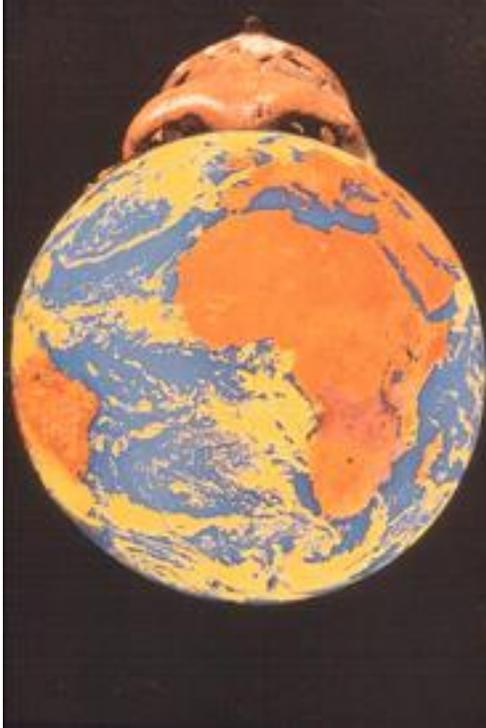


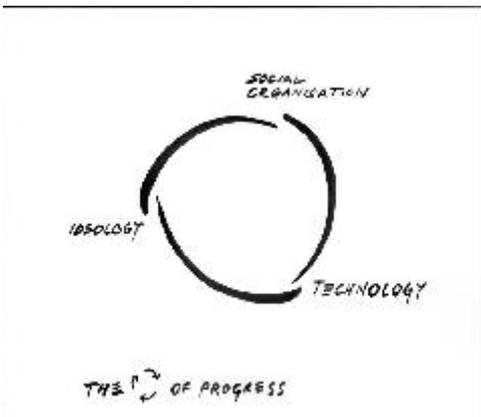
Architecture – Design in need of a Compass

Architecture is culture. Vilém Flusser, the Czech-born philosopher, made a convincing argument in his short essay *The Factory*, that it is through ‘the factory’, i.e. the place of manufacture, that we can understand the science, art, economy, politics, and religion of a society, and identify the human being in that society. His sense of humour suggested that *homo faber* (maker) was perhaps a better description of the common characteristic of human beings rather than *homo sapiens sapiens*.



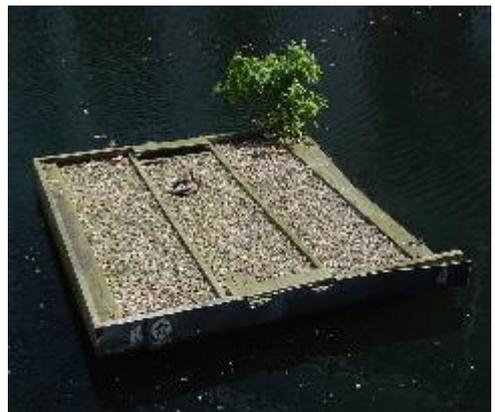
The materials and physical spaces that our architectural thinking ultimately has to engage with are a powerful witness to *homo faber*, but today, we must ask deeper and more difficult questions if we are to find solutions that respond to the idea of *homo sapiens sapiens*.

Civilisation, according to Stanley Diamond (1922-91), may be regarded as a system in internal disequilibrium; technology or ideology or social organisation are always out of joint with each other - that is what propels the system along a given track. Our sense of movement, of incompleteness, contributes to the idea of progress. To put it another way, when we are able to appreciate the way the world is really working, it is never quite the way we would like it to be working and this is why making a better future is so challenging.



The 20th century concluded with the fact that, fundamentally we need to re-investigate design to enable us, hopefully, to be more intelligent in the way in which we negate the status quo. This requires us to recognise that our very existence as individuals, and as a society, dealing with our need to survive changes the balance of nature.

The early reflections of *ecology to design* as a pragmatic search for a clean, green or eco-design methodology has in fact become an investigation into the problem of design in general. The shift from an *industrial reductivist* to a *post-industrial holistic* design requires a more complex inquiry. Any new design methodology has to embrace social, political and philosophical criticism of design if we are to redefine design with any sense of value and meaning. The problem is vast.

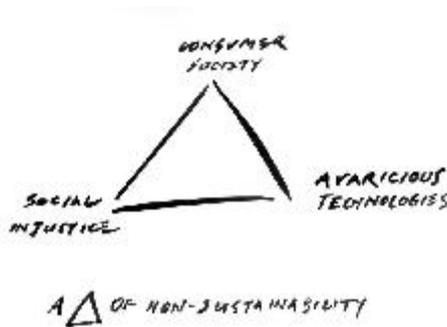


At the moment, I accept that we can only attempt to open up critical discussion of the role of design in a post-industrial ecological society in the hope of making the post-industrial holistic design paradigm happen.

Our western capitalist culture denies the natural environment by exploiting it. The rape of nature's resources to make money in order that we can measure growth through GDP is totally embedded in our society's idea of civilisation.



Our culture is dominated by economics and by economists who are not engaged with creating a method that embraces positively the needs of the wider natural environment and the poor.



Any architecture we create in the west, no matter what its visual reference or theoretical underpinning, maintains to a greater or lesser extent this status quo.

At the moment, the contradictions between seeking a more intelligent world - where moral justice rather than economic justice prevails - and producing architecture within the current economic model are inescapable.

This is the principal conundrum that has concerned me since I began my own practice. I quote Robert Kennedy from 1967 in a text entitled *The American Environment*:

“And let us be clear at the outset that we will find neither national purpose nor personal satisfaction in a mere continuation of technical progress, in an endless amassing of worldly goods. We cannot measure national spirit by the Dow-Jones average or national achievement by the gross national product.

