetic senses.

A good landscape education would be expected to embody all of these categories: graduates would be both environmentally aware as well as professionally trained.

John Scott is a recent graduate and diplomate of this School, and now works as Assistant Landscape Architect with Inverclyde District Council. He is also a member of the Scottish Chapter's working group on Environmental Education.

Such a background of breadth in environmental understanding and of depth in design and planning practice, provides the landscape architect with the necessary expertise to promote a novel, integrative yet creative, technique of environmental education within primary and secondary schools. This is what John Scott in his article is proposing. Whilst his emphasis is on the method and role of the designer, one can also see much value in the process of educating the school system towards design as an activity, which in turn would benefit the profession in the long term.

R.J.Moore

ENVIRONMENTAL EDUCATION

Too many landscape architects fail to understand that their work not only involves designing the environment to various degrees of complexity, but also involves them in fostering an awareness in people towards their environment, creating the maximum opportunity for people to experience and understand all the qualities that their environment can provide.

Recent initiatives by the Royal Institute of British Architects and the Royal Town Planning Institute encouraging environmental experts to participate directly within the educational system, have shown that the environmental professions have an important role to play with environmental education. Indeed, in February 1985, the R.I.B.A. appointed Nigel Frost to act as a co-ordinator for a national network of architectural workshops similar to the successful Newcastle workshop set up some seven years ago. His appointment marks another move towards grass roots activities, establishing links with primary and secondary schools and providing education about architecture and the environment.

Why is it then that landscape architecture as a subject and as a profession has lagged behind in the field of environmental education when it is so directly related? In my opinion environmental education can provide a much richer series of emotional and intellectual learning experiences for children through projects which are landscape design based; the problem at the moment is in mobilising landscape architects to be more active in this field.

Awareness of the importance of the environment has grown

substantially over the last three decades, along with a greater attention to environmental problems. Fears about man's impact on the natural environment, threats to the existence of many species, the influence of the built environment on the quality of life; all these are now topics of press and public debate. The term 'environmental education' is being used increasingly in Britain. However, it is clearly capable of different definitions, approaches and interpretations. The aim of environmental education to which I subscribe is to enable people to recognise the factors which determine the nature and quality of the human environment so that all may respect and appreciate it to the full and participate constructively, as individuals and as citizens, in its management and development.

To better illustrate what environmental education means is to describe some of the ideas of Patrick Geddes, Scottish Professor of Botany and student of Le Play's Sociology. Ultimately Geddes believed human life could only flourish if we came to terms with our towns and cities by making them both beautiful and functional places to live in. Throughout his life Geddes tried to foster the method of learning by direct physical, intellectual and emotional experience. From an early age he accepted that children are not empty vessels waiting to be filled with facts, but that consciousness is like a growing plant which contains within itself its own potential and merely requires the right environment to bring it to its full growth and fruition. Geddes would have defined environmental education as being education for the real world: education which is designed to help children function as whole beings and survive in this rapidly changing world. Above all it must be education that has as its central focus the idea of change and growth rather than the mere acquisition of vast amounts of seemingly irrelevant facts.

THE CURRENT PRACTICE OF ENVIRONMENTAL EDUCATION AND THE INVOLVEMENT OF THE ENVIRONMENTAL PROFESSIONS

The cause of environmental education has been greatly assisted in the last decade by curriculum development, much of it undertaken by local groups of enthusiastic primary and secondary school teachers with the support and encouragement of local authority advisers. Field studies have become an established part of educational practice at all levels over the past thirty years or more

and environmental education clearly owes a lot to this tradition.

There has also been a considerable increase in urban studies over the last decade. The urban studies centres which have been set up are particularly valuable in this context, and those that have been established enjoy the co-operation of local planning departments and of professional and community interests.

In recent years there have been many examples of architects and planners co-operating with teachers in educational ventures. Even before the Art and the Built Environment Project began, the Front Door Project (1975) had shown that the design professions might have a role to play in curriculum development. The Front Door Project in 1975 brought together art teachers and architects in a working partnership to explore architecture and design aspects of environmental study, a project initiated by the Royal College of Art's 'Design in General Education Study'. In 1980 the Schools Council, who funded the project 'Art and the Built Environment', agreed to extend its work to the 11-16 age range and to develop a nationwide network of working parties including teachers, architects and planners in curriculum development.

Members of the Working Parties attempt to develop courses and approaches to study which will enable pupils to make informed judgements about environmental quality, in the hope that they will be better prepared to take a more creative and participatory stance in shaping the environment in the future.

At the moment the project is in contact with over fifty groups whose members include teachers, architects and planners involved in curriculum development. They are able to offer encouragement and support to teachers whose training does not necessarily equip them to deal with this complex and comprehensive area of study. The working parties are asked to devise appropriate studies for pupils of all ages to experiment in schools and to report on their experience.

Planning is one of the professions most obviously concerned with the environment, since the functioning of the official planning system has such a direct impact on the lives and environments of its citizens. Knowledge and understanding of the system must feature in anything which seeks to develop environmental understanding. The

prime means of developing such understanding lies with the official educational system, although the R.T.P.I. has taken a major initiative in setting up an institute environmental education group which has promoted the establishment of various environmental education centres based on the expertise of planners. For example, as part of their growing contribution to environmental education, planners from Avon County Planning Department invited young people to work with them for a day during the school holidays. Over 100 young people turned up and chose from 14 different projects. These included traffic management, designing a building, attitudes to countryside issues and countryside management. It was clear that the many resources available from the Planning Department would prove of considerable value for larger projects within the school curriculum.

Similarly, the R.I.B.A. has taken another initiative and has developed many projects concerned with school children and environmental education. It is actively concerned with the setting up of architecture workshops along the lines of the successful Newcastle workshop which started in 1977 as a test centre. Funding from the R.I.B.A. and the Department of the Environment has been approved for a secretariat and various regional offices in order to set up more workshops in other parts of the country. The Newcastle Architecture workshop has a staff of teachers, architects, graphic artists and planners involved in educational work with schools and the local community. The education unit initiates project themes, and ideas at the workshop are developed for the use in schools by qualified teachers on the staff. Planners and architects endeavour to emphasise to teachers that planning and architecture are not about buildings and spaces, but about people. Furthermore, that decisions concerned with shaping the environment should consider not only human needs but economic, commercial and political demands, while the environment should be seen as a complex interaction of different systems, and above all children should be helped to understand the 'socio-political' reality of them all.

It seems to me therefore that environmental education must be concerned with how children perceive their environment and how they might be encouraged to extend and deepen their understanding. To base environmental education on the children's perceptions of their environment is to capitalise on previous experience and learning. Environmental education aims to enable children to relate the familiar to the unfamiliar, the

concrete to the abstract, to facilitate learning. Environmental education in schools is not at present established as a comprehensive, coherent long term core subject. It very much appears as a piecemeal provision of particular interests and is dependent on individual teacher's enthusiasms as well as on curriculum planning and timetabling. Whilst it is well founded in science, history and geography, each has its own approach and subject matter. True integration is lacking. The innovation most likely, in my opinion, to make good this absence, is the involvement of the environmental profession - the expertise of the architect and planner provides the necessary overview of environmental concerns.

The work of the R.I.B.A. and R.T.P.I. is commendable and very worthwhile. However, that architecture and planning should appear as the only choice for such involvement is indicative perhaps of the lack of interest the British take in the appearance and functioning of their surroundings and indicative certainly of the predominant arrogance of architecture and the overriding deadening power of British planning.

DESIGN PROJECTS AS A SUITABLE METHOD OF APPLICATION FOR ENVIRONMENTAL EDUCATION.

Alongside its fellow professions, the influence of landscape architecture remains weak, certainly in educational terms. Yet this profession has the distinctive qualities which are of value to environmental education.

It is my belief that the power and potential of environmental education is not being realised or achieved at present simply because of the method of application within the educational system. Children are being asked to go out into the environment and meticulously record vast amounts of information from the colour and shape of street furniture to the dimensions of Georgian and Victorian buildings. Yet this information in itself does not make a child aware of its environment. It does not facilitate an understanding of the physical, social or natural processes of the environment. Information gathering is not the answer to such an understanding. It is merely a very valuable component part of a much greater educational process. I believe that the design process which a landscape architect uses throughout his work, towards creating an environment for people to use

and experience, can be used within such an educational process. The process of analysis, synthesis and formulation of design objectives for a particular site can be used by educationalists with specialist advice from environmental designers to provide for children a way of understanding their environment which will captivate their interests and encourage individual thought.

I believe that an environmental design project similar to those undertaken by landscape design students can provide a valuable and unique method of achieving environmental awareness amongst children. In addition there can be benefit in undertaking a project with a physical outcome, that is one that allows the children to see their designs implemented. This in turn will help foster an element of guardianship whereby children feel responsible to and for their environment. Above all, landscape architects with their wide overview of environmental concerns and their specialist understanding of environmental design can provide the necessary expertise required to formulate and implement such design projects.

