

Paper 4

“The Modern Movement in Landscape Design: Precepts, legacies and challenges”

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This is a huge subject, and in its summary I must be brief, be bright and be gone. G. K. Chesterton once observed that the world will never be short of wonders, but only, perhaps, of wonder itself. Keeping our sense of wonderment intact leads us to seek to conserve the best of our surroundings so that we may pass on their value as anchors and cues of cultural context to the future.

Many of these wonders are landscapes: human constructs by definition partly ‘natural’ and partly ‘man-made’, and straining to change in their space, time and expression. These, and their underlying ideologies, glimpsed by myself, as a teacher, landscape architect and grumpy old man, are the subject of this talk.

Strictly speaking the so-called Modern Movement¹ refers only to the functionalist ideology in building design, evolving and practised from the mid-19th century and informing much of the architecture of the following century. By definition, all buildings form part of landscapes and are often their most important components, so we cannot here avoid at least summarising the functionalist ideology in building design.

It was distinctive in its expression of the structural frame, stripped of historical reference; and it found application in cheap blastfurnace steel, particularly at first in the United States, and in a parallel but not exclusive use of reinforced concrete in Europe. Both of these materials helped foster the so-called ‘free plan’, independent of loadbearing walls. Further freedoms in expression came with the ‘balloon’ or softwood stud frame, using machine-made nails and improved sawmilling; and with further innovations including plateglass, plywood, and electric lifts and elevators. Modern Movement ideology as a whole sought essentially to express the functional honesty of machine technology and its mantra ‘form follows function.’ So much then for buildings, but rightly or wrongly their characteristics were and are often transferred and applied to their surrounding landscapes.

‘Modernist’ functionalism permeated deep, not just into building design, but into all aspects of 20th century culture worldwide: into its literature, music, theatre and dance and certainly into all the plastic arts, including landscape design. Its chief

1. I doubt very much if the 20th century will be allowed to go on arrogating to itself the term ‘Modern Movement’, ‘Modern’ or even ‘Modernist’. Horace Walpole was referring to ‘Modern Landscapes’ in the mid-18th century, and these quickly ceased to be modern. As convenient temporary labels they will have their use, while permanent reference takes time to settle. The term ‘Renaissance’, for example, was not applied to the ferment of 16th-century Italy until 1823.

Paper 4

protagonists in architecture were Lloyd Wright, Gropius and Le Corbusier, handing on by example and through the Dessau Bauhaus and its following schools and practitioners² to a further three generations of modernists and their peers including Aalto, Kahn, the Saarinens and Utzon, but also to a long line of largely unsung town planners and landscape architects. All were to some extent inspired and subverted by the iconoclasm of Picasso and Matisse; and by a following host of abstractionist painters and sculptors, in the name of Cubism, Fauvism, Futurism, Surrealism and the rest of the 20th century's extraordinarily rich, exuberant and bewildering eclecticism. In their hands the world was taken apart and put together again as never before.

Now that much of the dust of the 20th century has settled, we can see sufficiently clearly to review its significant design ideologies in two halves: those before and those after 1945 and the ending of World War 2. Its first half was culturally distinctive, as described, in its adulation of the machine, but also in the machine's paradoxical capacity to destroy catastrophically, as an instrument of war. Its second half was equally distinctive in a growing self-awareness of the need for Mankind to curb the worst excesses of machine-based destruction and consumption, in reaching an accommodation with Nature. Its first half was thus parent to the monster of mechanized war and to the mass slaughtering of the howitzer,

the machine gun, the tank, the bomb and the mine; and the second half to a greater and greater concern with conservation in response to these powers of destruction, and to the threat of nuclear extinction.

The early years of the century were marked by a long overdue reaction to the squalor of overcrowded industrialised urban living conditions and the degradation of the working man. This reaction was evident in the work of Riehl in Germany, Reclus in France, Grundvig in Denmark, Kropotkin in Russia, Ebenezer Howard in England, and here, on our doorstep in the work of Patrick Geddes. Geddes was a protégé of the great T. H. Huxley, and he described himself as a biologist and sociologist. He had, in fact, no formal qualifications; but a part-time professorship in Botany at Dundee, created for him, allowed him to travel and to promote his passionate conviction that Man in Society needed to rediscover his place in Nature.