For the gross national product includes our pollution and advertising for cigarettes, and ambulances to clear our highways of carnage. It counts special locks for our doors and jails for people who break them. The gross national product includes the destruction of redwoods, and the death of Lake [Erie]. It grows with the production of napalm and missiles and nuclear warheads, and it even includes research on the improved dissemination of bubonic plague. The gross national product swells with equipment for the police to put down riots in our cities; and though it is not diminished by the damage these riots do, still it goes up as slums are rebuilt on their ashes. It includes Whitman's rifle and Speck's knife, and the broadcasting of television programs which glorify violence to sell goods to our children.”

This economic growth has been dependent upon the politics of hijacking scientific investigation and the industrial exploitation of science; and upon industry exploiting individuals within society. The individual economic effort is now so divorced from life that it is not surprising that so many people long for recognition within a group outside of the workplace.



Progress is a journey of the individual, and all will measure it differently.

Progress is inconsistent with a defined end.

Firstly, we seldom achieve progress in a universally agreed sense - the term is too loaded politically, since many of our notions of progress are achieved at the expense of the quality of life of others elsewhere in the world.

It is, therefore, difficult to find a consensual definition in a global society.

More fundamentally, since the notion of progress exists in our definitions as a way of measuring where we are in some abstract continuum, it becomes a direction marker, a signpost indicating distance, or a speedometer, by which to navigate and predict our "estimated time of arrival" at different stages of our lives.

The problem is to know when we have arrived.

At this point, we have eliminated the sense of differential by which we can judge our position or direction - it's a bit

like having a compass to find the north pole. When you get there you lose all sense of direction.

So the goal of progress has constantly to be redefined, and this process is part of a critical review of our advances since we last defined it.

The idea of progress is also bound up with the polarization between optimist and pessimist - those who can embrace the future and deal with uncertainty, as opposed to those whose insecurity drives them to cling to what they think they know; a comfortable (even, and especially if, illusory) historical image. Was it always so? Often, we have the impression of twentieth century attitudes to progress and the future as being characterized by optimism, and above all, certainty. There was seldom reference to doubt about the essential goodness of the direction in which the developed world was "progressing".

I have experienced a growing awareness that one can try one's best to make the built environment more visually and spatially attractive; that one can express a need to de-process the manufacture and the consumption of building materials and energy in the interest of conserving natural resources, and I have even found a 'visual' statement – a metaphorical intelligence through this way of thinking and designing. However, this cannot hide the underlying local and global social realities that more and more people are feeling disenfranchised.

There is no doubt that as the world feels smaller, there is not only a mutual assimilation of cultural activity – banal as much of it appears to be – but also a subversion of differences through the products we design – whether they be international architectures that have no contextual or aesthetic frontiers, or multi-media message devices. One might even suggest that there has been a blurring of eastern and western aesthetics.



The unforgettable title of Ian McHarg's book– Design With Nature, published in 1969, captures in many ways my approach to design.



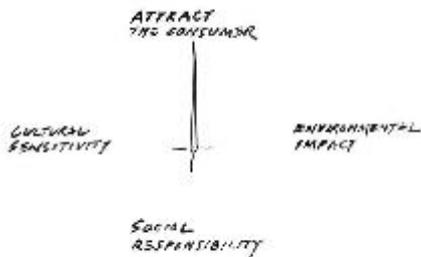
This has perhaps more in common with the traditional aesthetics of the east (where I spent some time in 1970), which do not seek to impose form upon the landscape but to allow it to emerge from it; not to control it but to be part of it; and not to assert one's own identity but to be absorbed by the environment.

Of course, western capitalism has become essential to Far East economic culture and appears inevitably to be part of China's culture also. For the people of these countries and their cultures, the invasive power of recent western economic thinking has had perhaps a more destabilising effect on their design culture. In architecture, modernism, brutalism and hi-tech reflected the globalisation of architectural style that occurred during the 20th century. And similarly, it is becoming more difficult to find differences in personal products: the car, bicycle, DVD player, clothing. The cultural difference is becoming invisible to the eye, but perhaps not to the mind.



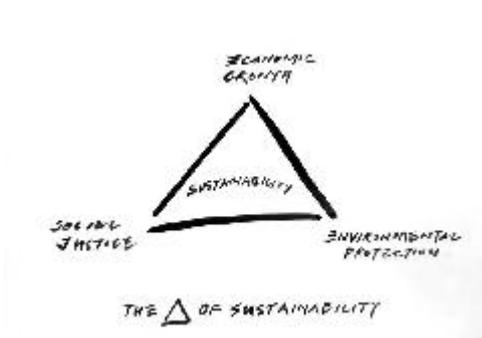
WHAT IS THE COLOUR OF THE WIND?

I remember when Hermann Kahn's futurology first surfaced in the late 60's. The western viewpoint may have dominated thought on the future, but it may be wrong when viewed from other cultural perspectives.



With this globalisation, which we find at its most banal in fast food, fast movies and fast games, is there about to be a backlash from designers? Can we see the signs that suggest a new tendency - less towards even more banality more towards a creative syntrophy from cultural differences – that will produce new aesthetic approaches that express a revitalised sense of being and meaning? Can architects help to produce this? Or, is our work in the end simply to be consumed?

The tragedy is that design in our present society remains judged, both qualitatively and quantitatively by the question: Does it attract the consumer? We designers think we have more noble standards – of providing functional artefacts that are environmentally and culturally sensitive, but are we deluding ourselves? Do we actually need most of the things we design? Do they simply serve to perpetuate the status quo?



Humanity and intelligence have as much to do with the process of decision-making and progress as the tangible artefacts that result from our application of science, technology and economics.