The Scottish Chapter of the Landscape Institute has taken a major step towards this and in October 1985 a small group of interested members formed the first Environmental Education Working Party for the landscape profession. Although recently started, the group is already involved with planners from Glasgow District Council working jointly on environmental education projects. The objectives of the group are, at the moment, to become involved with all interested groups at a decision making level in order to provide specialist advice regarding the involvement of landscape architects within environmental education. The Scottish Working Party is currently involved in forming a design competition for schools throughout Glasgow district to redesign their school grounds. The schools must liaise with a qualified landscape architect, and a short-list of volunteers has been prepared by the environmental education group of the Scottish Chapter. The environmental education group has designed a brief which will be given to all schools; as far as is possible it is the intention of the education group to use all departments within the school.

The brief will ask for a site survey, a user study of all existing uses made of the ground and some form of market research that is a report on potential demands for the

use of the grounds by all members of the school. The major part of the brief will however be for the production of design ideas in graphic form for all potential uses. A further requirement of the brief will be the keeping of a day-to-day diary outlining the methods used to achieve the finished proposals. The environmental education group are currently negotiating with the Scottish Development Agency and the Product Development Team for the National Garden Festival 1988 with the aim of displaying within the Festival the work produced by the schools with a possible built example from one of them on site.

The work of the professional landscape architect involves the design of the environment to varying degrees of scale and complexity. In order to achieve a design solution for the environment which is functional, practical and sensitive the landscape architect undertakes a comprehensive investigation of the site and the functional objectives. He has to understand, in particular, the needs of people and a knowledge of the environment, both social and physical, which affects such people. It is this same design process which I believe could form an integral part of the methodologies of environmental education. The design project is a well-recognised technique on landscape degree courses aimed at problem-solving through analysis and synthesis. There is scope within the broad field of environmental education to apply in complete or modified form such a package to children of various ages.

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[This article is a development of a similar article which appeared in Scottish Landscape Quarterly, September, 1985]

USING ENVIRONMENTAL PSYCHOLOGY IN THE EDUCATION OF LANDSCAPE ARCHITECTS

David Anderson

INTRODUCTION: ESTABLISHING AN APPROPRIATE CONTEXT

In approaching the topic of environmental psychology it should be borne in mind that this branch of applied social psychology cannot be presented simply for its own academic merits or intrinsic interest. What is needed is an approach that is essentially descriptive, rather than prescriptive, and one that always looks for ways of incorporating the perspectives gained into the landscape architect's decision-making.

For the academically minded, the leading figures in the development of environmental psychology as a specific discipline have defined it as "that area of psychology which brings into conjunction and analyses the transactions and inter-relationships of human experience and actions with pertinent aspects of the socio-physical surroundings" (Canter and Craik, 1981).

It begins by attempting to document how we experience and interact with our physical surroundings. It describes practical techniques whereby perceptual and cognitive factors can be identified, interpreted and understood. Finally, it attempts to establish the application of this understanding to the profession and practice of environmental decision making.

A BRIEF HISTORY OF INCORPORATING SOCIAL SCIENCE DATA INTO ENVIRONMENTAL DECISIONS

There is now something like a 150 year history of attempts to draw on the techniques and theories of social science in environmental decision-making. The surveys

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organized by Edwin Chadwick in the 1830s on the state of the health and living conditions of the working classes in Britain, prompted the first attempts at public health legislation and systematic, rather than piecemeal, attempts to improve sanitation and water supply, as well as the reduction of overcrowding in housing. The use of social science data seems generally to coincide with the growing state involvement in providing buildings, for example, the close connection between new theories of educational practice and the changing design of school buildings, the socialism of the Arts and Crafts movement and the early design for London's council housing, the town planning theories of Howard and Geddes and the development of garden cities and the new towns policy.

A specifically psychological concern can be traced back to the experiments conducted in the Hawthorne plant of Western Electric in the 1930s, to the effects of proximity on friendship patterns described by Festinger in the 1940s and to studies like White's "Street Corner Society" published in 1961. The wider urban context was analysed by Terence Lee's studies of people's perceptions of 'neighbourhood' in the 1950s, leading to his model of 'socio-spatial schema'. In America, at the same time, Barker and Wright were defining the existence of 'behaviour settings' in their long-term study of Oskaloosa, Kansas, whilst also creating far more naturalistic and ecological methods of investigation than those sterile, laboratory-based investigations that have been typical of much of traditional psychology.

DEVELOPMENTS DURING THE 1960s AND 1970s

It was the crisis of confidence that befell the architectural profession in the later 1960s that fuelled major developments in environmental psychology applications. Architects increasingly came to the belief that they had failed to understand their buildings' inhabitants. This was compounded by the new 'unknowns' that technology was creating in terms of new building materials and advanced servicing. The repercussions for users and indoor climate implications at offices and other internal environments using such technologies were increasingly apparent.

In the wider environment a general reaction to pollution and urban noise together with new appreciations for conservation and ecology led to psychologists becoming involved in the creation of indices of perceived

environment quality and in environmental impact analyses. This was further extended by issues of energy supply and demand.

The research literature of the 1970s reflects these broad concerns: surface mining, the siting of power plants and routing of pylons, landscape assessment and values, perceptions and resources, all received attention. Here problems of separating preferences from aesthetics were addressed, particularly in terms of appraising and mitigating the impacts of developments upon scenic quality. Risk analysis and hazard perception continues to be a popular research activity particularly in relation to the nuclear industry. A classic in this area was the 1978 publication, "How safe is 'safe enough'? A psychometric study of attitudes towards technological risks and benefits", by Fischhoff et al. Most recently work has been directed at the promotion of environmental intervention by lay people and researching 'consumer' attitudes to a range of environments.

'ESTABLISHED' AREAS OF CONTRIBUTION

It is interesting to note a continuation of interest since the early 1960s in what may be called 'therapeutic' environments - hospitals, psychiatric facilities and provisions for the elderly. In these and similar institutionalised settings, such as schools and prisons, research has consistently revealed the relationship of organizational structures to physical design and the impact that users' roles have on their perception and evaluation of such environments.

Some areas have become 'mini' disciplines in their own right, such as environmental perception and cognition (vide the work of Kevin Lynch and Don Appleyard), ecological psychology (Barker and Wicker), personality and environment, and environmental assessment. The psychological impacts of noise and lighting conditions are also now well established.

NEWER AREAS OF INVOLVEMENT AND RESEARCH

Environmental psychologists are presently keen to demonstrate the interplay of cognitive processes and individual variations in construing the world. This 'constructivist' or 'phenomenological' approach confirms differing conceptions of the environment according to

whether one is involved professionally or as a user, for instance. Various 'bids' are currently being made as to what are the most appropriate areas for concentrated analysis, particularly

- 1) the psychological experience and conception of 'place', plus its potential as a technical term for the fundamental building blocks of environmental experience.
- 2) a revised model of the 'behaviour setting' taking into account recent insights from organizational psychology including the 'manning' of environments.
- 3) the concept of privacy as a developmental aspect of childhood and adolescence.
- 4) ways of characterising everyday environments and 'affective' (i.e. emotional) environmental meaning, including categorization sets and reference points.
- 5) the significance of the social and organizational roles people play in a particular environment in their evaluation of the environment.

The stability of role differences is such that it appears to be maintained even under the extreme conditions of people's behaviour, for example, in fires (Canter). It is now thought that these consistent patterns of role difference must relate to more general psychological findings concerning perceptual-cognitive consistencies.

Generally, attempts are being made to apply these theoretical and academic concepts to problems of policy formulation, decision making and aspects of professional training.

There is now a far more sensitive recognition of the dynamic nature of person-environment interactions. Deterministic or behavioural models are now considered as inadequate bases from which to proceed.

EDUCATIONAL IMPLICATIONS AND APPLICATIONS

1) 'Valued' environments. One immediate way of bringing home to students the practical implications of the above discussion is to take a case study approach with 'valued' environments. Whatever they look like, these are

environments which are apparently cherished and nurtured by their inhabitants and users. The first question is always "why are they valued?" In answering this, psychological factors are addressed, but within a cultural and historical framework. The social processes that gave rise to a particular environment are reflected in the cognitive structures that underlie people's perceptions of it. In practice, the student would have to explore and make sense of the ways people are involved in the environment, including the scope for their participation in decisions concerning their surroundings, issues of environmental 'meaning', including image and style, and socio-economic matters, like control, choice, income and status.

2) 'Models of man' held by environmental decision makers. Here the emerging role which a professional education engenders needs to be directly examined. The landscape designer may, for instance, see his role as primarily concerned with ecology, earth moving or horticultural considerations. These would be his starting point, whether or not the ambience or meaning of the environment produced was appropriate. So, in this case, the landscape designer's role is one in which his concepts arise from the materials he manipulates. It would be difficult for him to conceive the same problem in terms of, say, natural landscape facilities or individual reactions to landscape beauty in the way that a recreation or tourist manager might do.

'Models of man' as a concept goes further than simply the perceptions brought to a specific design problem as a direct result of professional preoccupation. It includes how designers see themselves and mankind in general. For example, they may see mankind as being merely 'cultivated savages' with a thin veneer of civilisation protecting it from purely instinctive and pre-set patterns of behaviour. This can translate into a highly behaviourist approach to design decisions. Standard dimensions and checklists of 'user needs' may prevail, which, developed in the form of ergonomics and design guides, might lead to predictable solutions. Alternatively, the model may be one of collectivity: people are not individuals but family units, office workers, and so on. Consequently the problem is seen as the design of family housing, or hospitals for patients, nurses and doctors.