Geddes' great contribution in the battle against urban deprivation and squalor was to take the new discipline of town planning and to harness it to the newly-minted science of ecology, that is, to the study of life forms in their place and community. He expressed this partnership in a single great natural system which he referred to as the Valley Section, and to its sequence of natural habitats: its moorlands, woodlands, meadows, marshes, estuaries, coastlines and so on, all in relation, along the line of section, to

2. Among these and of particular importance was CIAM (CongresInternational d'Architecture Moderne) set up in Frankfurt in 1929, and in Britain the MARS group (Modern Architectural Research) in 1931.

Paper 4

their many varied human settlements, in balanced harmonious healthy partnership with Nature. Geddes described this as the living study and practice of Civics, and he sought to promote it by replacing the narrow three 'R's of conventional education by the three 'H's of Heart, Head and Hand. As a preliminary to all his plans for social action, he insisted on the collection of accurate data by survey, for, as he observed, in a 'fully biological outlook, geography and ecology, anthropology and evolution are all at one in the understanding of Place, Work and People in living interaction', and he quoted with great approval Comte's celebrated aphorism: 'Voir pour prévoir, prévoir pour pouvoir'. Much of his life Geddes spent tilting at windmills, but slowly his teaching attracted a more and more influential following.

Town planning itself was formally established in Britain as a professional discipline³ in 1914, followed by Landscape Architecture in 1930. Until mid-century, both these design disciplines espoused an odd mixture of Beaux Art Neo Georgian formalism, combined with 'The Garden Beautiful' and a diluted form of Unwin and Parker 'Garden City' planning. The latter found service in 'Homes for Heroes' and white collar commuter colonies, respited to city edges as speculative bungalow suburbias. They were reached by tram and train, and provided safe refuge and nominal contact with the soil, at densities of some 25 dwellings to the

hectare, and for a middle class able to afford a modest mortgage. They were hugely wasteful of land. Interwar Edinburgh, for example, by 1939 had increased in area by some 78%, while its population had increased by a mere 6%. Little or nothing was done during this time to ameliorate the nation's inheritance of urban industrialised squalor.

By the end of the 30s, but as world war once again threatened, long-term change towards Geddesian improvements began at last to seem attainable directly and unexpectedly from the science of Ecology itself – a science scarcely heard of by pre-war architects, planners and landscape architects, let alone understood by them. Ecology, that is, as we have noted, the study of life forms in place and community (in effect Geddesian Place – Work – People), began as a science in Britain in the vegetation mapping and descriptive work of Moss, Tansley, Elton and others from 1901 onwards, and by Clements and Shelford in the United States⁴. It was promoted by the British Ecological Society founded in 1913, and by its journal 'Ecology'. In 1939 it found its authority in Tansley's two-volume 'The British Isles and their Vegetation'. For years earlier, Tansley, in the American journal, 'Ecology', had coined the term 'ecosystem', that is, a system which by location as an 'ecotope' (Greek topos: place), forms a home (Greakoikos: house) for the life forms inhabiting it. In full succession he described a typical system

3. Geddes himself was a founding member of the TPI, and the only one to describe himself as a sociologist.

4. The word 'Oecology' was coined in 1873 by the German botanist Haeckel and simplified to 'Ecology' in 1902.

Paper 4

as proceeding from 'primary bare areas' through 'seral stages' to a 'climatic climax' in relative dynamic equilibrium, and subject to damage and reversion. The work of Tansley and his colleagues, in retrospect, was certainly one of the great legacies of the 20th century in its fundamental influence on the nature and practice of conservation. It gave conservation a human and ethical basis which raised it from mere ideology to philosophy. But to grasp this we need to return to our timeline.

In 1945, from the ashes of the former League of Nations, and the exhaustion, waste and huge loss of life in World War 2, sprang the United Nations. The UN's primary peacekeeping role and charter for international cooperation was coordinated by its Council, and by its special organisations, including UNESCO, which was given responsibility for conservation. World population increases in relation to productive land shortage quickly became a UN focus, and of its most densely populated member nations, including Britain. Simple arithmetic began to concentrate minds, and in a post-war reconstruction, conservation became a watchword.