The architecture we produce, and how we make our buildings, is a reflection of our worldview. There can be no revolution in the industrialised regions of the world with regard to the way we extract, process, design, manufacture, distribute, and consume materials - only a long campaign will eventually change our habits. Yet, these issues remain difficult for architects to appreciate in real terms within the present economic model. It is still difficult to access and realistically compare hard facts on energy, labour, social impact, and the renewability of materials used in construction. Graphs depicting comparative energy consumption of, for example, extracting raw materials or of processing them do exist, however, these 'facts', important as they are in signalling awareness, represent little in terms of the more complete picture. For example, we do not necessarily have the combined knowledge of the energy sources used, their comparative polluting effects, the effect of the production processes on the health of workers in these industries and their consequent social and health costs.



The impact of legislation and technological change on energy consumption remains slight. The ways in which we use or waste energy are part of a world power game. The USA, along with Europe, continues to exert a disproportionate influence in the exploitation of the earth's resources, and energy is one of the most dramatic instances of this. The ethos of the so-called "right" of the individual to enjoy freedom - of private transport, the products of energy-intensive industry, and an inefficient but comfortable home and work environment - demands a high price. The short term view of

material gain we see in most of our activities and the difficulty we have in altering these values could really change when legislation - or enlightenment - brings about a different set of criteria and aspirations. We must surely continue to work towards a change in these attitudes and believe more in the power of collaboration, co-operation, and the fundamental altruism of humans as part of our instinct for survival coupled with the enlightened use of our intelligence.

The rate of technological progress towards the (apparent) mastery of nature bears no relation to the rate at which human social evolution can keep pace with the consequences. Our mental structures were honed over millions of years of living in small tribal groups, and we bring the same structures to bear on an existence that has changed materially, however we measure it, by several orders of magnitude. We are all riding the same planetary roller coaster. Some of us are trying to hold on and keep an eye on where we are going, but constantly face the prospect of losing our grip. We are not sure who is at the controls; and when we think we do know, there seems to be disagreement between the navigator, the pilot, and the rest of the crew. The passengers don't know who to ask about the destination, and feel they would not be listened to if they did.

So the need for "evident intelligence and humanity" in what we are designing is indisputable, and it is a beautiful idea!

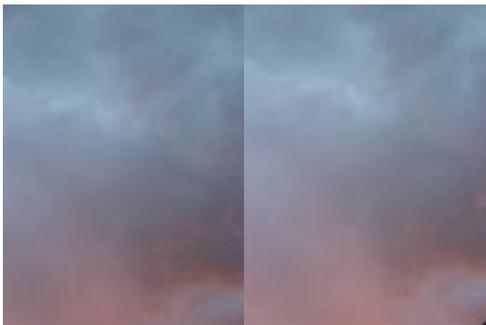
My conceptual thinking has always been open to allow the synthesis of art, science, technique, landscape and economy with a concern for the environment and social purpose.

As a practice, we have actively sought ways to reduce energy in the manufacture of products through working closely with industry to achieve less energy intensive methods of processing. We continually attempt to improve the thermal performance of buildings with less dependency



upon implanted energy systems, and we always take account of the manner in which the building(s) are planned to benefit from the environment and to contribute positively to the urban or landscape context. And, importantly, although this depends upon our clients, we are able more often than not, to engage with local people in the realisation of our projects. Most people consider that the local community is always anti-change. This is not true and it is their local knowledge which can positively contribute to the design context.

As my work shows, I am not suggesting any sentimentality of attachment to the past that nearly always encourages a misplaced desire to imitate it. That motive is usually delusional and symptomatic of a loss of faith in the present and a fear of the future. This visually driven notion is very different from a concern about the decay of society and the loss of humanitarian values. These phenomena are real enough and associated with the ever-increasing materialism and division of society, as material goals eclipse other aspirations. So, all too often, we see escapist reproductions of an ersatz glamourized version of a past that only exists in story books, paintings and the imagination - a happy, sanitized rural or village idyll, devoid of all reality, hardship, poverty, exploitation, illness and early death. It is as if grasping the image will bring us closer to an imagined set of spiritual values.

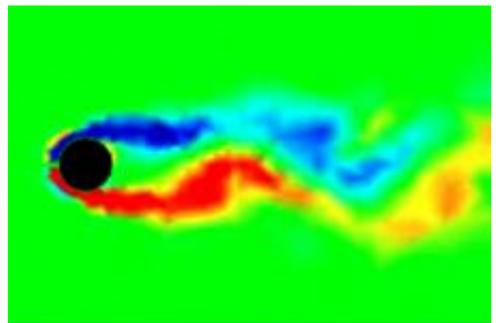


My architecture starts in the spaces I create in my mind. To be able to read our reality requires a reference – our dreams – and some of our dreams question reality's reality.

Anyone who has spent time watching clouds, waves crashing upon a beach or a sunset knows that their view of these realities are processed through the mind, and consequently the mind's filters of education and culture ensure that each person will see them differently. Yet they

represent the non-linear world that nature presents to us.

I am convinced that beauty is in large measure non-linear. One problem with creating architectural beauty is finding ways to express, or rather allow the play of nature's non-linearity. We see literal architectural proposals - surface, elemental and spatial representations of certain states and interpretations of non-linearity (chaos, fractals). They are easily read as images to be consumed rather than profound investigations into capturing some elusive and wonderful phenomena that surrounds us. To capture the beauty of non-linearity surely demands that architecture and architectural space itself is dynamic.





The flame is non-linear, copper is linear. Both can reveal the energy of sunset. The flame has it, the copper reflects it. The reflective quality of materials has always appealed to me. I see reflections of the clouds moving, the sun setting and the raindrop falling and interfering with these reflections as a genuine source of beauty – of the non-linear.