Because these models are continually present, and are developed or reinforced by a professional education, one role for environmental psychology in education is simply

to increase self-awareness and an understanding, leading to a better control of the bases upon which professionals make particular design decisions.

3) Design evaluation and feedback. Often it is only when a new building or facility has been completed and in use for some time that a reasonable set of data can be gathered about the relationships between physical and psychological variables. Such appraisals by their nature have to be descriptive, finding out how well the environment has worked in practice for its users. Obviously the findings can 'feed' forward to future design decisions and can inform or even improve the designer's sensitivity to the realities of their environments.

AN OUTLINE AGENDA FOR A COURSE IN 'LANDSCAPE PSYCHOLOGY'

It has not been the intention here to prescribe a detailed scheme of study for students of landscape architecture in environmental psychology, but it has been possible to show the concerns which such a course should cover. Beyond the more theoretical justifications, students simply need the experience of measuring and researching people's interactions with their environments. They need to experience at least two sorts of measurement: firstly, listening to what people are saying via the structured interview or questionnaire; and secondly, the observation of what people do, by behaviour mapping and frequencies of space usage. Students also need to be exposed to the consequences of their design decisions from perspectives other than those of the professional. Here there are opportunities for simulations, role playing and decision-making 'games'.

In the final analysis it is the designer's view of the nature or user which is crucial. The particular 'model of man' to which the designer subscribes may well be the most significant single influence on his design.

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APPENDIX - some recent papers in 'The Journal of Environmental Psychology' relating to landscape issues.

- | | |
|--------------------------|---|
| Vol. 5, no.3, Sept. '85 | A cognitive analysis for water-scapes. |
| -do.- | Conflict as a social interaction process: the example of leisure and recreation research. |
| -do.- | Young children's representations of the environment. |
| -do.- | The role of figural organization in city imageability. |
| Vol. 5, no.2, June '85 | Children's acquisition of spatial knowledge. |
| -do.- | Structure of urban cognitive maps. |
| Vol. 5, no.1, March '85 | Psychological aspects of environmental risk (special issue). |
| Vol. 4, no.4, Dec. '85 | Community opinion concerning airport noise: abatement alternatives. |
| Vol. 4, no.3, Sept. '84 | Water quality perception, dynamic evaluation. |
| Vol. 4, no.2, June '84 | Urban early adolescents, crowding and the neighbourhood experience. |
| -do.- | Spatial representation: a way-finding perspective. |
| Vol. 4, no. 1, March '84 | The prediction of scenic beauty from landscape content and composition. |
| Vol. 3, no.4, Dec. '83 | A photo validity test (landscape appraisals). |
| -do.- | Place and personal identity in old age: observations from Appalachia. |
| Vol. 3, no.2, June '83 | A lifespan developmental study of landscape assessment. |
| Vol. 2, no.4, Dec. '82 | Environmental cognition of small rural towns: the case for older residents. |
| Vol. 2, no.3, Dec. '82 | Attitudes to nuclear energy: beliefs, values and false consensus. |
| Vol. 2, no.2, June '82 | Community noise problems: evidence against adaptation. |
| Vol. 2, no.1, March '82 | Approaches to environmental aesthetics. |
| Vol. 1, no.2, June '81 | Route maps: a study of travellers' perceptions of a section of countryside. |

ST. KENELM'S CHAPEL, WINCHCOMBE.

Timothy Mellors

PREFACE by the Project Leader

For a number of years students in their final term of the 4 year Diploma course in the School of Landscape Architecture, Gloucester, have been given a choice as to the major design project they undertake, in the belief that the educational value of that work is enhanced through pursuing personal interest and expertise.

Prior to the Summer of 1985 the choice offered was between a number of projects set up by tutors to cover a range of topics and contexts. In 1985 that choice was broadened to include any subject identified by the students, with the one proviso that tutors had to be satisfied that the proposals were appropriate.

The objectives of extending the students' choice were threefold. Firstly, to further increase the educational value which comes through personal motivation. Secondly, to devolve to the students responsibility for outlining and developing their brief, and so completing work in this respect started through earlier projects. Thirdly, and perhaps most importantly, to make the students responsible for the management of their own project - making initial speculations as to content, form and timetable, and productively adjusting those, as necessitated by events - and so giving experience of this critical aspect of practice.

Timothy Mellors is a recent graduate and 1985 diplomate of the School of Landscape Architecture, Gloucester.

The results of this project showed that the students' work was of four broad kinds, given by two sets of two variables. The majority of students elected to pursue topics that were commonly a part of conventional landscape design practice, whilst a minority did not. Also, a majority chose to undertake and record their work in a way which closely paralleled common landscape design practice, whilst a minority did not.

Whilst there was no correlation between the grades given to these projects and the above classifications, it is possible to argue that those students who gained most educational value from this project had some degree of unconventionality in their work. Sometimes this led to a student being awarded a rather poorer grade than was their norm (achieved, perhaps, in relatively 'safe' circumstances) and sometimes grades which represented peaks of personal achievement. But either way it can be contended that those students actually learnt rather more from working in areas and/or in ways which required some original thinking.

The significance of this finding, to both education and practice, I leave for speculation, for in truth this piece is intended to do no more than introduce the paper by Tim Mellors which reports one such project. In this case, Tim set out to produce a design in which 'genius loci' or spirit of place was of paramount importance. This he did by combining conventional site planning procedures with those of the ancient traditions of geomancy and the medieval church builders. The project also illustrates how an understanding of local history can contribute to developing the uniqueness of a place.

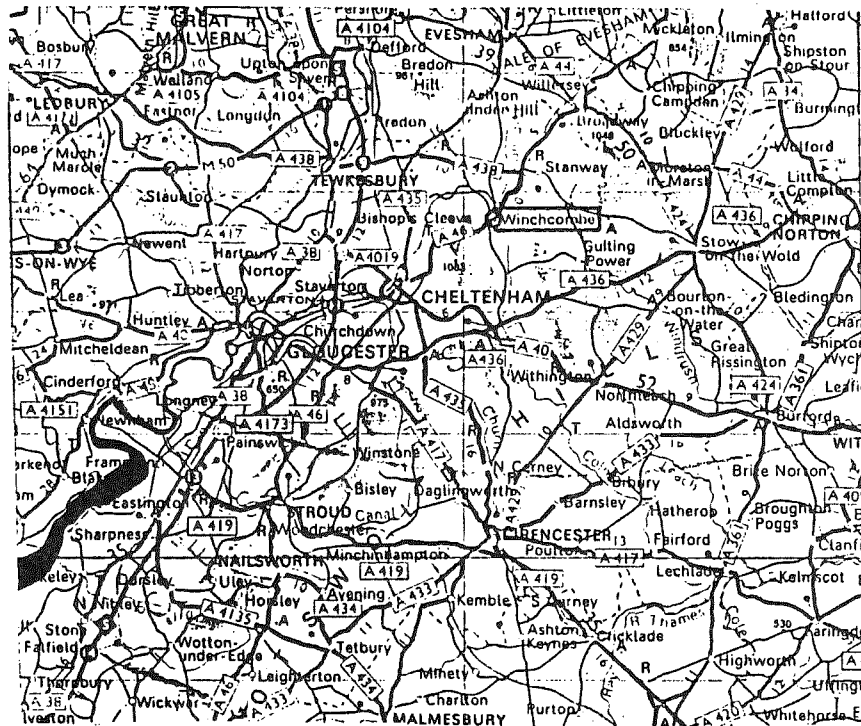
A.D.Pinder

PROJECT OBJECTIVES

1. To create a place of worship in the Christian tradition catering especially for ecumenical groups, local people, pilgrims and ultimately for people of any creed.
2. To endow the place of worship with characteristics that facilitate the communication between the individual and God.
3. To incorporate two disciplines with landscape architecture for the achievement of the above objectives, namely the traditions of medieval churchbuilders, and secondly

geomancy, a science concerned, especially in spiritual terms, with the selection of suitable environments and the most auspicious means of human intervention therein. To a degree these coincide in that the early church builders practised forms of geomancy:

Given that the sanctity of a place is felt through its 'genius loci', the prevalence of this ambience in medieval parish churches is no chance occurrence and there are two fundamental reasons for this: firstly, the builders chose the right places to site their churches, and secondly, they constructed them in accordance with customs that might today be labelled esoteric. Such geomantic practices were drawn upon during the project, as being the most appropriate for the development of a sense of place.