In Britain, ready reference was made to (Sir) Dudley Stamp's nationwide 1933 Land Utilisation Survey, in quantifying land shortage. Post war, and with an annual landtake of some 25,000 ha for all forms of development, and an inherited legacy of some 100,000 ha of slag heaps, tips and industrial wasteland, a succession of typically British government committees at last realised that Britain could no longer

avoid a need to plan its land consumption. Enter the 1947 Town and Country Planning Act, appointing local planning authorities to survey and draw up approved Development Plans for their areas, and requiring development approval for all except forestry and agriculture. Enter also the 1949 National Parks and Access to the Countryside Act, giving extra protection to specially designation National Parks; also to designation Areas of Outstanding National Beauty; and powers also to the newly-established Nature Conservancy to designate Nature Reserves and Areas of Special Scientific Interest, nationwide.

Sir Arthur Tansley himself, shortly before his death, became the first Director of the Nature Conservancy. His successor, the amateur ornithologist and civil servant Max Nicholson, ably assisted by Huxley, Melanby, Fraser Darling and others (all eventually knighted for their services to conservation) promptly set about their task, and in a 'now or never' urgency. Within a decade they had achieved wonders, but which are regrettably beyond the detailed scope of this paper.

But to return in summary to the activities of British post-war reconstruction. The 1951 Festival of Britain helped lift the design professions out of a long period of austerity. It gave the Man-Nature profession of landscape architecture the opportunity to expand its ambitions into a broader public realm. A war-stalled generation of British landscape architects, led by Colvin, Crowe, Jellicoe, Youngman and Clark now made significant contributions to the design of the so-called Mark I British new towns⁵, including

Paper 4

Harlow and Stevenage. As time went on they and their followers became involved in a wider and wider range of projects, including new university campuses, large-scale reclamations of industrial wasteland, the phased planning of open cast coal workings; and, following the 1967 Countryside Acts, the planning of regional parks and countryside leisure projects.

Supporting this greatly expanded work load came new university courses in London, Edinburgh, Newcastle, Sheffield and elsewhere, set up to train following cohorts of landscape architects and town planners. In retrospect, most of their design activities can be seen as contributing a new social awareness to the distinctive British aesthetic of the Picturesque and its long-established presence in the wider landscape; and which in its character was at least modernist, if not specifically of the Modern Movement.

Minor stylistic and following diversions included Postmodernism, Minimalism, Deconstruction and other even slighter eclecticism. The final twenty years or so of the 20th century, and particularly since the Kyoto Accord on Climate Change in 1990, saw an increasing emphasis on sustainability in all aspects of design. To myself, as a grumpy old man, sustainability is an annoyingly woolly, and unhelpful term which has so far failed to focus adequately on the conservation of natural resources. As this conference is particularly concerned

with conservation, I would therefore like to consider it in more detail; and to draw attention to what I consider to be one of the 20th century's greatest challenges to the present century, namely that of applying the concept of energy transfer between tropic levels, to all aspects of design.

Conservation, worldwide, took a leap forward in 1948 with the setting up of the IUCN (International Union for the Conservation of Nature) under the aegis of UNESCO (The United Nations Educational, Scientific and Cultural Organisation). The 1972 General Conference of UNESCO established its convention for encouraging the identification, protection and preservation of cultural and natural heritage sites around the world. This, of course, is now officially expressed in the listing of World Heritage Sites, advised by two technical committees: firstly, the World Conservation Union (formerly the IUCN), advising on Natural Sites; and secondly, ICOMOS (the International Council on Monuments and Sites), advising on Cultural Sites, and assisted since 1988 by Docomomo⁶. By the end of the 20th century, the UNESCO World Heritage Committee had designated some 630 sites worldwide: 480 of these being cultural, 128 being natural, and the remainder being combined designations. From this, now distant initiative, many member nations, including Britain, set up their own lists of cultural and natural sites of national and local importance, and conferring degrees

5. These Mark I British New Towns, and their Mark 2 and Mark 3 successors, drew on the ideas of Howardian satellites, Le Corbusier's La Ville Radieuse, and Clarence Stein's traffic-segregated Radburn planning, each with a clearly defined hierarchy of recreational open space.

6. Set up in Eindhoven by the Dutch architects Hubert Henket and Wessel de Jonge as an international working party to assist ICOMOS in documenting and conserving building sites and neighbourhoods of the Modern Movement.

Paper 4

of statutory protection. The inventory, for example, of noteworthy Scottish gardens and designed landscapes was begun in 1986. It is maintained by Scottish Natural Heritage and Historic Scotland, but has as yet only advisory status.