There has to be a contribution from the surface which is beyond reflection and beyond itself as a skin. It has to reveal transformational qualities, sensitivity to light and shadow, to burning sun or pouring rain, to change albeit slowly – not to stay the same forever.



When a log burns there is the beauty of the flame that never stops changing, and behind the flame, the log that is slowly transforming into ash. The water that forms a wave, breaks, foams and reforms as a retreating surface, always comes back, in part, as a new wave. These events are magical. The time frame of architecture is perhaps longer, but one needs to feel that, like the stone the priests touch each time they pass, it is changing in response to its environment, and like the stone it will inevitably disappear

under the pressure of the forces in its environment. This is to imagine architecture that will endure, decay and die beautifully.



From my first project in France in 1976 to recent projects in UK and Europe, I have maintained a commitment to values of efficiency, economy and aesthetic intent. The latter is use-less (unquantifiable) work but has as much, if not more impact upon how we feel than the other two. The way I look at this is that in any project, efficiency and economy are rightly expected by most clients and represent those two most tangible aspects of time and money, while the latter involves the designer in

investigating ideas of space, feeling and appearance – and the ability to reject them.

These take time and do not appear to directly profit the client, and often the client sees no real point in paying for them. However, designers must invest in them. If these intangible issues are driven by the moral dimension of aesthetics that embraces the idea that we design not just to satisfy the immediate needs of our client but for future generations, then the aesthetic issues become far more important. The result of giving value to the moral aesthetic as well as the appearance of the work is that it will indicate how responsibly we have acted with regard to future generations. It is a key part of the *homo faber* or *homo sapiens sapiens*' heritage that we pass on.

I am concerned with sustainability and over-consumption. Raising these concerns to an aesthetic quality and enjoyment is a vital aspect of design today. Why?

If people can enjoy these designs – recognising a new metaphorical intelligence - then perhaps public attitudes will shift.

Consider the notion of e (efficiency) x e (economy) = e².

This is how the client may see the project, or possibly as e² + e (esthétique) - the latter as an uneconomic add on.

The good designer sees e³.

The power of aesthetics is measured in the mind, not in the bank balance or electricity meter. The lack of it is like drip-water torture, it numbs the mind.

It is the lack of this aesthetic dimension which renders the cumulative effect of many parts of the built environment so demoralising - from motorway barriers to ventilation grills, from advertising hoardings to buildings.

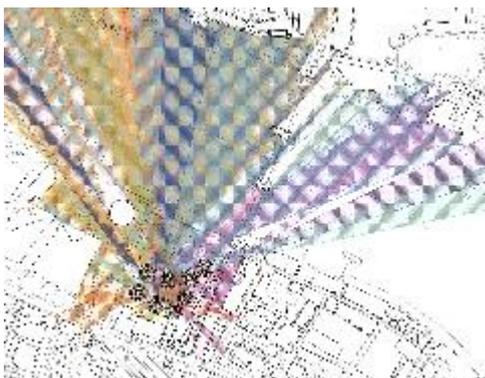
We talk of more and more city dwellers, of increasing the density of our cities as a sustainable model for the future. But what a terrible future for the next generations if the environment we create depresses us.

The rapid post-war build of housing estates is a perfect illustration.

As designers we know that we have a moral obligation to far more people than our paymaster and that the aesthetic dimension ought to include all our senses.



Consider the acoustic world we create. Designers can respond efficiently to current recommended or legal requirements about noise insulation and noise levels upon occupants within and without the buildings we design, but how often do we consider the injury of *first* and *second* reflections of noise? For example, not considering how railway or other transport generated sound affects nearby residents by primary and secondary reflection; likewise, fire alarms and security announcements; the location of air handling plant, air exhausts and standby generators.

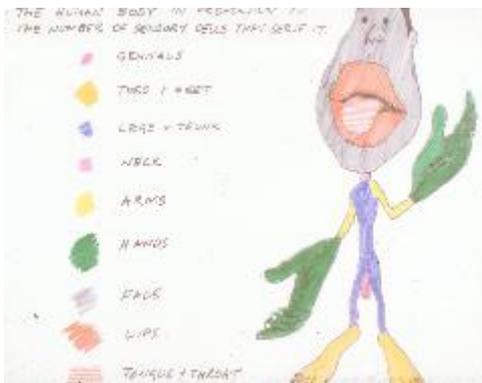


Similarly, we do not consider well enough the positive or negative effects from first and second reflections of light. Understanding and taking account of the indirect and hidden dimensions, as well as the obvious, will become an increasing responsibility of the designer as we densify our cities.

Yet it is these “hidden” dimensions as well as those that we see that determine the quality of life. If we do not get our cities right at the micro-level we could well end up with a cumulative effect upon our society far worse than any environmental disaster caused by super-bugs, toxins or terrorists.

In a world becoming more and more litigious, designers are being obliged to focus upon health and safety. How many of us regularly consider the impact of what we design upon the health of the mind? We know that we design the physical world around us, the machines and the built environment. This physicality enables us to live, but today almost nothing is allowed to be designed by guesswork. Traditionally, we have to justify our design decisions to our clients through measurable things – economy and efficiency. I have talked of aesthetics in a broader sense, but how do we measure the effect of our designs upon the mind of the viewer or user? We do not really know. Vitruvius gave us firmness (read buildability), commodity (read functionality) and delight (read ésthetic). We have learnt more or less to measure the first two, and we design to rules and predictable outcomes.

Now we are trying to measure ‘delight’.



So we have to begin looking at the effect of design upon *all* our senses more seriously. The easiest to understand have been measured – light and sound. We have not really considered taste, touch and smell to anywhere near the same degree - consider the late night washing machine exhausts, or street level restaurant kitchen exhausts.