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Figure 1

PROJECT DESCRIPTION : SITE SELECTION

At the outset, geomancy was used as a site selection tool since a place to be used for religious purposes requires special characteristics, of which the most important is the 'genius loci'. In the Chinese geomantic science of Feng Shui, criteria exist for the selection of an appropriate site, based on an idealized concept of perfection where the 'breaths' of heaven and earth are locked in mystical union. In common with other Chinese doctrines, Feng Shui is based on a philosophy of duality in which two opposing yet balancing forces underlie all creation. These are called Yin, representing for example earth and the female principle, and Yang, heaven and the male principle. The most fundamental of geomantic criteria, topographical forms, the presence and characteristics of water and vegetation, views, were included in a general list of site requirements containing the pragmatic criteria of standard landscaping procedure. Significantly, the former often coincided with the latter, illustrating that geomancy is more compatible with landscape architecture than might appear. Also important at this stage of site selection were the visits made to the most plausible of potential sites revealed by map searches, in order to assess the atmosphere of each. This was to a considerable extent a personal and subjective exercise, but as yet, 'genius loci' is not entirely amenable to rational appraisal. At the end of this process a site within a small valley to the east of Winchcombe (figure 1) emerged as the most auspicious. The geomantic reasons for this choice were basically (1) the 'arm-chair' topography of the valley, (2) the south-west aspect of the valley, (3) Yin/Yang implications of the topography, (4) the presence of spring water, and (5) a history of sanctity attached to the site. The place was, of course, not perfect, and various detrimental characteristics required geomantic treatment while others were to be redeemed by landscape procedures. Compatibility between geomancy and landscape architecture was further illustrated by some features that were designated as problems by both disciplines. For example a long, narrow plantation of mature larch stretched down the centre of the valley (figures 2 and 3). To a landscape architect this would have to be removed on the grounds that it visually and spatially divided the valley in a manner that impeded an appreciation of its entirety. The plantation itself was discordant in terms of form, texture and colour, and ecologically inferior to the surrounding semi-natural beechhanger and mixed deciduous woodland. It was

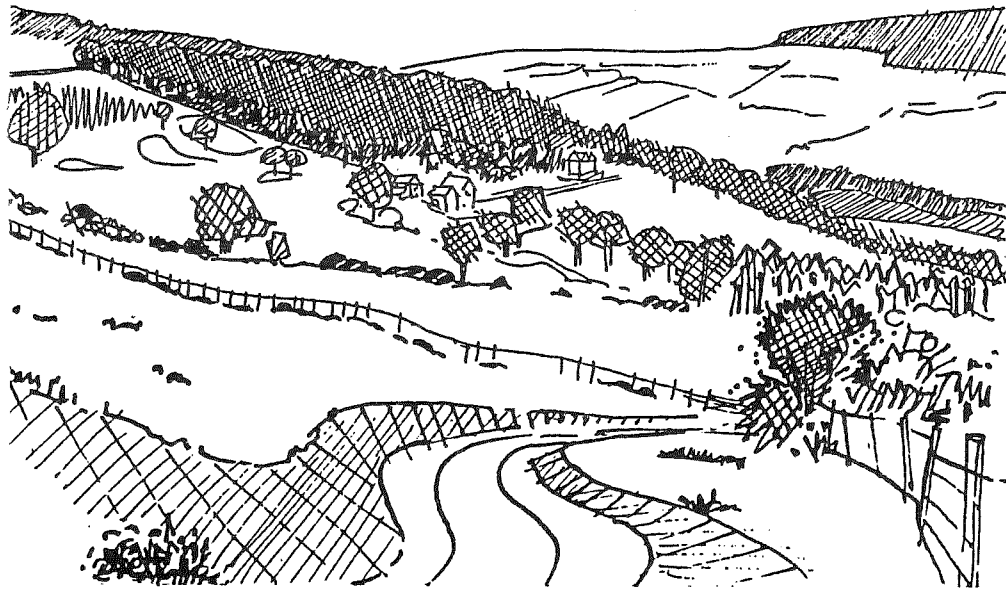


Figure 2

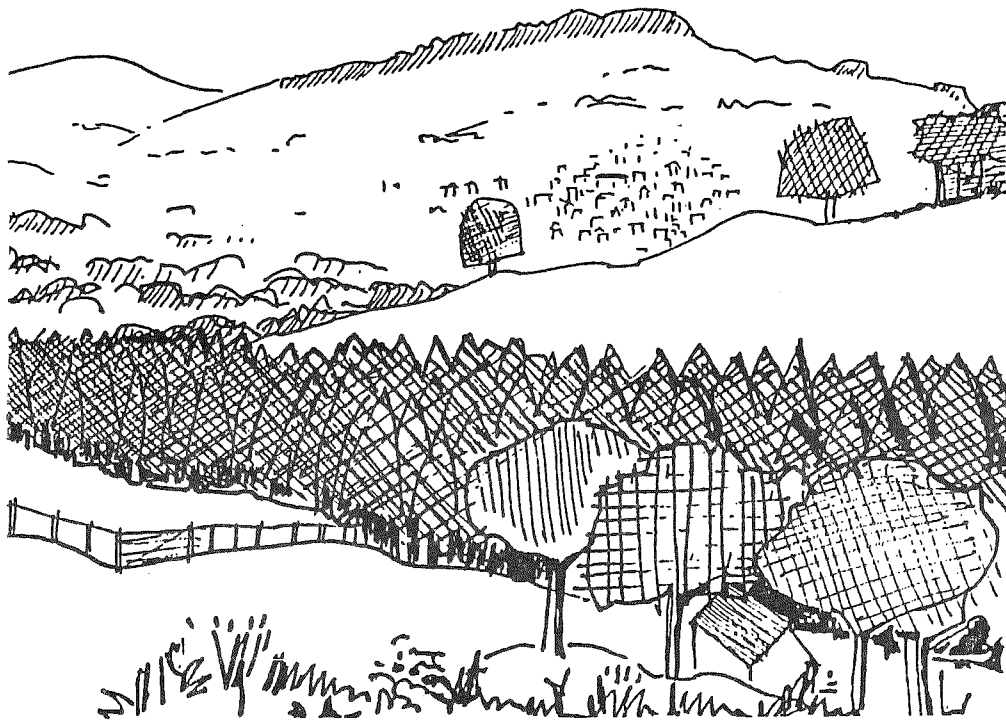


Figure 3

geomantically inauspicious because of its linear nature: any straight line pointing at a site is believed to, as it were, 'puncture' the atmosphere of the place, allowing the beneficial 'spirit' to seep away, or worse, it may conduct noxious spirit into that place. The plantation also screened the view of the valley's stream from the area where the chapel was to be constructed, for the presence of water is vital for the geomantic health of a locality since it is closely associated with beneficial spirit.