In their conservation the distinction between listed cultural and natural sites is not as apparent as it might seem. Few, if any, natural sites can be described as true wilderness areas, untouched by Man; and both inevitably therefore, on designation, share the common characteristic of being maintained by Man in a preferred state. This preferred state is specified in carefully considered management plans for both designations, to ensure that their special significance is safeguarded. Both kinds of designation are thus linked, however disparately by preferred state at a philosophical level⁷.

The conservation ethic generally, during the second half of the 20th century, was influenced very notably by three figures of world stature: the Greek planner, Constantinos Doxiadis; the Scottish proto-ecologist, Ian McHarg; and the American technocrat, Richard Buckminster Fuller. None of them were from natural science backgrounds, but they all had a Man-Nature stance at the centre of their design thinking.

In his 1969 BBC Reith Lectures 'Wilderness

and Plenty', the ecologist Frank Fraser Darling had stressed the urgency of man's need to plan his consumption of natural resources. Not surprisingly, he defined the term 'conservation' as 'practical ecology', and he called for an entente between economics and ecology. He noted the irony that both words were derived from the same Greek root, oikos: a house.

Fortuitously, also in 1969, Ian McHarg, an émigré Scots architect, had published from his new base in Pennsylvania University his book 'Design with Nature'. Fraser Darling had praised it in his Reith Lectures for its outspoken attack on careless large-scale corporate despoliation of land and natural resources. McHarg called for coordinated landscape planning using all the resources of natural science to guide such development in a benevolent and balanced Geddesian manner; and he demonstrated this balance in a number of case studies carried out by himself and teams of graduate students. McHarg's book rapidly became an article of faith to the landscape professions, and he followed its influence around the world in a number of influential lecture tours. Here, certainly, was Fraser Darling's accommodation of ecology and economics.

The second of the world figures I have listed, 'Dinos' Doxiadis, in his early 20s became Director of Town Planning Studies in Athens, and set up an office for national, regional and town planning studies. This became the

7. A typical management plan, based on a thorough Geddesian survey and inventory, might, for both a 'cultural' and a 'natural' site, specify a preferred state in certain areas and at certain times conditioned by restrictions of access and use, certain types of grazing and cutting regimes, and selective periodic clearances.

Paper 4

centre of a brilliant programme of post-war reconstruction development plans, firstly serving Greece itself, and then the wider world through his assistance given to the UN. Doxiadis, in promoting this work, sought to partner ecology and economics with 'Ekistics', the science of human settlements (a creation of his own). He focussed his study, with great energy, in a sequence of annual symposia from 1963 to 1975. These were gatherings of invited experts from many backgrounds, each gathering ending with an assembly, declaration and published proceeding in the great amphitheatre of Delos. Like McHard, Doxiadis called for a world picture to test all new development. He died young, but his message continues today in regular meetings of the World Society of Ekistics.

Contributors to the Delos symposia included R. H. Matthew and C. H. Waddington of Edinburgh University, representing architecture and genetics. A significant contributor also was the American engineer Richard Buckminster Fuller. Fuller was by nature a pluralist. He understood the message of Geddes; and he was in his element at Delos and in lecture tours around the world, promoting the Doxiadis 'global village' served by his own omni-purpose global wide-span geodesic domes. He visited Edinburgh twice, on the initiative of L. J. Fricker, tutoring in Matthew's Landscape Architecture Programme. After visiting the Geddes Outlook Tower and in a number of three to five hour lectures, using the never-ending sentence, he stunned his largely Modern Movement audiences with their own

parochiality. The influence of Fuller, McHarg and Doxiadis in supporting conservation at a world scale still resonates today.

In review of the 20th century as a whole, it is remarkable that none of its design historians, and certainly none dealing with architecture, planning or landscape design – Giedion, Pevsner, Mumford, Jellicoe, Reyner Banham and Jencks among them – should have understood the importance of the new science of Ecology in informing all aspects of design. Even today most designers seem ignorant of its true purpose in guiding Man's partnership with the Biosphere. Perhaps the greatest legacy of the 20th century, therefore, and certainly one of its greatest challenges, is to accept the need for all designers to work to energy budgets in aligning production and consumption in closest possible, cleanest and most sparing physical proximity. By this we show our real wonderment of the world around us.

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