It is not unreasonable to try and measure ‘delight’. Designers should not fear that they will be governed by ‘rules of delight’. We need to understand better how our designs affect people’s senses.



In 1989 we designed the Ecology Gallery at the Natural History Museum. This was the first time that I consciously investigated reaching senses other than sight and sound and avoiding poisonous materials. The crystalline white glass walls suggested a very fragile environment. The sheets were fixed such that sound resonated when the sheets were tapped. The entry floor was made of recycled rubber –soft. Each bridge had a different tactile surface identifying the history of man’s manipulation of materials - wood, metal and glass. A cherry handrail is the only connecting element – its tactile surface shaped to the hand and forearm.

We have also been exploring the potential of woven metals since we used a coarse stainless steel curtain as a landscape support at the Boves Pharmacy in 1985. In its various weaves – from the super fine to coarse, woven metals have enormous potential.



Most metal buildings I have experienced have not considered touch – and have never been designed to be leaned against. The machined, controlled line and hard surface ésthétic does not have to be the only product of industrial metal manufacture.

Recently, we have realised soft metal rainscreen wrapped buildings for Plymouth Theatre Royal.

Manufacturing processes can give us soft and less controlled surfaces. And choosing materials that allow the environment to change the surface is an ésthétic design decision which embraces not only the appearance, but becomes a metaphor for designing *with* rather than against nature, of beginning to unwind the long recent past where everything we have created becomes everything to be maintained.

Since the industrial revolution, maintenance has dictated our environment.



While many of our projects have sought to improve structural and energy performance in creating space, one of our current interests, as illustrated by the Terrasson Cultural Greenhouse, is creating architecture using material which is less and less processed by industry, thereby reducing energy consumption and cost, and reducing maintenance.

The de-processing of architecture appeals to me. Directly associated with this is the discovery of beauty in the essence of material. I seek more and more to find, understand and capture this essence in my work. But that beauty can be tempered by awareness and understanding of the social implications resulting from the processes through which the material has passed before it becomes an element in the architecture.



Take copper, a noble material. Only through a better understanding of the processes from extraction to coil can its beauty be fully appreciated; and of the *different quantities* of copper ions that run off over time when the copper is left un-patinated, or post-patinated or treated with anti-graffiti coating; and how these ions 'lock' into the mineral surfaces around. This deeper understanding can provide a different aesthetic approach to its application in architecture.

Or copper, using less of it in the form of woven phosphor bronze wire, and the soft, tactile qualities that this can give architecture.



Or steel, allowed to oxidise naturally as in Corten— first bright ginger and then slowly to a burnt red; steel that is not visually shiny and hard, but has a visual softness quality and one that requires almost no maintenance.



Or stain-less steel which by shot peening creates a more durable and resistant surface and also changes its reflective properties, rendering its surface very responsive to changing light.

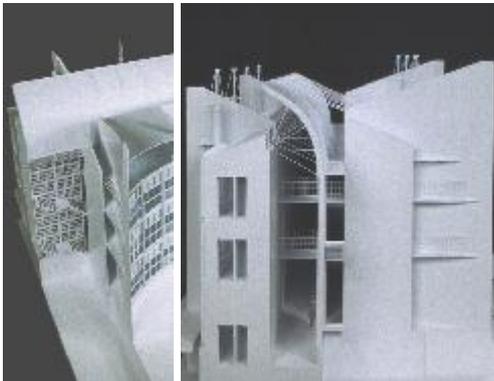


Take gabion - they are caged rocks, and they capture the feel of non-linearity. It is the non-repetitive forms of the stone –a collection - the collection of individual fragments from the same geological time tied together by wire. Even the wire has a pattern that the rocks interfere with, leaving it structured yet random – no two cages remain visually the same. Soil erosion is an ever present problem and gabions have proved to be a lasting civil engineering solution around the world. The earliest known use of gabion-type structures was for bank protection along the Nile River about 7,000 years ago. The gabion system has

evolved from baskets of woven reeds to engineered containers manufactured from wire mesh.

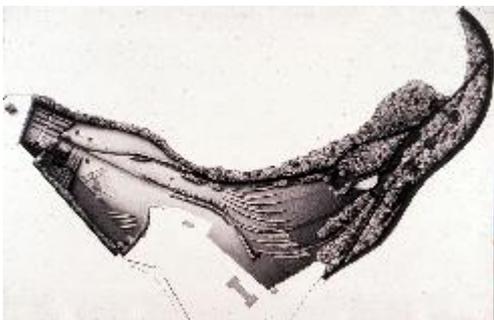


The lasting appeal of gabions lies in their inherent flexibility. Gabion structures yield to earth movement but maintain full efficiency and remain structurally sound. They are quite unlike rigid or semi-rigid structures which may suffer catastrophic failure when even slight changes occur in their foundations. They are a product of designing with nature.



The latest techniques of laser and water cutting stone to great precision - machined lines +/- 0,5mm - had enabled us to explore asymmetric arch forms in mortar-free stone construction for a project at Magdalen College Oxford in 1990.

This used the precision of stone cutting, combined with an elaborate structure to ensure that the limestone blocks remained in compression. Stone is similar to glass in that it is fragile and liable to sudden fracture – cracking. i.e. like glass it does not take tension forces very well.



Reasonably precise stone clad facades were already in evidence in Terrasson and arguably already represented late 20th century technique. But this is to forget that architecture is more than the application of technique.



The idea of using gabion came from walking across the site in a torrential downpour and not only seeing cascades form almost instantaneously, but also the soil being washed away. I mentioned this type of land/civil engineering construction to Kathryn Gustafson. She had won the competition in 1992 to develop this site with a garden concept 'Le Jardin de l'Imaginaire, based upon fragments reinterpreting key historical design concepts in landscape development from different continents. Any

garden design requires the retention of the soil.