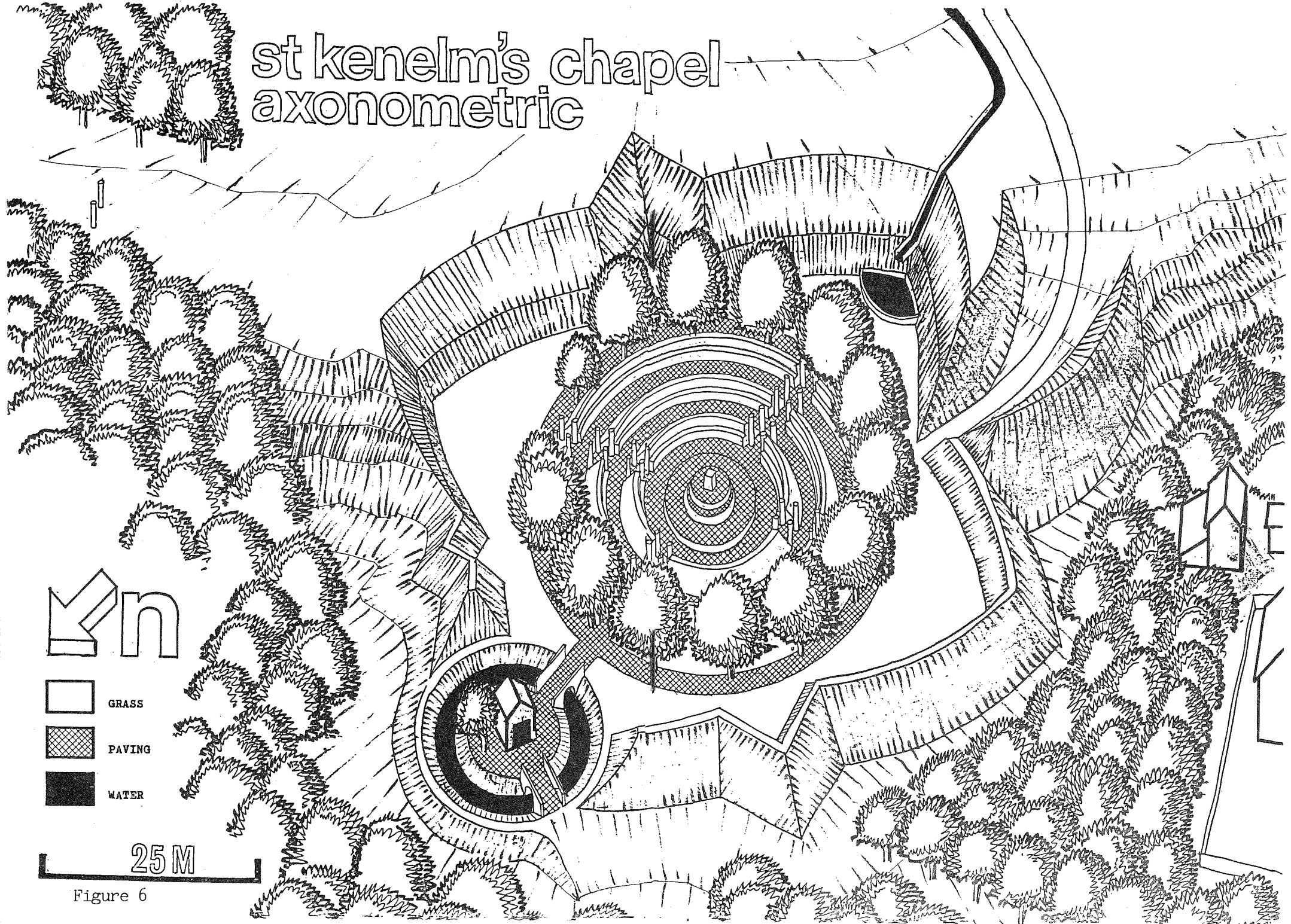
PREPARATION OF MASTER PLAN : HISTORY

On the south slope of the valley there is a holy well dedicated to the Anglo-Saxon saint, Kenelm. Nearby once stood an Anglo-Saxon chapel built to serve the pilgrims who, until the Reformation, had come to take the waters for their medicinal virtue. Thus the spiritual qualities of the place had clearly been recognized for centuries. Further research revealed that it must have been sanctified at an even earlier date. Analysis of the legend of St Kenelm exposed underlying elements that indicated an ancient reverence for the well spring as a shrine to the earth goddess. The spring with its symbolic values and healing properties had not been made holy by specific association to St. Kenelm, but had always been recognized as such. The legend of St. Kenelm was merely a metaphor hiding the process of the shrine's 'Christianization'. This was an example of a policy initiated by St. Augustine who ordered his early missionaries not to destroy pagan shrines, but to convert them - an astute political move but one that also ensured that the new churches would be built in suitably sacred places. Thus the 'genius loci' had been paid homage by a dual history, each religion acknowledging the same enduring essence, and each by its reverence, adding spiritual intensity to the pre-existing ambience. In turn, the two traditions, pagan and Christian, were incorporated into the design of the new chapel. However, the design was not primarily an exercise in reconciling the two, although this has been symbolically achieved through geometry, but, by utilizing both in an attempt to express more fully the spirit of place, it was hoped also to enhance the experience of worship there.

SACRED GEOMETRY

The structure of the proposed chapel is centred on the junction of two axes (figure 4). The north-south is the earthly-related axis which is aligned on magnetic north

st kenelm's chapel axonometric



Kn

- GRASS
- ▣ PAVING
- WATER

25 M

Figure 6

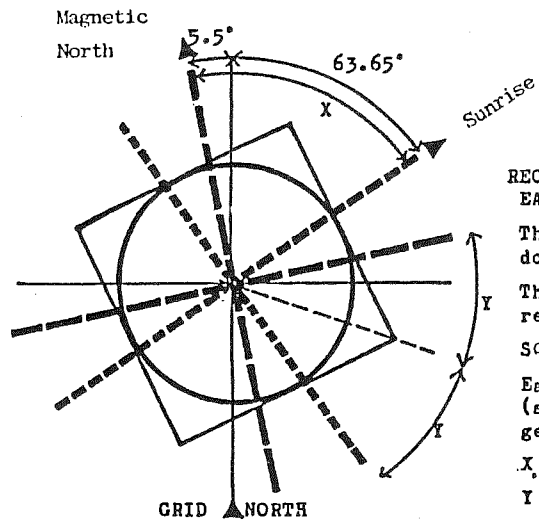


Figure 4

RECONCILIATION OF HEAVENLY AND EARTHLY AXES.

The centre lines of the two vesicas do not cross at 90°

Thus the geometric approach of reconciliation is applied;

SQUARING THE CIRCLE

Each side of the square = 148ft (same as radius of the circles generating the vesicas.)

X = 69.15° (from magnetic north)

Y = X/2

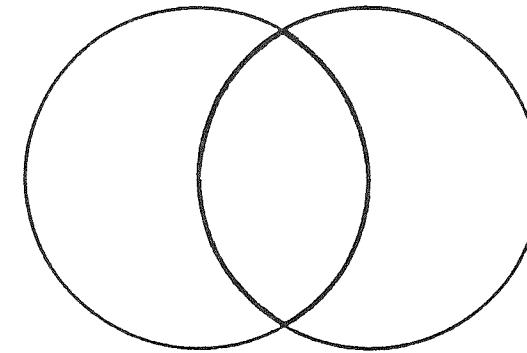
Y = 34.575°

and terminates on the existing Elizabethan well house over the spring. This follows the practice of the early church builders in aligning transepts on magnetic north. The east-west heavenly related axis is focused on the horizontal sunrise position on St. Kenelm's day (July 17th). Many medieval parish churches exhibit alignments deviating from true east-west due to this refinement of orientation towards the sunrise on the patron day of the saint to whom the church is dedicated. The earth-related axis is essentially pagan since its focii, the spring and the wandering magnetic pole are manifestations of the earth goddess. The nearby long barrow of Belas Knap for example, is similarly planned with a dominant north-south axis. The heavenly axis corresponds to the Christian tradition of a celestial deity, which is expressed by the east-west layout of churches. Each axis is the centre-line of a 'vesica piscis': a pointed oval shape formed by two equal circles passing through each other at their centres (figure 5). It has various symbolic connotations resting for example, in its similarity of form to the Christian emblem of the fish. In terms of sacred geometry, the vesica is of fundamental importance since it is the starting point from which all geometrical figures may be derived. It thus has a psychological basis as a symbol of perceived knowledge. Given the

objective of unifying the pagan and Christian histories of the site and their respective emphasis in earth and the heavens, the irrelation of the angle of junction between the two axes was resolved by a process of 'squaring the circle'. This entailed the production of a square, each side being the same length as the radii of the circles generating the vesicas, which geometrically reconciled the axes. The resulting squared circle, on

VESICA PISCIS

UNIVERSAL
Solar
Unchanging
Archetypal
Reality
Unification



EMPIRICAL
Lunar
Changing
Sensible realm
Actuality
Pluralism

BALANCING
Proportionality Mediation
Human consciousness

Figure 5

which is based the ground plan of the seating area and the four 90 degree corners of the ground modelling (figure 6), acts as an archetypal image of wholeness providing the symbolic keys for the contemplation of God and creation. The same configuration is to be found in the mandalas used by oriental religions as an aid to meditation. Great importance was given to measurement during the construction of pre-Reformation churches and cathedrals, not purely for aesthetic or acoustic reasons but because numerology and measure were associated with spiritual values. This philosophy originated with the Pythagoreans who believed that a synthesis of all knowledge was expressible through numbers. This is being confirmed by nuclear physicists who view material reality as being underpinned by laws and forces communicable only via mathematical formulae and concepts. All major measurements within the design are therefore derived from multiples of specific sacred numbers, using a basic unit of 2.72 feet, which is an approximation of the incommensurable figure 'e', the variant by which a logarithmic spiral is set out.

PLANTING

The soft landscaping over the site was dominated by three major considerations: first, in response to geomantic requirements, was to ensure that the planting was harmonious within a local context. To this end 'natural' species, especially those presently growing on site were used in the chapel area and in the belts of pasture woodland surrounding the chapel. This illustrates in passing the affinity between geomantic and ecological principles; second, arising from the above, the management was to continue in its present form - the optimum agricultural land use being sheep grazing, thus excluding the use of any vegetation types other than grass and trees; third, the species used within the chapel should hold some significance for worshippers and relate in some way to the philosophy behind the scheme. The source for the resolution of these conditions was the legend of St. Kenelm. In it his character emerges as a symbol of hope, self-sacrifice and purity, all central to Christian theology. In accordance with this, the species apple tree was chosen, for in the lore of plants it was sacred to Apollo and later Christ. To the pagans the ash tree was the tree of life that represented the fertility cycle of birth, death and renewal. In the legend, St. Kenelm, before his murder, thrust a twig into the ground which immediately grew into an ash tree. Consequently it was his emblem, and as such was introduced as the dominant tree in the central area of the new chapel.

SUMMARY

Since geometry and measurement were particularly appropriate to convey the ideas, images and symbols so relevant to the aims of this project, they were heavily employed to imbue the chapel with spiritual harmony, archetypal meaning and a link to the elemental aspects of God and Nature. The use of geomancy ensured the most propitious place. Its use was also intended to enable fuller reference to, and enrichment of, the spirit of place by emphasising the union of heaven (Yang) and earth (Yin) at this specific location. In the doctrine of Chinese geomancy, spirit is concentrated wherever a junction between Yin and Yang occurs. If the chapel were to be built in any other place, or its purpose modified, its form, alignments etc. would be irrelevant, rendering the structure literally meaningless.

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RESEARCH DIGEST : NATURE IN LOCAL PLANNING

Stephen Owen

Natural features of our settlement - landform, sunlight, air movement, water, vegetation and wildlife - can be treated properly only by a broadly-conceived process of environmental management including town and country planning, landscape architecture and maintenance programmes. Natural features are raw materials for landscape architecture; landscape architects have technical and design expertise in the manipulation of natural features. But concern for natural features in the development of settlements also should influence the exercise of town and country planning. There is, however, little or no published research indicating the extent to which natural features are taken into account in planning policies or development control. Similarly, there has been little development of methods, techniques or criteria for dealing with natural features in town and country planning.