The site had a 30 degree slope and was part of a north facing scrubland adjacent to the town centre. There was no intention to import soil.



Slowly the idea emerged that a pavilion too could be constructed using this technique, in harmony with the containment of soil by low gabion walls in the garden design, and could represent both the fragment of a greenhouse and the culturally undecorated 'wall' – one that could be the same outside and inside.

The classic, well-designed greenhouse relies upon solar energy, glass skin and thermal storage using mass – releasing the energy overnight – a diurnal cycle.

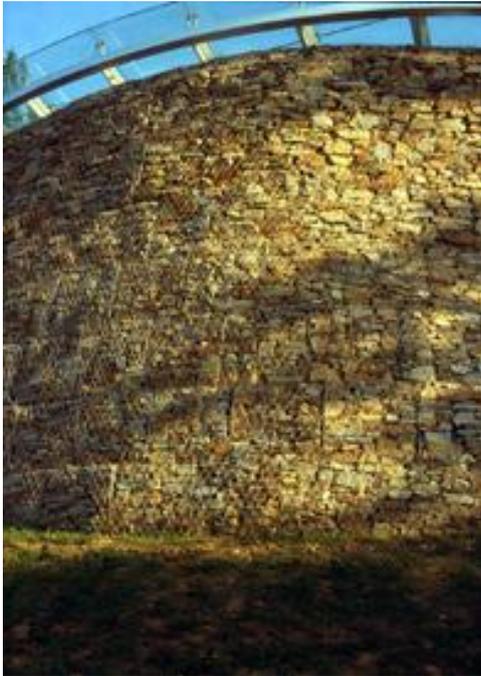


The glass roof would be the one-way door to solar energy, but would also represent, metaphorically, a virtual lake. A flat glass roof with no externally visible sign of how the glass is fixed would achieve this. This illusion would be enhanced because the roof is approached from above and at a distance. The topography is exploited both spatially and metaphorically.



The building – a wall and a roof – becomes landscape. The use of indigenous, un-machined material drew upon investigations we had carried out in the late 80's for a competition on the Isle of Aran in south-west Scotland.

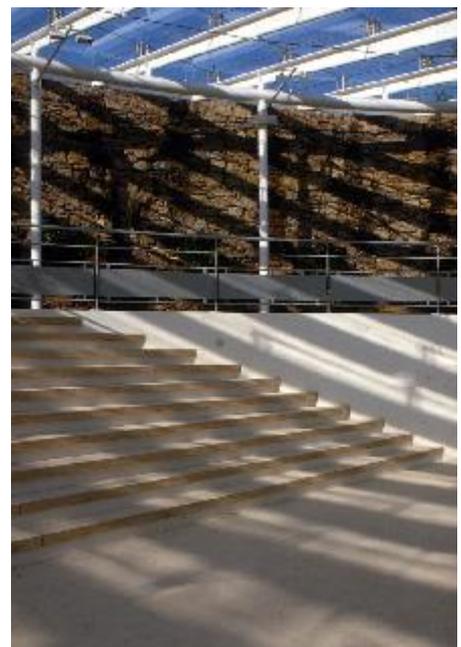
Here, at Terrasson, was an opportunity to create enclosure with minimum processing and transport – the quarry at St Yrieux was nearby and was the source material of the entire town of Terrasson-La-Villedieu on the Isère river. The idea that the material from the floor of the quarry combined with an economic and basic technique associated with land stability and civil engineering could be the prime source of architecture appealed to my barrier-free approach to design. The fact that steel wire gabion was developed during the twentieth century gave credence to the idea of adding a new layer of stone construction to the town's heritage.



The walls are cantilevers. This is not how gabions are normally used. They usually retain the earth, not air. These cantilevers reach 7m in height. It was vital to begin the construction of these walls from a horizontal base and to ensure that as the walls rose, they did not become unstable. It was dismantled and rebuilt. The fact that the wall is curved gives the construction an overall stability but essentially, the gabions are stabilised by their own intrinsic flexibility and mass. The steel structure holding the glass roof is totally independent of the gabion walls.

The cultural greenhouse was initially proposed as a glazed tea pavilion in Kathryn's scheme. In redefining it for use for theatre, exhibitions and refreshment, we explored the idea of contrasting the raw walls with a sophisticated glass roof.

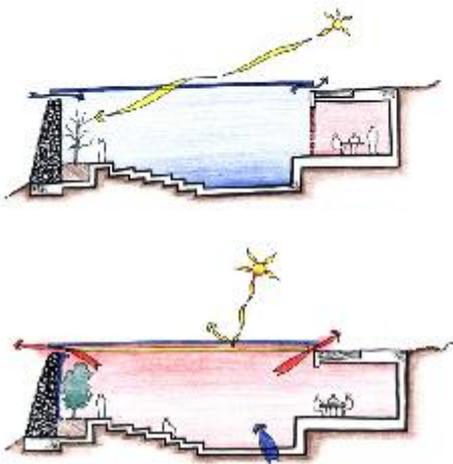
As a result the design is didactic. It contrasts the difference between the processed and the unprocessed; the energy invested by man in making flat glass and the embodied energy in the rock; the smooth and the rough; the fragile and the strong; the reflective and the absorbent surfaces; the cold and the warm; clinical control and relaxed anarchy.





The building exploits water from natural sources on the site. We considered water cascading naturally through the space – to provide summertime evaporative cooling, but decided it would be better to allow the space to be used for theatre, exhibitions, library and tea-house. Nevertheless, a concept was developed to use water to provide direct evaporative cooling inside the building in the summer months. Water is conducted onto the top of the stone gabions and the relatively large surface area is used to create a large wetted area from which the evaporative cooling takes place.

Natural spring water is also recycled along a trough – a 'ha-ha' - to keep people off the glass roof.



There is a permanent gap, about 150mm high, around the entire perimeter between wall and roof. The building creates its own internal microclimate. There is no mechanical heating or cooling. As such, there are no internal systems other than night time lighting, so energy consumption is almost zero.

From a social perspective, Terrasson-La-Villedieu has re-launched itself as a tourist destination as a result of this garden project and its local economy boosted through it.

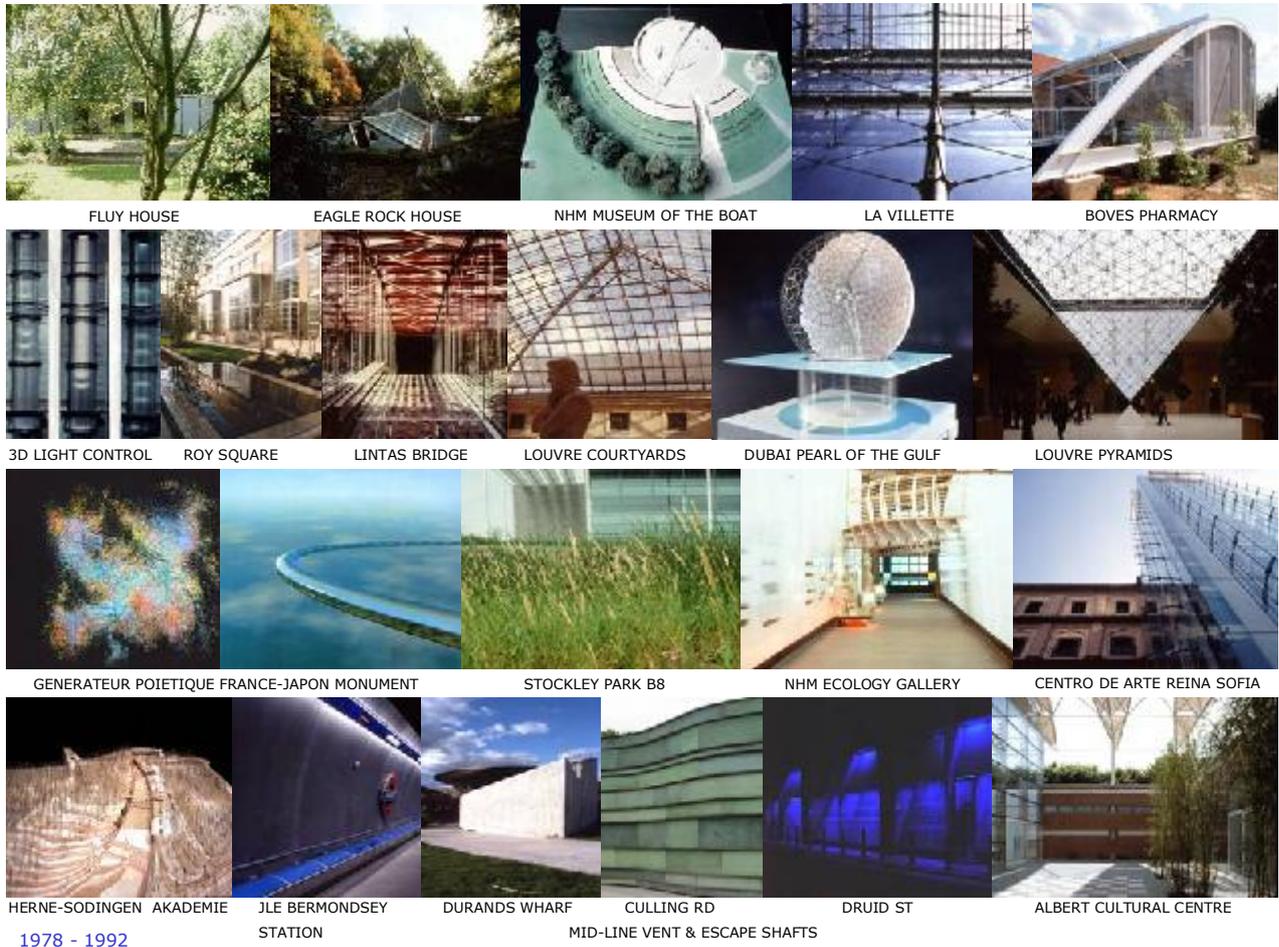
For the cultural greenhouse, apart from the glazing specialists, all other contractors were local, and the gabions were filled and face packed (not requested by us) by local labour under the supervision of France Gabion.



Typically, gabion efficiency increases rather than decreases with age. During early periods of use, silt and vegetation would have collected within the rock fill to form a naturally permanent structure and may also have been used to remove solid pollutants from the water. I take pleasure in the idea that birds will nest, and that over time the interstices will be home to a natural ecology. The architecture remains as the building slowly changes.

Conclusion

All design work should be aimed at producing a world that is a better place to live in for all; where people are able to understand more, where people are less oppressed and live less dreary lives, where people feel proud to work together. Design should be helping to bring this about.



Surely, in this city, if we really cared, we would be busting our guts to design far better housing, public buildings and transport that have considered the moral ésthetic of design. One that recognises the value of all of our senses and mental health to avoid at all costs the 'drip-water torture' built environment of our cities. This, I believe, is the collective micro-foundation of any sustainable future.

There is in every era a prevailing visual aesthetic. In architecture, we have seen that the last era has been commonly referred to as high-tech – an extension of modernism. Its aesthetic values have been associated with the beauty inherent in precise machine made elements and the importance of the connection, or joint, between the various parts - a desire to read the whole from the smallest assembly. There has been a significant shift from this aesthetic.