The longer term aim of this research project - Nature in Local Planning - is to evaluate techniques and to develop criteria and guidelines by which a more considerate treatment of natural features might be incorporated into local settlement planning. In setting the context for explicit recommendations to be made, the research project points briefly to the critical role that natural features played in the establishment and earlier evolution of settlements in Britain; examines in detail the treatment of natural features in contemporary local planning; and

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argues the relevance to the practice of local planning of a thorough understanding of the relationships between natural features and settlements.

The first paper issuing from the research project is published as a Research Report of GLoSCAT, School of Environmental Studies, (Owen, 1985). It sets out the results of a detailed review of the current treatment of natural features in all the local planning instruments published by all the local planning authorities in one county, Gloucestershire, since the re-organisation of local government in 1974. The paper reveals the scarcity of references to natural features in local planning instruments and evidence that the formulation of local planning policies is seldom influenced by consideration of natural features. On average there were fewer than eight references to natural features in each document analysed, some of these documents exceeding 100 pages. From the review, planners seem unable to escape the generalities of policy phraseology at all levels of detail in local planning, even in site-specific design briefs; criteria do not seem to have been developed against which proposals for change can be assessed.

The second paper, shortly to be published, argues the relevance of natural features to the practice of local planning. This should encompass the potentially damaging impacts of development on natural features themselves; the problems natural features cause to the inhabitants and other users of settlements; and the benefits which can be derived from natural features to enhance the quality of life for those people. Various natural features are examined in terms of: their relevance to the practice of local planning; value judgements that provide insights into a more responsive manner of dealing with those features in local planning; and the knowledge and information currently available for use by planners.

Whilst it is acknowledged that perceptions of the value of natural features differ, there is no doubt that people derive benefits and satisfaction from their everyday experience of natural features in settlements - whether aesthetic satisfaction, comfort or convenience. The research to date concludes that some of those benefits can be ensured through a fuller understanding and more explicit consideration of natural features in local planning.

Amongst the conclusions of the research, it is proposed that the following aims should become a function of local

planning :

- 1) to protect the intrinsic value of natural features themselves (e.g. wildlife habitats, groundwater, the natural shape of land, natural succession of vegetation);
- 2) to optimise benefits to people, particularly local inhabitants, from natural features (e.g. by maximising available sunshine, by protecting pleasing views of natural features by providing nature reserves which incorporate recreational uses, by protecting attractive mature trees);
- 3) to avoid or overcome problems posed by natural features (e.g. potential exposure of housing areas to cold winds, difficulties of land development from subsidence or poor drainage, intensive planting of trees on poorly-sunlit housing sites).

Two further conclusions emerge. Firstly, we have plenty to learn from other countries; British planning has a tendency towards insularity, partly no doubt because town and country planning originated in this country. Secondly, planners seem to have little capacity to learn from the past, not in a romantic or nostalgic sense, but from the sheer practicality and success of previous examples of good planning. Substantial efforts must be made by planners to study the consequences of their actions. The performance of plans, guidance notes, even conditions on planning consent, should be noted, sometimes thoroughly documented, in order to improve future performance, to amend policies, or to repeat successful treatment elsewhere.

Whilst technical knowledge about natural features is needed, planners cannot take sole responsibility for all the technical knowledge required in local planning. There is a clear need for some planners to have expertise relating to some aspects of natural features; reliance entirely on specialists will not ensure that consideration of natural features is integrated into local planning operations. But there is also a clear need for other specialists, such as landscape architects, ecologists, climatologists and water engineers either to be members of local planning teams or for their expertise to be available when required. There must also be the means of enabling these specialists to contribute to planning through the development of planning methods and

techniques or through the organisational structures of local planning authorities.

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MY "PERSONAL" PERSONAL COMPUTER

Michael Hodges

The faculty in the School of Urban Planning and Landscape Architecture at Michigan State University seem to be a non-homogenous group when it comes to computer ownership. Between us we have one Apple II, three Apple Mackintosh's and an IBM PC, Jr. And now, as a late entry to the field, myself with an A.T.&T. 6300 DFD Personal Computer.

I had been contemplating the purchase of my own Personal Computer (PC) for quite a while. It was very important for me to get a computer which would be more than a home computer. I needed a machine which could run much of the new software being developed for landscape applications and I wanted a high level of graphics capability for, after all, we are a visually oriented field. I also wanted to interact with our School's computer system, and with the M.S.U. mainframe and library computers, not only in order to enhance my own productivity, but to improve my ability to guide students in the area of computer applications. Compatibility with computer systems in landscape architecture departments at other universities was also desirable.

Much of the early development of PC software for the practice and teaching of landscape architecture took place on Heath-Zenith or Apple computers. Whilst the current Apple IIe and Mackintosh home computers are excellent machines, a sampling of available software definitely shows a switch to "IBM compatible" programs.

This change of focus was due to the fact that not only did International Business Machines enter the PC market,

Michael Hodges of the School of Urban Planning and Landscape Architecture, Michigan State University, was guest professor at Gloucester, Autumn 1984.

but that they were able, in a very short time, to make their machines and system the "standard" in many of the universities and offices across the country (and in fact, world wide). Michigan State University was no exception and this in turn compelled me to look at the IBM and compatible computers.

Larger offices, of course, may be able to invest in more sophisticated, (and expensive) stand alone multi-user systems of either PC's networked together or of terminals connected to a stand alone mini-computer. Wand and North Star are a couple of companies providing equipment to run popular CAD software. Hewlett-Packard and Texas Instruments address the needs of somewhat smaller offices seeking CAD programs and good graphics capabilities. I was quite impressed by the TI Professional Computer, but found, unfortunately that it was only "functionally" compatible and it could not meet my criteria of being operationally compatible with an IBM.

My choices were soon narrowed further. Since I had decided to insist on high resolution color (after all my TV, and I suspect yours, is capable of color reception these days) this excluded the IBM XT's because of the expense of their color system, and although the Zenith Z-150 was in the running on many counts, it finally did not seem quite such a good choice on the grounds of color resolution, service and cost. The "IBM clone" portables did not provide sufficiently large screens for comfortable work viewing (nor color) and many did not have enough expansion slots I considered necessary for future adaptability.

I should add that maintenance and long-term support was another factor in my decision. I did not want a \$3,000.00 odd investment to be unrepairable locally; this ruled out some other brands in my mind. The final factor was price, and the discovery that when you add all the essential bits and pieces (if you can ever get a straight answer to your inquiries) computers are a lot more expensive than the "advertised" basic price!

My final choice, which met all the above considerations and at a competitive price was the A.T.&T. 6300 Personal Computer, with dual double sided/double density 360 K floppy disk drives and a keyboard. I could not afford the 10 mb hard disk model, but did get the upgraded 256 K RAM (128 K is standard, and it is expandable to 640 K). The CRT 318 12" color video display monitor gives 16 colors in a very high 640 x 400 pixel resolution - twice

the density of comparable PC's.

Small business users who foresee a growth could take advantage of the networking features which can be established using A.T.&T. equipment. As your operation grows in size the PC can act as a terminal for the UNIX computing system which is developing into quite an international standard operating system for larger micro-computers and mini-computers. A range of software tools useful for sophisticated computing applications is becoming available and even the minimum entry level to UNIX is claimed to support full graphics applications and four simultaneous users. As demands grow the UNIX system can be transferred to more powerful computers - an upgrade which will only involve equipment costs and not require relearning an entirely new software.

I purchased separately an Epsom Spectrum LX-80 dot matrix printer which can also print in a slower "near letter quality" mode, as well as printing graphics output. This is not in color, of course; plotters were just too expensive for me to consider at this point, as were digitizer tablets. I do plan to add a "smart" (internal communication board) modum in the near future.

I will admit that delivery took a little longer than promised, and trouble with the video control board has further slowed my use of the system, so I cannot say much at this point about how I am getting on with the use of the equipment and software. Perhaps that should be the subject of a future article!

PART-TIME COURSES IN THE BUILT ENVIRONMENT OFFERED AT GLOSCAT

1. DIPLOMA IN THE BUILT ENVIRONMENT

Learning about design by doing design is the principle that underlies this course. It is a direct response to the needs of planners now working on development control, local plans etc., whose formal training has not prepared them for a role in the design process. No such course can be a substitute for a full time design education but it can provide a platform from which to pursue design quality both in a developing personal understanding and in its professional application.

The core of the course is a series of extended design projects integrated with six areas of study: precedents, human factors, technology, visual factors, design methodology and communication studies. Building upon these basic design principles the course offers important experience in three-dimensional designing in the framework of current planning practice and procedure. All four of the course team are architects. One is also a planner, another is also a landscape architect. This range of expertise is reflected in the nature of the projects set.

2. DIPLOMA IN ENVIRONMENTAL EDUCATION : a DES INSET course

The focus of this multi-disciplinary course is environmental education in the built environment. Understanding the form and function of our everyday surroundings is important and provides an accessible, relevant and valuable vehicle for teaching a wide range of disciplines. The distinctiveness of this course is

that its concern is with local area studies of the built environment. Housing for example can be studied in terms of construction and design in historical, technical or visual aspects. The layout of estates and interacting systems of pedestrian and vehicular movement, the influence of land form and sunlight, townscape and conservation issues, all provide a rich area of study.