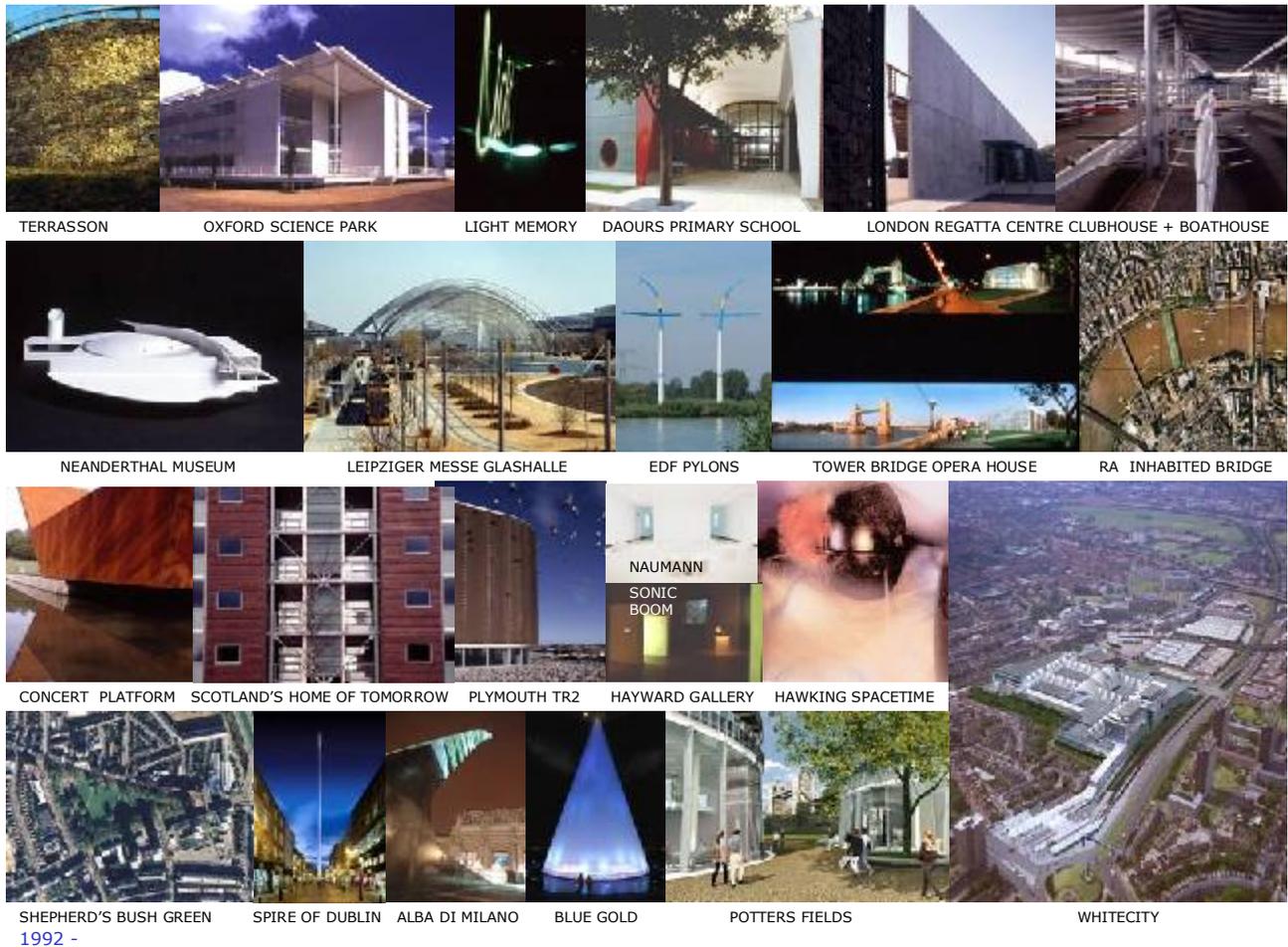
Often, designers have a desire to represent the zeitgeist in their work.

We can all recognise consumerism in a faster-faster, rougher-tougher world, and the significance of events rather than spaces, and of chaos rather than certainties.

And we have examples of architecture that freeze these characteristics of life today.

While the balance of nature with man is part of our zeitgeist I believe that the visual aesthetic has shifted towards landscape – in the broadest sense. It has emerged slowly. The new landscape aesthetic embraces both the work of those who refer to topography, e.g. through tectonic plate analogy, to those who map human movement across surfaces - whether the body or the vehicle. Within this new aesthetic the notion of sustainability must exist.

The title of my talk, 'Design in Need of a Compass' claims that design is a little lost, going somewhere but no-one knows where. However, the title does not infer a prescribed destination. My proposition this evening has been to identify that design needs to be derived more from *homo sapiens sapiens* than from *homo faber*.



I believe that designers need to consider more deeply the moral aesthetic and the value of meaning in their work by taking account of:

- all of our senses – otherwise we may as well build for robots or part-humans.
- how we extract and source the energies and materials for manufacture.
- how and what we manufacture for buildings.
- how we can reduce the maintenance burden of our designs.
- a socially responsible dimension to what we design.

Maybe then we would be able to dispense with our current predilection for creating empty fashions to feed an avaricious consumer society, and allow a more informed understanding of the social, physical, economic and philosophical aspects to inform and inspire design. This will surely help us shape a better future and give progress a new meaning.

If we reflect upon the way the world is,
 and if we have an idea of the future that is worth living in,
 and if we want to achieve it,
 then we have to direct our thinking and our development so that we go there.