The ultimate goal of the course is to encourage greater awareness, appreciation and responsibility for our everyday surroundings. Using the built environment for teaching purposes brings a relevance to a range of traditionally taught subjects. Learning to "read" our built surroundings and interpret underlying social, economic, historic and geographic explanations will provide an enhanced appreciation for schoolchildren and develop an ability to discriminate in assessing our surroundings.

For further information on these courses write to: the School of Environmental Studies, Gloucestershire College of Arts and Technology, Oxstalls Lane, Gloucester.

1985 DISSERTATIONS: BA (Landscape), Gloucester

The following is a list of the successful degree dissertation submissions for 1985. These documents can be consulted in the College Library and abstracts may be obtained from the Librarian on receipt of a stamped addressed envelope.

- AITCHISON, Michael K. The need to develop Victorian Parks to cater for present public recreational need, whilst retaining the integrity of the original design.
- ASHDOWN, Charlotte E. Landscape conservation: towards complete farm plans, with a study of the Demonstration Farms Project.
- BETTS, Jane The restoration of historic gardens: progress and achievements in England.
- BREESE, Emma M. The role of the London square; the long-term management of change within the cityscape.
- BROWN, Laura J.A. Landscape and community: a study of the involvement of landscape architects with local community groups in environmental projects.
- BURDEN, Colin A. The secondary uses of water supply reservoirs: the relationship between amenity, recreation and conservation.
- CARLTON, Kevin J. The revitalisation of an urban river valley: developing a landscape framework for recreation in the lower Swansea Valley.
- CLUTSON, Steven P. Historic Industrial Preservation: its role within the semi-rural landscape setting.

COOMBEY, Nicholas J. Zoo presentation: enclosure design for captive animals.

DICKINSON, Sarah R. Wetland drainage: conservation and agriculture.

DOWIE, Gary N. Waterbased recreation in Country Parks: a study of the problems that can arise through high levels of use.

EASTWOOD, Michael D. Sutton Park, West Midlands: management to reconcile the demands of recreation with the needs of natural resource conservation.

EDWARDS, Raymond P. Conception in colour beyond form: an observation and classification of the colour components of landscape, with the intention of taking the design on paper closer to reality.

EYERS, Lucy Landscape, a career for women? An investigation of landscape as a career offering equal opportunities for women.

GOLDIE, Paul S.G. An assessment of the potential for landscaping modern highways in rural areas in England.

GREAVES, Catherine A. Oak Wilt: the disease, its control and its effects with regard to Britain.

HARRIS, Paul S. The temporary seasonal campsite: an analysis of the conflicts between peak period demand by caravanners and the protection of the countryside.

HAWKSWORTH, Michele The integration of outdoor advertisement displays into the urban landscape.

JAMES, David The Groundwork Trust's approach to landscape regeneration in the urban fringe.

JONES, Anthony V. Victorian Wintergardens: a study of their development and design, culminating in the Municipal Wintergardens of the 19th century.

LAYTON, Nicholas E. The Droitwich Canals restoration: an investigation into the policies undertaken with regard to methods and materials in their restoration.

MACLEOD, Catriona S. The siting and design of transmission lines.

PORTUS, Martin Design/Build: the implications for landscape architects.

PRITCHARD, Timothy J. Design for the senses: with reference to the blind as a source of investigation into sensing stimulation in the landscape.

ROOKWOOD, Paul M. The viability and implications of rural road verge timber production.

BOOK REVIEWS

THE CHANGING COUNTRYSIDE by Blunden J, and Curry N. eds. (1985), Croom Helm.

The Changing Countryside is a textbook produced by the Open University with the support of the Countryside Commission. The main text and the accompanying Handbook, a collection of source documents, complement the television series of the same name. The course has been designed to attract two audiences: the general and the more specialist. The television series obviously gears itself to the mass audience but also seeks to capture or entice the more specialist. For the latter the textbook, the handbook and further course documentation provide far more detailed investigation. I recently came across the books in the office of an agricultural adviser who had enrolled on the course to broaden his understanding of conservation.

The very word textbook can be a deterrent to the seasoned practitioner. It is inclined to provoke the image of an exhaustive treatment of issues familiar to the reader. For the practitioner, too, with his overriding and continual concern for solutions, textbooks can be irritatingly inconclusive. How many times have you read through a textbook following the evolution of a particular idea or approach only to find that the author abandons you with no thought of the future? Whilst the academic avoids prescription, it is the practitioner's daily task.

However, The Changing Countryside is not a conventional textbook. It has a lively style and a strong editorial flavour. The text is broken up, but not disintegrated, by apt illustrations, useful quotations and most significantly, contributions from the grassroots. These last comprise interviews with farmers, N.F.U. officials, officers of County Trusts for Nature Conservation and the

like. For me, these splendid anecdotal contributions enlivened the precise, careful and objective text.

The changing countryside is a vast topic and few planning, landscape or geography courses would probably attempt to cram all that it implies into one course. The editors of the book have overcome the enormity of their task by selecting just four major issues or themes. These are "expanding agricultural productivity", "containing settlements", "conserving the wild" and "sustaining rural communities". This seems a logical and generally acceptable division which allows most current topics of concern to be aired. Perhaps forestry and recreation are the two major areas to suffer a little from the chosen subdivision.

The text credits thirteen contributors. Such a proliferation of authors, notwithstanding their individual knowledge and eminence, can be a recipe for disaster. The popularity of multi-authored texts is ascribed by cynics to the desperate urge to find short cuts to book production. Certainly the worst examples of this genre are unstructured, lack cohesion and continuity and metaphorically fall apart before your eyes. However, again the strong editorial style of "The Changing Countryside" avoids such criticisms. Interestingly individual sections do not carry individual attributions; the contributors are collectively acknowledged at the end of the text. It may, perhaps, be inferred that the editors did indeed edit!

Thus, despite the numbers of contributors, the text of "The Changing Countryside" emerges as the sort of seamless whole, which is so sought by, but currently eludes, Radio 4 producers. For the voyeur there is also the absorbing task of trying to decide which contributors wrote which section.

Readers of Landscape Issues may be drawn to evaluate the text by reference to the section of "Conserving the wild". The title of this section leaves lingering doubts. Landscape and wildlife conservation tend to be thrown together and treated as automatically compatible. This is not always the case. What is 'good' for landscape may not be 'good' for wildlife, and vice versa. Whilst landscape conservation has perhaps a longer history in the annals of countryside planning, wildlife conservation has a more cogent and scientific foundation.

Leaving the title aside, the section begins, as does

each, with an historical perspective. In this case the Bible is the starting point and the reader is jogged rapidly but interestingly through changing attitudes to landscape conservation. The pre-war lobbying and post war euphoria which saw the evolution of the National Parks and Access to the Countryside Act is well covered. The book makes you feel that this was an exciting time to be a conservationist.

There then follows a slight curiosity with a few pages entitled the "Management Era". The title again intrigues; it seems to suggest that the management approach belongs to a past era. I am confident that this is not the view of the book's sponsor, the Countryside Commission. The still developing Groundwork Trusts are founded on the Commission's interest in, and commitment to, countryside management. What the book says about countryside management is fair and informative, but perhaps a little brief in relation to the preceding historical account and the following account of the Wildlife and Countryside Act.

As a prelude to the description of the Act and its stormy passage, there is a good summary of the conflicts between agriculture and conservation. Despite Michael Heseltine's claim that the Wildlife and Countryside Act was a major piece of conservation legislation, I suspect it will not loom so large in subsequent textbooks. True, the Act did introduce the concept of Marine Nature Reserves and did extend protective legislation related to plants and birds, but in its central preoccupations it still appears ill-drafted, hastily devised and seriously flawed. The Act was supposed to propound the so-called voluntary principle, that farmers and landowners should be encouraged, voluntarily, to pursue landscape and wildlife conservation. In practice, it appears to have enshrined the principle that landowners and farmers should be paid to conserve.

The section concludes by looking forward and almost becomes prescriptive. As will be evident, I found this book overcame my prejudices and induced me to think further about a wide range of countryside issues. One can ask no more of a text and I recommend its reading.

Andy McNab,
School of Environmental Studies,
Gloucester.

LES COULEURS DE LA FRANCE by Jean Philippe Lenclos (1982), France, Edition Le Moniteur. BRITAIN IN VIEW, COLOUR AND LANDSCAPE by Michael Lancaster, Sandtex, London.

These recent publications complement each other in their treatment of colour in the landscape.

That of J.P.Lenclos develops a methodology enabling a precise analysis to be made of the palette of colours to be found in a given region (of France); that of M.Lancaster extends the investigation by studying the impact of colours used in new structures inserted into existing landscapes.

In "Les Couleurs de la France", J.P.Lenclos deploys the results of 20 years of research into "the geography of colour of the French landscape". The originality of his approach lies in his treatment of the use of colour in an integrated and conscious, rather than fragmented or impulsive, way. His methodology is applicable to any country.

Hitherto, writings about the use of colour have tended to describe its application to individual buildings or occasionally, at a larger scale, in town planning projects. Examples include, in the 19th. century, those of Turin in which colour was consciously used in a planned way, later, the work of Bruno Taut, the research carried out by the de Stijl movement, the contribution of Vasarely and his "ideal city of colour", and, nearer to our own time, the studies of the typology of colour by Johannes Uhl in Berlin and those of Bernard Lassus in France, particularly in the new towns there.

However, up to now, no study of colour has extended its scope to take in the whole range of natural or man-made colours in a landscape.

By taking systematic samples of soils, rocks, vegetation, building materials, renderings, paints, etc. and by using colour sketches to analyse total effects as well as details, Lenclos succeeds by a series of syntheses in establishing the palette of colours for each region of France. The palette includes the dominant colours of the most permanent and visible components; rocks, soils, walling, roofing and paving materials, the colours of the more changing components; vegetation, sky, water, as well as the colours of doors, windows and decorative objects.

Lenclos does not suggest solutions but rather gives us a tool to help us know and understand better the landscape in which we intervene and thus provide us with a basis for making better informed decisions. It remains for us to decide what effects we require from the use of colour, which could include integration, assimilation, contrast, novelty, accentuation and surprise.

In "Britain in View, Colour and Landscape", Lancaster seems to take up the theme at this point in order to develop it further.

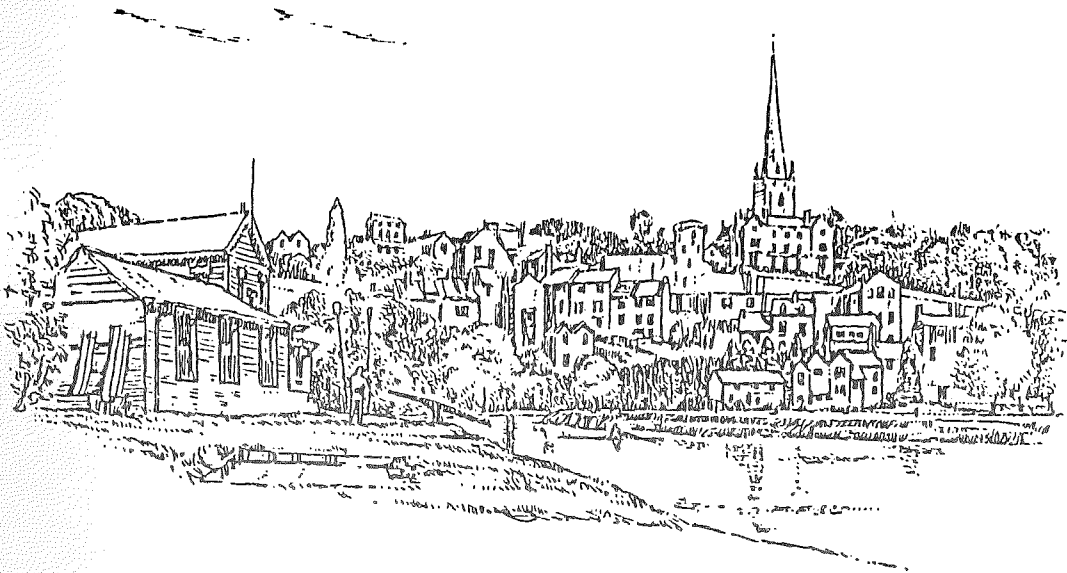
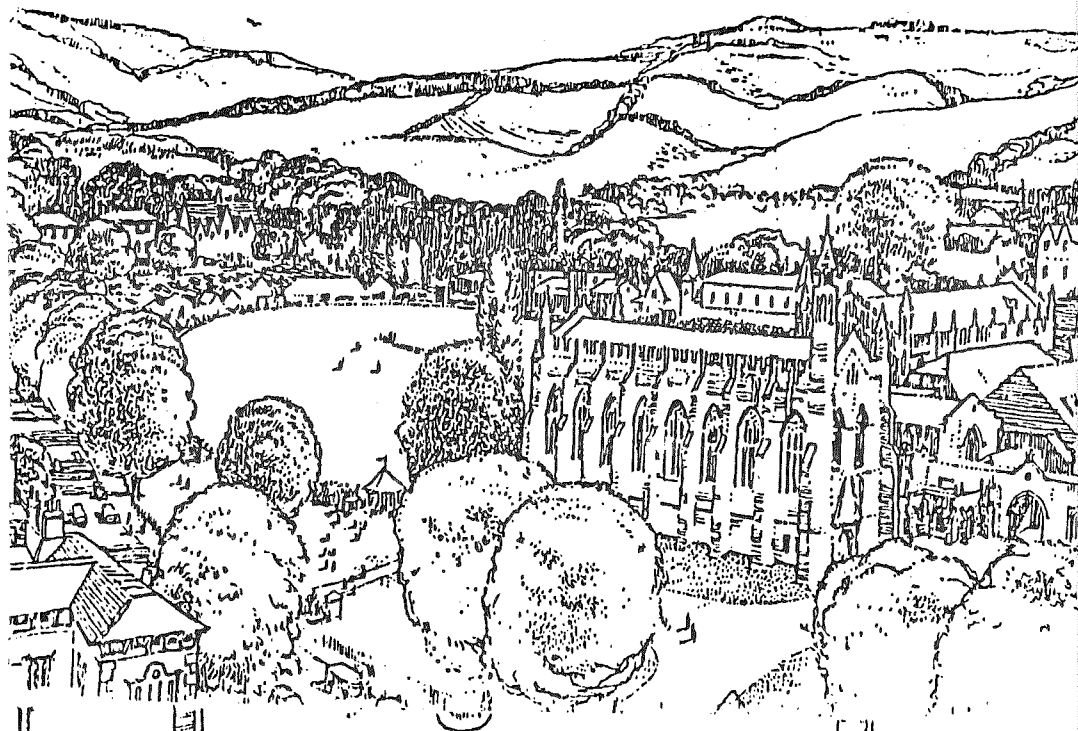
The first section of the book is likewise concerned with the geography of colour and analyses the effects produced by light on our perception of the colour of the traditional buildings, villages and towns, gardens and landscapes of the British Isles. The analysis is a detailed one, not dissimilar in spirit to that of Lenclos, though the methodology employed is pragmatic rather than systematic. The originality of Lancaster's approach is to be found later in the book, where, having established how the influences of the past have given landscapes their particular quality in terms of colour, he turns to the contemporary use of colour in the landscape. A range of examples from industry, power, transport and so on, are carefully analysed in terms of the intentions of the designer, the effect on the existing landscape and particularly on the background against which the new structure is seen.

The book concludes with "colour guidelines" based on the author's knowledge of landscape and architecture, of materials and of the different colour effects produced as a result of the action of light. These guidelines are no doubt based on the author's own aptitude for seeing "with an acute and active eye".

Both books are pleasant to read; both reveal much about the vernacular building which still forms the backdrop to many towns and villages in the two countries considered. All in all, they make one realise that the study of colour cannot be pursued separately from that of landscape, choice of materials, methods of combination, etc. A further merit is that they help us to see more clearly the world around us; a world whose colours are continually being renewed as time passes and seasons succeed one another, a world where permanence is subject to constant change. The studies remind us that it is pointless to argue about whether or not to use colour in

our designs; colour is everywhere, around us all the time whenever there is light. Awareness of this omnipresence of colour must be cultivated before good decisions can be made about the effects we wish to achieve in using colour in the landscape.

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(Opposite) Cheltenham Cricket Ground (above) and Hereford Racecourse (below) from A.A. Sampson's "Grounds of Appeal" and "Courses of Action", published by Robert Hale (1981 and 1984). The author is senior lecturer in the School of Landscape Architecture, Gloucester, responsible for information handling and research studies. He continues his series covering the environment of sport with a new book "Winning Waters", about the homes of British Rowing, to be published by Robert Hale, July 1986, from which the drawing Ross-on-Wye (above) is taken.

INFORMATION FOR CONTRIBUTORS

LANDSCAPE ISSUES publishes articles and reports on aspects of landscape architecture and landscape education. Manuscripts should be submitted to the Editor, in duplicate for refereeing, typed on A4 sheets with ample margins and bearing the title of the paper together with the name(s) and any affiliation(s) of the author(s). A high scholarly standard is expected, and normal conventions for references, illustrations etc. should be followed. Footnotes should be avoided. Further details will be supplied on request. Although there is no strict limitation on the length of articles, 3-5000 words are preferred. Reports are much shorter and cover matters of topical interest; for example, specific design projects, research seminars and dissertations. Illustrations are welcome: diagrams should be neat and clear; photographs should be black and white or, if colour, of suitable clarity for reproduction. Copyright is held by the authors of all work submitted. Articles may contain views which do not coincide with those of the Editorial Board.

CONGRATULATIONS

Congratulations to Yvonne Young and Justin Thomson, both recent graduates of this School, for their submissions in a design competition held last summer: Yvonne was a member of the team awarded second prize, and Justin's individual effort was highly commended. The Park Action Campaign invited designs for an ecological park, based on a threatened section of Gloucester City Park, that would show a more beneficial use of a disused railway line, in contrast to the existing plan for an inner ring road. The competition was judged by, amongst others, Alice Coleman and David Bellamy.

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